UNITED NATIONS INSTITUTE FOR TRAINING AND RESEARCH

Preparing a National Profile To Assess the National Infrastructure For Management of Chemicals

A Guidance Document

Second Edition (June 2006)

IOMC

INTER-ORGANIZATION PROGRAMME FOR THE SOUND MANAGEMENT OF CHEMICALS

A cooperative agreement among UNEP, ILO, FAO, WHO, UNIDO, UNITAR and OECD

How to Make Use of this Guidance Document to Address National Needs and Priorities

This ***Guidance Document***, has been developed to assist countries in preparing comprehensive National Profiles for the sound management of chemicals, through a process which involves all interested parties at the country level. While the suggested approach is comprehensive, the document has been designed to provide flexibility to countries National Profiles should be prepared in accordance with country priorities and be consistent with available information and resources, and often a less comprehensive approach is adequate. In particular, the tables contained in Part C of this document should be considered illustrative and should be adapted to meet national needs and circumstances.

A National Profile

- can become an official national reference document, providing a clear picture of the national legal, institutional, administrative and technical infrastructure for national chemicals management, and
- may assist in the identification of infrastructure related strengths, weaknesses, and gaps, as well as priority needs for national action and external technical assistance
- could provide a nationally recognised information base against which may be judged progress in meeting specific national or international targets.

The preparation process can be useful in developing a situation analysis of national capacity for sound management of chemicals in relation to specific areas, such as persistent organic pollutants (POPs), and a companion guidance document has been prepared for this particular purpose, as is in preparation in relation to the Prior Informed Consent Convention.

To remain valuable, the National Profile should be reviewed periodically to determine when updating is needed. The use for which the National Profile is intended will determine how often updating is warranted; for most purposes updating every few years would be appropriate. The Guidance Document is intended to be useful also as countries update or revise their National Profiles for specific purposes.

This ***Guidance Document*** has been prepared in the context of UNITAR's Training and Capacity Building Programmes in Chemicals and Waste Management.

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Introduction to the Guidance Document

Chemicals encompass substances of man-made and natural origin and are increasingly used in the agricultural, industrial and consumer sectors of all societies. While indispensable in many economic activities, there is increasing evidence to suggest that chemicals and chemical products can contribute to health and environmental problems at various stages during their life cycle from production/import through disposal, as well as resulting from unintended occurrence. Such problems include

- pollution generated during production processes, improper handling, storage and transport accidents, occupational accidents and diseases, and
- environmental contamination due to unsound disposal methods.

While in the developing world much evidence of such problems is often associated with the use, and misuse, of pesticides in the *agricultural sector*, increasingly, industrial and consumer chemicals are reported to cause severe health and environmental problems as countries develop from agricultural to *industrial societies*. Furthermore in many countries, chemicals of *natural origin* may also give rise to adverse health impacts in a variety of segments of society.

It is now widely recognized that chemicals need to be managed properly in order to achieve a sustainable level of agricultural and industrial development and a high level of environmental and human health protection. One important step in strengthening national systems for the management of chemicals is a comprehensive assessment, called a National Profile, of

- the national infrastructure and capacity, relating to the legal, institutional, administrative and technical aspects of chemicals management, along with
- the nature and extent of chemicals availability and use throughout their life cycle in the country.

Further the National Profile would provide a recognised country information reference base that can be used to judge progress in meeting specific national or international targets, in implementing the Strategic Approach to International Chemical Management (SAICM, Dubai 2006), as well as the WSSD (Johannesburg 2002) goal of sound management of chemicals by 2020 and United Nations 2015 Millennium Development Goals as they relate to achieving environmental sustainability.

This ***Guidance Document,*** initially issued in 1996 and revised as a second edition in 2006, has been developed to assist countries in preparing such National Profiles. It is intended to assist

- countries who still need to prepare National Profiles
- countries who will update or revise their National Profiles for specific purposes and to respond to emerging issues, ensuring that there is available in the country a sound information base for decision making in relation to life cycle chemicals management.

It has been prepared by UNITAR under the umbrella of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC), a cooperative agreement of UNEP, ILO, FAO, WHO, UNIDO, UNITAR and OECD, with UNDP and the World Bank as observers, and in close co-operation with the Secretariat of the Intergovernmental Forum on Chemical Safety (IFCS).

Part A provides an updated **introduction** to the international and national policy frameworks for the sound management of chemicals. It emphasises the need to ensure close coordination among concerned ministries towards achieving the sound management of chemicals.

Part B introduces possible **objectives and benefits** of preparing a National Profile. It provides suggestions for organizing the preparation of a National Profile at the national level.

A key element of this preparation is the involvement of a broad range of concerned parties, both within and outside of government at all levels within a country. Such involvement helps to ensure that the National Profile can become an official national reference document which is endorsed by all concerned parties. While many countries have already undertaken similar situation analyses exercises or will use this Guidance Document to update an existing National Profile, the more practical details of the organizational arrangements for preparing a National Profile have been kept in the latter section of Part B of the second edition at the request of some countries.

Part C provides a guide for the structure and content of a National Profile[1]. A series of tables, descriptive sections, and questions are provided

- to assist in documenting and analyzing the existing infrastructure, including its strengths and weaknesses,
- to indicate improvements that my need to be made, and
- to update an existing National Profile.

Acknowledgements

UNITAR would like to express its deep appreciation to member organizations of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC), member countries of the Intergovernmental Forum on Chemical Safety (IFCS), and the IFCS Secretariat for their encouraging support to this activity.

Several governments have contributed and continue to contribute financially to the preparation of National Profiles in developing countries and/or countries with economies in transition. Special thanks are extended to the European Commission and to the Governments of Australia, Austria, Canada, Germany, the Netherlands, Switzerland, and the United States of America.

In addition, numerous individuals have made immense contributions to the preparation of the original ***Guidance Document*** and its revision as a second edition. Mentioning each and everyone would be beyond the scope of this introduction, though it must be said, without their help and dedication, it would not have been possible for UNITAR to finalize the original document on time to allow many countries to meet the ambitious targets established by the IFCS for the preparation of National Profiles.

[1] Some additions and modifications have been made to the original structure and contents to reflect the changed situation during the intervening decade since the preparation of the first edition and to fill gaps in areas not adequately covered in the earlier version of the Guidance Document

PART A:

The International and National Policy Frameworks for the Sound Management of Chemicals and for the Preparation of National Profiles

1. Introduction

This part of the ***Guidance Document*** provides an introduction to the international and national policy frameworks for the sound management of chemicals. It includes a discussion on the need to ensure close coordination among concerned ministries and non-governmental partners towards achieving the sound management of chemicals.

2. Background on the International Policy Framework

Agenda 21 and chemical safety

In 1992, the United Nations Conference on Environment and Development ("Rio Conference") was held. It marked an important event towards the goal of achieving sustainable economic development which meets the needs of the present without compromising the needs of future generations. Heads of States or Government from more than 150 member countries of the United Nations adopted "Agenda 21", a comprehensive document outlining responsibilities of States towards the achievement of sustainable development.

Chapter 19 of "Agenda 21" is entitled "Environmentally Sound Management of Toxic Chemicals, including Prevention of Illegal International Traffic in Toxic and Dangerous Products". All countries present at the Rio Conference agreed on the goal of achieving the sound management of chemicals for which major progress should be made by the year 2000. Further, related to Chapter 19 are chapter 20 entitled " Environmentally sound management of hazardous wastes, including prevention of illegal international traffic in hazardous wastes" and Chapter 21 entitled " Environmentally sound management of solid wastes and sewage-related issues", which are concerned with certain aspects of life cycle management of chemicals.

In 1994, the International Conference on Chemical Safety (Stockholm, Sweden) brought together high level representatives from more than 100 countries to identify priorities to implement Chapter 19. The Stockholm Conference established the Inter-governmental Forum on Chemical Safety (IFCS), through which countries now regularly discuss their activities and priorities for the sound management of chemicals. The Stockholm Conference, also marking the first meeting of the IFCS, adopted a "Priorities for Action" plan to implement the recommendations of Chapter 19 of Agenda 21. The Forum discussed Programme Area E of Chapter 19 which deals with "Strengthening of National Capabilities and Capacities for Management of Chemicals". It recommended that "national profiles to indicate current capabilities and capacities for management of chemicals and the specific needs for improvement should be elaborated as soon as possible and not later than 1997". Subsequently, three more meetings of the Forum have been held (1997, 2000 and 2003) at which further priority activities have been adopted. At the third meeting, held in Salvador de Bahia, Brazil, the IFCS adopted the Bahia Declaration on Chemical Safety and Priorities for Action Beyond 2000. It called upon countries to develop a National Profile on Chemicals Management though a multi-stakeholder process and to ensure national coordination for sound management of chemicals. This was again reinforced at the fourth meeting held in Bangkok, Thailand in 2003. It was noted that 71 countries had prepared national profiles and an additional 27 were in the process of developing a national profile.

At the level of international organizations, UNEP, ILO, FAO, WHO, UNIDO, and OECD established in 1995 the Inter-Organization Programme for the Sound Management of Chemicals (IOMC), a co-operative agreement to co-ordinate activities in the area of chemicals management. UNITAR subsequently became a member of the IOMC in 1997 and UNDP and the World Bank participate as observer organizations. Through the mechanism of the IOMC, these organizations initiate, facilitate and coordinate international action to implement the SAICM and to achieve the WSSD 2020 goal for sound management of chemicals (see below) and to cooperate towards linking and integrating their respective programmes in the area of chemical management and safety.

Policy instruments
Since the late 1980's several international policy instruments have been adopted which address specific aspects of chemicals management. These instruments include, for example:

- UNEP London Guidelines for the Exchange of Information on Chemicals in International Trade (as amended in 1989)
- FAO International Code of Conduct on the Distribution and Use of Pesticides (as revised in 2002)
- ILO Convention (No. 170) Concerning Safety in the Use of Chemicals at Work (1990)
- ILO Convention (No. 174) Concerning the Prevention of Major Industrial Accidents (1993)
- Vienna Convention and the Montreal Protocol on Substances that Deplete the Ozone Layer. (signed 1985 and entered into force on 22 September 1988)
- Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal (signed 1989 and entered into force on 5 May 1992)
- Paris Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and Their Destruction – Chemical Weapons Convention (signed 1993 and entered into force on 29 April 1997)
- Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.(signed 1998 and entered into force on 24 February 2004)
- Stockholm Convention on Persistent Organic Pollutants (POPs) (signed 2001 and entered into force on 17 May 2004)
- Globally Harmonized System for the Classification and Labelling of Chemicals (GHS) (adopted in December 2002 and endorsed by ECOSOC in July 2003), which is a voluntary agreement rather than a multi-lateral convention.

Furthermore, other Multilateral Environmental Agreements relevant to sound management of chemicals and waste have been adopted by the General Assembly of the United Nations, as well as by various regional bodies; for example, the UNECE Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in

Environmental Matters, adopted on 25th June 1998. The Convention links environmental rights and human rights. Additionally there are Protocols to existing Conventions, such as that to the Basel Convention, on Liability and Compensation, adopted in December 1999, which established rules on liability and compensation for damages caused by accidental spills of hazardous waste during export, import or during disposal.

In 2001, The Global Environment Facility (GEF) was selected as the interim financing mechanism for the Stockholm Convention on persistent organic pollutants and the GEF Council approved guidelines for enabling activities for the Convention which, *inter alia,* recommended the preparation of a National Profile as a key output of a National Implementation Plan for the Convention, and encouraged the use of the UNITAR/IOMC guidance which constitutes this second edition guidance document.

The World Summit on Sustainable Development, (WSSD) was held in Johannesburg, South Africa from 26 August to 2 September 2002. It built on the achievements made since UNCED. It recognised the potential for synergy across the implementation of the various chemicals-related international agreements and the need for related coordination within countries, and agreed on a *Plan of Implementation*. The Johannesburg Plan renewed the commitment, as advanced in Agenda 21, to sound management of chemicals throughout their life cycle and of hazardous wastes. It aimed, *inter alia*, to achieve, by 2020, that chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment, using transparent science-based risk assessment procedures and science-based risk management procedures, taking into account the precautionary approach, as set out in principle 15 of the Rio Declaration on Environment and Development The Plan also aimed to support developing countries in strengthening their capacity for the sound management of chemicals and hazardous wastes by providing technical and financial assistance. Included in this plan are recommendations to "Promote the ratification and implementation of relevant international instruments on chemicals and hazardous waste, and encourage and improve coordination as well as supporting developing countries in their implementation" (Paragraph 22(a)), and "Encourage partnerships to promote activities aimed at enhancing environmentally sound management of chemicals and hazardous wastes, implementing multilateral environmental agreements, raising awareness of issues relating to chemicals and hazardous waste, and encouraging the collection and use of additional scientific data" (Paragraph 22(d)).

International strategies

Building on the IFCS Bahia Declaration and Priorities for Action Beyond 2000, development of a "Strategic Approach to International Chemicals Management" (SAICM), comprising the Dubai Declaration on International Chemical Management, the Overarching Policy Statement and the Global Plan of Action, was adopted in February 2006. Sound management of chemicals is recognised as essential to achieve sustainable development, including eradication of poverty and disease, the improvement of public health and the environment and the elevation and maintenance of the standard of living in countries at all levels of development. Involvement of all relevant sectors and stakeholders, including a the local, national, regional and global levels are seen as key to achieving the SAICM objectives, while respecting human rights and fundamental freedoms, understanding and respecting ecosystem integrity and promoting environmental governance and democracy.

A number of countries and groups of countries are also planning new chemicals strategies, such as proposed for the European Union, in the White Paper on the Strategy for a Future Chemicals Policy, published in February 2001 (COM (2001) 88), where the Commission outlined its strategy for ensuring a high level of chemical safety and a competitive chemical industry through a system for the Registration, Evaluation and Authorisation of Chemicals - the REACH system. The White Paper is based on seven objectives that need to be balanced within the overall framework of sustainable development:

- Protection of human health and the environment
- Maintenance and enhancement of the competitiveness of the EU chemical industry
- Prevention of fragmentation of the internal market
- Increased transparency
- Integration with international efforts
- Promotion of non-animal testing
- Conformity with EU international obligations under the WTO

The system represents a model of sustainable development by pursuing objectives in three areas: economic (industrial competitiveness), social (jobs) and environmental (protection of human health and the environment).

Further, achieving the United Nations Millennium Development Goals – as they relate to achieving environmental sustainability – would call for the reduction in exposure to toxic chemicals and the improvement in frameworks for chemicals management. The preparation of a National Profile could serve as a useful tool in this context by providing a comprehensive picture of the national infrastructure and capacity in which chemicals-related international agreements would be implemented.

In addition, a number of guidance documents have been or are being prepared by international organizations (both inter-governmental and non-governmental) to assist countries in establishing and implementing chemicals management schemes. UNITAR/IOMC has also held a number of Thematic Workshops on Priority Topics of National Chemicals Management Capacity Building, reference to which may be found on the appropriate Web sites.

3. Establishment/Strengthening of National Programmes for the Sound Management of Chemicals and Waste

All policy instruments and fora referred to above have been established with one common goal: to facilitate the establishment/strengthening of national programmes for the sound management of chemicals in all countries. Chapter 19 of Agenda 21 points out that the basic elements of such programmes should include, for example:

- 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.

As indicated above there are related aspects of sound management of chemicals in Chapters 20 and 21 of Agenda 21. For example the prevention of the generation of hazardous wastes and the rehabilitation of contaminated sites are also important elements of national programmes for the sound management of chemicals, which should have been in place in all countries by the year 2000. However, much remains to be done to meet the goals set by the Earth Summit and also to implement SAICM and to achieve the Johannesburg objectives for 2020 and the UN Millennium Development Goals as they relate to sound management of chemicals throughout their life cycle. The following sections discuss the life cycle, coordination, stakeholder involvement, and the role of National Profiles.

Definition of the term Chemical as used in this document

For purposes of this document, the term "chemical" is used in a broad sense to include: pesticides, fertilizers and other agricultural chemicals; chemicals used in industrial processes; petroleum products; chemicals marketed for consumer use; pharmaceuticals; cosmetics; food additives; chemicals of natural inorganic and biological origin, as well as unintended chemicals, such as produced in combustion processes and those appearing as residues in food, biota and consumer goods etc. Chemicals used in the informal economic sectors in many developing countries, while often having a significant impact on health and the environment, are difficult to identify, quantify and manage. In a life cycle approach, chemicals that are discarded after use or arise as unwanted by-products from various processes may become wastes that need to be managed in an environmentally sound manner either recycled or ultimately disposed. Further, treatment of wastes may give rise to other chemicals that need to be managed in order to protect health and the environment. In preparing a National Profile, countries will need to decide which classes of chemicals should be covered and which should be exempted. In this regard, it should be noted that food additives, cosmetics, pharmaceuticals, and other chemicals that are intended for direct human application or consumption are generally regulated in very different ways than other chemicals, as are radioactive substances.

There is a need to develop integrated activities which cover and link all aspects of the chemical life cycle, including production, import, export, storage, transport, distribution, use and disposal of chemicals. This is sometimes referred to as "life-cycle" management. In many countries, current chemical management systems are based on a sectoral approach and are media specific (e.g., addressing separately air, water, and land). Individual stages of the chemical life-cycle are controlled without adequate consideration of possible linkages and opportunities for an integrated approach. This has often led to inadvertent substitution of one problem for another one (*e.g.* end-of-the-pipe water pollution control leading to an increased amount of waste sludge which needs to be burned or deposited). Furthermore, there are the issues of misuse and diversion of chemicals, both of man-made and natural origin, from their intended use, as well as the potential for chemical accidents at all stages of the life cycle.

The preparation of a National Profile is meant to contribute to a better understanding of

- which problems or potential problems related to chemicals exist in a country, and
- what mechanisms are available to address these problems.

Concerned parties may not be fully aware of the range of mechanisms which are available since they

- are under the authorities of several different ministries, agencies or other relevant institutions, and
- may not be specific to chemicals management (*e.g.* more general environmental controls, or laws concerning the control of poisons, the protection of public health or occupational health and safety; or measures for emergency response).

The National Profile will also help to identify important gaps or weaknesses in the existing systems as a first step in defining where further efforts may be required. The Profile could indicate where there may be overlaps in controls or other inefficiencies, which may prevent efficient use of limited resources. Thus, the process of preparing the Profile should assist countries in establishing priorities for future activities.

Need for Inter-ministerial Co-ordination

An integrated approach for achieving sound management of chemicals at the national level is complicated by the fact that usually different ministries participate in the control of chemicals in different phases of the chemical life-cycle. While different countries allocate responsibilities somewhat differently and may use different titles for their ministries/agencies, in most cases:

- Ministries of Environment are generally concerned with the direct and indirect effects of releasing chemicals into the environment as emissions and wastes to air, water, and land, and may also control the location of installations using or emitting chemicals

- Ministries of Agriculture are generally concerned with the use of agricultural chemicals for the benefit of securing food supplies or the protection of plants and animals of economic benefit

- Ministries of Health are mainly concerned with the short- and long-term health impacts of chemicals on the general public, medical response to people exposed to toxic chemicals, and the safe use of chemicals of therapeutic benefit and may also be responsible for regulating consumer chemicals, as well as pesticides used in the health sector

- Ministries of Labour are generally concerned with occupational health and safety issues related to the use and handling of chemicals at the workplace, including accidents involving chemicals in the workplace

- Ministries of Industry are often concerned with the production of chemicals and chemical products and the introduction of cleaner production technologies

- Ministries of Transport are generally concerned with the safe transportation and storage of chemicals during the distribution phase

- Ministries of Trade are generally responsible for regulating the import and export of chemical substances and often have the authority to issue relevant trade permits

- Ministries of Justice or Legal Affairs are generally concerned with the development and enforcement of laws and regulations, and often deal with issues concerning public access to information and the protection of confidential business information

- Customs Authorities are generally responsible for ensuring that chemicals do not enter or leave the country contrary to government regulations and international agreements

- Ministries of (Civil) Defence or Ministries of the Interior are usually responsible for emergency services; such are fire fighting and response to emergencies involving chemicals

- Local Authorities can have an important role in chemicals management and may be covered at the national level though a ministerial authority which coordinates local government matters

- Government printing/publications offices are generally concerned with the publication and distribution of laws, regulations and other government documents

- Ministries of Planning often deal with the donation or receipt of development assistance, which could include *e.g.* chemicals for agricultural use, technical or financial assistance for the development of chemical industries, or technical assistance for the management of chemicals

- Ministries of Foreign Affairs usually co-ordinate all international aspects of chemicals management, such as the participation in relevant international agreements and conventions

Due to the cross-sectoral nature of managing chemicals throughout their life-cycle, a sound co-ordinating mechanism among all ministries concerned is crucial for strengthening management of chemicals at the national level in an integrated and non-duplicative way.

It should be born in mind that federal countries often have regionally elected governments responsible for implementing their own chemicals management regulations, as well as for areas of regional government which interface with sound management of chemicals and waste. Further, specific areas of chemicals, and particularly waste, management may be a local authority responsibility, which is empowered to enforce national or regional legislation. In some countries rural councils and governing bodies may have important responsibilities which impact directly or indirectly on chemicals and waste management. In many countries local authorities come under the jurisdiction of elected district or local assemblies. The integration of chemicals and waste management policies and their effective implementation throughout the country will depend on the implementation of efficient coordinating mechanisms that also include these groups.

Involvement of Concerned Parties Outside of Government

In addition to government ministries, various parties and organizations outside of government play an increasingly important role in strengthening chemicals and waste management at the national and local level. Non-Governmental Organisations (NGOs) are often divided into the following categories: Industry, Labour, Science and Public interest.

Industry, as the producer/importer and primary user of chemicals, has a major responsibility to reduce chemical risks throughout the chemical life-cycle. In many developing countries, industry is also the source of most of the information available on chemical risks. Sound management of chemicals in the informal sector is often a challenge. In many countries, industry has taken responsibility through initiation of voluntary programmes and commitments which include, for example, "Responsible Care" and "Product Stewardship" programmes. Further public-private partnerships are being encouraged to implement certain chemicals' management strategies in some countries. While such initiatives are not meant to replace government control systems, they do represent an increasing commitment by industry to take responsibility for the sound management of chemicals throughout the life cycle in their areas of activity.

Labour may play a significant role in improving awareness of chemical safety issues and ensuring good practices in use of chemicals, particularly in the economic sectors where Labour is organised. Some countries face the challenge of poorly organised labour movements and lack of official recognition. Furthermore, there are areas of human and environmental exposure to chemicals where workers have little or no organised structure.

Science based organisations, university/academic institutions and professional bodies may provide valuable technical expertise not directly available in government and experience from these organisations may make important inputs into chemical safety activities in countries.

Public interest groups, as part of civil society, are also recognized as important contributors to the sound management of chemicals at the national and local levels. These can include, for example, environmental and consumer groups, woman's organizations and special local interest groups, as well as national associations of international public interest NGOs. These groups can have significant expertise and experience in the field, and often work at the grass roots level.

Civil society can therefore contribute to a better understanding of problems related to chemicals, to improved transparency, as well as to the development and implementation of solution strategies. Thus, it is essential that coordination of actions to implement sound management of chemicals and waste involve all relevant elements of civil society in a transparent manner.

Assessment of the National Infrastructure for the Sound Management of Chemicals through Preparation of a National Profile

A good understanding of the current national control practices related to all stages of the chemical life cycle from production/import through disposal and recycling is a key to any national programme to strengthen the management of chemicals and waste. Prior to UNCED and the formation of the IFCS few countries had prepared comprehensive assessments in a manner that involves all concerned ministries, as well as parties outside of government, at the national and local levels. In many countries, papers and reports had been prepared on different aspects of chemicals and waste management for specific purposes. As a result, they consisted only of a partial analysis reflecting, for the most part, a sectoral rather than a consolidated point of view and, therefore, could not be considered a comprehensive assessment of the existing infrastructure. Also, such reports were not always linked to the

national reporting systems under international policy bodies, such as the Commission for Sustainable Development (CSD).

Therefore, at its first meeting the Forum recommended the elaboration of National Profiles to indicate current capabilities and capacities for management of chemicals and the specific needs for improvement. Many countries have since found value in preparing national profiles as a basis for developing policies for sound of chemicals and waste. By following a consistent structure in the development of National Profiles, there have been significant benefits at the international level. For example, the IFCS, the CSD, and member organizations of the IOMC are now in a better position to assess the status quo of national chemical management infrastructures world-wide, to measure progress made by countries in strengthening their national capabilities, and to identify relevant priorities of developing countries and countries in economic transition when developing future work programmes. Regularly updated National Profiles should also provide an important baseline for assessing progress in implementing chemicals-related international agreements and progress towards the SAICM objectives, WSSD 2020 target as well as implementing the Millennium Development Goals as they relate to achieving environmental sustainability.

4. Principles for Preparing a National Profile

In accordance with the spirit of Agenda 21, SAICM and the Johannesburg Plan of Implementation, the following general principles should guide countries when preparing a National Profile. A National Profile should:

- be prepared at the country level through a process which involves all concerned ministries and other government institutions, as well as other interested parties within the country ("by countries for countries")

- provide a basic understanding of chemicals (of human or natural origin) produced, imported, exported, used, handled and/or disposed of and recycled in the country, the specific uses of such chemicals, and the populations and environmental resources, that are potentially affected by such chemicals; where appropriate it should reflect the different situations in different regions within a country and provide a baseline against which progress in implementing sound management of chemicals and waste can be subsequently judged

- document the existing national infrastructure both for general aspects of chemicals and waste management (*e.g.* information on existing legislation, ministerial responsibilities, coordinating mechanisms etc.) and for specific aspects of chemical management (*e.g.* pesticide registration, occupational health, transport of dangerous substances, chemical emergency response, etc.)

- provide practical information on on-going and planned activities at the country level (*e.g.* activities related to the implementation of international agreements, ongoing and planned technical assistance projects, etc.)

- initiate a process by which a country will be able to identify gaps in the existing legal, institutional, administrative, and technical infrastructure related to chemical and waste management and safety

- provide indicators that may be used locally for assessing progress and success in improving infrastructure

- provide a means for improved co-ordination among all interested governmental, and non-governmental, organizations at all levels within a country. The process of preparing the Profile itself may serve as a starting point for improved co-ordination and should facilitate communications and an improved understanding of the potential problems and activities being undertaken within the country.

- provide a means for sharing information among parties inside and outside government and provide a means for bridging any communication problems between policy makers and technical staff

- provide a basis for cost-effective allocation of resources by including information on the resources available for the management of chemicals, including financial resources and human skills/capabilities, as well as an indication of resources needed for undertaking priority actions

- be a "living" document, useful to many different parties on a regular basis. It should be developed using a flexible, iterative process appropriate to national needs and adapted to available information and resources. It should be periodically reviewed, and up-dated as appropriate, to remain an authoritative national document

5. UNITAR/IOMC National Profile Programme

The United Nations Institute for Training and Research (UNITAR) initiated a programme in 1995 to assist countries to prepare National Profiles. The UNITAR National Profile Programme is conducted within the framework of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC) and in co-operation with the Secretariat of the Inter-governmental Forum on Chemical Safety (IFCS).

In 1995 a draft version of a Guidance Document to assist countries in the preparation of a National Profile was prepared in close co-operation with FAO, ILO, OECD, UNEP, UNIDO and WHO, as well as with other interested international bodies, governments, and experts. The draft document was developed through peer-review, pilot countries and consultative processes. The first edition was published in English, French, and Spanish in 1996. Arabic, and Russian versions were subsequently developed. Later, UNITAR moved beyond the assessment stage towards assisting countries in the development of fully integrated policies and action plans for the sound management of chemicals. Available guidance material was made accessible. With the establishment by the IFCS of the INFOCAP website to facilitate systematic exchange and public accessibility of information on capacity building, countries are now encouraged also to post their National Profiles on this site.

The Guidance Document was revised in 2006.

6. UNITAR/IOMC Training and Capacity Building Programmes

In collaboration with other IOMC organisations, UNITAR is promoting a broad range of initiatives to assist countries to implement the SAICM objectives and to achieve the above mentioned 2020 goal in relation to sound management of chemicals:

- establishing and regularly updating National Profiles on the infrastructure for management of chemicals
- setting priorities for strengthening specific aspects of national chemicals management
- facilitating the development of integrated national programmes for the sound management of chemicals and wastes
- providing guidance and training to countries in the area of action plan development and project planning and management with respect to sound management of chemicals
- development of and training in the use of a variety of methodologies, skills, procedures and tools relevant for sound management of chemicals, such as
    - the design and implementation of National Pollutant Release and Transfer Registers (PRTRs),
    - implementing risk management decision-making processes and action plan development for priority chemicals,
    - coordinating financial resource mobilization,
    - promoting information exchange among institutions and stakeholders,
    - strengthening national coordination mechanisms and
    - development of a public involvement plan
- training and capacity building for implementing specific multilateral agreements involving chemicals such as the Globally Harmonized System for the Classification and Labelling of Chemicals (GHS), the Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, and the Stockholm Convention on Persistent Organic Pollutants (POPs); promoting good governance and environmental democracy, including public participation evaluation methodology and research, and developing a guidance document on preparing a National Profile to assess and strengthen capacities for implementing the Aarhus Convention on Access to information, Public Participation in Environmental Decision Making and Access to Justice in Environmental matters.

With the extensive use of the National Profile Guidance Document over the last 10 years it became evident that the methodology could be applied in countries or regions within countries as a tool for the situation analysis for specific subjects such as PRTRs and Occupational Health and Safety, as well as for international conventions, such as the Stockholm Convention on persistent organic pollutants, the Rotterdam Convention on prior informed consent, and other multilateral environmental agreements involving chemicals, such as the GHS. Further, the methodology can be useful in providing a basis for national plans for developing funding proposals and projects for example to donors and the Global Environment Facility (GEF).

PART B:

Organising the Preparation of a National Profile

A Typical National Profile Project

Once a country has decided to embark upon the preparation of a National Profile, the agency or institution that will serve as the **National Co-ordinator** is identified through consultation among interested governmental agencies. An initial national **planning meeting** is organized at an early stage to identify the members of a National Co-coordinating Team, from different concerned stakeholders, which will work closely with the National Coordinator throughout the entire National Profile development process. This meeting also serves the purpose of defining **key objectives** and benefits of preparing a National Profile within the context of national environmental management and sustainable development objectives. At the same time, it provides an opportunity for the National Coordinating Team to agree on a detailed **work plan** for the various tasks to be accomplished, including the division of responsibilities among all interested parties. Following the national planning meeting, a network of **contact points** is established and, as appropriate, **working groups** is set up to produce draft chapters of the National Profile. At this point, subject-specific **research and background work** is conducted, covering all aspects of the existing legal, institutional, administrative, and technical chemicals management infrastructure. The various elements of the National Profile are then compiled into a **draft report** which is reviewed and discussed in interim meetings, as appropriate. Following these discussions, a **final draft** of the National Profile is prepared and presented at a **final review meeting** for approval of all concerned parties. In advance of the final review meeting, an *Executive Summary* of the National Profile is prepared highlighting the major findings and recommendations. The final review meeting may also provide the opportunity to initiate and discuss priorities for possible **follow-up activities**, such as the organization of a permanent national chemicals management mechanism, as well as other actions and improvements needed to achieve the sound life cycle management of chemicals and chemical products.

1. Introduction

This part of the ***Guidance Document*** introduces possible objectives and benefits of preparing a National Profile and contains suggestions for organizing the preparation of a National Profile at the country level. A key element of the proposed approach is the involvement of a broad range of parties, both within and outside of government to ensure that the National Profile will be endorsed and used by all concerned parties. Special emphasis is placed on

- preparatory and organizational considerations,
- practical steps towards completing the National Profile, and
- a check list to help assess progress in preparing the National Profile.

While many countries may be using this second edition Guidance Document for updating an existing National Profile and have been through the detailed preparation process earlier, the detailed organisational and practical aspects have been retained in Section 4 as guidance to countries new to the National Profile preparation process.

2. Objectives and Potential Benefits of a National Profile

A National Profile, and the process of its preparation with input from all concerned parties, can serve important national objectives to strengthen the national chemicals and related waste management systems as well as to facilitate important national economic and trade objectives. Specifically, the National Profile can serve the following objectives:

Improved Efficiency of Governmental Operations

- to provide practical information on ongoing programmes and activities in the country which are concerned with the management of chemicals throughout their life cycle

- to establish a process which can facilitate the exchange of information and dialogue among government ministries and authorities at national, regional and local levels, concerned with the sound management of chemicals and related waste, and to assist ministries other authorities in learning from each others' experience as a basis for improved co-operation

- to strengthen national decision-making capabilities related to the management of chemicals throughout their life cycle

- to facilitate the exchange of information and dialogue between government and parties outside of government such as industry, labour, academia and civil society organizations

- to establish an authoritative document which can serve as a basis for further efforts to strengthen the national system for the management of chemicals throughout their life cycle through involvement of all concerned parties

Social Benefits

- to provide a basis for improved worker, public and environmental protection as a consequence of improved knowledge and understanding of potential problems and alternative means for addressing them

- to provide a basis for improved awareness of chemical risks among workers and the public and help to develop a national safety culture
- to establish a national dialogue on chemicals safety/management involving all concerned parties and sectors of society

Economic/Trade Benefits

- to facilitate trade in chemicals, and agricultural, domestic and industrial products which rely on chemicals

- to help ensure that chemicals produced, imported and exported are supporting economic goals and are not creating economic burdens through health, environmental and safety problems

- to improve awareness of potential pesticide and other chemical residue problems which could limit opportunities for agricultural exports

- to indirectly improve the productivity of workers through improved worker safety

More Effective Participation in International Activities

- to provide core information and an evidence base for the development of situation analyses for actions required to implement Multi-lateral Environmental Agreements, such as the Rotterdam Convention on Prior Informed Consent, the Stockholm Convention on Persistent Organic Pollutants, and the Globally Harmonised System for classification and labelling

- to ease compliance with international/regional reporting schemes in a consistent and efficient manner, e.g., reporting to the Commission on Sustainable Development and the preparation of background documents for international meetings and workshops

- to facilitate communication among countries, which will permit improved learning from others' experiences and lead to increased co-operation (e.g., on a regional basis)

- to provide a basis for identifying needs for technical and financial assistance, and for mobilizing assistance resources available from international and bilateral sources

This listing is not meant to be exhaustive but should provide a starting point to determine possible national objectives and benefits of a National Profile for a particular country. Countries will likely come up with additional objectives and benefits based on their national priorities.

3. Preparatory and Organizational Considerations

3.1 Identification of a National Co-ordinator

A National Co-ordinator should be identified to facilitate and catalyze the preparation of the National Profile. Selection of an appropriate and committed National Co-ordinator is a key to the success of the National Profile preparation process. The National Co-ordinator should

therefore be located in a ministry which has an interest in and a mandate to manage chemicals.

It is important for the National Co-ordinator to have the respect and co-operation of all participants in the development of the National Profile. Furthermore, the National Co-ordinator should have sufficient political clout to involve other government ministries and other institutions, as well as parties outside of government, into the process of preparing the National Profile.

Each country should determine the best way to choose a National Co-ordinator, recognizing that the process of involving and co-ordinating activities among the concerned parties will be greatly facilitated if the National Co-ordinator is widely considered to be knowledgeable, unbiased, and trusted. It may be appropriate for the National Co-ordinator to be chosen, or at least endorsed, by the National Planning Meeting for the preparation of the National Profile or at some other point in the planning process.

One option is to choose the National Focal Point for the Intergovernmental Forum on Chemical Safety (IFCS) as the National Co-ordinator, based on the consideration that the IFCS National Focal Point would, in general:

- be located in a Department or Agency with the responsibility to co-ordinate chemical safety/management activities or be in active contact with all those involved in chemical safety/management activities

- be at a sufficiently senior level to recommend initiatives that follow recommendations of the IFCS

- disseminate information concerning IFCS activities to appropriate organizations and agencies within their country

- provide the IFCS with priorities of their countries with respect to the environmentally sound management of chemicals

- serve as the co-ordinator and secretariat for IFCS initiatives within the country

From a practical perspective, the National Co-ordinator should if necessary arrange for the translation of this ***Guidance Document*** and other relevant information into the official national language(s), or the agreed working language.. The ***Guidance Document*** should then be circulated to key officials in government and in non-governmental organizations which have an interest in chemicals and related waste management.

3.2 Who Should Participate in Preparing the National Profile?

The procedures set out in this ***Guidance Document*** have as their fundamental objective the creation of a successful National Profile, one that will provide a comprehensive documentation of the national chemicals infrastructure and which can serve as a basis for improvements towards the sound management of chemicals throughout their lifecycle.

The involvement of concerned parties from within the country is a prerequisite for the success of the National Profile. The reason is simple: to be successful, the process for

developing a National Profile must provide a comprehensive but easily accessible and flexible mechanism for the collection and dissemination of country-specific information related to lifecycle chemicals management. The Profile therefore cannot be prepared without the active involvement and participation of the key users. Without the input from all concerned parties, important concerns will be omitted, language will fail to communicate clearly, and some significant ongoing chemical use and management activities will escape notice.

As a first step, it is essential that the key concerned parties agree to participate in the development of the National Profile. Secondly, it is important that they recognize that their participation is meaningful, thereby increasing the likelihood that the National Profile will be both useful for their purposes and broadly acceptable.

It should be recognized that certain parties will be more enthusiastic and more willing to be responsible for taking the lead in preparing parts of the National Profile. Nevertheless, it is important that all concerned parties are kept informed and involved throughout the process.

Identifying Concerned Parties

What does it mean to be a "concerned party" in the context of preparing a National Profile? It means a ministry, agency, organization, institution or a body of civil society that cares about issues of chemicals and related waste management and the development of the National Profile document and that recognizes that the decisions made in the course of its preparation could have an effect on its activities. The role of the different participants should be clarified so that mutual expectations attain a realistic level.

The list of participants in developing the National Profile will vary among countries. In most cases concerned parties will come from the following three major sectors of the country:

- ***Federal, regional and local government ministries, agencies or bodies***

  For example, concerned parties may include the Ministry of Agriculture, Industry and Economics, Health, Labour, Environment, Justice, Transportation, Public Works, or other organizations, including local authorities, responsible for the development and implementation of laws, regulations and policies related to lifecycle chemicals management.

- ***Industry and industry associations***

  Industry in the broadest context which includes most economic sectors in a country is the producer and trader in chemicals and has the data and the knowledge about the local situation. Often organised through industrial federations or associations and chambers of commerce, industry often has the infrastructure to make a very useful contribution to the national profile process, even in the difficult area of the informal economy. Agro-pastoral and key local industrial sectors should be included.

- ***Worker's Associations, Public interest NGOs, Academia, Research sector and Professional Bodies***

These may include workers' associations, consumer, environmental, or other community-based organizations (e.g., women's groups), or other associations that share a concern about the uses and effects of chemicals within the country. Academia and the research sector typically includes researchers from major universities as well as representatives of agricultural, forestry, or marine research centres and other sources of scientific/technical information needed for chemicals and management. The main relevant professional bodies, such as societies of toxicology, emergency medicine and of chemical engineers, could also be included, as appropriate.

These groups often have specific knowledge of certain aspects related to the sound management of chemicals and related waste which is valuable to include in the National Profile. It may be difficult to determine the appropriate NGO and interest group representatives, in particular, if there are too many for all concerned organizations and groups to be represented. Therefore, it may be necessary to establish a mechanism to determine the most qualified or interested NGOs and interest groups or to establish a means for allowing the NGOs and interest groups to determine for themselves who should represent them. As far as possible workers' associations, relevant academia/professional bodies and key public sector groups should be represented.

3.3 Managing the Process of Preparing the National Profile

Basic to the success of preparing a National Profile is the establishment of a clear management structure for overseeing its preparation. It is therefore suggested that a National Co-ordinating Team be established with a membership of about 15 to 20 members which represents the various concerned parties within and outside of government with an interest in chemicals and related waste management. Experience has shown that it is important to raise sufficient awareness at the country level before selection of members of the National Co-ordinating Team and to do some active outreach to ensure that all parties are aware that the process is being started. The role of the National Co-ordinating Team is to organize and supervise the work towards the preparation of the National Profile. It is essential that the National Co-ordinator works closely with all members of the National Co-ordinating Team throughout the process of preparing the National Profile. In this regard, it is important to recognize the value of having on the National Co-ordinating Team representatives of a range of relevant disciplines (*e.g.* chemistry, toxicology, economics, law, etc.).

Participation in the task of completing the National Profile is an important aspect of organizing the work. The National Co-ordinating Team may therefore want to delegate the drafting of certain sections to its members or establish informal working groups. Alternatively, a knowledgeable and unbiased local consultant (*e.g.* based in a respected university) could be involved in collecting relevant information and drafting the various chapters, subject to further review by the National Co-ordinating Team.

Co-ordination and Communication among Concerned Parties

The basis for an effective, well co-ordinated process is clear communication. From the outset, participants need to know what is expected of them and what types of support they will receive. The National Co-ordinator must also recognize that participants typically are involved in a large number of other activities and that it is useful to establish schedules and plans well in advance (e.g., the times and location of the meetings of the National Co-ordinating Team).

No matter how carefully the process is designed, co-ordination among members of the National Co-ordinating Team sometimes will prove to be challenging. Why might challenges arise? Five reasons are particularly important:

- ***Differences in values***

  Some team members will have one set of concerns whereas other team members will care about other things. This is to be expected and welcomed: the reason why different groups are invited to participate in the process is because they have different concerns and interests. The main task of the National Co-ordinator with respect to differences in values is to try to ensure that groups move beyond vague statements and contribute towards developing an information base which is truly useful for improving understanding on general as well as specific aspects of chemical management in the country.

- ***Differences in the interpretation of factual information***

  In such cases, the National Co-ordinator should take a proactive stance, seeking to discover the reasons for the differences among concerned parties. Alternatively, the National Co-ordinator may be able to search for additional data sources that can help to clarify a specific issue. For example, a factual dispute may arise because one group involved in discussions is simply misinformed. If this is the case, the National Co-ordinator should attempt to find a way to provide the correct information in a manner that will prove to be not embarrassing to other team members or to their organization. Where there are genuine differences in interpretation of data, often due to inadequate or missing information, then this should be clearly indicated in the relevant sub-section on comments, with perhaps proposals as to how missing data might be obtained for a more harmonised interpretation.

- ***Geo-cultural differences***

  In many larger countries there may be different issues in relation to sound management of chemicals due to regional geo-climatic, and socio-cultural variations (*e.g.* different languages), and the National Profile preparation process should endeavour to ensure that these differences are reflected.

- ***Size***

  The size of the National Co-ordinating Team influences co-ordination in many ways. As the number of participating concerned parties increases, it can become more difficult to co-ordinate among each of them. If more than about 15-20 concerned parties are involved, it may be advisable to organize smaller groups (drawn from the national team) that will conduct specific tasks, for example completing the legal section of the Profile. Larger numbers of participating parties also can complicate the logistics of planning meetings or add to the expenses involved in getting everyone together.

- ***Logistics***

  Travel costs and time for meetings of the National Co-ordinating Team by members located far away from the capital city can in some cases constitute a barrier. For some

countries, this aspect should be taken into consideration when deciding on size and members of the National Co-ordinating Team as well as on the frequency of meetings.

All these questions will require frank discussions in the early stages of the process; in many cases, it will make good sense for countries to begin small, by obtaining the key sources of information that are easily available and then building on this base over time and within the context of realistic financial and technical constraints. If it helps in meeting a reasonable deadline, some issues or data may purposely be left to the first updating of the Profile.

Developing an Effective Process for Participation

Effective participation in the process requires, in general, that participants believe they have an important role to play in designing the National Profile and that this input will lead to the development of an improved product. To this end, awareness raising of the National Profile process should be started at a very early stage, so that all who may wish to be involved are sufficiently informed on time.

In many cases, it will be possible to easily reach agreement on a large number of issues such as those relating to the identity and number of concerned parties to be represented on the National Co-ordinating Team, or the number of times that meetings of the entire group are scheduled.

In other cases, however, the achievement of agreement will not be a realistic goal, because of the differences of opinion and interpretation that exist among members of the National Co-ordinating Team. In such cases, the best that can be hoped for in many discussions is to clarify areas of agreement and disagreement and, with this knowledge carefully recorded, to move ahead towards the development of workable and generally-acceptable strategies for completing the information base. Examples of areas where agreement may prove to be difficult typically include controversial information, such as the diagnosis of possible overlaps in a country's existing legal basis for managing chemical risks and competing mandates.

An important task of the National Co-ordinator is therefore to carefully delineate those topics where agreement can be easily reached and those in which decisions will be made in other ways. Team members should also be reminded that the development of the National Profile is an ongoing process and that the fate of the first version of the National Profile does not hinge on every detailed decision that is made. Thus, team members should be encouraged to work hard to achieve their major goals but to compromise and be more easily satisfied on less important issues. Differences of opinion can be expressed in the comments sections of each chapter.

It is also important for the National Co-ordinator to pay close attention to a variety of basic organizational and logistical duties: to clearly designate meeting times, to ensure that background materials are distributed to participants well in advance, and to decide on a process for recording decisions of the group. Most participants in the National Co-ordinating Team will have been part of earlier groups, often discussing similar topics, and they will have formed expectations on the basis of these earlier experiences. It is therefore valuable to uncover these expectations, with an intent of repeating the positive experiences and avoiding the negative ones.

In order to define clearly all organizational aspects of preparing the National Profile, countries may want to consider preparation of a short *Terms of Reference* which could specify, for example:

- the tasks and functions of the National Co-ordinator
- the parties which should be represented on the National Co-ordinating Team including, as appropriate, agreement on the National Co-ordinator
- the role and functions of the National Co-ordinating Team and of individual members of the Team. This could include the need for, and establishment of, working parties responsible for developing parts of the National Profile
- a work plan, including a schedule, for preparation of the Profile including reference to interim status reports, meetings, etc
- a time frame for completion of the National Profile

3.4 Determining the Scope of the National Profile

Each country should explicitly determine the scope of chemicals, under the life cycle approach, to be addressed in the National Profile, before work is begun on gathering information. It should be borne in mind that chemicals may be from natural sources, both of biological and inorganic origin, as well as intentionally produced by humans. As a minimum, the classes of chemicals to be addressed should include:

- agricultural chemicals (pesticides and fertilizers)
- pesticides used for public health, industrial and consumer uses
- chemicals used in industrial processes, including small and medium sized enterprises
- petrochemicals, including refined petroleum products
- chemicals in consumer products such as cleaning materials, paints, and solvents

It is recognized, however, that while some countries produce or import very limited quantities of chemicals used in industrial processes and have no controls established for such chemicals, others have a very broad spectrum of industries, for which the National Profile would be more meaningful with a more detailed breakdown of chemical groups or industrial sectors.

Countries may wish to consider whether to also include human and veterinary pharmaceuticals, narcotics, food additives and cosmetics, recognizing that products intended for direct human consumption or application are generally controlled in a different manner than other chemicals. Other chemicals that may be considered for inclusion would for example be dual purpose chemicals (chemical weapon precursors) and radioactive chemicals; as well as natural toxins (snake, scorpion, fish, and plant toxins) which may have important health impacts in some countries. As far as possible, units of data on chemicals by groups or sectors should be harmonised and comparable (e.g. by weight, or volume where appropriate, rather than only by declared value). Furthermore, countries should define the terms to be

used in their Profile including, for example, "pesticides", "industrial chemicals", "consumer chemicals", "production", various types of "waste" and the other relevant terms. Additionally, each country should define key terms used in the tables and in the descriptive material in a manner consistent with relevant laws and policies. In this regard it is suggested that each Profile contain a glossary (Annex A) defining key terms to facilitate communication and understanding among all interested parties.

3.5 Identifying the Preliminary Objectives of Preparing the National Profile

Before starting any work on the National Profile, preliminary reasons for, and anticipated benefits of preparing the National Profiles in the specific national context should be identified. If these benefits are clearly visible and seen by all concerned parties at the outset, full participation of everyone is promoted. Section 2 of Part B of this ***Guidance Document*** may provide suggestions in this regard, although that list is not meant to be exhaustive.

4. Detailed Practical Steps Towards Completing a National Profile

The practical steps found in this section are meant to provide practical guidance to organize the process of preparing the National Profile. They should be used in a flexible manner. Each country may want to add or eliminate certain steps in order to streamline the process in accordance with its national practices and will need to decide on the appropriate time-frame for each step in the process. Full account should be taken of other relevant work (*e.g.* recent chemicals or waste inventories which may need to be integrated into the Profile preparation process to avoid overlaps). Based on the experience gained, it is estimated that most countries will require between six and twelve months to complete a National Profile for the final approval process

Practical Steps towards Preparing a National Profile

1. Obtain Political Commitment to Prepare a National Profile
2. Hold a National Planning Meeting with Interested Parties to Establish a National Co-ordinating Team and Agree on a Work plan
3. Establish a Network of Contact Points and Gather Relevant Information
4. Develop Draft(s) of the National Profile
5. Hold Interim Meeting(s) to Discuss Progress
6. Prepare Final Draft of the National Profile
7. Hold Final Review Meeting and obtain Stakeholder Endorsement
8. Publish and Distribute the National Profile
9. Identify Follow-up Activities

Step 1: Obtain Political Commitment to Prepare a National Profile

In order to ensure that the full range of concerned parties participate in the preparation of the National Profile, and to facilitate access to necessary information, it is important to get political commitment to the process from the highest levels of government. The appropriate form of political commitment will vary among countries but could include, for example, a presidential decree or a ministerial declaration. It should have the full support of the key Ministries and Agencies of Government involved in various aspects of life cycle management of chemicals.

Step 2: Hold a National Planning Meeting with Interested Parties to Establish a National Co-ordinating Team and Agree on a Work plan

A high level meeting should be organized at the beginning of the process of preparing the National Profile to involve all concerned parties at an early point in time. This will help to ensure that the project is accepted as a national activity and that it is perceived as a politically-neutral, fact-finding exercise. At the meeting, it should be emphasized that the preparation of the National Profile is not a matter of one ministry, but rather an integrated effort of the country to document its national infrastructure as far as the management of chemicals and related waste is concerned.

Purpose and Objectives of the National Planning Meeting

The National Planning Meeting is a key event in the process of organizing the work towards preparing a National Profile. By the end of the meeting agreement should be reached on:

- the objectives and anticipated benefits of preparing the National Profile
- the identification of parties which should be represented on a National Co-ordinating Team and the identification of the National Co-ordinator
- the role and functions of the National Co-ordinating Team and of individual members of the Team
- the need for, and establishment of, working parties responsible for developing parts of the National Profile
- a work plan for preparation of the National Profile
- a time frame for completion of the National Profile

Who should be Invited to the Meeting and Why?

Participants of the National Planning Meeting should include high-level representatives of all interested national, regional and local ministries/agencies, universities and research institutes, industrial and professional organizations, labour organizations, and environmental, consumer and other interested community-based groups. In particular, the representatives of the various national ministries should be high level officials with sufficient authority to ensure the required input of their agencies in preparing the National Profile.

In addition, representatives of international and bi-lateral technical co-operation agencies and organizations which have interests and programmes related to the sound management of chemicals and which are present in the country should be invited. In particular, international organizations with projects in developing countries should be considered which include, for example, FAO, ILO, UNEP, UNIDO, UNDP, WHO, and the World Bank.

Each country will need to establish appropriate mechanisms to help ensure that all relevant sectors are invited and participate in the development of the National Profile. Recognizing that there may be difficulty in identifying and choosing appropriate representatives of non-governmental organizations, particularly in larger countries and those with well-established community-based organizations, it may be necessary to have some means for certifying the organizations in order to limit their representatives to a reasonable number. Alternatively, it may be appropriate to ask the non-governmental organizations to identify for themselves a specified number of broad-based representatives, for instance covering industry, science, labour and public interest.

Assuring an Effective National Planning Meeting

It is recommended that the National Planning Meeting takes place over a minimum of one full day, and preferable two days if work is to be initiated according to Session 4. To provide some guidance, the agenda items mentioned below could be included in the meeting. Alternatively, Session 4 could precede Session 3. It is suggested that, after the introduction and preliminary discussion in Session 4 the meeting could be organized in parallel working groups.

Session 1: Opening and Introductory Remarks

Session 1 Opening should be attended by senior officials from the key stakeholders with the representative of the focal point agency giving an official opening speech to emphasise the government commitment to the National Profile process. The Session could include a brief presentation by the national IFCS Focal Point, underscoring the importance of the National Profile for the national management of chemicals and waste and its multiple international linkages, i.e., to the IFCS, WSSD, SAICM, etc. In the absence of a UNITAR representative, a representative of an international organization could introduce the UNITAR/IOMC National Profile Programme and answer possible questions related to the principles, scope, and content of the National Profile ***Guidance Document***. During this session opportunity should also be provided to all participants to introduce themselves and make a few remarks about their interest in the preparation of the Profile and their possible contribution to it.

Session 2: Identifying National Objectives and Potential Benefits of the National Profile

Session 2 should be introduced by the focal ministry/institution outlining relevant activities in the country concerning sound management of chemicals throughout their life cycle. The background international framework (as outlined in Part A of this Guidance Document) should be presented. After an introductory presentation of the organisational arrangements for preparing a National Profile, there could feature a discussion about the national objectives and potential benefits of preparing the National Profile in the context of national activities to achieve the sound management of chemicals and waste. For example, consideration could be given to the possible objectives and benefits described in Part B, Section 2 of this document.

At this stage consideration may also be given to possible differences that may need to be reflected in the National Profile, arising from possible geo-climatic and socio-political variations in the country. This is particularly relevant in large countries, possibly with federal government systems and a variety of regional languages and ethnic groups.

Session 3: Organizing the Work of Preparing the National Profile

Session 3 is a key session of the National Planning Meeting and should be carefully prepared and a presentation made of the key proposals that the meeting should discuss.. The following aspects should be addressed and agreed upon:

- the tasks and functions of the National Co-ordinator
- the parties which should be represented on the National Co-ordinating Team including, as appropriate, agreement on the National Co-ordinator
- the role and functions of the National Co-ordinating Team and of individual members of the Team. This could include the need for, and establishment of, working parties responsible for developing parts of the National Profile
- a work plan, outlining a schedule, for preparation of the Profile, including interim status reports and meetings
- a time frame for completion of the National Profile

Session 4: Structure of the National Profile and Initiation of Work to Prepare it.

Session 4 (which can be held before or after Session 3) introduces the stakeholders to the structure of the National Profile and enables a dialogue as to who can contribute to what parts of the Profile. It should be introduced by a presentation of the suggested structure given in Part C of this document and could be followed with a preliminary discussion of any modifications that may be required for the situation in the country. It is then suggested that the meeting divide into working groups to discuss the details and to plan and initiate the collection of information and the drafting of various sub-sections of chapters.

Members of groups will be expected either to present data/information relevant to sections of chapters or to identify where such data and information can be obtained and to agree a tentative timetable for obtaining information. Groups will also be expected to initiate the discussion of the issues involved, the gaps and possible recommended approaches to their resolution. As far as possible, inputs should be nuanced to consider the regional and other dimensions of the national situation. It is important that well in advance of the meeting invitees are aware of the agenda and the contributions that they will be expected to make.

Groups should report back to Plenary with their findings and proposals.

Session 5: Closing Session

At the closing session a summary should be made to announce the members of the National Co-ordinating Team, as well as the agreed National Profile work plan, member institutions of

any working groups established for data collection, and the schedule of interim activities and overall time frame, etc.

Step 3: Establish a Network of Contact Points and Gather Relevant Information

Gathering data and information to prepare the National Profile will require access to a range of governmental and other organizations, agencies and offices at the local, regional, national, and international levels. Many of these may be represented on the National Co-ordinating Team, while others may not. It is therefore important to make contact with all specific offices/individuals that have access to the information required.

It is suggested that each organization interested to contribute to the National Profile nominate a contact point. These contact points should assist in the information-gathering process and ensure adequate co-operation and participation of their respective agencies in the preparation of the National Profile.

Although there could be a variety of approaches for collecting the information necessary for the National Profile, the information required to complete the Profile is likely to be scattered across a broad range of government agencies and other institutions. Gathering this information takes knowledge of information sources, appropriate contacts within the agencies where the information is located, and patience. The previous networking of contact points, as well as a letter of introduction from the National Co-ordinator, should facilitate the process of information gathering.

Recognising that Ministry officials often have time consuming multi-functions, a country may wish to designate a local consultant or groups of consultants to undertake, under the direction of the national coordinator, the main information gathering as a full or part time task. Clear terms of reference should be established for such consultants.

Some countries have found it useful to create a simple Internet based information data management system or a Website as a tool to enable rapid and reliable transfer of information among members of working groups and data gatherers.

Step 4: Develop Draft(s) of the National Profile

Since a National Profile is intended to be extensive, it may be useful to divide its preparation into sections. The preparation of these sections can be delegated according to areas of expertise and interest. For example, a National Statistics Office may have available the data for much of Chapter 1; the sub-chapter on Information Management Capacity, Data Access and Use could be drafted by the agency which has a lot of ongoing activities in the area of chemical information management. The National Co-ordinating Team can divide and delegate the work in the manner it considers appropriate, including the establishment of working groups responsible for specific sections of the National Profile. First suggestions for this will have emerged at the National Planning meeting from Session 4.

It may also be useful to establish a small drafting group, responsible for pulling together all the information into a first draft for review by the National Co-ordinating Team and for making necessary revisions. Alternatively those designated to draft particular chapters of the Profile may form the overall drafting group.

Step 5: Hold Interim Meeting(s) to Discuss Progress

Interim meeting(s) should be organized once drafts of the various sections of the National Profile are available. Such meetings could be used to consider progress, review the drafts, fill in gaps, and address any differences of opinion. The interim meetings should also start discussing the assessment/analysis/comments sections of the relevant chapters, as the process of agreeing on a common analysis may take some time.

Step 6: Prepare Final Draft of the National Profile

The final draft of the National Profile should be prepared taking into consideration the conclusions reached at the interim meeting(s). It should be in shape for approval at the Final Full Stakeholder Review Meeting with only minor adjustments to be made. The National Co-ordinating Team should be responsible for ensuring the completion of a draft National Profile, incorporating the range of information gathered from various sources. In finalizing the draft of the Profile, specific emphasis should be placed on completing and refining the analysis section of the various chapters which in turn should be summarized in the *Executive Summary* of the National Profile. The full range of stakeholders, identified as concerned with the National Profile, should be consulted on the penultimate text of the Profile before the final draft is prepared for examination at the national review meeting (step 7).

The National Profile should be readable by a wide range of audiences, including national and, if desired, international audiences. At the same time it should contain sufficient detail to be of use by decision-makers and sectoral specialists for their work to strengthen national management of chemicals and related waste. As a general guide, the final National Profile should not exceed 100 pages in length, including the *Executive Summary* and a *Glossary of Terms*. If certain descriptions, e.g., those of relevant legislation or other listings and data sets, take too much space, relevant information could be put in annexes.

Although the *Executive Summary* is an integral component of the National Profile which highlights main results of the National Profile and includes a critical assessment, the National Co-ordinating Team may also want to consider publishing the *Executive Summary* as a separate document in order to reach all those who may not want to read through the full National Profile. It should be drafted accordingly.

Step 7: Hold Final Review Meeting

The Final Review Meeting should serve to finalize and approve the National Profile as an official national reference document. The final draft should be circulated to participants well in advance of the meeting, with possibly some indications as to the recommendations that might be considered in formally approving the document.
The meeting should also discuss possible activities, such as:

- publication and establishment of a mechanism for widespread distribution of the National Profile, taking into account the possible need to protect certain information, such as confidential business information. In this regard, consideration should be given to whether there is a need to translate all or part of the National Profile to facilitate communication within, or outside, the country; at least a summary should be available in one of the official UN languages, including English.

- publication and dissemination of an *Executive Summary* as a separate document; and

- means for periodic review and updating of the National Profile. It should be clear how often the National Profile will be reviewed to enhance its value to all potential users. The review process should allow for additions to the Profile in areas which might not have been fully addressed in the past, as well as for updating of information which may have changed over time. It should be recognized that certain parts of the Profile can be regularly updated, including some of the national background information (e.g., concerning trade and production statistics), whereas other parts will only require updating after some triggering event such as the adoption of new legislation or regulations. Each country should decide on the best method, and appropriate timing for the periodic review, taking into account the value of maintaining the Profile as an accurate picture of the existing situation in the country.

Step 8: Publish/Distribute National Profile

There may be need for a formal transmission and approval process at top government level before the National Profile is published as an official national reference document. If required, this should be done in a timely manner after the Final Review Meeting and it may be useful to anticipate this process before the Review Meeting itself is held. Arrangements for the publication of the National Profile should be made well in advance, so that it can be rapidly distributed once approved. Copies should be sent to all the relevant instances of government at all levels and to all relevant stakeholder organisations. It may be useful to make the document available on a national Web site. UNITAR may advise on creation of a website.

If the document or summary is available in a UN language it could be valuable to make it available internationally and it could be transmitted formally to UNITAR with an agreement to make the document generally available for this purpose, for instance on the UNITAR/ECB Website or INFOCAP.

Step 9: Identify Follow-up Activities

Ideally, the exercise of preparing the National Profile should have promoted a participatory, interagency, and cross-sectoral assessment of the current national practices in the management of chemicals throughout their life cycle. During this process, important gaps in national practices for chemicals and related waste management might have been identified. Upon completion of the National Profile, the National Co-ordinating Team should explore opportunities for national follow-up action to be further considered by national decision makers. This could include, for example:

- organizing a National Workshop to discuss and develop, on the basis of the National Profile, a national programme to achieve the sound management of chemicals; this may also be done at the Final Stakeholder National Profile Review meeting if prepared beforehand

- encouraging inter-ministerial co-ordination and cross-sectoral approaches to strengthening national chemicals and related waste management and looking for solutions to existing problems; the establishment of a formal coordinating mechanism for chemical safety matters should be considered

- initiating a national action plan to address existing gaps in the chemicals and waste management infrastructure, e.g. through organization of a National Workshop on the Sound Lifecycle Management of Chemicals, drafting additional legislation, or regulations, strengthening certain institutions, etc.

It should be recognized that the National Co-ordinating Team established for the development of the Profile could serve as the basis for a continuing mechanism to help co-ordinate related national activities and to facilitate improvements towards the sound management of chemicals and related waste.

Checklist for Completing the National Profile: Work plan and Budget

A checklist is useful to confirm whether progress is being made towards completing the preparation of the National Profile. It should be based on the work plan and budget for the Profile preparation and should be adapted to be consistent with the procedures established in each country. The work plan should contain key milestones and activities that can occur in sequence over the life of the process. Each activity should be assigned to a responsible participant(s), with deadlines and a system for tracking progress (this can be done by the Secretariat in coordination with the Chair of the National Coordinating Team. Each activity can be clearly mapped out in sequence, and even be broken down further into tasks, as the following table shows.

The budget, which should be modest and cover the basic expenses for undertaking the work plan, can provide a detailed estimate concerning the cost of the various components of the work plan for which resources are needed. As part of the budget, consideration may be given to the hiring of a local/national consultant that can assist with gathering information for the National Profile.

Table number Sample Work Plan for National Profile Development/Updating

Activities	Months											
	1	2	3	4	5	6	7	8	9	10	11	12
1. Organise National Profile Planning Meeting	X											
2. Hold National Profile Planning Meeting	X											
3. Finalise TOR, work plan and budget		X										
4.Hire consultant(s)		X										
5. Gather information		X	X	X	X							
6.Hold working group meetings (e.g. monthly)		X	X	X	X	X						
7. Prepare first draft of National Profile						X	X					
8. Hold review meeting								X				
9. Prepare final draft of National Profile									X	X		
10. Hold final review meeting, identify priorities											X	
11. National Profile completed												X
12. Publish National Profile												X

PART C:

Suggested Structure and Contents of a National Profile

This part of the ***Guidance Document*** outlines a suggested structure and contents for a National Profile. Some countries may use this second edition guidance document to assist in the updating of an existing Profile. For those countries, it should be noted that some modification has been made to the suggested structure and contents. This was to reflect changes that have occurred during the decade since the first edition of the document and to rationalise the order in which infrastructure is described. Additions have been made to certain chapters, particularly to reflect infrastructure requirements in relation to the more recent multi-lateral agreements, and to fill gaps not adequately covered in the first version of the document, such as infrastructure related to chemical emergencies.

The document recommends a combination of tables and text to present the relevant information. In addition, questions are put forward to assist the National Co-ordinating Team to diagnose the existing national infrastructure for the life cycle management of chemicals and identify areas where strengthening or new capacity may be required. It is suggested that this exercise is undertaken with the long term 2020 goals of the Johannesburg Plan of Implementation in mind, along with the SAICM global Plan of Action.

The tables and questions should be adapted to meet the needs of each country. It is recognized that no country will be able to complete all the tables or answer all the questions set out below; the objective is to collect and, to the extent appropriate, analyze all relevant, *existing* information. In fact, the lack of certain information in itself will provide important insights for developing follow-up activities.

Countries should also determine the best way for collecting information. For example, some countries may decide that it would be easier to collect information by sector (for agricultural chemicals, industrial chemicals, domestic products etc.). Others may decide to divide responsibilities for information collection by chapter of the Profile. Whatever approach is taken, it is important to integrate the collected information during the drafting and finalization process into a coherent document and as far as it is feasible to use harmonised, comparable units.

Since different countries utilize technical terms differently, this ***Guidance Document*** does not include a definitive glossary for use by countries. Rather, it is suggested that each country develop a glossary so that it is clear how certain terms are used in the Profile. A suggested non-exhaustive list of terms to be defined is included in Annex I.

Recommended Table of Contents of the National Profile

It is suggested that the National Profile contains, in addition to an introductory section and an Executive Summary, 13 distinct chapters and a series of annexes, as appropriate. Each chapter should be divided into sections with distinct titles and heading numbers. The following "Table of Contents" represents the recommended structure of the National Profile:

The final National Profile should, if possible, follow the suggested format and use the recommended titles and chapter/section numbers, as appropriate.

Introduction to the National Profile

Purpose of the Introduction

To provide an introduction to the international and national policy context in which the National Profile was prepared and to indicate the purpose of the National Profile, as well as the organizations which contributed towards its preparation

Linkage of the National Profile to the International Policy Framework for the Sound Life Cycle Management of Chemicals

This section should provide a brief introduction to the international policy framework for the sound management of chemicals and related waste, including reference to relevant recommendations of Agenda 21 Chapter 19 and the "Priorities for Action Plan" adopted by the IFCS at its various meetings, the Multi-lateral Environmental Agreements which the country has signed and other international initiatives as may be relevant such as the WSSD 2020 goal, the United Nations Millennium Development Goals and recommendations emanating from SAICM. The section should refer to the country's broader development goals and link chemicals and related waste management to them, including, for instance, provision of safe drinking water, control of water pollution, poverty alleviation and income generation, as well as possible indirect economic impacts or driving forces for change in relation to chemicals risk assessment and management. It may also introduce the UNITAR/IOMC National Profile Programme, where support may have been given. If it is an update of a National Profile e.g. for the Stockholm Convention or for SAICM implementation, account should be taken of the original Introduction. The preparation of this section can be based on information provided in Part A of this second edition ***Guidance Document***.

National Objectives and Anticipated Benefits of Preparing the Profile

This section should outline the major reasons for and anticipated benefits of preparing the National Profile. Reference should also be provided to the potential contribution of the National Profile to the overall efforts to improve the management of chemicals and related waste at the national, regional and local level, including the rural situation as may be relevant. Information provided in this section will reflect a summary of the deliberations of the National Planning Meeting. In addition, information provided in Part B of this second edition ***Guidance Document*** may be useful for drafting the introductory section of the National Profile.

How was the National Profile Prepared

This section should provide a short description of the national process which led to the preparation of the National Profile. It should, for example, refer to:

- institutional structures used or established for preparing the Profile, e.g., the establishment of a National Co-ordinating Team and its membership, with possible

working groups that were established and whether any local experts were used to support the drafting of sections of the Profile

- important meetings that took place

- other important steps which took place in the process of developing the National Profile; etc.

Participation of Ministries and Organizations

All partners which were involved in and contributed to the preparation of the National Profile should be listed, including:

- the National Co-ordinator (including name, position/title, organization, address, phone/fax/Email)

- all ministries, government agencies and other institutions, as well as organizations outside of government, including names and titles of relevant staff or, as appropriate, the offices responsible for various tasks (their complete addresses should be provided in an Annex)

Executive Summary of the National Profile

Purpose of the Executive Summary

To summarize main findings and conclusions of the National Profile, thereby serving as a key to identify priority concerns as well as opportunities to strengthen national programmes to achieve the sound lifecycle management of chemicals

A well-structured and well-written *Executive Summary* of the National Profile could become a key to the success of the National Profile to raise awareness among decision makers and to trigger concrete follow-up action towards strengthening the national scheme for the sound management of chemicals and related waste. Due to its importance, the *Executive Summary* should therefore be prepared with great care and should be thoroughly reviewed by the National Co-ordinating Team.

The preparation of an *Executive Summary* should be considered an integral part of the National Profile exercise. It should therefore highlight and be consistent with the main points and observations documented throughout the different chapters of the National Profile, in particular those mentioned in the "assessment and comment" sections of chapters 2-12. Further, it should highlight the main findings as to gaps and needs for priority action. It would therefore be logical to prepare the *Executive Summary* after completion of all main chapters which address the various legal, institutional, administrative, and technical aspects of national chemicals and related waste management in greater detail.

The *Executive Summary* should be no longer than 8-10 pages, in order to be able to obtain the attention of key decision makers. In this regard it may be appropriate to publish the *Executive Summary* as a separate document in order to allow the widest possible dissemination to all key decision makers and a wider public. At the same time, it could serve the purpose of informing other countries about the national chemical and related waste management situation, as well as potential donors concerning the national priorities for capacity building in relation to chemical and waste management.

Possible Structure of the Executive Summary

Following the brief introduction to the national/international policy context for the preparation of the National Profile, the *Executive Summary* should address, for each of the aspects covered in the main section of the National Profile, a summary of identified strengths, weaknesses and follow-up opportunities. It is therefore suggested that the *Executive Summary* addresses the following key aspects of national chemicals and related waste management:

- the identification of priority concerns related to chemicals production, import, export, transport, storage, use and disposal including chemicals of anthropogenic and natural origin and chemical products

the identification of international or regional issues e.g. illegal traffic, trans-boundary pollution, ports and transit corridors to other countries, international waterways.

- a summary analysis of the national legal and regulatory infrastructure and its enforcement
- a summary analysis of ongoing governmental programmes and inter-ministerial co-operation
- a summary analysis of chemicals management and risk reduction activities conducted by industry, public interest groups, the research sector and other NGOs
- a summary analysis of the national chemical information management infrastructure
- a summary analysis of the technical infrastructure
- a summary analysis of the infrastructure and capacity to deal with chemical emergencies
- a summary analysis of national awareness raising and education programmes for workers and the public, and of training for specific aspects of chemicals and related waste management
- a summary analysis of the implementation of international policy initiatives and technical assistance programmes
- a summary analysis of available human and financial resources
- a summary of follow-up actions recommended to implement the major findings of the National Profile

Ideally, and in addition to covering the main issues of the different chapters, the *Executive Summary* should provide an overall assessment of the national chemicals and related waste management situation, by addressing the following questions:

- What are priority problems related to chemicals and chemical products (both man-made and of natural origin) in all stages of their life cycle in the country?

  Are there issues relating to chemicals and waste requiring an international or regional solution?

- Which are the opportunities for improving national legal instruments, including their enforcement, related to life cycle chemicals management, including relevant risk management/reduction activities?
- What lessons can be learned from the process of preparing the National Profile to improve co-ordination of activities and participation by all concerned parties (governmental and non-governmental) in chemicals and related waste management?
- What can be done to improve information and surveillance data collection, review and analysis to support chemicals and related waste management? What actions should be

taken to improve accessibility to such information by all the concerned ministries and other government institutions and non-government institutions?

- What actions can be taken to improve the national "safety culture" including improved awareness by workers and the public concerning the potential risks associated with chemical production, import, export, handling, storage, use and disposal? What actions can be taken to improve risk communication?

- How can sufficient human, technical and financial resources be mobilized to help ensure priority activities are undertaken for the sound life cycle management of chemicals? How can the best use be made of resources available in non-governmental organizations such as industry, research institutes, universities, professional bodies, labour groups, consumer and environmental organizations, and other grass roots organizations?

- What can be done to advance current activities for the implementation of existing national legal instruments and international agreements? How can international activities in which the country participates become more effective in helping to strengthen national programmes?

- What opportunities are available for assuring close linkages among relevant multi- and bi-lateral programmes, and for synergies in implementing different multi-lateral environmental agreements relating to chemicals? What internal mechanisms should be established to promote improved co-ordination of assistance activities? What are the priorities for technical assistance (multi-lateral and bilateral) such as training, information, consultant advice, etc.?

- What actions should be undertaken to ensure that the National Profile is utilized to the extent desirable? What actions should be taken to promote, distribute, translate or otherwise facilitate access to the Profile? What actions should be undertaken in order to ensure that the National Profile is periodically reviewed and updated, as appropriate?

- What key conclusions/recommendations emerge from the preparation of the National Profile? What follow-up activities should be pursued towards strengthening the national scheme for the sound management of chemicals and related waste?

Chapter 1: National Background Information

Purpose of Chapter 1

To provide general background information on the country both at the national and at the regional levels

Chapter 1 should provide general background information on the country. Some of this information is only indirectly relevant to the management of chemicals and related waste. However, it is important to the understanding of the overall physical, political, demographic and socio-cultural context, as well as the industrial, agricultural and other economic activity characteristics of the country.

1.1 Physical and Demographic Context

- Size of the Country (area in square km):
- Form of Government:
- Official Language(s):
- Local Language(s):
- Total Population:
- Urban Population (% plus definition of urban):
- Rural Population (% plus definition of rural):
- Important changes in population migration, including immigration and refugees:
- Average Age of the Population:
- Population of Working Age (e.g., 15 - 65):
- Birth Rate:
- Life Expectancy:
- Literacy Rate:
- Average Education Level of Population:
- Unemployment Rate:

- Percentage of Women Employed Outside the Home:

1.2 Political/Geographic Structure of the Country

Section 1.2 should provide an introduction to the political and geographic structure of the country. It should refer to:

- Number of regions, provinces, states, municipalities, etc.
- Description of local government entities, e.g., states, provinces, departments, etc.
- Division of responsibilities between national, regional and local governments in the area of health and environmental control as well as land-use for economic development
- Location of various ethnic groups, as appropriate

A map of the country which indicates major administrative divisions (e.g., provinces, states, etc.) should be included as an Annex to the Profile. A text section should indicate any socio-cultural aspects which might influence choice of chemicals and related waste management options in the country.

1.3 Agricultural, Industrial and Other Key Economic Sectors

Section 1.3 should provide general information about the main economic sectors of the country, particularly agricultural and industrial activities, and provide an insight into the relative importance of various economic sectors, including the informal sector, where problems of chemicals and related waste management may be faced. The following tables are intended to summarise relevant information in a structured manner and should be expanded as required. A text section should be added to indicate other economic sectors that may be important in the country and that may have a bearing on options for chemicals and related waste management (*e.g.* tourism and construction).

The purpose of Table 1.A is to provide a summary of the relative importance of three of the primary sectors of the economy, i.e., the industrial sector (which includes manufacturing and other production facilities), mining (including offshore activities) and minerals extraction (including quarrying), and the agricultural sector (which includes agro-pastoral, fishing and forestry). To the extent appropriate, separate tables should be prepared for each major region.

The purpose of Table 1 B. is to provide an indication of the breakdown by size (by number of employees) of the industrial/manufacturing sector (which may include small and medium sized enterprises as well as large industrial complexes); mining and mineral extraction (which may include family or single person mining operations up to large open cast mining and quarrying, deep mining operations and offshore activities; and the agricultural sector (which may concern small family farms or animal husbandry up to large scale plantations and forestry estates).

The purpose of Tables 1.C and 1.D is to elaborate on the information contained in Tables 1.A and 1.B in order to provide an understanding of which regions in the country are most likely to face potential problems related to hazardous chemicals.

Table 1.A: Overview of the Industrial, Mining and Agricultural Sectors

(Prepare a national table and a set of sub-tables for each region or province as may be appropriate)

Sector	Contribution to the Gross Domestic Product (%)	Number of Employees	Major Products in each Sector
Industrial/ Manufacturing Sector [1]			
Mining and Extraction [2]			
Agricultural Sector [3]			
TOTAL			

1 This would include all manufacturing, production, formulation, assembly and related facilities.
2 This would include offshore exploration and exploitation of minerals, petroleum and gas.
3 This would include agro-pastoral, fishing and forestry activities.

Table 1.B: Structure of the Manufacturing/Mining/Agricultural Sectors by size according to the number of employees per facility

(Prepare a national table and one for each region or province as may be appropriate)

	Micro Farms/ Facilities [1] (%)	Small Farms/ Facilities [2] (%)	Medium Farms/ Facilities [3](%)	Big Farms/ Facilities [4] (%)
Industrial/Manufacturing Sector				
Mining and minerals extraction				
Agricultural Sector				
TOTAL				

1 1 to 15 employees
2 16 to 100 employees
3 101 to 250 employees
4 More than 251 employees

Table 1.C: Breakdown of Agricultural Production by Regions or Provinces

(If appropriate prepare a table for each region/province and expand the table as necessary)

Region	**Major Crops (including animal husbandry, fishing and forestry)**	**Total Value of Crop, etc.**	**Total Number of Employees**	**Size of Productive Areas (# hectares)**
TOTAL				

Table 1.D: Breakdown of Industrial Production and Mining (including offshore) by Region

(If appropriate prepare a table for each region/province and expand as necessary)

Region	**Major Products or Minerals Mined**	**Total Value of Production in US $ or Local Currency as Stated**	**Number of Industrial/ Mining Facilities**	**Number of Employees**
TOTAL				

1.4 Industrial Employment by Major Economic Sectors

This section provides a detailed overview of the levels of employment and annual output in different sectors of the national economy that have implications for safe management of chemicals and related waste. Some 12 key sectors are suggested and each country should adapt the sectors in relation to the perceived chemicals and waste issues. Sectors may be further grouped or disaggregated as is appropriate to the local situation. Section 1.5 refers to the chemicals and related waste issues themselves and uses the same structure. The International Standard Industrial Classification of All Economic Activities (ISIC) code is suggested as a reference for both sections and the latest version ISIC Rev 3.1 should be used as far as is feasible. (http://unstats.un.org/unsd/cr/registry). The ISIC Rev 4 is expected in 2007.

The purpose of Table 1.E is to identify the relative importance of different industries that may have implications for the safe management of chemicals and related waste. Prepare by region if appropriate.

Table 1.E: Industrial Employment by Major Economic Sector

ISIC Rev 3.1 Code [1]	Description	Number of Facilities	Total Employment	Output Value (per year)
D 15	Food Industry			
D 17-19	Textiles/Clothing and Leather Goods			
D 20,22	Wood and Wood Products, Printing			
D 21	Paper and Paper Products			
D 23-25	Chemical/Coal/Petro/ Plastic Products			
D 26	Non-metallic Mineral Products			
D 27	Basic Metals Industry			
D 29	Fabrication of Machinery and Equipment			
	Bulk Drugs			
	Paints			
	Dyes and Dye Intermediates			
	Ink and Printing Ink			
	Other Manufacturing Industries			

ISIC Rev 3.1 Code [1]	Description	Number of Facilities	Total Employment	Output Value (per year)
C 10-14	Mining and Extraction (Coal/Oil/Natural Gas/ Minerals/Metals)			
E 40	Electric Generation			
	Dry Cleaning			
	Others			
TOTAL				

1 ISIC: International Standard Industrial Classification of all Economic Activities, UN Statistics Classifications. The table suggests economic sectors, but each country may report as is most appropriate. Sectors may be expanded as necessary. Note that the new ISIC Rev 4 classification is expected in 2007.

1.5 Releases of Concern by Major Economic Sectors

This section provides a detailed overview of the releases of concern in the country related to specific economic sectors referred to in section 1.4 above. The purpose of Table 1.F is to identify the major emissions by type. It is meant as a companion table to 1. E and may be adapted for specific types of releases such as persistent organic pollutants. Each box should be expanded as needed

Table 1.F Releases by type and media for Major Economic Sectors

ISIC Rev 3.1 Code [1]	Description	Major pollution emissions by chemical type	Media to which emissions are released: Air Water, Soil	Wastes emitted as: solids, liquids or gases by volume or weight if known.
D 15	Food Industry			
D 17-19	Textiles/Clothing and Leather Goods			
D 20,22	Wood and Wood Products, Printing			
D 21	Paper and Paper Products			
D 23-25	Chemical/Coal/Petro/ Plastic Products			
D 26	Non-metallic Mineral Products			
D 27	Basic Metals Industry			

ISIC Rev 3.1 Code [1]	Description	Major pollution emissions by chemical type	Media to which emissions are released: Air Water, Soil	Wastes emitted as: solids, liquids or gases by volume or weight if known.
D 29	Fabrication of Machinery and Equipment			
	Bulk Drugs			
	Paints			
	Dyes and Dye Intermediates			
	Ink and Printing Ink			
	Other Manufacturing Industries			
C 10-14	Mining and Extraction (Coal/Oil/Natural Gas/ Minerals/Metals)			
E 40	Electric Generation			
	Dry Cleaning			
	Motor vehicle spray-painting facilities			
	Others			
TOTAL				

1 ISIC: International Standard Industrial Classification of all Economic Activities, UN Statistics Classifications. The table suggests economic sectors, but each country may report as is most appropriate. Sectors may be expanded as necessary. Note that the new ISIC Rev 4 classification is expected in 2007.

1.6 Assessment and Comments

This section should provide comments on physical and demographic aspects which may influence chemicals and related waste management options, such as:

- major regional climatic variations (tropical to tundra, hot or cold, humid or dry);
- geographical variations that may affect land-use; and
- problems related to population migration and immigration, including refugees, which may put a heavy burden on already stretched local resources affecting chemicals and waste management..

The political structure of the country may influence jurisdictional aspects of chemicals and waste management. Often local authorities have responsibilities for implementing pollution control and waste disposal. Ethnic and cultural variations in a country may influence the options for chemicals risk communication and management. Some comment may be needed

with respect to specific economic sectors in the country or in a particular region where chemicals may be important. Quantification of the informal economic sector is often very difficult and this sector is often uncontrolled and highly polluting; and in some cases may be illegal, such as gold mining with mercury and illegal use of chemicals in the narcotics trade. The issue of illegal trade in and smuggling of chemicals may also be referred to and discussed in Chapters 2 and 3.

Chapter 2: Chemical Production, Import, Export, Storage, Transport, Use and Disposal

Purpose of Chapter 2

To provide basic information about the existence of chemicals, through production import and export, as well as concerning the storage, transport, use and disposal of chemicals and handling of chemical waste in the country

An introductory paragraph may be added to describe past issues related to chemicals production, import, export, storage and transport which might have current relevance or influenced past policies which are still applied. For example, there may have been past production of currently banned chemicals (*e.g.* persistent organic pollutants pesticides and PCBs) or abandoned activities involving chemicals, such as minerals mining or cottage industries, where contaminated facilities or sites remain, and where there may be abandoned storage facilities for chemicals or stockpiles of obsolete chemicals. There may have been issues of transportation of hazardous materials which required special regulations, such as in some countries where transport of highly toxic or dangerous materials requires a security convoy. Additionally, it may be considered that the National Profile should reflect issues relating to unintentionally generated chemical substances and products, such as from fires or combustion (*e.g.* dioxins and furans); intermediates and chemical feed-stocks for other processes (*e.g.* methyl isocyanate, vinyl monomer or DDT); as well as chemicals' contaminated goods (*e.g.* cooking oils or domestic products with PCBs). This should be reflected in the introductory paragraph. Information could be obtained from a previous version of a National Profile, if available. Where there are official definitions of terms referred to, such as banned chemicals, obsolete chemicals, contaminated facilities, hazardous materials, toxic materials they should be explained and the definitions included in the Glossary. As far as is feasible data on chemicals should use harmonised, defined units, preferably metric (metric tons or kilograms for weight and cubic metres for volume) of be defined in the glossary.

2.1 Chemical Production, Import and Export

This section deals with the issues concerning domestic production of chemicals and chemical products, as well as the import and export of chemicals and products. The purpose of Tables 2.A and 2.A.1 is to get an understanding of the extent, and nature, of chemical production and trades in the country. The first column of each Table should be adapted to be consistent with decisions made concerning the scope of the National Profile, as well as with the definitions of terms in the glossary. It should be clear whether the tables include individual chemicals only or whether they also address formulations and preparations. For a basic National Profile, major chemical groups (e.g. total pesticides, petroleum products, other industrial products and household (consumer chemicals) goods) may be adequate for an overview of issues, where the local national statistical groupings of chemicals or the appropriate top level of the ISIC Rev 3.1 (with some modification) may be used. For highly industrialised countries it may be necessary to include a broader range of industrial chemicals, such as bulk drugs, dyes and dye intermediates, inks, paints, chlor-alkali and soda ash. As appropriate, offshore

production should be included. Where the Profile needs to deal with more specific issues, e.g. chemicals restricted under international conventions then additional tables (2 A.1) should be prepared to reflect individual or specific groupings of chemicals. Information on chemicals might be collected, for example, through product registers (e.g., for pesticides), chemical inventories and/or lists of licenses for production facilities and/or importers. In case this information is not available, estimates can be used but these should be clearly indicated as such. Where raw materials (e.g. minerals, coal, petroleum, and gas) are major chemical issues Table 2.A.2 should be completed, giving an explanation of the issues involved. It may be also useful to prepare separate tables for major regions in the country.

Table 2.A: Chemical Production and Trade

(Adapt rows according to the local data collection and add rows where necessary e.g. using and adapting the ISIC Rev3.1)
(Prepare also separate tables for Specific Regions if appropriate)

Chemical Type	**Production/ Manufacturing (tons/year & value)**	**Imports [1] (tons/year & value)**	**Formulation/ Packaging[2] (tons/year & value)**	**Exports [2] (tons/year & value)**
Pesticides (agricultural, public health & consumer use)				
Fertilizers				
Petroleum Products				
Industrial (used in manufacturing/ processing facilities)				
Consumer Chemicals				
Other chemicals (unknown/ mixed use)				

Chemical Type	Production/ Manufacturing (tons/year & value)	Imports [1] (tons/year & value)	Formulation/ Packaging[2] (tons/year & value)	Exports [2] (tons/year & value)
TOTAL				

1 If available, the primary sources (exporting countries) of these chemicals should be listed.
2 These quantities will overlap with the quantities indicated for production and import. There should be some clarification of the relationship among the information in the four columns.

An example of a table designed for specific issues such as Stockholm Convention chemicals is given in Table 2.A.1

Table 2.A.1: Estimated Stockholm Convention Chemicals Production and Trade

Persistent Organic Pollutant Categories	Production/ Manufacturing (kg per year and value, if any [1])	Imports (kg per year and value)	Formulation/ Packaging (kg per year and value)	Exports (kg per year and value)
Industrial Chemicals: (polychlorinated biphenyls [PCBs] and hexachlorobenzene)				
Pesticides (aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene, mirex and toxaphene)				

1 PCDD and PCDF are not commercially produced and have little if any commercial value, except when produced as reference standards for laboratory/other use.

Table2.A.2: Raw materials for Chemicals and Related Industries

Raw Materials	Import Tons or Volume /Year	Exports Tons or Volume/Year	Extracted locally Tons or Volume/year

2.2 Chemical Use by Categories

This section deals with the issues concerning use of chemicals and chemical products. The purpose of Tables 2.B is to get an understanding of the extent, and nature, of chemical use in the country. The first column of the Table should be adapted to be consistent with decisions made concerning the scope of the National Profile, as well as with the definitions of terms in the glossary. It should be clear whether the table includes individual chemicals only or whether they also address formulations and preparations. For some countries it may be useful to include use of natural chemical products.

Table 2.B: Chemical Use by Categories

The table may be expanded for other types of chemicals, groups of chemicals or individual chemicals as appropriate, for example pesticides used in industry; or a breakdown by certain industrial sectors; consumer chemicals or natural products. Additionally in some countries it may be valuable to have a Regional breakdown by use.

Type of Chemical	**Number of Tons Used per Year in the Country**
Pesticides - Agricultural	
Pesticides - Public Health	
Pesticides - Consumer Use	
Fertilizers	
Petroleum Products	

Type of Chemical	Number of Tons Used per Year in the Country
Industrial Chemicals (used in manufacturing/ processing facilities)	
Consumer Chemicals	
Other Chemicals (unknown/mixed use)	
TOTAL	

2.3 Storage of Chemicals and Related Issues

This section deals with issues concerned with the safe storage and handling of chemicals, particularly with respect to bulk storage. Chemicals may be imported into one country for transit to another country, for which there may be special storage facilities either at the port or place of entry or at specific warehouse areas. Certain chemicals destined for further transformation or later domestic use may be warehoused in bulk. The purpose of the Tables 2.C series is to get an understanding of the extent, and nature of chemical storage facilities in the country, particularly for bulk materials. This section is not meant to cover storage facilities at individual enterprises or small scale use of chemicals, such as at laboratories where storage facilities will be part of the installation. The first column of the Table should be adapted to be consistent with decisions made concerning the scope of the National Profile, as well as with the definitions of terms in the glossary.

Table 2.C: Bulk Chemical Storage and Warehousing Facilities

(Adapt rows according to the local data collection and add where necessary by industrial sector, e.g. using and adapting the ISIC Rev3.1)
(Prepare also separate tables for Specific Regions, if appropriate, and where more than one facility exists in a region prepare a separate table for each facility)

Chemical Type	Size/Capacity (Volume in cubic meters or weight in tons)	Type of Facility [1]	Location Area (port, industrial complex, urban, rural)	Labelling; Health and Environment Protection Measures [2]
Pesticides (agricultural, public health & consumer use)				

Chemical Type	Size/Capacity (Volume in cubic meters or weight in tons)	Type of Facility [1]	Location Area (port, industrial complex, urban, rural)	Labelling; Health and Environment Protection Measures [2]
Fertilizers				
Petroleum Products				
Industrial Chemicals (used in manufacturing/ processing facilities)				
Consumer Chemicals				
Chemical Waste				
Other Chemicals (unknown/mixed use)				

1 Indicate the type of storage facility e.g. whether: open, partly covered, completely enclosed, bounded?, monitored for air and water emissions.

2 Indicate whether the GHS or other system is used for labelling storage facility and, as may be appropriate, whether there are special precautions to protect flammables from ignition; to minimize the potential of exposure to poisons; to segregate incompatible compounds to prevent their accidental mixing (via spills, residues left in storage containers, earthquakes, fires or human error).

An indication should be given if the individual storage facilities are specifically for warehousing chemicals while in transit to another country. More description can also be given of specific facilities which provide major chemicals and related waste storage infrastructure, as to the adequacy of the facility in relation to sound management, health and environment protection, both in relation to handling of the chemicals at the site and impact on the community. An indication should also be given as to whether there is kept an up to date inventory of chemicals at the storage facility, and to whom this inventory is available.

If co-storage of bulk chemicals with other goods (e.g. food/feed stocks) is used at any site, a description should be given of the facilities and any precautions that are used to segregate incompatible materials and avoid mixing or spills during emergencies etc.

2.4 Transport of Chemicals and Related Issues

This section deals with issues related to the chemicals supply chain and is concerned with the facilities for safe transport of chemicals either from the site of production/transformation or the place of importation. It deals with the facilities for the full chemicals life cycle supply chain. Bulk chemicals are usually imported into a country either by sea (or inland waterway), rail or road. The point of entry provides an opportunity to check the nature and quantify chemicals. Chemical products manufactured or transformed in local industries are transported to local markets or to exit points for export to other countries. The purpose of the Tables 2.D series is to get an understanding of the extent, and nature of chemical transportation facilities in the country, particularly for bulk materials. This section is not meant to cover local distribution facilities within individual enterprises or small scale use transport of chemicals to local domestic markets. The first column of the Table should be adapted to be consistent with decisions made concerning the scope of the National Profile, as well as with the definitions of terms in the glossary.

Table 2. D: Supply Chain for Bulk Chemical Distribution and Transportation

(Adapt rows according to the local data collection and add where necessary by industrial sector, e.g. using and adapting the ISIC Rev3.1)
(Prepare also separate tables for Specific Regions, if appropriate, and where more than one major bulk transportation facility exists in a region prepare a separate table for each facility)

Chemical Type	**Type of Transportation Facility: Maritime, Inland waterway, Rail, Road, Air**	**Approximate Capacity (Volume in cubic meters or weight in tons transported by year)**	**Labelling; Health and Environment Protection Measures** [1]
Pesticides (agricultural, public health & consumer use)			
Fertilizers			
Petroleum Products			
Industrial Chemicals (used in manufacturing/ processing facilities)			
Consumer Chemicals			
Chemical Waste			
Other Chemicals (unknown/mixed use)			

1 Indicate whether the GHS/UNRTDG or other system is used for labelling of the transport facility and, as may be appropriate, whether there are special precautions to protect flammables from ignition; to minimize the potential of exposure to poisons; to segregate incompatible compounds to prevent their accidental mixing (via transport accidents and spills, residues in containers, earthquakes, fires or human error).

An indication should be given if the transportation facilities are specifically for transit of chemicals to another country. More description can also be given of specific facilities which provide major chemicals and related waste transportation infrastructure, including any transportation of a mixture of chemicals with other goods, as to the adequacy of the facility in

relation to sound management, health and environment protection, both in relation to handling of the chemicals during supply chain and impact on the community. An indication should also be given as to whether there is a registration system as well as an up to date inventory of bulk chemicals transportation e.g. from the point of importation or manufacture to the end user or point off exportation, and to whom this inventory is available.

2.5 Chemical Waste.

All wastes are chemicals; some are relatively inert, other "hazardous" or "toxic", depending on the intrinsic properties and circumstances. This section should summarize the total amount of various chemical waste produced and traded (Table 2.F) each year. To the extent the information is available, there should be descriptions concerning the type and nature of this waste (reference can be made to categories of hazardous waste defined in the Basel Convention see http://www.basel.int) and definitions given in the glossary. To the extent that there are imports and/or exports of chemical wastes, this should also be described. It may be useful to have a breakdown by industrial sector (appropriate ISIC Rev 3.1 categories could be used for the sectors) and a breakdown by Region. Countries that are signatories to the Basel Convention may be reporting regularly on the national import/export data and on material for recycling and disposal of waste.

Table 2.F: Chemical Waste Generation and Trade

(For some countries it may be useful also to have the information at a Regional level)

Type of Chemical Waste [1]	**Generation (tons/year)**	**Export (tons/year)**	**Import (tons/year)**
TOTAL			

1 In accordance with national definitions (define in the glossary).

2.6 Overview of Technical Facilities for Recycling of Chemicals

This section provides the opportunity to give an overview of relevant recycling or recovery facilities for chemicals and related waste. There is often an economic and ecological

advantage in recovery of raw material chemicals of high economic value (such as metals like copper, gold and silver), and of chemicals with a high energy value (like aluminium or certain hydrocarbons), as well as in recycling of substances such as solvents and oils. Table 2.G deals with facilities for recycling and recovery of chemicals. It may be useful to have a breakdown by industrial sector (appropriate ISIC Rev 3.1 categories could be used for the sectors) and a breakdown by Region. Where appropriate, cross reference should be made to chapter 2 section 2.5. To describe the recovery operations (third column) it is proposed that the R codes of Annex IVB of the Basel Convention are used.

Table 2.G: Facilities for Recovery and Recycling of Chemicals and related Waste

(For some countries it may be useful also to have the information at a Regional level)

Location of facility/ operation or process	Description of the facility, operation or process	Recovery operation (Annex IVB) R code	Capacity of the facility (in metric tons)	Does the facility treat wastes imported? Yes/No

2.7 Overview of Capacity for Disposal of Chemicals.

This section provides the opportunity to give an overview of relevant facilities for disposal of chemicals and related waste in the country. There are many types of possible disposal facilities and processes, including land and water dumping, impounding, incineration, permanent storage, as well as biological and physico-chemical treatment and depending on the form of the chemicals (solid, liquid, sludge, gaseous etc.) for disposal. Some types of facilities are environmentally sound; others may have health and environmental impacts. All should be monitored. Table 2.H deals with facilities and processes for disposal of chemicals. It may be useful to have a breakdown by industrial sector (appropriate ISIC Rev 3.1 categories could be used for the sectors) and a breakdown by Region. Where appropriate, cross reference should be made to chapter 2 section 2.5. To describe the disposal operations (third column) it is proposed that the D codes of Annex IV A of the Basel Convention are used.

Table 2H: Facilities for Disposal of Chemicals and related Waste

(For some countries it may be useful also to have the information at a Regional level)

Location of Facility/ operation or process	Description of the facility, operation or process	Disposal operation (Annex IVA) D code	Capacity of the facility (in metric tons)	Does the facility treat wastes imported? Yes/No

2.8 Assessment and comments

With respect to technical infrastructure for recycling and recovery as well as for disposal of chemicals in the country, a number of additional questions should be addressed, including for example:

- What are the possible health and environmental impacts of the facilities?
- Are facilities monitored for emissions?
- Are there specific arrangements for dealing with emergencies involving these facilities?
- Is there any cooperation with other countries in the recycling, recovery or disposal of chemical wastes?
- Is the country actively participating in a Basel Convention Regional Centre?

Where chemical specific data is required e.g. for chemicals under conventions or for obsolete pesticides inventories an additional table or set of tables 2.I. can be prepared indicating the number, location and magnitude of stockpiles or waste deposits and of contaminated sites. An example is given. Nationally used definitions for obsolete chemicals should be included in the glossary.

Table 2.I: Obsolete Chemical Stocks, Chemical Waste Sites and Contaminated Areas

(Expand boxes as required. Separate tables per Region could also be prepared.)

	Geographical location (GPS coordinates or Lat. Long.)	**Main content by chemical or groups of chemicals/waste**	**Magnitude of the site or stocks; e.g. small, medium and large**
Obsolete Chemical Stocks : Site 1 Site 2 Site 3 Etc.			
Chemical Waste Sites Site 1 Site2 Site3 Etc.			
Contaminated Areas Site1 Site 2 Site3 Etc.			

2.9 Unintentionally Generated Chemicals

Where countries consider that unintentionally generated chemicals, such as dioxins, furans and polycyclic hydrocarbons, are important for the National Profile, such as when preparing a National Implementation Plan for meeting the requirements of the Stockholm Convention or when intermediates and feed-stocks need to be considered, a new table should be added with the main source categories relevant to the national situation. An example for the persistent organic pollutants is given in table 2.J.

Table 2.J: Unintentionally Generated persistent organic pollutants under the Stockholm Convention

Type of Facility/Practices		Frequency of Occurrence/ Number of Facilities
Convention Annex C. Part II:	(a) Waste incinerators, including co-incinerators of municipal, hazardous or medical waste or of sewage sludge	
	(b) Cement kilns firing hazardous waste	
	(c) Production of pulp using elemental chlorine or chemicals generating elemental chlorine for bleaching	
	(d) Thermal processes in the metallurgical industry (i) Secondary copper production (ii) Sinter plants in the iron and steel industry (iii) Secondary aluminium production (iv) Secondary zinc production	
Convention Annex C. Part III: Source Categories	(a) Opening burning of waste, including burning of landfill sites	
	(b) Thermal processes in the metallurgical industry not mentioned in Part II	
	(c) Residential combustion sources	
	(d) Fossil fuel-fired utility and industrial boilers	
	(e) Firing installations for wood and other biomass fuels	
	(f) Specific chemical production processes releasing unintentionally formed persistent organic pollutants, especially production of chlorophenols and chloranil	
	(g) Crematoria	
	(h) Motor vehicles, particularly those burning leaded gasoline	
	(i) Destruction of animal carcasses	
	(j) Textile and leather dyeing (with chloranil) and finishing (with alkaline extraction)	
	(k) Shredder plants for the treatment of end of life vehicles	
	(l) Smouldering of copper cables	
	(m) Waste oil refineries	
TOTAL		

Taken from the UNITAR Supplementary Guidance Document for the Stockholm Convention.

2.10 Assessment and Comments

This section should summarize

- the capacity for data collection on production, import, export storage, transport, use and waste disposal of chemicals;
- the main sources of the data and
- where there are gaps or data is considered unreliable, for example in areas of chemical waste or chemicals used in the informal sector.

Suggestions should be given as to

- how more reliable data generation can be promoted and
- the feasibility of introducing registration and inventories e.g. for chemicals storage and transportation.

Where illegal traffic and smuggling of chemicals and related waste are suspected an indication of the extent of the problem and possible origins could be given and suggestions for better quantifying the issues made. Special issues relating to chemicals production importation and use and waste generation along with stockpiles, warehousing and transport of chemicals may also be discussed and proposals for their solution made.

Other international issues may arise through the bulk storage and transit transport of chemicals for import to and export from a neighbouring country.

Chapter 3: Priority Concerns Related to Chemicals at All Stages in Their Life Cycle

Purpose of Chapter 3

To provide an overview of the nature of problems associated with chemical production, trade, storage, use and disposal throughout their life cycle and, to the extent known, the chemicals or the categories of chemicals which are causing the concerns

3.1 Priority Concerns Related to Chemicals at all Stages of Their Life Cycle

This section is meant to provide an overview of the nature of the problems in the country associated with chemicals at all stages in their life cycle from importation or manufacture through transportation, storage, use and disposal or recycling. Consideration needs to be given to the broadest definition of chemicals and their applications appropriate to the country, and should usually include chemicals of natural origin, both inorganic and biological, as well as possibly dual purpose chemicals according to the Chemical Weapons Convention, radioactive chemicals and those used in terrorism. Further, the unintended generation of chemicals (e.g. dioxins and those from incomplete combustion processes) need also to be considered. Health and environmental issues related to additives to or residues found in food and consumer goods as well as biota (such as pharmaceutical residues in animals or wild life) may also justify inclusion.

The purpose of Table 3.A and Table 3.B is to assist countries in diagnosing and prioritizing potential problems related to chemicals throughout their life cycle within the country. Table 3.A provides an overview and description of the problem areas. A list of potential problem areas, which may serve as a starting point, is provided in the left hand column of Table 3.B. Each country should determine, as appropriate, other problem areas. In certain cases, it may be helpful to prepare separate tables for different classes of chemicals. Further, for some countries it may be useful to prioritise problems on a regional or local basis.

Some countries have found it useful to identify “hot spots” for priority action in chemicals management; and also to map areas of concern. A useful analysis may be made by comparing the sites of production/importation of certain chemicals and regions of use along with the transport corridors.

Table 3.A: Description of Problem Areas

Nature of Problem	City/ Region	Brief Description of Problem	Chemical(s)/ Pollutant(s)

The purpose of Table 3.B is to provide additional information and a general analysis with respect to identified problem areas of Table 3.A, including, for example, the ranking of priority areas of concern.

Table 3.B: Priority Concerns Related to Chemicals

Nature of Problem	Scale of Problem [1]	Level of Concern [2]	Ability to Control Problem [2]	Avail-ability of Statistical Data [3]	Specific Chemicals Creating Concerns	Priority Ranking [4]
Air Pollution: General Urban						
Air Pollution: Motor Vehicles						
Air Pollution: Industrial						

Nature of Problem	Scale of Problem [1]	Level of Concern [2]	Ability to Control Problem [2]	Avail-ability of Statistical Data [3]	Specific Chemicals Creating Concerns	Priority Ranking [4]
Drinking Water Contamination						
Ground-water Pollution						
Pollution of Inland Waterways						
Marine Pollution						
Soil Contamination						
Hazardous or chemical Waste Treatment/ Disposal						
Medical waste Treatment/ Disposal						
Storage/Disposal of Obsolete Chemicals						
Chemical Residues in Food						
Chemical Contamination of Goods (Excl. Food)						
Occupational Health Agriculture						
Occupational Health: SMEs						
Occupational Health: Industrial						
Public Health						
Toxins of Natural Origin						
Radioactive Chemicals						
Household Chemicals						

Nature of Problem	Scale of Problem [1]	Level of Concern [2]	Ability to Control Problem [2]	Avail-ability of Statistical Data [3]	Specific Chemicals Creating Concerns	Priority Ranking [4]
Labelling of Chemicals						
Chemical Accidents: Industrial						
Chemical Accidents: Transport						
Transport of Chemicals						
Chemical Terrorism						
Chemical Poisoning: Intentional						
Chemical Poisoning: Non-intentional						
Unknown Chemical Imports[5]						
Illegal Imports and Smuggling of Chemicals						
Dual Purpose Chemicals Illegally Used						
Warehousing of Chemicals						
Persistent Organic Pollutants						
Other Specific Chemicals of Concern						
Others						

1 Enter: Local, regional, or national.
2 Enter: Low, medium, or high.
3 Enter: Sufficient, insufficient, or no data available; data source should be mentioned separately.
4 Provide relative ranking from 1 to 5 of the problems being faced by the country (1 = most severe problem(s), 2 = second most severe problem(s), etc.). As appropriate, the same ranking can be given to different problem areas.
5 For example, to ensure compliance with decisions made as part of the UNEP/FAO prior informed consent procedures.

3.2 Assessment and Comments

Section 3.2 should provide an analysis of national capabilities to identify problem areas and establish national priorities related to chemical production, import, export, handling, storage, transport use and ultimate disposal or recycling. It should have a length of a few pages only. The following are examples of questions which should be addressed in preparing this section:

- Is the available information sufficient to establish relative priorities of national problems in chemicals and related waste management? If not, what additional information should be available?

- Is there a regional concentration of chemicals related problems? Are problems different in different regions? In case some regions are more affected than others, what are the reasons?

- Is there significant agreement among concerned parties about relative priorities? If not, the different views should be explained.

- Do chemicals of concern nationally possibly qualify for additions to the conventions on Prior Informed Consent or on Persistent Organic Pollutants?

- Are there specific issues related to parts of the life cycle of chemicals in the country, where special measures are required e.g. transport of hazardous chemicals through sensitive corridors?

- Are there issues that require international cooperation to solve them, such as inter-country transport of chemicals; trans-boarder pollution/contamination due to chemicals, smuggling and illegal traffic in chemicals?

Chapter 4: Legal Instruments and Non-Regulatory Mechanisms for Life Cycle Management of Chemicals

Purpose of Chapter 4

To provide an overview of existing legal instruments and non-regulatory mechanisms for managing chemicals and related waste, including their implementation and enforcement, and to identify relevant strengths, weaknesses and gaps

Due to the cross-sectoral nature of chemicals and related waste management, it is likely that several pieces of legislation, regulations, or standards in the country address chemicals and waste in different ways. Many of these laws, regulations, standards, decrees or other legal instruments may be relevant even when they are not limited to, or specifically target, chemicals. For example, general transport laws, regulations relating to offshore activities, or environmental health laws may have some control provisions which are applicable to hazardous chemicals and related waste.

This does not mean, however, that all important aspects of chemicals and related waste management are covered and that there is consistency or are complementarities among these legal instruments. Furthermore, there may be a number of non-regulatory instruments that should be considered in an overall analysis of the adequacy of national chemicals and related waste management.

Chapter 4 should address this important issue by providing a summary of all relevant legal instruments and non-regulatory mechanisms related to the life cycle management of chemicals, which should also include unintentional by-products and intermediates, as well as toxins of natural origin. In addition, Chapter 4 should address the implementation and enforcement of these instruments and mechanisms.

4.1 Overview of the National Legal Instruments Which Address the Life Cycle Management of Chemicals

The purpose of Table 4.A is to provide a list of all Laws (L), Regulations (R) Standards (S), Decrees (D) or other legal instruments relevant to the management of chemicals and related waste. Information should be provided on scope and objective of each instrument, the ministry(ies) or other body(ies) responsible for implementation and enforcement, and sections or articles which address issues of chemicals and related waste management.

In addition, it should be made clear which categories of chemicals are covered (e.g., agricultural chemicals, industrial chemicals, consumer product chemicals, toxins of natural origin) or which type of chemical by-products are regulated (e.g., air emissions, water emissions), or types of related waste (e.g. industrial, medical or domestic). This can be done by preparing separate tables for each group of chemicals of concern or it can be integrated

into one table with appropriate explanations. Where the Profile is required to cover additionally specific issues, such as the implementation of a particular Convention, e.g. Stockholm, or of a specific management tool e.g. Pollution Release and Transfer Registers (PRTR), it may be useful to develop additional tables. Table 4.A.1. gives examples of topics that could be addressed in a set of tables for specific issues.

Table 4.A: References to Existing Legal Instruments Which Address the Life Cycle Management of Chemicals

Legal Instrument (Type, Reference, Year) [1]	Responsible Ministries or Bodies	Chemical Use/Waste Categories Covered	Objective of Legislation	Relevant Articles/ Provisions	Resources Allocated [2]	Enforcement Ranking [3]	Number of Prosecutions per year

1 Copies of relevant legislation should be made available as an Annex to the National Profile.
2 Budget and person years.
3 Enter: effective (1), fair (2), or weak (3) enforcement.

More detailed summary descriptions of key legislation should be provided in Section 4.2, as appropriate.

Table 4.A.1. References to Existing Legal Instruments that Address Specific Issues

Identical sets of tables to table 4.A. with the replacement of the third column (Chemical Use/Waste Category Covered) by for example:

- Hazardous waste management and contaminated sites ("Stockpiles and Wastes")
- Sources that generate and release dioxins and furans ("Unintentionally Generated persistent organic pollutants")
- Pesticides persistent organic pollutants ("Intentionally produced persistent organic pollutants")
- Industrial persistent organic pollutants chemicals ("Intentionally Produced persistent organic pollutants")
- Pollutant Release and Transfer Registers (PRTRs)/inventories

Explanations and more details should be given in Section 4.2.

4.2 Summary Description of Key Legal Instruments Relating to Chemicals

Section 4.2 should provide additional details on legal instruments which are considered of particular importance for the management of chemicals and related waste. For each such instrument, the following information should be provided:

- Lists of specific chemicals/groups of chemicals or waste which are covered and/or the criteria applied for selecting those which are covered

- Indicate where legislation covering more general areas, such as transport of goods, storage/ warehousing, mining, occupational health and safety, zoning and land-use, small and medium sized enterprises, disaster management may be used for chemicals and related waste management

- Means for making legislation publicly known (e.g., official journals or registers), including the availability of translations

- A brief description of administrative procedures included under the legal instruments (such as information requirements, risk assessment, classification, labelling) and management schemes (such as registration of pesticides or other classes of chemicals, permitting schemes or licensing of installations or traders, provision of information to the public, etc.). Key terms, as used in the national context, should be defined in the glossary

- Mechanisms included to monitor implementation (e.g., audit procedures, reporting requirements), as well as actions which can be taken for non-compliance (e.g., fines, revocation of licenses, shutdown of facilities, prison terms etc.); an indication of the number of prosecutions per year under the legislation can be a useful indication of the effectiveness of enforcement; have there been any challenges in the courts concerning the legislation or have the courts found authorities in breach of implementing the legislation

- Existing databases which have been created as a result of such instruments (e.g., permit databases and emission registers). For each such database, there should be a description of the scope and objectives and identification of location and responsible body

- Provisions for the protection of proprietary information

4.3 Existing Legislation by Use Category Addressing Various Life Cycle Stages of Chemicals from Production/Import through Disposal

Based on the information provided in Sections 4.1 and 4.2, Table 4.B is meant to provide an overview of the legal instruments that regulate each stage of chemicals from production/import through disposal and recycling, for each of the main use categories of chemicals addressed in the Profile. The purpose of this overview is to assist in identifying missing elements as well as opportunities for strengthening the existing system. It is expected that, as a minimum, agricultural chemicals, industrial chemicals, consumer product chemicals and related waste are covered. For specific purposes the table may be expanded to cover individual chemicals or groups of chemicals and waste.

It should be kept in mind that legal instruments may not always be needed to reduce chemical risks and that non-regulatory mechanisms may be used in certain cases including, for example, incentive systems or voluntary programmes by industry.

Table 4.B: Overview of Legal Instruments to Manage Chemicals by Use Category[1]

(The table may be expanded in the first column for specific chemicals or waste e.g. for persistent organic pollutants)

Category of Chemical	**Import**	**Production**	**Storage** [1]	**Transport** [2]	**Distribution/ Marketing**	**Use/ Handling**	**Disposal**
Pesticides (agricultural, public health and consumer use)							
Fertilizers							
Industrial Chemicals (used in manufacturing & processing facilities)							
Petroleum Products							
Consumer Chemicals							
Chemical Wastes							
Others							

1 If a specific stage is adequately addressed through legislation, an "X" should be filled in.

2 It should be recognized that transportation and storage can occur at various stages of the chemicals' life-cycle from production through disposal.

4.4 Summary Description of Key Approaches and Procedures for Control of Chemicals and Related Waste

The purpose of this section is to provide an overview of the existing policy approaches and procedures used to control various classes of chemicals and related waste. These instruments may be relevant at different stages of the chemicals life cycle and could address, for example, classification and labelling of chemicals/products/waste, registration of products, permits (e.g. for discharge), licenses (e.g. to operate), reporting requirements, inspections, information to be provided to workers and/or the public, etc.

For each of the policy instruments descriptive information should include, for example:

- a short description of relevant instruments, including applicable limitations
- agency/organization responsible for each procedure (including whether they are national, regional or local)
- the role of the judiciary in enforcement and whether civil action has been brought in the courts to enforce legislation
- the level and nature of enforcement including the availability of human and financial resources for enforcement
- the role of non-governmental organizations in monitoring and enforcement, as well as in education and public awareness

To the extent appropriate, decision-making procedures should be described and/or illustrated (e.g., through flow charts) including an indication of which parties are involved at various points in the procedures. For example, this could be done for the registration of pesticides and other chemicals, licensing of facilities, emissions permits, import decisions under the Prior Informed Consent procedure, etc.

This section should also include a listing of chemicals which have been banned or severely restricted as well as a listing of national Prior Informed Consent import decisions. This information could be presented in text form or in a table (see Table 4.C).

Table 4.C: Banned or Severely Restricted Chemicals [1]

Name of Chemical	**Level of Restriction (ban (B) or severe restriction (SR))**	**Details of Restriction (e.g. reason for control action, remaining allowed uses, etc.)**

1 Following the criteria established by the Rotterdam Convention on Prior Informed Consent.

4.5 Regulatory Instruments for Related Activities which Impact on Chemicals Management

Many broader areas of legislation not specifically concerned with chemicals directly may have an important impact on life cycle management of chemicals. Land-use regulations in both the urban and rural contexts, zoning, traffic and motor vehicle control, building regulations, and environmental quality control may impact directly of indirectly on the way chemicals are used and disposed of. As one example, regulation on the use of various types of packaging materials may impact on both the chemical waste and persistent organic pollutants emissions issues. This section provides an opportunity to review these additional areas of policy instruments and legislative infrastructure in relation to sound life cycle management of chemicals.

For each of the policy and legislative instruments descriptive information should include, for example:

- a short description of relevant instruments, including applicable limitations
- agency/organization responsible for each procedure (including whether they are national, regional or local)
- the level and nature of enforcement including the availability of human and financial resources for enforcement
- the role of non-governmental organizations in monitoring and enforcement, as well as in education and public awareness
- the role of the judiciary in enforcement and whether civil action has been brought in the courts to enforce legislation

To the extent appropriate, decision-making procedures should be described and/or illustrated (e.g., through flow charts) including an indication of which parties are involved at various points in the procedures.

4.6 Non-regulatory Mechanisms for Managing Chemicals

Section 4.6 should provide a description of all non-regulatory mechanisms which have a role in the life cycle management of chemicals. These could include, for example:

- voluntary actions by industry, such as Responsible Care programmes
- economic incentives, such as tax benefits
- other incentives

For each mechanism, a summary should be provided which describes, as appropriate:

- the nature of the mechanism
- the classes of chemicals covered
- the objective of the mechanism
- the parties responsible for its implementation
- the nature and extent of implementation

To the extent information is available, the summary should address the costs associated with the use of each mechanism and the relative cost-effectiveness of using such an approach.

4.7 Assessment and Comments

Section 4.7 should provide an analysis of the national legal and non-regulatory infrastructure for the life cycle management of chemicals. It should have a length of a few pages only. A number of questions should be addressed including, for example:

- Are there any overlaps and gaps in the existing legislative system and responsibilities among authorities for the management of chemicals and related waste, and what are these (a distinction should be made among classes of chemicals, such as pesticides, industrial chemicals and consumer chemicals or specific chemicals)?

- How effective is enforcement of the different pieces of legislation? In case enforcement is not effective, what are the underlying reasons?

- How effective are non-regulatory instruments in reducing chemical risks in the country (e.g., incentive systems, voluntary programmes by industry, etc.)? What are the reasons for their success or failure or for their inexistence?

- Do existing laws match with the national priorities indicated in Chapter 3, i.e., is there a law or policy which addresses each of the main priority concerns indicated in Chapter 3? Which key areas have not been addressed at all?

- Are there any new laws/policies being proposed? If so, which are these? Reference should be provided to the relevant initiative including the responsible ministry.

- Are there any laws, regulations or other instruments that are the direct result of international conventions or agreements? If yes, specify the respective laws and the relevant international instrument.

- Are there any modifications to or new regulations, legislation or other instruments required to meet the country's commitments to chemically related Multi-Environmental Agreements, such as the Stockholm or Rotterdam Conventions.

- For each chemical use category, an analysis should be conducted whether existing control instruments are appropriate, effective, and comprehensive. This should include available descriptions and statistics of events where the existing control instruments have failed or problems have arisen.

Chapter 5: Ministries, Agencies and Other Institutions Managing Chemicals and Related Waste

Purpose of Chapter 5

To describe and analyze the mandates and programmes of different ministries, agencies and other governmental institutions responsible for, and concerned with, various aspects of chemicals and related waste management

5.1 Responsibilities of Different Government Ministries, Agencies and Other Institutions

The purpose of Table 5.A is to provide a general overview of ministerial responsibilities and activities related to chemicals management for each stage of the chemical life cycle from production/import through disposal and recycling. The overview is meant to assist in documenting areas currently covered, and in identifying missing elements or possible overlaps in the national institutional infrastructure. Based on this overview, further descriptions of relevant responsibilities and activities should be provided in Section 5.2.

For each cell in the Table, an indication should be provided which government ministry has responsibility for the control of chemicals for each stage from importation and production, storage, transport, use through disposal and recycling. Separate tables should be completed for different classes of chemicals such as pesticides (Table 5.A.1), petroleum products (Table 5.A.2), industrial chemicals (Table 5.A.3), and consumer chemicals (Table 5.A.4). Additional tables may be added for specific issues, such as control of persistent organic pollutants, or other chemicals of national concern.

The ministries/agencies listed in the first column are provided as examples. The Table should be adapted to include the appropriate ministries/agencies in the country. To the extent applicable, it should include regional and local agencies and institutions.

Table 5.A: Responsibilities of Government Ministries, Agencies and Other Institutions [1]

Stages of Life-Cycle / Ministry Concerned	Importation	Production	Storage	Transport	Distribution/ Marketing	Use/ Handling	Disposal
Environment							
Health							
Agriculture							
Labour							
Trade/Commerce							
Industry							
Finance							
Transport							
Interior/Civil Defence							
Justice							
Customs							
Foreign Affairs							
Other							

1 Check the appropriate box with an "X" where institutions have responsibilities and explain in the text in section 5.2.

5.2 Description of Ministerial Authorities and Mandates

Section 5.2 should include additional information concerning each of the institutions (e.g., ministries, agencies) identified in Section 5.1. This information should include:

- a brief description of their primary responsibilities for, and involvement in, specific aspects of chemicals and related waste management, including inspection and enforcement, e.g., occupational health, public health, environmental protection (air, water, habitats, species, etc.), pesticides control, industrial safety, emergency response, etc.;

- the role of State or other Regional Governmental and Local/Municipal Authorities and how they interact with the Central Government Authorities; whether there are difficulties

or benefits and possible hindrances to sound management of chemicals and related waste due to the division of responsibilities between Central, Regional and Local Authorities;

- the role of Presidential Decrees and any National Commissions (e.g. for Sustainable Development) in chemicals and related waste management and their effectiveness.

- resources allocated for chemicals and related waste management activities including budget and number of person-years (taking into account the fact that some personnel have multiple responsibilities); and

- the type and level of expertise available for life cycle chemicals management activities.

5.3 Assessment and Comments

This section should provide an analysis of ministerial mandates and programmes in order to ensure a well co-ordinated division of responsibility related to the sound life cycle management of chemicals. It should have a length of approximately 1 page. A number of questions should be addressed in this section, including:

- Are there overlapping mandates among ministries and bodies at different levels of government in the country? If relevant, is this issue addressed in practice? How?

- Are there situations where it is not clear which ministry or other institution is responsible for fulfilling a general mandate set out in a legal instrument?

- Should additional ministries or other institutions be involved which presently do not have any responsibility/activity with regard to chemicals or related waste management? Why should or shouldn't they be involved?

- Are Presidential Decrees and National Commissions effective policy instruments for sound life cycle management of chemicals?

- What is the current degree of implementation of the various institutional mandates? To the extent possible, it is useful to assess the effectiveness of concerned ministries and other authorities towards implementing various regulations and administrative procedures

Chapter 6: Relevant Activities of Industry, Public Interest Groups, Professional Bodies and the Research Sector

Purpose of Chapter 6

To describe and review activities of non-governmental bodies and entities which support national efforts to manage chemicals and related waste

Chapter 6 should provide information on all relevant programmes conducted by non-governmental organizations and entities. This information is considered important in light of the significant role that non-governmental organizations should play in the life cycle management of chemicals. It should, however, be borne in mind that in some countries governmental authorities are responsible for certain activities that would be undertaken by NGOs in other countries. Furthermore, not all countries have a broad spectrum of NGOs and some, such as professional bodies or associations, may not exist in all countries. Among the public interest groups, industrial, scientific and professional associations, there are often international bodies that can play a very valuable role, such as the International POPs Elimination Network (IPEN), Greenpeace International, the International Council of Chemical Associations (ICCA), the International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations (IUF), International Federation of Chemical, Energy, Mine and General Workers' Unions (ICEM), International Metalworkers' Federation, the World Wide Fund for Nature (WWF), the International Council of Scientific Unions (ICSU), International Standards Organisation (ISO), and the International Societies of Toxicology, including the International Union of Toxicology (IUTOX), the North American Academy of Clinical Toxicology (NAACT), the European Association of Poison Centres and Clinical Toxicologists (EAPCCT) and the Asian and Pacific Association of Medical Toxicologists (APAMT). It should be noted that for the implementation of certain international agreements e.g. the Stockholm Convention, the involvement of non-governmental stakeholders is a legal requirement.

Such organizations include:

- ***industrial organizations and entities*** involved in the production, formulation, sales/marketing, import, export, transport, storage or disposal of chemicals. In most countries there will be a Chamber of Commerce, and possibly associations of pesticides dealers and distributors, chemical manufacturers, and of SMEs. They may be involved in voluntary activities related to chemicals managements such as implementation of the FAO Code of Conduct, implementation of Responsible Care and Product Stewardship programmes, emergency response assistance, etc.

- ***labour unions and workers' associations*** are involved in occupational health and safety in the works place and have a awareness and training programmes for their members, and can also be important advocates for chemical safety.

- ***professional and scientific associations and bodies*** involved in the professional conduct of their members and providing codes of practice and expertise in areas of chemicals risk assessment and management; as well as standards organisations concerned with accreditation of facilities, such as laboratories, and harmonisation of standards applied in the commercial field, including those related to chemicals and waste

- ***universities, research institutes, private laboratories, libraries and quasi-governmental organizations.*** Academia and the research sector typically includes researchers from major universities as well as representatives of agricultural, forestry, or marine research centres and other sources of scientific/technical information needed for chemicals and management, and/or are conducting related research and development. The main relevant professional bodies, such as societies of toxicology, emergency medicine and of chemical engineers, have access to relevant information

- ***public sector interest groups and other non-governmental organizations*** including community-based organizations (e.g., environmental, consumers' and women's groups and associations of indigenous peoples) have an interest in the sound life cycle management of chemicals, and may also have specific local interests within a country.

6.1 Description of Organizations/Programmes

Section 6.1 should provide brief information on each relevant organization. This should include information on contact points, address/phone/fax/e-mail, website, and a brief statement describing related activities and areas of interest.

It is recognized that in some countries, in particular in larger countries, the relevant organizations may be too numerous to describe and, therefore, some mechanism should be chosen to determine which organizations are the most important or active in the field. Further, there may also be Regional/Provincial groupings of certain organisations, which may need to be included.

Where international associations or bodies contribute to aspects of sound management of chemicals and related waste a description of their roles should also be included.

6.2 Summary of Expertise Available Outside of Government

Table 6.A should provide, in summary form, an overview of the nature of expertise in non-governmental organizations which might be available to support national programmes and policies related to chemicals and related waste management. It may be appropriate to prepare separate Tables for each class of chemicals addressed in the National Profile. Further, the number of columns may be expanded to include other specific NGOs (national, regional or international) or to give a better breakdown of the various categories of NGOs, such as the Professional Bodies, the Environmental/Consumer Groups, the labour organisations, and the Industrial Associations. Other fields that might be added to the rows include: classification and labelling; risk communication; accreditation; information to specific professional groups; health surveillance and environmental surveillance.

Table 6.A: Summary of Expertise Available Outside of Government [1]

Field of Expertise	Research Institutes	Universities	Industry	Environmental/ Consumer Groups	Labour Unions	Professional Orgs.	Other (specify)
Data Collection							
Testing of Chemicals							
Risk Assessment							
Risk Reduction							
Policy Analysis							
Training and Education							
Research on Alternatives							
Monitoring							
Enforcement							
Information to Workers							
Information to Public							
Heath Surveillance							
Environmental Surveillance							
Other (specify)							

1 For each entry in this table, further information should be provided in section 6.2 which will allow concerned parties to understand the nature of the activity, where it takes place and how to obtain further information.

6.3 Assessment and Comments

Section 6.3 should provide an assessment of activities of non-governmental organizations and entities and the linkages of such initiatives with government programmes to strengthen chemicals and related waste management. It should have a length of approximately 1 page. Questions which should be addressed include:

- What is the government policy (or policies) concerning opportunities for non-governmental organizations to obtain government information related to the management of chemicals; does this apply also to the international NGOs?

- What is the government policy (or policies) concerning opportunities for non-governmental organizations to provide information to the government related to the life cycle management of chemicals; does this apply to the international NGOs?

- What role do non-governmental organizations have in government decision-making concerning the management of chemicals and related waste; and are these organisations consulted in the planning and proposals stages for new or modified chemicals and related waste legislation ?

- Which voluntary initiatives in industry (or elsewhere) are successful and may supplement chemicals and related waste management activities of government?

- What role do non-governmental organizations play in informing the public about chemical risks and about government activities in this area?

- What rights do non-governmental organizations have to seek enforcement of laws and regulations related to the control of chemicals; is there a precedence for the involvement of the judiciary?

- Is there any information, studies, or previous research conducted by non-governmental organizations, including industrial organizations, relevant for strengthening government's capacity for chemicals and related waste management? If so, how does the government use this information?

- To what the degree is there existing co-operation between government and non-governmental sectors in chemicals and related waste management.

Chapter 7: Inter-ministerial Commissions and Co-ordinating Mechanisms

Purpose of Chapter 7

To describe and analyze mechanisms which facilitate co-ordination and co-operation among ministries, agencies and other relevant governmental and non-governmental bodies in particular areas of chemicals and related waste management

In preparing this chapter reference may be made also to the report of the UNITAR/IOMC thematic workshop on Inter-ministerial Coordination for the Sound Management of Chemicals, August 2002.[2]

7.1 Inter-ministerial Commissions and Co-ordinating Mechanisms

Table 7.A should provide an overview of any relevant mechanisms for co-ordinating activities among relevant institutions. This table is just an example of how information on such mechanisms can be summarized. However, different countries will have very different types of mechanisms, depending on the legal and cultural setting of the country. Therefore, the table will need to be adapted for the national and possibly regional and local situation.

More detailed summary descriptions of key mechanisms and their effectiveness can be provided in Section 7.2, as appropriate.

Table 7.A: Overview of Inter-ministerial Commissions and Co-ordinating Mechanisms

Name of Mechanism	Responsi-bilities	Secretariat	Members	Legislative Mandate/ Objective	Informa-tion Provided in Section 7.2 (yes/no)	Effective-ness [1]

1 Rank between 1 and 3: excellent (1), adequate (2), or poor (3).

[2] Available on the UNITAR website: www.unitar.org/cwm

7.2 Description of Inter-ministerial Commissions and Co-ordinating Mechanisms

Section 7.2 should describe in more detail inter-ministerial commissions and co-ordinating mechanisms referred to in Table 7.A which are considered of particular importance for the management of chemicals and related waste or for specific international commitments. It should be borne in mind that vertical and horizontal coordination within Ministries and Institutions is often very important. For each mechanism, the following information should be provided:

- Type of mechanism (e.g., inter-ministerial body, standing committee, formal consultative process, ad hoc groups); and how it was established (such as by Presidential Decree, a legal requirement of a Parliamentary Act, an informal arrangement)

- Scope of issues and chemicals covered

- Parties included (including governmental and non-governmental)

- Working procedures (e.g., nature and frequency of meetings, decision-making procedures, etc.); budget available for the operation of the mechanism; how often has the mechanism been convened in the previous 12 months?

- Diagnosis of current weaknesses

Where appropriate, it may be useful to prepare diagrams or flow charts, for example, relating to an inter-ministerial commission established for the registration of pesticides or for setting residue levels of pesticides and other chemicals in food; or for responding to chemical emergencies.

7.3 Description of Mechanisms for Obtaining Input from Non-Governmental Bodies

Section 7.3 should provide a description of any relevant mechanism for obtaining input from non-governmental bodies into government review and decision-making procedures, recognizing that such bodies often have important information not otherwise available to government. The term "input" should include: sharing of information; reporting; and participation in planning, in decision-making and in implementation of national chemicals and related waste management programmes and policies.

Section 7.3 should also include a list of relevant non-governmental organizations. Such non-governmental bodies may include research institutes, universities, industrial organizations, labour unions, professional bodies, standards organisations, and community-based organizations (e.g., environmental/consumer/indigenous/women's groups).

7.4 Assessment and Comments

Section 7.4 should provide a critical assessment and analysis of the existing inter-ministerial co-ordinating mechanisms which help to facilitate a well co-ordinated division of responsibility and inter-ministerial co-operation related to the sound life cycle management of chemicals. Specific attention should be devoted to their effectiveness and the extent to which groups are aware of means for input. It should have a length of approximately 1 page. The following questions should be addressed in preparing this section:

- Are existing co-ordinating mechanisms working effectively? What could be done to improve them? Are technological solutions required? (Website, online data, fax, telephone linkages), organizational solutions? (*ad hoc* groups, quality circles), more frequent communication? (regular newsletter), political support from higher authorities?, budgetary resources?, etc

- Are all parties from government ministries and agencies which may be able to contribute represented in each of these mechanisms?

- Do these mechanisms cover all important aspects of chemicals and related waste which require inter-ministerial co-ordination and co-operation? Do they link with related coordination mechanisms for development or disaster preparedness and response? Is there a need for establishing additional co-ordinating mechanisms? If so, for which purpose?

- Are the existing mechanisms linked with each other or do they work separately?

- Are there opportunities to bring in additional parties from outside of government in these mechanisms?

- Are there opportunities to include additional parties on a case-by-case basis to deal with specific issues of concern?

- Is information shared across the different agencies charged with chemicals and related waste management? What current mechanisms exist to share information among agencies?

Chapter 8: Information Management Capacity, Data Access and Use

Purpose of Chapter 8

To provide an overview of the information management capacity in the country related to the life cycle management of chemicals, and in particular the availability of data and how it is used for national and local chemical risk reduction

This chapter is concerned with the capacity of the country to access and collect data, and use it for sound life cycle management of chemicals under local conditions. It addresses the quality, quantity and location of data, procedures for collecting and disseminating it, information management tools and exchange systems. It should be borne in mind that there is a vast amount of information in the international literature on chemicals and related waste issues and that countries need access to validated data that they require for decision-making. Additionally, information is needed on the local situation in the country in order to apply effective chemicals and related waste management. The first section deals with the quality and quantity of available information for decision-making; the second and third, respectively, with the location of national data and procedures for collecting and disseminating it; the fourth on availability of international literature and databases; and the fifth on the government information systems and IT capacity and the exchange of information.

8.1 Overall Availability of Data for National Chemicals and Related Waste Management

Table 8.A provides an overview of whether sufficient data is available for different decision-making activities which may be required under existing legal instruments. The items listed in the first column are provided as examples, which should be adapted to the national situation. Additional columns may be added as appropriate, for example if dealing with a particular group of chemicals of concern e.g. persistent organic pollutants. Details should be placed in the comments section which follows the table. The terms should be defined in the glossary.

Table 8.A: Sufficiency (in Quality and Quantity) of Available Information [1]

Data Needed for/to:	Pesticides (agricul-tural, public health and consumer use)	Industrial Chemicals	Consumer Chemicals	Chemical Wastes	Other areas of Chemicals Concern (state which)
Priority Setting					
Assess Chemicals Impact under Local Conditions					
Risk Assessment (environment/health)					
Classification/ Labelling					
Registration					
Licensing					
Permitting					
Risk Reduction Decisions					
Accident Preparedness/ Response					
Poisoning Control					
Emissions Inventories					
Inspections & Audits (environment/health)					
Information to workers					

Data Needed for/to:	Pesticides (agricul-tural, public health and consumer use)	Industrial Chemicals	Consumer Chemicals	Chemical Wastes	Other areas of Chemicals Concern (state which)
Information to the public					
Others					

1 If sufficient information is available for the tasks listed in the left hand column, an "X" should be placed in the appropriate box.

It should be noted that much of the data collected for other chapters will originate from databases that have to be described in detail here and appropriate cross reference should be made.

Additions to the table should be explained in the context of national requirements for sound life cycle management of chemicals. Where an "X" is not put in a square, then an indication should be given in the text as to the extent of information available for the particular decision-making activity, with an indication of how availability could be improved. Examples:

- A country may have access to good quality data on poisoning control (treatment of persons exposed to specific chemicals) but insufficient data on the composition of consumer goods to use the data in treating persons exposed to these chemicals.
- Much data may be available on the risk assessment of a particular industrial chemical, but the epidemiological data under local conditions may not be of sufficient quality to permit a decision on acceptable levels in the work place.
- Under the requirement for "classification and labelling" for "industrial chemicals" the information may be inadequate as the industry/manufacturer/importer does not provide a (or provides an inadequate) safety data sheet for this purpose;
- For "poison control" for "consumer chemicals", there is inadequate labelling and the label is not required to give the ingredients by chemical name with quantities (e.g. composition of the product and solvent);
- For "accident preparedness/response" the emergency response services have no access to the information on product composition, and do not have a data base on handling, protective clothing and fire-fighting procedures for any of the groups of chemicals.

8.2 Sources of National Data and Their Access and Format

The purposes of Table 8.B is to indicate the nature of national data related to chemicals and waste management which is available, and to provide practical information on how to gain access to such data. Additional “Rows” may be added for other types of relevant data e.g. persistent organic pollutant inventories. In particular, the table should indicate where data is maintained within government ministries, agencies or other institutions or within non-

governmental bodies. Table 8.B. should also indicate the source of the data (which may be multiple), who has access to the data and the form in which the data is maintained (e.g., automated database, paper files, register, etc.). An example may be "First row; Production Statistics": Location "National Bureau of Statistics"; Data Source "Industry, Ministry of Trade and Commerce and Customs services"; Who has Access "All government Departments"; How to gain access "Published on the Web"; Format "Excel tables". The comments section following the table should indicate details concerning restrictions on access. Comments on any shortcomings in the data its collection and the quality of the information that can be obtained should be made in Section 8.3.

Table 8.B: Sources of National Data, their Access and Format

Type of Data	Location(s)	Data Source	Who Has Access?	How to Gain Access[1]	Format
Production Statistics					
Import Statistics					
Export Statistics					
Chemical Use Statistics					
Industrial Accident Reports					
Transport Accident Reports					
Occupational Health Data (agricultural)					
Occupational Health Data (industrial)					
Poisoning Statistics					
Pollutant Release and Transfer Register					

Type of Data	Location(s)	Data Source	Who Has Access?	How to Gain Access[1]	Format
Hazardous Waste Data					
Register of Pesticides					
Register of Toxic Chemicals					
Inventory of Existing Chemicals					
Register of Imports					
Register of Producers					
Prior Informed Consent Decisions					
Others					

1 This should include a description of any restrictions on access.

Provide further information on the table and in particular any restrictions on access.

8.3 Procedures for Collecting and Disseminating National/Local Data

Additional information should be included in this section on the procedures for collecting and disseminating data related to life cycle chemicals management, particularly concerning shortcomings of the data and how collection and dissemination of data can be improved. Among the questions which should be addressed are:

- What types of data are collected on a systematic basis using harmonised formats with defined terms? In which languages? Which databases are computerised (see also section 8.5)

- What types of data related to life cycle chemicals management are required by law to be provided to government authorities? By whom, when and under what circumstances?

- Are data maintained on the health and environmental effects of chemical exposures locally in the country? If so, who has to develop, collect, provide and analyze the data?

- Is there a systematic collection of information on chemical incidents, as well as chemical accidents in the work place? (Make cross reference to Chapter 10)

- Are data maintained by government authorities, or others, related to the specific chemicals or groups of chemicals used in the country? Indicate which.

- Is access to the relevant data adequate once the government has collected them? Who has access to the data? What restrictions exist on access? What protection is given to confidential business information ("cbi") and how is this defined?

- How can the collection of comparable local data in harmonised ways be improved and their access to all who need to use them for life cycle chemicals management be enhanced?

8.4 Availability of International Literature and Databases

The purpose of Tables 8.C and 8.D is to make transparent what international literature and databases are accessible within the country, including their location, in order to facilitate access to them by all concerned parties.

For each type of international literature and database which is available in the country, additional information should be provided which facilitates access including, for example, which specific office or location within institution(s) receives documentation. In this regard, government and non-governmental institutions should be considered. Often, research institutes, universities, other libraries, industry and other non-governmental organizations have access to international sources of information which may not be easily available through governmental institutions. Furthermore, it should be borne in mind that most internationally available data is accessible both in hard copy and via the Internet.

Similar information should be provided relative to sharing of information among countries (including international, regional and national literature and databases). For example, this might include assessments of chemicals and lists of priority chemicals.

Table 8.C: Availability of International Literature

Literature	Location(s)	Who Has Access and in what form?	How to Gain Access[1]
Environmental Health Criteria Documents (WHO)			
Health and Safety Guides (WHO)			
International Chemical Safety Cards (IPCS/ILO)			
Decision Guidance Documents for Prior Informed Consent Chemicals (FAO/UNEP)			
FAO/WHO Pesticides Safety Data Sheets			
Documents from the FAO/WHO Joint Meeting on Pesticide Residues			
Documents from the FAO/WHO Joint Expert Committee on Food Additives			
Safety Data Sheets (Industry)			
OECD Guidelines for the Testing of Chemicals			
Good Laboratory Practice Principles (OECD)			
Good Manufacturing Practice Principles (WHO)			
WHO/UNEP Global Environment Library Network			
Others			

1 This should include a description of any restrictions on access.

*Table 8.D: Availability of International Databases**

Database	Location(s)	Who Has Access?	How to Gain Access [1]
ILO CIS			
IPCS INCHEM			
IPCS INTOX			
Relevant Databases from Other Countries [4]			
Other			

1 This should include a description of any restrictions on access.
2 In the process of being developed, to link information centres.
3 STN: Scientific and Technical Information Network, US Chemical Abstract Service.
4 These should be specified.

For tables 8C and 8D, include information related to restriction of access and details of other relevant databases.

8.5 Government Information Systems and Informatics Technology Capacity and the Exchange of Information.

This section should provide an overview of the informatics technology capacities available within the government which can be used for chemical information systems, to access international data bases and for the implementation of governmental policies and programmes related to chemicals and waste management; as well as to promote data exchange and information flow

* Note a listing of some 30 data bases is given on Page 19 in the Annex to the Report "Hazard Generation and Availability", prepared for IFCS Forum IV (see http://www.who.int/ifcs/documents/Forum/ForumIV/Meeting_docs/Working_docs/09w-F4Ann_en.doc)

With respect to government IT capacities, the following questions should be addressed in this section:

- Do all Ministries and Institutions concerned with different aspects of life cycle chemicals management have informatics capabilities? Do all relevant staff, including those at the technical level, have access to computers. If not, who has access?

- Do database management systems for chemicals and various types of waste exist in the country (what is the bases e.g. are they adapted from internationally available systems, with defined terms and harmonised formats) and who uses them. If there is more than one system are they compatible?

- Is there a national Chemicals/Waste Web site? Who maintains it and who has access to it? Are there any restrictions to access?

- Are the computer information systems in different ministries and other governmental institutions compatible?

- Do the computer systems have the ability to access E-mail (indicate if only internally) and the Internet, (if only some staff have access to the Internet indicate at which level e.g. director level only). Are there general or specific problems with Internet access and if so why?

Concerning exchange and flow of information this section should provide additional information on national activities, programmes, or policies which facilitate:

- information flow from international organizations to all concerned parties in the country

- the exchange of national information among various ministries and other institutions and other concerned parties

- are there any formal or informal networking arrangements within authorities within the country and with institutions abroad? If so give details.

8.6 Assessment and Comments

This section should contain a critical assessment and analysis concerning the availability and use of information and the related infrastructure for national chemicals management. It should have a length of approximately 1 page. Consideration should be given, for example, to the following questions:

- Are there significant gaps in the literature/information base and its current distribution? If so, where are these gaps?

- Does the existing international data (e.g. on research assessment, or economic evaluation) allow interpretation and application under conditions in your country?

- Are there overlapping and/or conflicting sources of information related to chemical assessment and management?

- What is the present state of existing data bases in the country? Are they automated? Is there harmonisation of data in terms of definitions and standardised data collection formats? How are they maintained? Can they be queried? Is there a national chemicals/waste Web site? Who has access to this Web site?

- Are there current efforts/initiatives to improve the quality of existing databases?

- How can existing data/information mechanisms be strengthened?

- Is access to international databases or documentation sufficient? If not, what are the problems?

- Do all concerned parties have appropriate access to information? If not, what are the underlying reasons?

- How can further information on specific chemicals, or groups of chemicals used in the country, be obtained?

- What is the national policy on public access to government information?

Chapter 9: Technical Infrastructure

Purpose of Chapter 9

To provide an overview of the technical infrastructure in the country related to the life cycle management of chemicals, and in particular: the analytical capacity required for sound management of chemicals and waste; the technical capacity for recycling and disposal. Other areas of technical infrastructure not covered elsewhere and considered of importance by a country may be added in additional sub-chapters

Earlier on, I have already commented on the composition of this chapter. I really do not think it is a good idea to insert section 9.3 on recycling here. This is an industrial activity and does not belong here. I also feel that 9.4 should be put in a separate place and not under this title.
This chapter is concerned with the technical infrastructure to support national programmes and policies for chemicals and related waste management, and in particular the technical capacity for chemical analysis, recycling and disposal. Laboratory facilities providing analytical chemistry capabilities which can, *inter alia*, help to ensure the quality of chemicals, conduct residue analyses, identify unknown substances and monitor for possible adverse effects. For countries wishing to undertake a more detailed analysis of analytical capacity, attention is drawn to the report of the UNITAR/IOMC thematic workshop on *Strengthening National Capacities for Chemical Analysis and Monitoring for the Sound Management of Chemicals* and the Survey Reporting Format given in Annex A of this report.[3] A global inventory of POPs laboratories has been issued by UNEP[4]. Technical facilities for recycling and disposal of chemicals provide important capacity for sound management of chemicals and reference should be made to the reporting of such facilities under the requirements of Articles 13 and 16 of the Basel Convention[5].

9.1 Overview of Laboratory Capacity

The purpose of Tables 9 A and 9 B is to provide an overview of the laboratory facilities available in the country to support programmes and policies for the management of chemicals. Table 9 A deals with the laboratory capacity related to regulatory chemical analysis. Table 9 B deals with the monitoring capacity and the ability to support health and environmental surveillance e.g. for pesticide or work place exposures, for persistent organic pollutants in the environment, for chemical contamination in ground water. All relevant laboratories should be mentioned, including those in government agencies, research institutes, universities, and, where appropriate, the private sector etc. However, it is recognized that in more developed countries there may be too many laboratories to be included in a table. In that case, the most important laboratories, from the perspective of enforcing chemicals management policies, should be included in Table 9 A, and those

[3] The report is available on the UNITAR website at: www.unitar.org/cwm
[4] http://www.pops.int/documents/meetings/cop_1/meetingdocs/en/inf_24/COP_1_INF_24.pdf
[5] See http://www.basel.int

concerned with monitoring in relation to health (such as clinical analytical toxicology laboratories) and to the environment (eco-toxicology laboratories) in Table 9 B.

Table 9 A: Overview of Laboratory Infrastructure for Regulatory Chemical Analysis

Name/ Description of Laboratory	Location	Equipment/ Analytical Capabilities Available	Accredi-tation (if yes, by whom?)	Certified GLP [1] (yes/no)	Purpose

1 GLP: Good Laboratory Practice.

Table 9 B: Overview of Laboratory Infrastructure for Monitoring and Analysis

Name/ Description of Laboratory	Location	Equipment/ Analytical Capabilities Available	Accredi-tation (if yes, by whom?)	Main purpose, and the chemical substances analysed	Number of samples/ month (state which substance)

9.2 Assessment and Comments

With respect to the laboratory infrastructure, a number of additional questions should be addressed including, for example:

- Do the laboratories utilize internationally-recognized protocols, such as the OECD Test Guidelines or those of ISO or professional bodies?

- Do the laboratories have formal quality assurance systems; are these internal programmes or external?

- Are there any national programmes to improve the quality and quantity of the output from relevant laboratories?

- Describe the main problems and hindrances experienced in providing laboratory services in the country (*e.g.* financing, training and retaining staff, equipment maintenance, availability of spare parts, reagents and reference materials)

- Are there any programmes (formal or informal) for co-operation among countries (*e.g.* on a bilateral or regional basis) to share laboratory facilities or test results?

- Are there areas of chemical analysis where the country would like external laboratory support for specific activities e.g. monitoring for dioxins or other substance where the analytical capacity does not exist in the country?

- Is the number and location of laboratories sufficient to cover national needs compared to the current situation?

9.3 Other Relevant Areas of Technical Infrastructure

This section provides the opportunity to give an overview of other relevant technical infrastructure available in the country in relation to life cycle management of chemicals.

9.4 Overall Assessment and comment on technical infrastructure for sound management of chemicals and related waste

This section should include an analysis of the overall technical infrastructure of the country as far as life cycle chemicals management is concerned. In addition, it should identify opportunities for strengthening the technical infrastructure. It should have a length of approximately 1 page, and should, for example, address the following issues:

- an outline of the mains strengths and weaknesses of the current technical infrastructure for chemicals management

- an estimate of the current infrastructure deficit. For example, are the needs for adequate infrastructure met through out the country? Are there regions or areas of technical infrastructure where existing infrastructure is particularly weak? How can improvements be made?

Chapter 10: Chemical Emergency Preparedness, Response and Follow-up

Purpose of Chapter 10

To provide an overview of the capacity in the country related to preparedness for, response to and follow-up of emergencies involving chemicals

Chapter 10 should provide information on the facilities available in the country for chemical emergency preparedness, response and follow-up. Emergencies may arise from industrial, transport or other incidents involving toxic substances, including waste. They may arise from accidental or deliberate contamination of food, drinking water or consumer goods. Such contamination may involve both chemicals of made-made or natural origin. Natural disasters may also provoke chemical emergencies e.g. earthquakes, floods or storms destroying facilities containing toxic materials, which are released into the environment; volcanoes emitting toxic fumes. Recently several countries have experienced chemical terrorism, the potential for which is ever present. These incidents may involve many people (and animals, as well as contaminating the environment), during which emergency response facilities and health services, already strained in many countries, are put under great pressure. Furthermore, the normal communications systems e.g. telephones may, become blocked or inoperative during an emergency, and the capacity of regular transportation systems severely reduced.

10.1 Chemical Emergency Planning

Describe briefly the existing emergency arrangements in the event of a chemical incident:

- Does the country have a chemicals emergency plan and is it part of an overall national disaster management plan?

- Which authorities have various responsibilities and how does the plan operate at regional and local levels?

- Which stakeholders are involved in the development of the plan and its implementation? For example, besides the emergency services themselves, are the: health, environment and local authorities; industry and the transport sector; and meteorological services involved? Responsibilities may vary depending on whether the chemical incident is in the industrial, transport, domestic or public health fields.

- Does the plan include regular testing under simulated conditions and are there provisions for modification of the plan based on experience of specific emergencies?

- How are the media involved and what mechanisms exist to inform the public in an emergency?

Other questions that should be addressed in relation to preparedness include:

- Are inventories made of installations and transport routes at risk of chemical incidents? Do the fire, police and other emergency services have specific equipment, including protective clothing, to deal with chemical incidents and is staff specifically trained for such incidents?

- Is the GHS (Globally Harmonised System for the Classification and Labelling of Chemicals) being applied in the country? What are the chemical hazard identification systems already in place and enforced in the country, both in the transport and industrial/commercial sectors? Do they apply to SMEs?

- Is there a poisons information or other chemicals information service which is available around the clock to provide advice in a chemical emergency and are there dedicated emergency communications systems?

- Do local hospitals have patient decontamination facilities and stocks of antidotes, medicines and appropriate equipment for chemical emergencies?

- Are the health or emergency services equipped for transportation of chemically exposed persons?

- What facilities are available for incident clean-up and for long term follow-up of exposed persons?

- What training is available to prepare the emergency services (e.g. fire, police civil defence) personnel in dealing with a chemical incident, as well as medical and paramedical staff in handling and treating chemically exposed persons?

- Is there any training for veterinarians concerning treatment of exposed animals to toxic substances?

10.2 Chemical Incident Response

This section provides the opportunity to list in Table 10.A and describe some of the more significant chemical incidents that have occurred recently in the country with the outcomes. Add a paragraph below the table on comments and observations and possible lessons learned from particular incidents.

Table 10.A: Examples of Chemical Incidents in the Country

Date of incident	Location	Type of Incident	Chemical(s) involved	D: Number of Deaths I: Number of Injuries E: Numbers Evacuated	Environ-mental Contam-ination or damage

For Location give the name of the place e.g. town and the region/province.

Type of incident could be: industrial accident/fire; transport (road/rail/waterways/air) accident/fire/spill; warehouse/storage site fire; contamination of drinking water/food/ medicines/other consumer goods; chemical misuse; natural disaster involving chemicals; terrorist attack, etc.

Chemicals involved could be a one individual (e.g. chlorine) or a group of chemicals (e.g. pesticides, PCBs); a natural occurring chemical or toxin (e.g. arsenic in drinking water, aflatoxins, toxic algae in red tide incidents) or a large mixture e.g. in a fire, when material being burned should be given.

Environmental contamination or damage should be described briefly e.g. air pollution; drinking/ground water/river/lake/sea pollution; soil contamination; destruction of plants/ woodlands/commercial crops; loss of wild life or commercial animals (cattle, sheep, goats, horses, camels etc.).

Add a paragraph for explanations and observations, with possible lessons learned from the response to specific incidents.

10.3 Chemical Incident Follow-up and Evaluation

This section is provided for a description of the procedures, if any, taken for the follow-up of a chemical incident, both in terms of exposed persons and the environment with rehabilitation measures, and for the evaluation so as to improve preparedness and response in the future.

- Is there a formal or informal mechanism in place to investigate a chemical incident and its outcome? Is there a standardised format for collecting the information about the incident? Give a brief description.

- Can the investigation lead to a formal enquiry about the causes and responsibilities of various parties involved? Can the investigation lead to a follow-up activity e.g. an epidemiological study; or a study of improved fire prevention in warehouses etc.? Give a brief description where this has been done in the past.

- Is there a register of chemical (and other) incidents? Who has the responsibility for it? Is it kept systematically? How is an incident defined to be entered in the registry?

- Is there a follow-up surveillance and rehabilitation mechanism in the health service for exposed persons who may suffer long term disabilities and sequelae? How is this achieved?

- Do the Environmental and Local Authorities (or others) have the responsibility for clean-up after an incident? Is there a follow-up of any damage to the natural or physical environment? Give a brief description.

10.4 Assessment and Comments

This section provides an opportunity to make an assessment of the country's capacity in relation to chemical emergencies; an evaluation of the needs in relation to chemicals emergency response in comparison with the current situation and the facilities available through the existing disaster preparedness and management infrastructure: for example needs in relation to coordination mechanisms, communications, equipment, databases and information management systems, trained human resources, health service capacity for response, environmental services clean-up capacity, mechanisms for follow-up and rehabilitation of exposed persons. It may be that the capacity varies considerably from region to region, with good facilities in the vicinity of major towns and poor facilities in remoter regions.

Chapter 11: Awareness/Understanding of Workers and the Public; Training and Education of Target Groups and Professionals

Purpose of Chapter 11

To provide an overview of

- ***the mechanisms available to provide information to workers and to the public concerning the potential risks associated with chemicals , and of***
- ***the capacity for training and education of***
  - ***target groups affected by chemicals and related waste and of***
  - ***professionals involved in sound life cycle management of chemicals.***

This chapter should summarize legal instruments, programmes, policies and related activities to

- promote awareness and understanding of chemical safety issues throughout the country and to
- provide education and training of specific sectors of society concerned with the implementation of sound management of chemicals and waste.

The summaries provided should include relevant activities of government ministries and other institutions, as well as the full range of non-governmental groups described in Chapter 6.

11.1 Awareness and understanding of chemical safety issues

In many countries there is still a very poor appreciation of the issues concerning chemical safety and how exposure to toxic chemicals and waste may give rise to serious health impairment and degradation of the environment, which then impacts on human wellbeing and economic development. In this section describe the activities being undertaken to:

- provide information to workers to protect their health and safety from the risks of chemicals

- provide information to the public concerning the risks to the environment, health and safety from chemicals, and actions which should be taken in order to protect themselves from chronic or acute exposure to hazardous chemicals in everyday life, as well as at the time of a chemical emergency

- raise awareness and educate the public for effective participation in national environmental management initiatives as stated in Agenda 21 or the implementation of the Stockholm Convention; as well as access to justice in environmental matters. Please cite examples of government-public participatory partnerships in environmental issues in your country

- raise the awareness of decision-makers and legislators concerning chemical safety and encourage them to take timely action to implement sound management measures

- improve the understanding of communicators and the media concerning chemical safety issues and encourage them to better communicate these issues to the public in order to improve understanding and promote chemical safety actions by the public and civil society in general

11.2 Education and Training for Sound Management of Chemicals and Waste

Many target groups may be at particular risk concerning exposure to toxic chemicals and related waste where improved education may help reduce such exposures. Among the many examples are: education of parents, especially mothers, in reducing the risk of children in their care to toxic chemicals; the training of agricultural workers in safe application procedures for pesticides and the wearing of protective clothing against exposures (such as boots against snake bites in the tropics during planting and harvest); education of workers in cottage industries to reduce exposures to chemicals and waste and use environmentally sound disposal/recycling of waste. Education needs to start in primary and secondary education, and continue into a variety of courses at higher education levels. Technical and administrative staff concerned with specific aspects of sound management of chemicals and waste need to be provided with the necessary skills and on the job training promoted. This section should describe, in general terms, any training and education programmes aimed at providing the technical expertise required to implement government policies and programmes related to chemicals management. This should include programmes related to disciplines such as chemistry, toxicology, environmental sciences, and environmental engineering. In this regard, consideration should be given to training and education programmes at technical schools and at university level, as well as specific programmes available to government employees. In this section describe the activities being undertaken to:

- Develop chemical safety education in school and university curricular

- Promote the necessary skills for administrators concerned with risk assessment and regulation in the use of available data and evidence base approaches

- Promote skills training for a range of professional workers concerned with aspects of sound management of chemicals, from customs workers to those handling and transporting chemicals to the users of chemicals, such as agricultural and industrial workers, and those in SMEs

- Promote the training of health and other professionals in diagnosis and management of exposed persons

- Promote the training of chemical emergency response professionals

- Promote the training of staff at technical facilities, such as laboratories, recycling and disposal facilities

11.3 Assessment and Comments

This section provides an opportunity to make an assessment of the country's capacity in relation to public and workers awareness concerning chemical safety issues and to human resource development for sound life cycle management of chemicals in the country. Availability of trained human resources both within government and civil society is a key factor in sound management of chemicals. It may be that the capacity varies considerably from region to region, and the reasons for this may be analysed in this section.

Chapter 12: International Linkages

Purpose of Chapter 12

To describe national participation and involvement in international organizations and agreements concerned with the management of chemicals and to identify opportunities for an integrated approach at the national level

12.1 Co-operation and Involvement with International Organizations, Bodies and Agreements

In preparing this chapter reference may be made to the report of the UNITAR/IOMC thematic workshop on *Synergies for Capacity Building under International Agreements Addressing Chemicals and Waste Management*.[6] A recent compilation of Chemicals Agreements, Programmes and Activities has been published by the World Bank.[7] The purpose of Tables 12.A and 12.B is to clarify the involvement of the country in international activities and agreements and to allow all concerned parties to know who has the responsibility for contacts with the related international organizations. The Tables should be expanded to incorporate international activities relevant to the country.

Table 12. A : Membership in International Organizations, Programmes and Bodies

International Organization/ Body/Activity	**National Focal Point (Ministry/Agency & Primary Contact Point)** [1]	**Other Ministries/ Agencies Involved**	**Related National Activities**
Intergovernmental Forum on Chemical Safety (IFCS)			
UNEP **UNEP/UNIDO National Cleaner Production Centres**			
IPCS			

[6] The report is available on the UNITAR website at: www.unitar.org/cwm

[7] The Global Pursuit of the Sound Management of Chemials, prepared for the World Bank by John Buccini : http://lnweb18.worldbank.org/essd/envext.nsf/50ByDocName/TheGlobalPursuitoftheSoundManagementofChemicals/$FILE/GlobalPursuitOfSoundManagementOfChemicals2004Pages1To67.pdf

International Organization/ Body/Activity	National Focal Point (Ministry/Agency & Primary Contact Point) [1]	Other Ministries/ Agencies Involved	Related National Activities
WHO			
FAO			
UNIDO			
ILO			
World Bank			
Regional Development Bank (specify)			
OECD			
United Nations Regional Economic Commissions (specify)			
Regional Economic Groupings (Specify) [2]			
Other relevant Regional Arrangements e.g. SPREP			
Others			

1 This column should identify the specific office, and title of the individual, which serves as the national focal point.

2 Regional Economic Groups of Countries and other Regional Arrangements include:

- Andean Community
- Asia-Pacific Economic Cooperation (APEC)
- Association of Southeast Asian Nations (ASEAN)
- Common Market for Eastern and Southern Africa (COMESA)
- Economic Community Of West African States (ECOWAS)
- European Union (EU)
- Gulf Cooperation Council (GCC)
- Mercado Común del Sur (MERCOSUR)
- Organization of Islamic Conferences (OIC)
- Southern African Development Community (SADC)
- South Asian Association for Regional Cooperation (SAARC)
- South Pacific Regional Environment Programme (SPREP)

Table 12.B: Participation in International Agreements/Procedures Related to Life Cycle Chemicals Management

International Agreements	Primary Responsible Agency [2]	Relevant National Implementation Activities [3]
UN Recommendations for the Transport of Dangerous Goods		
FAO Code of Conduct (voluntary procedure)		
Montreal Protocol[1]		
Basel Convention[1]		
Agenda 21 - Commission for Sustainable Development		
ILO Convention 170		
ILO Convention 174		
Paris Chemical Weapons Convention		
Rotterdam Convention[1]		
Stockholm Convention[1]		
GHS		
SAICM		
Regional/Sub-regional Agreements (specify)		
Bilateral Agreements (specify)		
Others		

1 The DNA(s) or Focal Points of relevant conventions should be identified
2 This column should identify the specific office, and title of the individual, which serves as the national focal point.
3 International agreements usually imply the need for significant national implementation activities. Therefore, complementary information should be provided for each relevant international agreement on the corresponding national activities.

12.2 Participation in Relevant Development and Technical Assistance Projects

Table 12.C should provide an overview of all on-going and planned multi-lateral and bi-lateral assistance activities related to the management of chemicals. It should not just address projects which are specifically directed to chemicals management, but also projects related to environment and sustainable development (*e.g.* concerning National Environmental Action Plans), and projects concerning, for example, agricultural and industrial development which involve the transfer of chemicals or chemical-related technology. Include technical cooperation activities with the UN agencies such as with UNDP, UNIDO, WHO, FAO and ILO, as well as capacity building projects with GEF and bilateral donors. The resources aspects of development assistance projects are covered in Chapter 13 section 4.

Table 12.C: Participation as Recipient in Relevant Technical Assistance Projects

Name of Project	**International/ Bi-lateral Donor Agency Involved**	**National Contact Point**	**Relevant Activities**

Consideration should be given to whether the table should be completed with representatives of international/bilateral donor agencies.

For each project, complementary information should be provided addressing, for example:

- the objective and scope of the project
- the duration of the project
- participating national organizations
- relevant experience gained

In addition, this section should describe any national policies related to aid projects which may have an impact on the life cycle management of chemicals. Among the questions which could be addressed are, for example:

- Are there any controls or limitations on the chemicals which will be accepted as part of an aid project?

- Are there any procedures to facilitate co-ordination among aid projects, to help focus on priority activities and to avoid duplication?

12.3 Assessment and Comments

Section 12.3 should provide an analysis of national capabilities to effectively link international programmes with a national strategy for the sound life cycle management of chemicals. It should have a length of approximately 1 page. The following questions/aspects are among those that should be addressed in preparing this section:

- Assess the degree to which national implementation activities of international agreements have been undertaken.

- How well is the work of the international organizations integrated into a comprehensive national programme?

- Is there appropriate co-ordination on the national level with respect to implementation of international activities and agreements in the area of chemicals management? Have synergies been developed between/among agreements in their implementation in the country? If so, describe how?

- Are there any procedures to help ensure co-ordination between ministries/agencies responsible for aid activities and those responsible for the protection of health, safety or the environment?

- How could international agencies improve the effectiveness of their current programmes in your country? What are your specific recommendations in this regard (e.g. improved co-ordination mechanism, better communication, redefinition of priorities, better adaptation to local conditions, etc.)?

- What are the obstacles in your country in the way of implementing international agreements? How could such obstacles be overcome?

Chapter 13: Resources Available and Needed for Chemicals Management

Purpose of Chapter 13

To provide an overview of resources available within government related to various aspects of life cycle chemicals management (including human and financial resources) and to analyse resource needs

While provision of resources for many aspects of sound management of chemicals and related waste in countries is a government responsibility, all stakeholders need to contribute in their area. The industrial and commercial sectors make a large contribution through investment in safety measures and pollution control, as well as in the application of classification and labelling systems. Each concerned NGO contributes resources though, for example, their own awareness and training activities. In many developing countries multi- and bi- lateral development assistance agencies provide additional resources for specific programmes, such as the GEF for Stockholm Convention enabling activities. The chapter is concerned, however, mainly with resources provided through and needed by government departments and institutions. Attention is drawn to the report of the UNITAR/IOMC thematic workshop on "Strengthening Finance Resource Mobilisation for the Sound Management of Chemicals".[8]

13.1 Resources Available in Government Ministries/Institutions for Chemicals and Related Waste Management

The purpose of Tables 13.A is to provide an overview of resource availability within the national government. It addresses the existing resources available within government ministries, agencies and other institutions specifically to address governmental responsibilities with respect to sound life cycle management of chemicals. This should include information on the availability of professional personnel and particular skills, as well as financial resources. As far as possible resource availability should be linked to specific responsibilities e.g. risk assessment for regulation or food standards; enforcement of designated areas of legislation e.g. inspection, pesticide residues in food; monitoring for health or environmental impact. The ministries/agencies listed in the first column of the Table are provided as examples. The table should be adapted to include the appropriate ministries/agencies in the country. To the extent applicable, it should include regional and local agencies and institutions. In the second column the specific areas of responsibility for which the resources are allocated should be given, as in the examples immediately above. It may be appropriate to prepare separate Tables for each class of chemicals addressed in the National Profile, a task that would be very useful if there are specific requirements for the Profile, such as the situation analysis for a NIP for the Stockholm Convention.

[8] The report is available on the UNITAR website at: www.unitar.org/cwm

Table 13.A: Resources Available in Government Ministries/Institutions

Ministry/Agency Concerned	Specific responsibilities for which resources are allocated	Number of Professional Staff Involved	Type of Expertise Available	Financial Resources Available (per year)
Environment				
Health				
Agriculture				
Labour				
Trade/ Commerce				
Industry				
Finance				
Transport				
Interior/Civil Defence				
Justice				
Customs				
Foreign Affairs				
Other				

To the extent information is available, this section should also indicate the extent of resources (human and financial) available at local and regional government authorities for the management of chemicals.

13.2 Resources Needed by Government Institutions to Fulfil Responsibilities related to Life Cycle Chemicals Management

The purpose of Tables 13. B. is to provide an overview of resource needs within the national government. It addresses the resources estimated to be needed by government ministries, agencies and other institutions in order to fulfil their responsibilities for chemicals and related waste management. As with Table 13 A, resource needs should be associated with specific responsibilities or activities. The ministries/agencies listed in the first column of the Table are provided as examples, and the table should be adapted to include the appropriate ministries/agencies in the country. To the extent applicable, it should include regional and local agencies and institutions, and indicate the areas of responsibilities. It may be also

appropriate to prepare separate Tables for each class of chemicals addressed in the National Profile.

Table 13.B: Resources Needed by Government Institutions to Fulfil Responsibilities Related to Chemicals Management

Ministry/Agency Concerned	Specific responsibilities for which resources are required	Number/Type of Professional Staff Needed	Training Requirements
Environment			
Health			
Agriculture			
Labour			
Trade/Commerce			
Industry			
Finance			
Transport			
Interior/Civil Defence			
Justice			
Customs			
Foreign Affairs			
Other			

13.3 Resources Available in Non-Government Institutions for Chemicals and Related Waste Management

The industrial and commercial sectors make a large contribution through investment in safety measures and pollution control, as well as in the application of classification and labelling systems. In some countries there are public-private partnerships for certain chemical safety activities. NGOs contribute resources though, for example, their own awareness and training activities. The purpose of Tables 13.C is to provide an overview of resource availability within the non-government community. It addresses the existing resources available within institutions specifically to address governmental responsibilities with respect to sound life cycle management of chemicals. This should include information on the availability of professional personnel and particular skills, as well as financial resources. As far as possible

resource availability should be linked to specific responsibilities. Note should be taken of the importance of identifying these resources in relation to counterpart local funding for development assistance activities involving the non-governmental sector.

Table 13.C: Resources Available in Non-Government Institutions

Concerned Institution	Specific responsibilities for which resources are allocated	Number of Professional Staff Involved	Type of Expertise Available	Financial Resources Available (per year)

13.4 Resources from Development Assistance Activities

Many developing countries and those in economic transition benefit from multi-lateral and bi-lateral assistance activities related to the management of chemicals and related waste. The projects are described in Chapter 12 section 2. The purpose of Table 13.D is to provided an overview of the resources available to the country through technical cooperation and development assistance with the UN agencies such as with UNDP, UNIDO, WHO, FAO and ILO, as well as capacity building projects with GEF and bilateral donors. In many cases more than one funding agency may be involved

Table 13.D: Resources Available through Development Assistance and Technical Cooperation Activities.

Funding Institution(s)	Title of Project and its duration (start and finish dates)	Number of Professional Staff Involved	Type of Expertise Provided	Financial Resources of Project (from Donor and from local sources)

13.5 Assessment and Comments

This section should have a length of approximately 1 page and address, for example, the following questions:

- Analyze the strengths of various national ministries/agencies and NGOs in terms of their technical capacity to address chemicals and related waste management.

- Indicate the extent to which individual national ministries/institutions need strengthening, capacity building and human resources training in specific areas of chemicals and related waste management. In which areas?

- What are estimates of the deficit (if any) in qualified human resources to manage chemicals and related waste safely, e.g. technicians, legal experts, customs officers, factory inspectors, clinical toxicologists, analytical toxicologists etc.?

- What provisions are being made within ministries to ensure sustainability of activities currently receiving development assistance resources?

- What strategy should be developed to mobilize sufficient technical and human resources to ensure the sound life cycle management of chemicals in the country?

- What is the potential for encouraging public-private partnerships, and in which areas of chemicals and waste management?

Chapter 14: Conclusions and Recommendations

Purpose of Chapter 14

To provide overall Conclusions concerning the situation in the country in relation to life cycle management of chemicals and a summary of the Recommendations for action.

This optional chapter is intended to be prepared following formal stakeholder adoption of the National Profile and to provide an opportunity to give a concluding consensus overview of the current situation in relation to sound life cycle management of chemicals in the country, as well as to summarise the recommendations arising from the National Profile whether formally adopted or agreed by consensus. It is suggested that the chapter would have two sections, namely:

14.1 Conclusions

14.2 Recommendations

ANNEX 1 to the National Profile: Glossary

Each country should determine which terms should be defined in order to facilitate understanding of the National Profile and communication of the information contained in the Profile both within the country and for international purposes. The terms which will likely need to be defined include:

Agricultural chemical:

Consumer chemical:

Formulation:

Impact assessment:

Industrial chemical:

License:

Permit:

Pesticide:

Pollution prevention:

Production:

Risk assessment:

Risk reduction:

Rural:

Trade:

Urban:

Disposal (including recycling, re-use, etc.:

Waste including hazardous waste, chemical waste, etc,:

Obsolete chemical:

Contaminated area:

Toxin:

ANNEX 2 to the National Profile:

Available National Reports and Papers Addressing Various Aspects of Chemicals Management

ANNEX 3 to the National Profile:

Names and Addresses of Key Individuals and Organizations

ADDENDUM I to the GUIDANCE DOCUMENT:

Abbreviations/Acronyms

CSD: Commission for Sustainable Development

FAO: Food and Agriculture Organization of the United Nations

GATT: General Agreement on Tariffs and Trade

GEF: Global Environment Facility

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

IFCS: Intergovernmental Forum on Chemical Safety

ILO: International Labour Office

IOMC: Inter-Organization Programme for the Sound Management of Chemicals

IPCS: International Programme on Chemical Safety

ISG: Inter-sessional Group of the Intergovernmental Forum on Chemical Safety

ISO: International Organization for Standardization

NGO: Non-governmental organization

OECD: Organisation for Economic Co-operation and Development

POPs: Persistent Organic Pollutants

SAICM: Strategic Approach to International Chemicals Management

UNEP: United Nations Environment Programme

UNDP: United Nations Development Programme

UNIDO: United Nations Industrial Development Organization

UNITAR: United Nations Institute for Training and Research

WHO: World Health Organization

WTO: World Trade Organization

WSSD: World Summit on Sustainable Development