

Strengthening National Capabilities and Capacities for the Sound Management of Chemicals

Observations and Conclusions of an International Expert Meeting
Montezillon, Switzerland, August 1996



IOMC

INTER-ORGANIZATION PROGRAMME FOR THE SOUND MANAGEMENT OF CHEMICALS
A cooperative agreement among UNEP, ILO, FAO, WHO, UNIDO, UNITAR and OECD

Expert Meeting on Strengthening National Capabilities and Capacities for the Sound Management of Chemicals

Executive Summary

The Expert Meeting on Strengthening National Capabilities and Capacities for the Sound Management of Chemicals, Montézillon, Switzerland, 26-30 August 1996, was organized by the United Nations Institute for Training and Research (UNITAR) as a key input into the planning and development phase of the *UNITAR/IOMC Training and Capacity Building Pilot Programme to Assist Three Developing Countries in Implementing National Action Programmes for Integrated Chemicals Management* and as a contribution to international discussions related to Programme Area E of Chapter 19, Agenda 21. The meeting was attended by 33 participants from developed countries, developing countries and countries with economies in transition, international and bilateral organizations, and non-governmental groups.

Some of the main themes which emerged from the expert meeting include: the importance of a multi-stakeholder approach in strengthening chemicals management; the need to target capacity building activities towards the priority needs as identified by countries; the importance of a pragmatic approach to chemicals management, drawing upon existing experiences and using innovative means to overcome existing constraints; the need to raise awareness and motivate actors at all levels (local/national, regional and international) to become more involved in the field of chemicals management; and the need to coordinate activities of the various entities involved in capacity building to ensure effective and sustainable results at the country level. The expert group recommended that the development of a strategic training and capacity building plan should be considered by the IFCS in order to mobilize support at all levels to match countries' needs and requests and to assist countries in meeting the targets set forth in Chapter 19 of Agenda 21.

In a series of plenary and working group sessions, the expert meeting explored various substantive and procedural aspects of chemicals management capacity building. Participants identified from a developing country perspective some of the key elements and objectives of a national system for integrated chemicals management, building upon the guidance provided to countries in Chapter 19. In addition to identifying linkages among the various elements as a basis for an integrated national approach, the group emphasized the importance of linking chemicals management with other areas of environmental policy such as pollution prevention and control. The group also stressed the need to place the sound management of chemicals within the broader context of a country's economic and social development goals.

In order to overcome some of the challenges faced at the country level in implementing chemicals management policies and programmes, the group emphasized the need for a pragmatic approach aimed at achieving concrete and immediate risk reduction results. Making use of the experiences and lessons learned from countries with advanced chemicals management schemes was suggested as a useful way to assist countries in selecting and pursuing the chemicals management approaches which will best meet their needs. The

development of a series of resource documents on chemicals management instruments and the promotion of partnerships between countries were identified as two possible means to facilitate this type of exchange.

The expert group reviewed and further developed a suggested procedural framework to assist countries in developing and implementing national chemicals management policies in an integrated way. With the assessments contained in the National Profile as the starting point, the suggested process involves a series of planning and implementation stages to be carried out under the auspices of a National Coordinating Team comprised of all interested parties from within and outside of government. To assist countries in working through such a process, a number of guidance, training and resource materials were proposed by the expert group. These materials ranged from strategic guidance on planning and implementing a national action programme for integrated chemicals management, to targeted guidance and factual resource materials to assist countries in addressing specific elements of a national chemicals management system. The group developed a draft set of criteria to guide the preparation and effective use of such documents, with particular emphasis on ensuring their relevance to potential users in developing countries.

Recognizing the importance of a multi-stakeholder approach, the expert group generated some ideas on practical ways to motivate action on the part of government, industry, public interest groups, research/academic institutions and other key actors to reduce chemical risks and strengthen national capacities to manage chemicals. The group also developed some principles of effective capacity building meant to help ensure that the capacity building programmes of international, bilateral and regional organizations meet countries' needs and trigger sustainable results. Possible strategies and activities to be undertaken at the national, regional and international levels were proposed for raising chemicals management as an important issue and to enhance current efforts to build national capabilities and capacities.

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1. Introduction

The *Expert Meeting on Strengthening National Capabilities and Capacities for the Sound Management of Chemicals* took place from 26-30 August 1996 in Montézillon, Switzerland. It was organized by the United Nations Institute for Training and Research (UNITAR) as the first main event of the *UNITAR/IOMC Training and Capacity Building Pilot Programme to Assist Three Developing Countries in Implementing National Action Programmes for Integrated Chemicals Management*. The meeting was attended by 33 participants from governments of developed and developing countries, international organizations, bilateral cooperation agencies, industry, research institutes, and public interest groups.

In addition to providing input into the planning phase of the UNITAR/IOMC pilot programme, the expert meeting provided an opportunity for concrete follow-up to recent international policy discussions related to chemicals management capacity, specifically,

- the *Second Intersessional Group (ISG-2) Meeting of the Intergovernmental Forum on Chemical Safety (IFCS)*, Canberra, March 1996, which recognized the important role of government, parties outside of government, and international and bilateral organizations to contribute towards a coordinated strategy for strengthening national capacities and capabilities for the sound management of chemicals in developing countries and countries in economic transition;
- the *Government-designated Group of Experts on Further Measures to Reduce the Risks from a Limited Number of Hazardous Chemicals*, Copenhagen, April 1996, which acknowledged "the ongoing work of UNITAR and the IFCS to develop national profiles on the existing infrastructure for chemicals management" and recommended that the Governing Council of UNEP "call upon the IFCS to identify country needs for capacity-building", and "recommend providing a mechanism to encourage partnerships between recipients and donors of technical assistance to help coordinate these activities", and "call upon member organizations of the IOMC, UNITAR and bilateral agencies to further strengthen coordination of their capacity building activities"; and
- the recommendation of the *IFCS Ad Hoc Working Group on Persistent Organic Pollutants (POPs)*, Manila, June 1996, that the IFCS, the IOMC and UNITAR help identify possible sources of assistance and facilitate partnerships between recipients and donors

of available technical and financial assistance to address these needs.

The expert meeting addressed a broad range of issues related to the development and implementation of a coordinated training and capacity building strategy to support national chemicals management in developing countries and countries in economic transition. Such a strategy would help to ensure that international and bilateral support in the area of chemicals management and safety is provided in a systematic, coordinated and mutually supportive way that effectively addresses the priorities as identified by countries through the preparation of their National Profiles.

The main themes and conclusions that emerged from the expert meeting provide the basis for this document, which it is hoped will serve as a useful contribution to ongoing efforts to strengthen national chemicals management and achieve the targets set forth for all countries in Chapter 19 of Agenda 21.

2. Developing a Framework for a National System for Integrated Chemicals Management

2.1 Introduction

Defining the scope, objectives and key elements of national chemicals management are important first steps for developing an integrated chemicals management framework.

While Chapter 19 of Agenda 21 outlines many elements and possible action items for achieving the sound management of chemicals, it provides little guidance to countries on how to integrate various chemicals management elements into a comprehensive, integrated national chemicals management strategy which addresses all stages of the chemical life cycle and makes efficient use of available resources.¹ Defining the scope and objectives of national chemicals management and identifying the key elements which are needed to achieve those objectives are considered important first steps for developing an integrated framework at the country level. Establishing linkages with other related national programmes and policies and ensuring effective implementation of national obligations under international agreements are other important aspects of an integrated approach to chemicals management.

2.2 What Should be the Scope of a National System for Integrated Chemicals Management?

In defining the scope of a national chemicals management system, it is important to ask whether the system will focus solely on traditional issues of chemical safety or whether it will address a broader set of issues which go beyond the safe use of chemicals. Programmes for *chemical safety* are generally comprised of activities related specifically to the safe use of chemicals and the identification and assessment of associated risks to human health and the environment. By comparison, a programme for the *sound management of chemicals* implies a broader, more holistic approach addressing the production, processing/formulation, transport, distribution, use and disposal of chemicals following a life cycle approach, and encompasses relevant linkages to pollution prevention and control as well as economic considerations. In developing a comprehensive and integrated national chemicals management system, this latter, more holistic approach is

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The elements of chemicals management listed in Programme Area E of Chapter 19 include: adequate legislation; information gathering and dissemination; capacity for risk assessment and interpretation; establishment of risk management policy; capacity for implementation and enforcement; capacity for rehabilitation of contaminated sites and poisoned persons; effective education programmes; and capacity to respond to emergencies.

considered necessary.

2.3 Objectives and Benefits of Integrated National Chemicals Management

Identifying chemicals management objectives and potential benefits from the perspective of all stakeholders can be an effective driving force for ensuring commitment and action among all concerned parties.

Clearly defined objectives are important to ensure that the core elements and activities of the national chemicals management programme are well targeted toward achieving priority aims. National chemicals management objectives may be motivated by environmental and public health considerations, and/or they may be linked to other important national objectives such as those related to sustainable economic development and free trade. Generally speaking, the ultimate chemicals management objectives are to protect human health and the environment while allowing for sustainable economic development. Other intermediate objectives can be considered as *means* to achieve these ultimate goals. While all stakeholder groups may agree on the ultimate goals, as well as several intermediate objectives (e.g. effective legislation, targeting priority areas), the preferences of the various groups regarding how to achieve those goals can be quite different, and reflect their particular viewpoints and interests.

Identifying chemicals management objectives and potential benefits from the perspective of all stakeholders can be an effective driving force for ensuring commitment and action among all concerned parties. The broad range of groups which, for various reasons, may have an interest in a sound national chemicals management scheme includes: citizens, consumers and the community in general; workers; government; industry; shareholders; bankers and insurance companies; professionals; and researchers. While these various stakeholder groups may prioritize the objectives and anticipated benefits in different ways according to their specific interests, in many cases the benefits to be achieved will in fact be interrelated. For example, improving worker safety is a benefit not only for the workers themselves, but also for industry which could anticipate reduced health care costs and improved worker productivity. In other cases, specific chemicals management objectives may only be of interest to certain stakeholder groups, e.g. achieving free trade of chemicals.

2.4 Key Elements of a National System for Integrated Chemicals Management

Programme Area E of Chapter 19 provides a list of key elements of a national chemicals management programme which can be considered comprehensive and useful. However, these elements need to be

implemented in a pragmatic way according to each country's situation and priorities. For developing and industrializing countries, this may mean placing emphasis on some particularly important aspects and tailoring the elements to address existing needs.

While recognizing that Chapter 19 represents a negotiated and internationally accepted document, the following is an amended list which reflects the perspective and priorities of developing and industrializing countries (modifications/additions in bold):

- adequate legislation;
- information **generation**, gathering, **use** and dissemination;
- capacity for **hazard and risk assessment**, interpretation **and communication**;
- establishment of risk management policy, including **evaluation of safer chemical alternatives and non-chemical options**;
- capacity for implementation and enforcement;
- capacity for rehabilitation of contaminated sites and poisoned persons;
- education, **awareness raising, and training** programmes;
- capacity to respond to emergencies;
- **pollution prevention and waste minimisation**; and
- **product stewardship and industry action programmes such as "Responsible Care™"**.

The two elements "information generation, gathering, use and dissemination" and "education, awareness raising, and training programmes" are considered of particular and immediate importance. Elements such as "adequate legislation," "capacity for hazard and risk assessment, interpretation and communication" or "establishment of risk management policy including evaluation of chemical alternatives and non-chemical options" are also considered important. Regarding "rehabilitation of contaminated sites", some aspects of this element are quite important and cost-effective, such as removal of obsolete chemicals and cleaning up industrial and commercial buildings that are still in use. However, cleanup of contaminated soil and groundwater at abandoned sites will often be beyond the financial capacity of

abandoned sites will often be beyond the financial capacity of developing countries.

A key task at the country level is to define which elements a national chemicals management programme should include and how these elements might be prioritized and linked with one another.

In addition to prioritizing the elements of the national system, the challenge for a country working towards an integrated approach is to identify strategic linkages among them. For example, legislation may be necessary to implement certain aspects of information gathering and dissemination or to support risk assessment. Risk assessment and interpretation may in turn have an information gathering component, and provide an important input into the establishment of risk management policy. Chapter 19 does not provide detailed guidance regarding these possible linkages. A key task at the country level, therefore, is to define which elements a national programme should include and how they might be prioritized and linked with one another.

2.5 Linking Chemicals Management with Pollution Prevention and Control

Various synergistic linkages exist between chemicals management and pollution prevention and control which should be further explored by countries.

Traditionally, chemicals management and pollution prevention and control have been separately addressed at the country level, as well as by international organizations and bilateral agencies in their technical cooperation programmes. However, various synergistic linkages exist which should be further explored by countries interested in developing integrated national chemicals management systems. These two areas, in turn, need to be closely linked within a broader strategy to promote sustainable industrial development.

Some possible linkages between chemicals management and pollution prevention include: the use of hazard and risk assessment information as a basis for setting priorities for pollution prevention action; the use of a life cycle approach in identifying risk reduction opportunities during production, processing, transport, distribution, use and disposal; and the use of ecotoxicology and environmental monitoring in problem identification and priority setting. Other opportunities for establishing mutually reinforcing linkages between chemicals management and pollution prevention programmes include: the use of community right-to-know mechanisms such as Pollutant Release and Transfer Registers (PRTRs) to monitor releases of priority chemicals to air, water, and land; the promotion of cleaner technologies and safer alternatives; the use of source separation, recycling and other pollution reduction and management techniques to reduce chemicals risks; and the use of chemical substitution throughout the life cycle for targeting chemicals of greatest concern.

2.6 Incorporating International Policies and Programmes into a National System for Integrated Chemicals Management

International Events and Motivating Factors

International policy guidance, agreements and programmes can be an important driving force to stimulate national chemicals management. In addition, international events which raise awareness among politicians and decision-makers on environmental issues, such as the United Nations Conference on Environment and Development (UNCED), Rio de Janeiro, 1992, can provide an impetus for strengthening chemicals management in the context of broader environmental and sustainable development goals. The potential for environmental issues to affect trade, e.g. as a result of environmental standards required by importing countries or possible consumer reactions to products from countries which have a negative environmental image, is another way in which the international context can influence chemicals management decisions made at the country level. A country's interest in joining regional economic organizations, such as the European Union (EU) or the North American Free Trade Agreement (NAFTA), or the need to participate in external environmental review mechanisms, such as the OECD Environmental Performance Review, can be other reasons for a country to focus on improving its chemicals management scheme.

International Commitments and Obligations

Governments may have specific commitments to fulfill under international agreements and conventions in the field of environmental and/or chemicals management. Several legal instruments and related programmes have been developed at the international and regional levels which address specific aspects of national chemicals management. Examples include the Montreal Protocol, the London Guidelines and FAO Code of Conduct, and the various ILO conventions. A country's efforts towards sustainable industrial and agricultural development, including actions undertaken in the context of international initiatives such as the United Nations Development Programme (UNDP) Capacity 21 programme, can also form an important basis for national chemicals management.

The challenge from the country perspective is to integrate its responsibilities and activities under these international agreements and programmes into its national chemicals management framework and to identify linkages among them, as appropriate. For example, making import decisions for chemicals included in the PIC procedure is closely related to aspects of ILO Convention 170 which addresses the safe use

of chemicals at the workplace.

One possible strategy to ensure a coordinated approach at the country level is to set up an inter-ministerial task force to focus specifically on opportunities for integrating implementation of international chemicals management agreements. As a first step, a systematic review of national responsibilities under international chemicals management agreements should be conducted. Appropriate resource materials should be made available to assist countries in this task, in recognition of the difficulties faced by developing countries in obtaining information about the multitude of international, regional and bilateral agreements – both mandatory and voluntary – that address various issues of chemicals management and safety.

While international agreements and programmes can stimulate action at the country level, some countries view their implementation as a significant administrative burden which does not necessarily lead to effective risk reduction. During the negotiation process for international agreements, countries often are not aware of the far reaching implications and the considerable effort that will be necessary for effective implementation. In many cases, developing countries sign or ratify international chemicals management agreements without having the necessary capacities or commitment in place. Notwithstanding these difficulties, however, countries also recognize that international chemicals management agreements have been successful in raising awareness among decision makers and triggering appropriate action.

3. Experiences Gained in Countries With Advanced Chemicals Management Systems

3.1 Introduction

A significant number of countries have had national chemicals management programmes in operation for a number of years. The practical experiences gained and lessons learned through these programmes, both positive and negative, can be a valuable source of information for countries that are in the process of developing their own national chemicals management systems. In addition to developed countries, developing and industrializing countries also have gained valuable experiences from which other countries could benefit.

The lessons learned from countries with advanced chemicals programmes can pertain both to general strategies undertaken by countries, as well as to specific instruments that have been used. These fall into several categories including strategies and instruments to address ongoing industrial and agricultural operations, control of chemicals in commerce and trade, obsolete chemicals, and existing contamination and chemicals in the environment. The range of specific programmes and issues for which there is existing experience includes legislative and regulatory systems, information gathering and dissemination programmes, permitting/licensing schemes, risk-based decision making policies, import/export control policies, chemical screening and risk assessment procedures, emergency response programmes, and public/worker education initiatives, among others.

3.2 Lessons Learned

Some of the approaches taken have proven to be successful and cost-effective and have achieved significant reductions in chemical risks. Other programmes have consumed a lot of resources without generating significant results. Still others may have been effective in an industrialized country context, but would probably not be feasible or realistic in developing countries.

Priority setting is one area in which the lessons learned in developed countries could be used by developing/industrializing countries to ensure that limited resources are used effectively. Identifying priorities for action can either be addressed through a systematic, often resource-

intensive approach, such as a chemicals inventory, vs. a more pragmatic approach which identifies general areas of concern based upon knowledge of existing health and environmental problems. Collecting comprehensive chemical-specific data as a basis for setting priorities according to the estimated risks of individual chemical substances is a large and difficult task, particularly given that risks associated with specific chemicals are dynamic and vary according to use. Thus, chemicals management experts from developed countries generally do not recommend that developing countries take the comprehensive and complicated information gathering approaches that many countries have taken, but rather, encourage countries to pursue realistic approaches aimed at solving concrete problems. For example, a pragmatic approach for addressing problems associated with industrial facilities might be to start by identifying specific chemicals of concern and then targeting those industrial processes which use those chemicals as a first priority, rather than trying to systematically address all industrial processes at the outset.

The importance of a prevention-oriented approach is another general lesson learned. Based on the experiences of countries with advanced programmes, an approach that focuses on prevention, including increased corporate responsibility, product stewardship, voluntary or partnership-based approaches, and increased public awareness of chemical safety practices, is preferable to addressing problems only after they have been created.

3.3 Making Use of Existing Experiences and Lessons Learned

Strategies which may have proven effective in developed countries may not be as successful in developing countries due to differences in culture, resource constraints and other circumstances.

An exchange among countries of experiences and lessons learned can be an important contribution to strengthening national chemicals management capabilities and capacities. A key principle for achieving a positive impact through these types of exchanges is to ensure that the differing needs and situations of countries are sufficiently considered. Strategies which may have proven effective in developed countries may not be as successful in developing countries due to situational factors, differences in culture, resource constraints and other circumstances. For example, the socio-political situation in many developing countries may constrain their ability to focus on corporate responsibility and public pressure as a means for stimulating improved chemicals management, thus some of the approaches taken in developed countries which are based on public accountability may not be as successful.²

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The development of a resource series on chemicals management instruments has been initiated jointly by UNEP Chemicals and UNITAR and member organizations of the IOMC in the context of the UNITAR/IOMC Integrated Chemicals Management Capacity Building Pilot Programme.

Development of innovative partnerships and twinning arrangements is one promising strategy for exchanging experiences and lessons learned; making information available on existing experiences is another possible approach. A compilation and review of the experiences gained by countries which have used certain chemicals management instruments or policies could provide developing countries with a set of possible options to consider for addressing priority issues and further developing their chemicals management systems². The instruments included in such a compilation could range from the most basic to the most complex, and thus could be useful for selecting national strategies that are adapted to existing constraints. Information could be included for each approach to specify the types of conditions under which it is most likely to be effective, thereby helping countries to select the most suitable approach. Making available a list of countries which have used specific instruments may also facilitate direct interaction between countries, as countries in the process of considering certain approaches seek guidance from those which have existing experience.

4. Working Within Existing Constraints in Developing Countries

4.1 Introduction

Circumstances in developing and industrializing countries can present obstacles to strengthening national systems for the sound management of chemicals. To be realistic and have a reasonable chance of success, national chemicals management activities need to be tailored to existing constraints, such as availability of resources and level of infrastructure.

4.2 Challenges and Constraints in Developing Countries

To be realistic and have a reasonable chance of success, national chemicals management activities need to be tailored to existing constraints, such as availability of resources and level of infrastructure.

The challenges facing countries can be numerous and varied in nature. Some are general constraints, such as lack of sufficient telecommunications and information infrastructure; a general lack of trained human resources in government, aggravated by the tendency for qualified personnel to move into the private sector; rapid turnover of government staff resulting in loss of "institutional memory"; and a lack of experience within institutions dealing with environmental problems, particularly since many of these institutions may have only recently been established in response to an increasing global and national focus on environmental issues.

Other constraints relate specifically to national chemicals management, such as:

- lack of clear chemicals management policies and political commitment, related to the general lack of attention and emphasis placed on chemicals management issues in many countries;
- lack of mechanisms for communication and cooperation among ministries and between industry sectors and government regulators;
- lack of access to information/data necessary for chemicals management decision making, including inadequate local data/statistics;
- lack of access to information on existing international, regional, and national chemicals management activities;
- lack of trained personnel to collect, interpret and use data necessary for chemicals management decisions;

- language barriers related to the translation of international information (e.g. Material Safety Data Sheets (MSDSs), etc.); and
- general lack of awareness within the population about chemicals management problems and safety practices.

4.3 Addressing Constraints in a Practical Way

Creating multi-sectoral networks which foster collaboration and information exchange can be an effective means for overcoming frequent turnover of government staff.

While some of these constraints can be successfully addressed, others need to be taken as given. In these latter cases, countries often have to apply innovative solutions and use priority-based strategies in order to achieve their chemicals management objectives and overcome resource limitations and other constraints. When comprehensive solutions are lacking, countries should seek to identify pragmatic intermediate solutions which can achieve immediate and considerable reductions in risk. Some examples of such strategies are presented in Section 4.4 below.

The overall strategic approach used in strengthening or establishing national chemicals management can to a large degree determine how successful are efforts to overcome obstacles and address national needs. For example, creating multi-sectoral networks which foster collaboration and information exchange can be an effective means for overcoming frequent turnover of government staff and/or lack of formal coordinating mechanisms. A multi-stakeholder approach can also help overcome resource constraints, since it mobilizes the expertise and capacities of the various parties within and outside of government in addressing chemicals management objectives.

One specific problem which many countries face is lack of access to information. Overcoming information-related constraints requires not only improved technical infrastructure (e.g. Internet access, software, hardware) but also the creation of networks among national institutions and people, and enhancement of their capacities to access, interpret, and effectively use data for chemicals management purposes. The establishment of pilot programmes for Internet access, with the cooperation of industry, international and/or regional organizations, is one possible concrete activity toward this goal. Industry's potential contributions in addressing information gaps (e.g. providing MSDSs, Classification, Packaging and Labelling (CPL) information, Internet access, etc.) can be crucial in countries with very limited resources.

4.4 Pragmatic Opportunities to Achieve Risk Reduction

In addition to While Chapter 19 encourages the development of comprehensive

actors in government and the private sector, the involvement of dedicated groups and individuals who are active in social issues can form an important part of efforts to improve chemicals management and safety.

national systems for the sound management of chemicals in all countries, reality in many countries suggests that a pragmatic step-by-step approach which takes care of immediate concerns and tackles the most severe problems as a matter of priority is more feasible in the short run, particularly for countries facing severe resource constraints. For example, while the development of an inventory of chemicals in use seems to be a logical first step in a national chemicals management scheme, collection of the required information consumes significant resources and does not in itself achieve any reduction in chemical risks. In comparison, labelling requirements for hazardous chemicals and mandatory provision of MSDSs could lead to significant risk reduction without requiring extensive administrative infrastructure.

Guiding Principles

Some guiding principles can help countries in pursuing a pragmatic approach to national chemicals management decision-making. A **problem-based approach**, in which the search for solutions to concrete problems becomes the driving force for decision-making, helps direct resources and effort towards priority areas of concern. An emphasis on **preventive measures**, such as worker education, pollution prevention techniques including "good housekeeping" and substitution of safer alternatives, can help avoid the creation of new problems while addressing existing sources of risk, often in a cost-effective way. A **results-oriented** approach ensures that only those activities that achieve reductions in risk or other desired objectives will continue to be implemented. In this regard, establishing accountability measures and monitoring the effectiveness of specific strategies are important, and flexibility is needed to ensure that the course of action can be altered if it proves not to be effective. Finally, a **collaborative and participatory approach**, in which the strengths and potential contributions of all concerned parties are mobilized, can help to bring about positive change. In addition to actors in government and the private sector, the involvement of dedicated groups and individuals who are active in social issues can form an important part of efforts to improve chemicals management and safety, particularly through increased public awareness.

Practical Strategies and Actions

A pragmatic approach can lead to concrete and immediate results in addressing specific areas of chemicals management at the country level. For example, raising awareness of chemical risks and safe use practices and fostering increased attention to chemicals management problems can be a practical way to achieve risk reduction. This might entail focusing on education and training at all levels, including raising the

focusing on education and training at all levels, including raising the awareness of decision makers; establishing legal requirements to ensure that dangerous chemicals which are produced, imported, and used in the country are accompanied by MSDSs and appropriate CPL information, and that these materials are disseminated to all users; emphasizing the real-life risks and potential consequences of chemical misuse by documenting specific case studies and scenarios; and strengthening risk communication efforts and safe use training.

Efforts should be targeted towards those industrial sectors which do not have sound chemicals management practices and which contribute significantly to chemical-related risks.

In the area of policy-making and development of regulatory and enforcement schemes, the focus should be on the problems of greatest priority. For example, efforts should be targeted towards those industrial sectors which do not have sound chemicals management practices and which contribute significantly to chemical-related problems and risks. Information management policies should be designed to meet specific risk reduction objectives, with the intended use of information clearly defined before resources are spent on its collection. Given that many countries rely on chemicals that are imported, strengthening border and customs control, including training border agents to recognize potentially hazardous and/or illegal chemical shipments, can be a practical step to gain control of chemicals used and transported throughout the country.

To foster chemicals management within industry, a collaborative approach can be used, such as working with industry and other commercial bodies, including small and medium-sized enterprises (SMEs), to develop practical solutions to address the most severe problems and risks. Providing incentives and taking steps to raise awareness within industry regarding possible economic gains associated with sound chemicals management practices, and raising the issue of chemicals management as a competitiveness issue (e.g. to emphasize that export sectors of countries whose industries do not adopt sound chemicals management policies may suffer economically), are other possible strategies. Promoting voluntary agreements and industry driven concepts, such as Responsible Care™ and product stewardship programmes, can also spur action toward improved chemicals management and increased corporate responsibility.

5. Mobilizing Commitment of Government and Other Parties of Interest

5.1 Introduction

Chapter 19 places an important responsibility on government to take action, and to encourage other concerned parties to contribute towards achieving the sound management of chemicals. With a wide range of actors within and outside government having a role to play in achieving sound chemicals management, mobilizing action and commitment among these groups becomes an important prerequisite for effective capacity building.

5.2 Mobilizing Government Action

Effective action within government towards chemicals management objectives depends upon:

A key challenge for countries is to delineate those areas in which government should take action from those in which other concerned parties may be in a better position to take the lead.

- high level policy commitment within the various ministries and levels of government;
- effective coordination based on a clear division of responsibility among governmental entities in carrying out chemicals management functions; and
- effective information exchange and decision making procedures.

Several factors can help to mobilize commitment within government. Increased awareness among policy makers as well as among the general public can focus attention on chemicals management priorities and motivate government to take action. In this regard, key national figures and local/national groups, including public interest groups, can play an important role in raising awareness and generating high-level interest in chemicals management issues. National and/or international meetings and other high-profile events can also help to raise sound chemicals management as an important national and global issue. Organizing national or sub-regional meetings, potentially with the support and participation of international organizations, is another possible means for raising the profile of chemicals management as a priority for government action.

The experiences of some countries suggest that government may find it difficult to provide strong leadership and initiate effective action in the

field of chemicals management for a variety of reasons, not least of which is resource constraints. Thus, a key challenge for countries is to delineate those areas in which government should take action from those in which other concerned parties may be in a better position to take the lead.

5.3 Mobilizing Involvement of Non-Governmental Actors

Identifying incentives and anticipated benefits that could stimulate action on the part of non-governmental groups is a key for mobilizing their active involvement in chemicals management.

Key parties outside of government which are involved in chemicals management include industry associations, companies, labour organizations, research institutes, public interest groups and other non-governmental organizations (NGOs). Identifying specific factors, incentives and anticipated benefits that could stimulate action on the part of each of these groups is a key for mobilizing their active involvement in pursuit of chemicals management objectives. Any constraints that might prevent effective action by these groups should also be identified, including the reluctance of certain groups to work together or with government. Once the motivating and constraining factors have been identified, opportunities can then be explored for ways in which the various non-governmental sectors, working in parallel or in direct partnership with government, can effectively contribute to national chemicals management.

Effective action towards chemicals management objectives within non-governmental sectors can be fostered by:

- creating incentives and taking steps to break down existing barriers to cooperation;
- actively involving non-governmental actors in the early stages of the policy development process to tap their resources and ensure their commitment to agreed upon actions;
- identifying the appropriate roles and potential contributions of the various groups; and
- defining how actions can be coordinated within a national action programme for integrated chemicals management.

Some specific factors which may motivate industry to focus on chemicals management issues include community and consumer pressure to improve environmental management, including reducing chemical-related risks, through a commitment to "shared responsibility"; voluntary programs of industry associations and trade chambers (e.g. Responsible CareTM); and industry initiatives such as

**Principles for ensuring effective national coordination
through a multi-stakeholder process**

The following are some key principles and practical steps to ensure that national coordinating mechanisms established for undertaking activities in the context of integrated national chemicals management are able to operate effectively:

- Clear decision-making procedures should be established at the outset and documented in written form.
- The coordinating body should have the responsibility and authority for implementing concrete activities, in addition to its coordinating role.
- The coordinating body should have financial independence, to the extent possible, e.g. through the establishment of a sustainable financing system.
- The coordinating body should act as a clearinghouse of information on activities of participating ministries, agencies and other groups.
- National chemicals focal points (e.g. DNAs, IFCS Focal Points) should be part of the secretariat of the coordinating body, in order to coordinate international linkages.
- Development of a national information system or network is recommended to provide a working link between institutions, stakeholders and other people involved in chemicals management at the country level.

eco-auditing, external verification, environmental management systems, continuous improvement, and community involvement programmes. Implementation of mechanisms to ensure accountability and transparency of information in relation to emissions and chemical risks (e.g. making pertinent information public, setting up PRTRs, holding public consultations, etc.) can foster responsible action. Adequate functioning and enforcement of government regulations, in particular the control of chemical imports/exports, is also important to ensure accountability. From industry's perspective, reducing the burden of fulfilling regulatory obligations, e.g. through streamlined import procedures, could help to improve the level of compliance and contribute to enhanced transparency.

Product stewardship and producer responsibility are concepts which should be further explored as a means for promoting preventive action within industry across all stages of the chemical life cycle. Securing the involvement of trade agents, intermediate processors, and distributors in fulfilling the responsibilities of product stewardship presents a significant challenge, but is necessary to ensure that the chain of responsibility extends to the final end user.

UNITAR/IOMC National Profile Capacity Building Programme

In July 1996, a revised version of the UNITAR/IOMC *Guidance Document on Preparing a National Profile to Assess the National Infrastructure for Management of Chemicals* was distributed to all member countries of the IFCS to assist countries in following the recommendations of the Second Intersessional Group meeting (ISG-2) of the IFCS, which invited countries to "commit to the preparation of a mini or comprehensive National Profile, as national circumstances dictate, using the process in the revised UNITAR guidance document."

Copies of the guidance document were sent to IFCS Focal Points, Designated National Authorities (DNAs) under the London Guidelines and FAO Code of Conduct, and other key national focal points that are concerned with chemicals issues, along with application forms for countries to request assistance in preparing their National Profiles. With contributions from several governments, UNITAR has supported approximately 40 countries in preparing their National Profiles during 1996/97, and is anticipating providing support for additional countries in 1997.

6. Moving Forward at the Country Level: What Steps Can be Taken to Strengthen National Chemicals Management?

6.1 Introduction

For countries in the process of establishing or strengthening their national chemicals management systems, a systematic approach can help to ensure that priorities are identified and addressed, and that activities are integrated and coordinated at the national level.

6.2 Assessing the Existing Infrastructure through Preparation of a National Profile

The preparation of a National Profile, which highlights chemicals management priorities and areas of need, can provide a good starting point for the development of a National Action Programme for integrated chemicals management.

The preparation of a National Profile, which highlights chemicals management priorities and areas of need as identified at the country level, can provide a good starting point for the development of a national action programme for integrated chemical management. In addition to serving as a key foundation for national priority-setting and action, a country's National Profile can also serve as an important reference point for international and bilateral organizations seeking to provide support through capacity building and technical assistance programmes. Preparation of a National Profile through a participatory, multi-stakeholder process can set the stage for collaborative action among all concerned parties to strengthen chemicals management. Through the IFCS, all countries have been encouraged to assess their existing infrastructure and capabilities for managing chemicals through preparation of a National Profile, using the UNITAR/IOMC *National Profile Guidance Document* (see box).

In order to be most effective, the National Profile preparation process should be country-driven, with broad stakeholder involvement. To ensure active participation, the National Profile preparation process must be transparent and the guidelines for involvement must be clearly explained to all stakeholder groups. In addition to governmental ministries, participation of NGOs and institutions of higher learning is very important. The selection of a well accepted National Coordinator, and high level policy commitment to complete the process and to ensure follow-up, are also considered essential.

6.3 Implementing a National Action Programme

Setting up a coordinated national process has proven to be one of the main challenges for countries in achieving systematic and sustainable progress in strengthening national chemicals management.

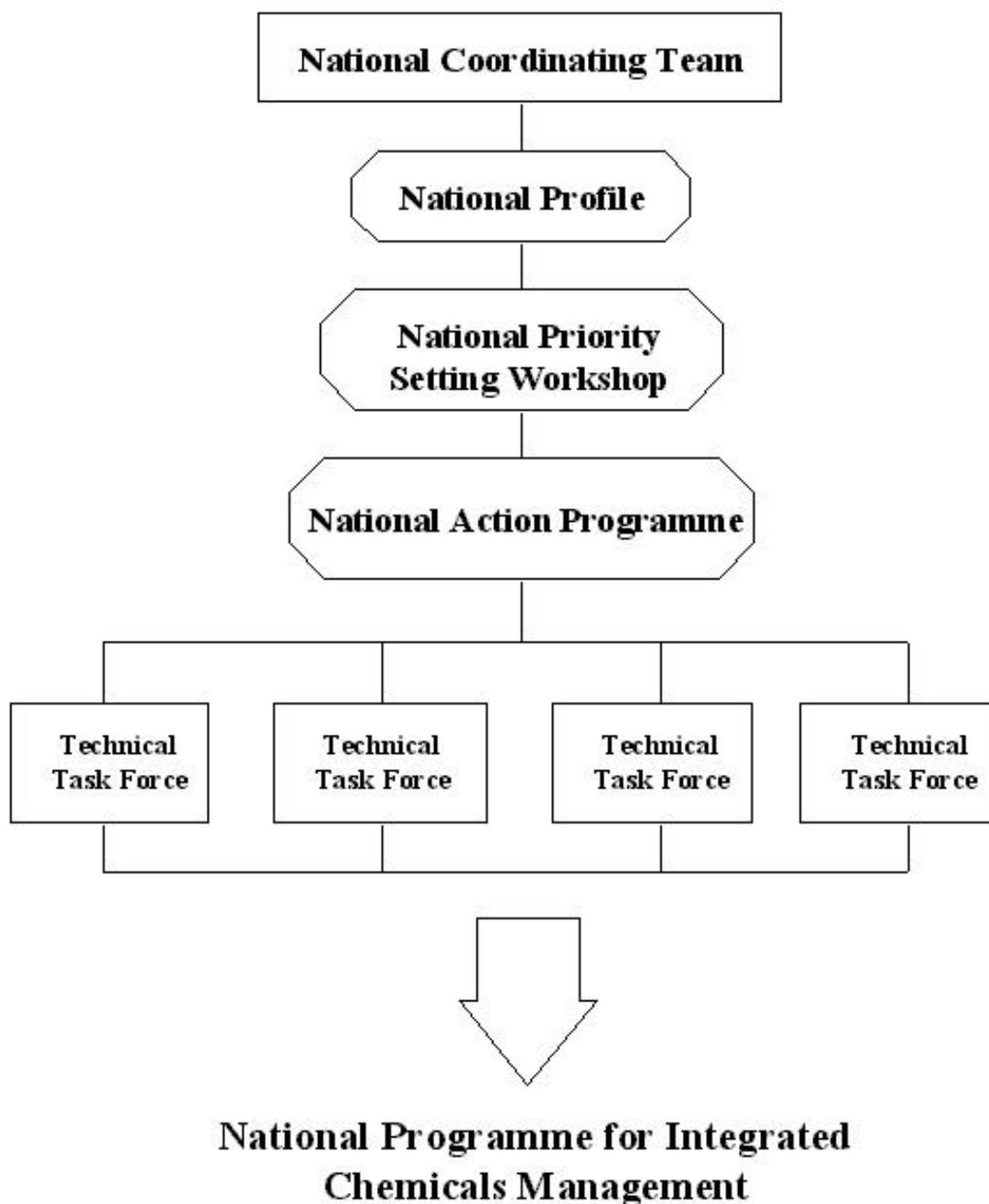
The development of a systematic strategy which defines clear goals and targets is important to ensure effective action at the country level. Past experiences have shown that setting up an effective, coordinated national process has proven to be one of the main challenges for countries in achieving systematic and sustainable progress in strengthening national chemicals management.

Within the context of the UNITAR/IOMC *Pilot Programme to Assist Three Developing Countries in Implementing National Action Programmes for Integrated Chemicals Management*, a draft strategy has been developed which is intended to assist countries in organizing a **National Action Programme** to address priority issues of chemicals management and safety, towards the ultimate goal of a fully operational national system for integrated chemicals management³. The proposed stages are illustrated in the diagram and are briefly described below.

Following the completion of a National Profile, an initial planning meeting involving key governmental officials and other lead actors is organized to identify objectives and establish a timeframe for programme planning and implementation. A National Priority Setting Workshop is then organized as a means to identify the chemicals management priorities and objectives to be pursued through the National Action Programme. This priority-setting process draws upon input from all interested parties within and outside of government as well as the assessments contained in the National Profile. A multi-stakeholder National Coordinating Team (NCT) is established to guide the implementation of the National Action Programme. Implementation takes place largely through the activities of technical task forces created under the NCT. Towards the end of the 2-year process, the results and progress achieved are brought together in a draft report on integrated chemicals management. A National Review Workshop is then held to review the progress made and to identify opportunities for follow-up implementation.

³ A document has been prepared entitled *Planning and Implementing a National Action Programme for Integrated Chemicals Management: A Guidance Document* (UNITAR/IOMC, Final Draft, 1997) which will be used and tested by three pilot countries in the UNITAR/IOMC Integrated Chemicals Management Capacity Building Pilot Programme.

Figure 1: Towards Integrated Chemicals Management at the Country Level



Following are some key principles which countries are encouraged to follow in developing an effective National Action Programme for integrated chemicals management:

- An integrated approach to national chemicals management should address the production, processing, transport, distribution, use and disposal of chemicals following a life-cycle approach;
- Broad stakeholder involvement should be sought in order to ensure that the expertise and potential contributions of all relevant parties will be effectively mobilized, and that actions and decisions taken in the context of the National Action Programme will receive broad-based support; and
- A priority-based and pragmatic approach should be taken to ensure that the National Action Programme leads to practical actions and concrete results.

7. Enhancing Regional Cooperation in Support of National Chemicals Management Programmes

7.1 Introduction

Regional cooperation provides an opportunity for groups of countries with similar situations and problems, or which cooperate closely in the area of economic development, to address issues which are of common interest. The IFCS has stressed the importance of regional cooperation as a key element of a comprehensive strategy for the sound management of chemicals. The challenge remains, however, to develop effective mechanisms to facilitate interaction among countries at the regional level, building upon current structures and activities.

7.2 Status of Regional Activities to Support Chemicals Management

Regional cooperation provides an opportunity for countries with similar situations and problems to address issues which are of common interest.

Under the IFCS, regional group meetings have been organized which primarily bring together national IFCS Focal Points. While some regions have made progress in strengthening regional IFCS cooperation (e.g Latin America, Asia, Eastern Europe), other regions such as Africa have not yet been able to work at the regional level between IFCS meetings, with the exception of regional discussions that have been included in ongoing activities of international organizations. Present funding arrangements are rather ad hoc in nature and do not provide a good basis for sustained regional cooperation.

In addition to regional activities under the IFCS, several international organizations cooperating in the IOMC (i.e. UNEP, WHO, ILO, FAO and UNIDO) have regional offices or programmes which initiate action and implement chemicals-related activities in constituent countries. Other key players at the regional level include multi- or bilateral technical assistance and financing organizations, and sub-regional economic integration organizations which increasingly place issues of environmental and chemicals management on their agendas.

7.3 Opportunities and Strategies for Strengthening Regional Cooperation

Regional cooperation can be used to enhance and support national chemicals management in a variety of ways. For example, where

Ensuring that all countries and relevant organizations are aware of ongoing activities within the region is an important basis for facilitating regional action and cooperation.

individual countries do not have sufficient resources to ensure full control of their borders, regional harmonization of import/export regulation as a trade block could contribute towards a solution. Cooperation in the establishment of regional information, laboratory, and poison control centers, when resource limitations would otherwise prevent countries from developing these types of facilities on their own, are other possible undertakings. Regional cooperation can also contribute to harmonization in areas where individual national approaches might lead to negative impacts on trade or put a significant burden on industry (e.g. different labelling requirements for individual countries).

Opportunities exist for regional offices of international organizations, regional economic organizations and other regional groups to take action to support national efforts. For example, regional offices of international organizations could play a strong role in coordinating the sharing and exchange of technical expertise and capacities (e.g. laboratory infrastructure, information resources, professional expertise, practical experience with specific chemicals management instruments, etc.) that are available within countries of a given region. Regional offices of international organizations could also serve as clearinghouses of information on possible funding opportunities from bilateral and other sources, as a means to assist countries in obtaining support for chemicals management projects.

Ensuring that all countries and relevant organizations are aware of ongoing activities within the region is an important basis for facilitating regional action and cooperation. A systematic means should be established for providing information on ongoing activities in the region, including regional activities organized from the headquarters of international organizations; activities of regional offices of international organizations; relevant activities of regional organizations and economic integration agreements; and activities initiated by individual countries in the region, including ISG member countries. Within each country, this information should be regularly channeled to key decision makers.

The following are some other possible actions that could be undertaken to foster regional cooperation:

- Strengthening regional cooperation in the area of chemicals management should be taken up at the policy level of all relevant bodies, including ministerial meetings, meetings of councils and regional organizations, etc.

- An inventory could be developed within each region to describe the relevant activities of various regional entities, possibly to be compiled and distributed through modern electronic means (e.g. Internet).
- Annual regional meetings, organized jointly by countries, international agencies and regional economic organizations working on technical issues related to chemicals management, could facilitate collaboration and catalyze regional action.
- IFCS member countries could take a lead role in implementing IFCS recommended priorities within each region.
- Profiles of the regional offices of IOMC member organizations, including an inventory and analysis of relevant activities, could be prepared as a means to promote further efforts and facilitate an exchange of experiences among regions.
- Coordinating mechanisms among the regional offices of international organizations could be established to facilitate collaborative action and increase mutual awareness of ongoing activities.
- Regional economic organizations could pursue opportunities to achieve economic and trade-related benefits through regional harmonization of chemical import/export regulations, pesticides registration and assessment schemes.

National Profiles could also serve as a basis for strengthening regional interaction on chemicals issues. Countries in a region or sub-region, where problems are similar, could assist each other in the process of preparing National Profiles, share successes and failures, and explore opportunities for regional cooperation in follow-up activities. The preparation of "Regional Profiles" is another potentially useful undertaking.

8. Strengthening International Capacity Building Activities in Support of National Efforts and Priorities

8.1 Introduction

For years, many international, multi-lateral and bilateral organizations have been conducting technical assistance and training programmes addressing various issues of national chemicals management. Each of these organizations has specific substantive expertise, resources and other types of support which it can provide to countries to help strengthen their chemicals management capabilities and capacities. Drawing upon the experience that has been gained, opportunities exist for international/ bilateral organizations to improve their country based activities in order to better address the needs of countries and ensure a more efficient use of resources.

8.2 Lessons Learned

Country-based activities of international and bilateral organizations should be geared towards a country's priority concerns and fully integrated into a national strategy.

Lessons from past training and technical assistance activities suggest that country-based activities of international and bilateral organizations should be geared towards a country's specific needs and priority concerns, fully integrated into a national strategy for the sound management of chemicals, and designed to have a sustainable impact. Frequent examples of duplication or inconsistency among international capacity building activities indicate the need for organizations to better coordinate their efforts and increase their understanding of the existing situation and ongoing efforts at the country level prior to initiating projects or activities. Questions remain, however, as to how these goals might be best achieved and what practical steps organizations should take to enhance current capacity building efforts.

8.3 Opportunities and Strategies for Strengthening International/Bilateral Capacity Building Activities

Some key challenges to be addressed in improving upon the capacity building and assistance services of international/bilateral organizations include: how to focus international and bilateral assistance and capacity building efforts towards the priority needs as defined at the country level; how to foster some key principles of effective capacity building which will be accepted by all players and which will help to ensure an effective and sustainable impact at the country level; and how to

National Profiles provide a good opportunity for matching in a systematic way the potential contributions of various actors involved in capacity building with the priorities for action as identified at the country level.

achieve effective coordination among the various multi-lateral and bilateral organizations involved in chemicals management capacity building at the country level.

Focusing Capacity Building Activities on National Needs and Priorities

National Profiles provide a good opportunity for matching in a systematic way the potential contributions of the various key actors involved in capacity building with the priorities for action that have been identified at the country level. International and bilateral organizations considering the initiation of capacity building or assistance projects should consult the National Profile, if one has been prepared, to ensure that their proposed activities will address the priority needs as identified at the country level. In order to facilitate this process, the IOMC member organizations and bilateral assistance agencies, in collaboration with UNITAR, should assist countries in preparing National Profiles and, as far as possible, provide follow-up assistance in the implementation of National Action Programmes.

Guiding Principles for the Design and Implementation of Effective Capacity Building Programmes

While many capacity building and training activities of the various international, regional and bilateral organizations have contributed significantly to strengthening national capabilities and capacities for sound chemicals management, others have not had a sustainable impact at the country level for a variety of reasons. Key guiding principles, based on the lessons that have been learned about what approaches are successful and why, may help to ensure that the capacity building efforts of international and bilateral organizations are able to achieve effective and long-lasting results. To be effective, such principles would need to be discussed among and taken into consideration by the various international/bilateral actors. Annex 1 contains as a starting point a draft "checklist" of some guiding principles for initiating and sustaining successful capacity building initiatives at the country level.

Improving Coordination Among Country-based Capacity Building Activities of International/Bilateral Organizations

Information exchange and enhanced coordination, including collaboration on materials development as well as activities at the country level, should be fostered and pursued among international and bilateral organizations as a means to achieve better, more cost-effective results. Some actions which international and bilateral organizations

might take to improve coordination and identify opportunities for mutually supporting linkages of their respective capacity building activities include:

- encouraging countries to set up a national task force to systematically track and coordinate all external support activities, and then work with this entity to identify possible linkages and address inconsistencies;
- establishing at the country level coordinating structures with representations of IOMC member organizations, UNITAR, bilateral organizations, and NGOs;
- seeking information on ongoing and planned activities of other international actors, including international and regional organizations, bilateral technical assistance agencies, industry organizations and other NGOs, prior to initiation of activities; and
- clarifying the roles and responsibilities of national focal points of international agreements and organizations to help ensure that relevant information is shared and disseminated at the country level.

At the international policy level, further discussions might be held on possible division of responsibilities and cooperative relationships between international and bilateral organizations, based on their comparative advantages and strengths and in order to make efficient use of limited resources for implementing country-based activities.

9. Developing Appropriate Materials for Chemicals Management Capacity Building

9.1 Introduction

A wealth of materials has been prepared on various aspects of chemicals management by international, bilateral and national organizations and the private sector. These materials fall into several categories and have been used for a variety of purposes in the context of chemicals management capacity building. *Guidance documents* are meant to stimulate national policy discussions and catalyze possible activities within the country. *Resource documents* provide developing countries with access to pertinent and up-to-date information on various aspects of chemicals management. *Training manuals* are intended to address the needs of individuals in developing countries to acquire and further develop technical skills related to specialized aspects of chemicals management.

While a large body of literature exists, the materials overlap in some cases and provide, at times, conflicting messages. Some areas are covered in depth (e.g. safe use of pesticides), while others have received very little attention (e.g. management of consumer product chemicals). In some cases the existing materials may not be well suited to the needs and circumstances of developing and industrializing countries in terms of content, scope, presentation and/or adaptability.

Development of a comprehensive series of training and capacity building materials which addresses all important aspects of chemicals management in a systematic and integrated manner, and which meets the specific needs of developing and industrializing countries, would be an important contribution to global capacity building efforts. Important first steps in undertaking this effort would be to identify the specific chemicals management areas to be covered and to establish specifications and criteria according to which the materials should be developed and/or evaluated.

9.2 Criteria for Developing Guidance, Resource and Training Materials

Agreeing on some key principles and criteria could help to ensure the development of materials that are well-tailored to circumstances in developing and industrializing countries and meet the needs of the

In order to be most effective, guidance and resource materials need to be relevant to the situation and problems currently being faced at the country level.

developing and industrializing countries and meet the needs of the various international and bilateral organizations involved in chemicals management capacity building activities. Such criteria could address the content and presentation of information, such as the need for documents to be user-friendly and geared towards the needs of the intended users. Experience indicates that in order to be most effective, materials need to be directly relevant to the situation and problems being faced at the country level.

Criteria could also be established to guide the process through which materials are developed, both at the international and national levels. For example, in order to ensure their relevance, materials should be developed in close collaboration with individuals in the countries where they will be used, and peer review should be emphasized as an important stage in the process. In some cases materials, e.g. training manuals and site-specific case studies, should be prepared at the country level, drawing upon existing documents and external expertise as needed. Annex II contains a draft listing of possible criteria and principles for developing effective materials for chemicals management capacity building.

9.3 Guidance, Resource and Training Materials to Assist Countries in Strengthening National Chemicals Management

The following are some of the topics which might be addressed in a comprehensive series of relevant guidance, resource and training materials to address the full range of procedural and substantive issues which countries are likely to face in developing an integrated approach to national chemicals management and safety.⁴

Guidance documents could be provided on: organizing a National Action Programme; the key elements of a national chemicals management system; establishing a national chemicals management information system; linking chemicals management activities with pollution prevention and control programmes; organizing a national chemicals management workshop; addressing legislative and regulatory issues; managing the risk of obsolete pesticides, pharmaceuticals and other hazardous chemicals; and promoting Integrated Pest Management; among others.

Resource materials could provide information on: experiences gained

⁴ Materials already exist which address some of these important areas and topics. UNITAR is preparing an inventory of all relevant training, guidance and resource materials of the various international and bilateral organizations.

with specific chemicals management instruments; international agreements with relevance for chemicals management and safety; activities and resources of international/bilateral organizations; available guidance and training materials; existing chemical safety databases of international organizations, governments and other groups; and information and data related to chemical risk assessment; among others.

Training materials could address needs for capacity- and skills-building in the areas of: chemical risk assessment; risk management decision-making; awareness raising and risk communication; addressing local chemicals management problems; establishing chemical standards; data selection, interpretation and validation; and the use of ecotoxicology and environmental monitoring as tools for chemicals management, among others.

Annex III provides a partial listing of materials which exist or are under preparation to address some of these key areas.

10. Key Issues to be Addressed in Further Developing a Coordinated International Capacity Building Strategy

10.1 Introduction

While the preceding chapters provide a diverse spectrum of observations and suggestions to ensure effective capacity building programmes for the sound management of chemicals, several key questions and challenges will need to be further addressed in a systematic manner. An immediate goal would be to initiate a process involving all interested parties through which innovative and pragmatic solutions to outstanding issues in the area of chemicals management capacity building could be explored. Further action is required (1) to systematically review progress achieved, as well as remaining obstacles, in implementing Programme Area E, drawing upon National Profiles and the work of regional IFCS working groups, (2) to facilitate partnerships for chemicals management capacity building at all levels, (3) to explore innovative approaches and financing mechanisms, and (4) to identify means for enhancing the effectiveness of capacity building efforts through increased coordination and improved targeting of capacity building programmes to address priority needs as identified by countries and regions.

10.2 Effective Support of National Efforts

As the number of countries which have completed their National Profiles and initiated National Action Programmes is likely to grow, possible mechanisms need to be explored which will facilitate targeting technical assistance and technological cooperation towards the needs and priorities that have been identified at the country level. Some key questions to be addressed include:

- What systematic steps can be taken by countries, following the preparation of National Profiles?
- Through what mechanism could relevant information from National Profiles be made available to international, bilateral and other organizations to mobilize and better target external support?
- How can international and bilateral cooperation agencies, as well as the development banks, be mobilized to support countries in their

efforts to implement National Action Programmes for integrated chemicals management?

- How might transfer of experience and lessons learned (both positive and negative) between countries be facilitated on a partnership basis?
- How can the contributions and responsibilities of non-governmental organizations be strengthened, including industry, public interest groups, workers' unions and scientific organizations?

10.3 Strengthening Regional Efforts

Strengthening regional programmes and initiatives will be a cornerstone of an effective international capacity building strategy for the sound management of chemicals. Key questions which need to be further addressed include:

- How can regional offices of international organizations be effectively engaged and utilized, recognizing their unique position and potential ability for making linkages between national priorities and key developments at the international level, as well as their relationships with donor countries? How might such a mechanism be coordinated with global efforts and those of the IFCS regional working groups?
- Through what mechanism can regional IFCS working groups receive sufficient support and funding to ensure their ability to meet and work together in a systematic way?
- How might relevant information from Regional Profiles, prepared based on National Profiles, be used as a basis for implementing Regional Action Programmes?
- How can regional initiatives effectively support National Action Programmes and be coordinated with the projects of international and bilateral cooperation agencies?
- How can commitment of regional organizations, regional development banks and regional economic cooperation organizations be mobilized to support national and regional efforts in the area of chemicals management?

10.4 Mobilization and Coordination of International and Bilateral Activities

Capacity building activities of international and bilateral agencies will also play an important role in supporting national and regional efforts to achieve sound chemicals management and improve chemical safety. Some key questions to be addressed in this context include:

The IFCS, in cooperation with other concerned parties, may want to identify concrete activities to strengthen international, regional and bilateral capacity building efforts in a systematic way.

- Building upon the ongoing work of the IOMC, what additional activities/mechanisms are needed to ensure coordination and mutual support among capacity building activities of international organizations, multi-lateral development banks and bilateral cooperation agencies?
- Recognizing the comparative advantages of international, multi-lateral and bilateral organizations, what should be the division of responsibilities in implementing country-based activities?
- How can international and regional organizations cooperate in compiling, developing and disseminating a comprehensive package of guidance, resource and training materials which fully address countries' needs? Through what mechanisms can these materials be made available for use by countries that are providing bilateral technical assistance?
- How can the ability of international organizations to implement training and capacity building programmes be strengthened?
- How can the commitment of multi-lateral development banks be mobilized to make chemicals management capacity building a priority of their programmes, while making use of the services and substantive expertise available through IOMC member organizations?
- How can global priorities (e.g. POPs) become a driving force for, and be integrated into, training and capacity building activities conducted at the regional and national level?

Using the above questions as a starting point, the IFCS, in cooperation with other concerned organizations and parties, may want to identify concrete activities to strengthen international, regional and bilateral capacity building efforts in a systematic way. In particular, a strategic training and capacity building plan should be developed by the IFCS in order to mobilize support at all levels to match countries' needs and

requests. Some possible actions and issues to be considered by the IFCS are provided in Annex IV. Possible actions and key issues to be taken up by the IOMC, international and bilateral organizations, and other actors at the international, regional and national levels are provided in Annex V.

ANNEX I

Guiding Principles for Effective Capacity Building

The following are some suggested guiding principles aimed to help ensure that capacity building programmes of international organizations and bilateral development cooperation agencies meet countries' needs, trigger sustainable results, and are adapted to fit national and local circumstances.

- Capacity building activities should address the needs and priorities as identified at the country level, and should be integrated into countries' broader national strategies and long term goals in order to achieve sustainability and ensure national ownership.
- International/bilateral organizations should consult National Profiles (if available) to find out about countries' priority needs and existing infrastructures.
- International/bilateral organizations should consult with and get the approval of partner countries to ensure that planned capacity building activities meet their needs and fit into the national strategy.
- Partner countries should be encouraged to play a key role in coordinating and integrating the capacity building activities of various international and bilateral organizations.
- An integrated (e.g. inter-ministerial, intersectoral) approach should be encouraged and used in carrying out capacity building activities.
- International/bilateral organizations should ensure that their initial entry point or national contact (e.g. governmental ministry) will involve other actors, as appropriate.
- Organizations initiating capacity building activities should consider requiring a minimum of co-sponsorship as a pre-condition for receiving capacity building resources/services in order to create an incentive for multi-stakeholder involvement.
- Projects should be designed to be economically sustainable and to accommodate existing constraints in infrastructure, resources, etc.
- Capacity building activities directed towards government should build the capacity of government to mobilize action within other sectors (e.g. industry).
- Training of staff should be coupled with efforts to ensure the commitment of decision makers to use the skills that are acquired.

- Organizations involved in chemicals management capacity building should focus on activities with spill-over and "multiplier" effects that could motivate additional actions within or among countries.
- Organizations should obtain information on ongoing/planned activities of other international actors, including international and regional organizations, bilateral technical assistance agencies, industry organizations and other NGOs, prior to initiation of any activity. Organizations should make this type of information available, e.g. through existing coordinating mechanisms, Internet, etc.
- Organizations involved in capacity building should coordinate with other international and bilateral entities to ensure efficient use of resources and to avoid duplication and inconsistency among projects.

ANNEX II

Guiding Principles and Criteria for Developing Effective Guidance, Resource and Training Materials

- Whenever appropriate, materials should be developed through direct involvement of people in partner countries as an integral part of capacity building activities.
- Documents should aim to address in a pragmatic way the actual problems or issues that countries are facing in their efforts to strengthen national chemicals management.
- Materials should be user-friendly and geared towards the specific needs of the intended user group(s).
- Peer review should be included as an important step in the development process, and should involve the intended users of the materials.
- Partnerships between developing and developed countries can be a potentially effective approach to materials development.
- Training materials should use a modular approach to address particular problems or issues, and should include case examples and interactive hands-on exercises to build skills to address concrete problems and to facilitate "learn-by-doing."
- Development of core modules, accompanied by a train-the-trainer approach, can enable countries to draw upon existing materials while allowing countries to tailor the materials to their individual needs and situations.

ANNEX III

Document Series for Chemicals Management Capacity Building

The following is a partial list of guidance and resource materials which have been discussed during, or initiated as follow-up to, the UNITAR-organized Expert Meeting, Montézillon, Switzerland, August 1996. The documents are intended to assist countries in strengthening their national chemicals management through an integrated and multi-stakeholder approach.

Initial drafts and proposed outlines for all but one of the following documents were reviewed and discussed by a group of experts from developed and developing countries and NGOs during the UNITAR/IOMC Group of Experts Meeting to Review Guidance Documentation for the UNITAR/IOMC Pilot Capacity Building Programme, Geneva, Switzerland, 22-24 January 1997. Further development of these documents will take place within the context of the UNITAR/IOMC Pilot Capacity Building Programme through a participatory process involving input from the member organizations of the IOMC, UNITAR, and other interested organizations and governments. The document entitled *Key Elements of a National Programme for Chemicals Management and Safety: A Guidance Document*, which has been jointly prepared by IPCS and UNITAR, was reviewed during the IPCS/UNITAR Working Group on Guidance Material for Strengthening National Capabilities and Capacities for Sound Management of Chemicals, Geneva, Switzerland, 20-21 January 1997.

Guidance Documents

Guidance documents which address the overall strategic approach at the country level towards the development of a national system for integrated chemicals management include:

- *Preparing a National Profile to Assess the National Infrastructure for Management of Chemicals: A Guidance Document*. (UNITAR/IOMC, 1996)

This document provides guidance to countries for organizing a national, multi-stakeholder process to prepare a National Profile. It includes detailed guidance on the structure and content of a National Profile, and aims to assist countries in conducting an assessment of the existing infrastructure and capabilities for chemicals management. The document is available in English, French and Spanish, and has been distributed to key national contact points in all member countries.

- *Planning and Implementing a National Action Programme for Integrated Chemicals Management*. (UNITAR/IOMC, final draft)

This document is intended to assist countries in planning and implementing a National Action Programme for chemicals management and safety through a multi-stakeholder process. The document provides a procedural framework, including specific guidance on

each stage of the suggested process, in order to help countries work through all aspects of programme planning, development and implementation.

- *Organizing a National Workshop on Chemicals Management and Safety: A Guidance Document.* (UNITAR/IOMC, final draft)

This document is intended to assist countries in organizing a National Priority Setting Workshop on chemicals management and safety, following the preparation of a National Profile. Guidance is provided on a diverse set of issues related to effective workshop planning, implementation and follow-up, and on possible workshop methodologies which could be applied to fit the specific situation and objectives of each country.

Guidance documents which provide process-oriented guidance to assist countries in addressing specific elements or aspects of chemicals management and safety include:

- *Raising Awareness and Communicating Risk for Chemicals Management and Safety: A Guidance Document.* (UNITAR/IOMC, under preparation)

This document will provide practical guidance for improving chemicals management and safety through awareness raising and risk communication. A main focus of the guidance will be to assist a task force or other users of the document in developing innovative and pragmatic strategies that meet existing needs and circumstances at the national/local level. The document will address possible tools and mechanisms for providing information, and will draw upon case examples of both successful and unsuccessful approaches that have been used at the country level.

- *Strengthening National Information Systems for Integrated Chemicals Management: A Guidance Document.* (UNITAR/IOMC, under preparation)

This guidance document will assist countries in thinking through key issues of strengthening national chemicals information systems/networks, including effective chemical information gathering, use and dissemination, and the establishment of compatible national information management systems.

- *Integrated Implementation of International and Regional Agreements Related to Chemicals Management and Safety: A Guidance Document for Countries.* (UNITAR/IOMC, under preparation)

This document will provide guidance for countries on identifying linkages among the various international and regional agreements with relevance for chemicals management as a means for exploring opportunities for integrated implementation within specific areas of national chemicals management. A resource document providing information on the various agreements will be available as a companion to this guidance (see below).

- *Developing Risk Management Policy for Integrated Chemicals Management: A Guidance Document* (UNITAR/IOMC, under preparation)

This document will assist countries in thinking through some key issues related to the development of risk management policy within an integrated national approach to chemicals management. In particular, it is intended to assist a task force responsible for developing risk management policy within the context of a National Action Programme for integrated chemicals management.

Resource Documents

- *Key Elements of a National Programme for Chemicals Management and Safety: A Guidance Document*. (IPCS/UNITAR under the IOMC, 1997)

This document provides an overview of the key elements of a national chemicals management and safety programme. It is intended to serve as a framework document for countries undertaking efforts to establish national systems for integrated chemicals management.

- *Introduction to Key Issues of Risk Assessment and Risk Management: A Resource Document*. (UNITAR/IOMC, under preparation)

This overview document aims to enhance a broad understanding of key issues of risk assessment and risk management within the context of national chemicals management. The document will introduce: the various existing methodologies for risk assessment including important underlying scientific concepts; key concepts and approaches within risk management, including the use of risk in priority setting and decision making and issues pertaining to effective communication of risk; and the linkages between risk assessment and risk management. References to sources of more in-depth information will also be provided within each topic area.

- *Chemicals Management Instruments: A Series of Resource Documents*. (UNEP/UNITAR under the IOMC, under preparation)

This series of resource documents will provide an overview of chemicals management policy instruments applied in countries (both developed and developing) with advanced chemicals management schemes. The documents will include, for each tool or approach, a review of experiences gained with regard to effectiveness and resource requirements from a country's perspective. UNEP and UNITAR have initiated a joint effort to coordinate the preparation of the series under the umbrella of the IOMC and in collaboration with interested organizations, governments and other parties.

- *International and Regional Agreements Related to Chemicals Management and Safety: A Resource Document.* (UNITAR/IOMC, under preparation)

This document will provide an overview of various instruments and agreements which have been adopted at the international and regional levels to encourage countries to reduce risks associated with the importation, production, transport, use and disposal of chemicals. Through a set of Fact Sheets, practical information will be provided on each relevant agreement, including a summary of its chemicals related provisions, participating countries, the address of the secretariat, etc. The document will also include an analysis section which identifies chemicals management areas (e.g. risk management) which are addressed by more than one agreement and which therefore might be considered in an integrative way from the perspective of an implementing country.

- *Activities and Resources of International and Bilateral Organizations to Support National Chemicals Management and Safety Programmes.* (UNITAR/IOMC, under preparation)

This document will provide practical information on resources and expertise available through key international organizations which are active in the area of chemicals management. For each concerned organization it will provide an overview of its various programmes, available resources, guidance and training manuals and contact points for further information. In addition, information will be provided on some of the major bilateral cooperation agencies which have active programmes or an interest to support countries in strengthening their chemicals management schemes. At this time, UNITAR is preparing a list of subject categories based on which a table will be developed to summarize the areas of expertise and resource materials of international organizations.

ANNEX IV

Recommended Actions Related to the Work of the IFCS

It is recommended that action be taken to encourage the IFCS to:

- Develop a strategic training and capacity building plan in order to mobilize support at all levels to match countries' needs and requests;
- Consider establishing an IFCS Ad Hoc Working Group on Programme Area E;
- Further raise awareness among governments, in recognition that in many countries chemicals management is not yet seen as an issue for priority attention at the national level, and given that such attention is often a prerequisite for concerted action;
- Lead and catalyze substantive and cooperative action at the regional level through its regional working groups; and
- Use and promote the preparation of comprehensive National Profiles in all countries as a main driving force for stimulating discussions and activities in the area of chemicals management capacity building.

ANNEX V

Recommended Actions Related to the Work of International and Regional Organizations, Bilateral Development Cooperation Agencies, NGOs and Other Partners Involved in Chemicals Management Capacity Building

It is recommended that action be taken to:ⁱ

- Encourage the IOMC to coordinate the development of a comprehensive IOMC training and capacity building strategy in order to ensure that the work of IOMC member organizations is mutually supportive;
- Promote pragmatic division of responsibilities among IOMC member organizations, other international organizations, bilateral development agencies, multi-lateral development banks, governments and other interested parties, within a coordinated international capacity building strategy, to ensure that each organization contributes its services in line with its expertise and comparative advantages;
- Promote joint pilot programmes as a means for defining an appropriate division of responsibilities among IOMC organizations and others in the implementation of country-based activities. The results of such pilot initiatives, including the one recently initiated by UNITAR/IOMC, should be evaluated and disseminated as a means for further exploring possible models for collaboration;
- Encourage the IOMC member organizations and bilateral assistance agencies, in collaboration with UNITAR, to assist countries in the process of preparing National Profiles;
- Encourage the IOMC member organizations, bilateral assistance agencies, and other organizations to provide follow-up assistance to countries in the implementation of National Action Programmes and based on needs identified in their National Profiles;
- Encourage international, bilateral and regional organizations to endorse some key guiding principles for programme development and implementation;
- Build upon the current effort of the IOMC to collect detailed information on activities of its member organizations as a means for obtaining a better understanding of, and identifying possible linkages among, the work of international organizations in the area of chemicals management;

ⁱ Key actors potentially to be involved in initiating such actions include member organizations of the IOMC, UNITAR, other international organizations, regional organizations, bilateral assistance agencies, multi-lateral development banks, industry, labour and public interest groups, research and academic institutions, and other key actors involved in chemicals management capacity building.

- Build upon the efforts of OECD to identify the activities of national agencies and bilateral assistance organizations as a means for obtaining a better picture of training and capacity building activities that are being conducted outside the UN system;
- Generate a mechanism to pool available expertise and resources of the IOMC, UNDP, UNITAR, NGOs, industry associations, multi-nationals, bilateral agencies and participating governments in order to implement joint country-based programmes through effective cooperation;
- Encourage regional offices/programmes of international organizations, regional economic organizations, and bilateral/multilateral agencies that are active in chemicals management to enhance their capacity building activities in support of national chemicals management; and
- Consider the Global Environment Facility (GEF) as an opportunity to obtain funding for activities in the field of chemicals management, in particular through its activities related to "contaminated international waters".

ANNEX VI

List of Acronyms

CPL	Classification, Packaging and Labelling
DNA	Designated National Authority
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
GEF	Global Environment Facility
IFCS	Intergovernmental Forum on Chemical Safety
ILO	International Labour Organization
IOMC	Inter-organization Programme for the Sound Management of Chemicals
IPCS	International Programme on Chemical Safety
ISG	Intersessional Group (of the IFCS)
MSDS	Material Safety Data Sheet
NAFTA	North American Free Trade Agreement
NCT	National Coordinating Team
NGO	Non-Governmental Organization
OECD	Organisation for Economic Co-operation and Development
POP	Persistent Organic Pollutant
PRTR	Pollutant Release and Transfer Register
SME	Small and Medium-sized Enterprise
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organisation
UNITAR	United Nations Institute for Training and Research
WHO	World Health Organization

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