

Guidance and Training Materials of IOMC Participating Organisations: An Annotated Resource Guide for Chemicals Management Capacity Building

Second Edition

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UNITAR

IOMC

INTER-ORGANIZATION PROGRAMME FOR THE SOUND MANAGEMENT OF CHEMICALS

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

The second edition of this document has been developed in the context of the *UNITAR/IOMC Integrated National Programme for the Sound Management of Chemicals*. The first edition of this document was developed in the context of the *UNITAR/IOMC Pilot Programme to Assist Countries in Implementing National Action Programmes for Integrated Chemicals Management*. Funding for the *UNITAR/IOMC Integrated National Programme* is provided by the Swiss Agency for Development and Co-operation (SDC). UNITAR also would like to gratefully acknowledge the input of the IOMC Participating Organizations in preparing this publication and welcomes any additional comments and suggestions to further improve the quality and coverage of this resource guide.

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Background and Objectives

In 1999, UNITAR, in collaboration with the IOMC Participating Organizations¹, published the first edition of this Annotated Resource Guide entitled *Guidance and Training Materials of IOMC Participating Organizations for Chemicals Management Capacity Building*. This document aims to guide countries in their search for documents and materials which provide guidance and/or which could be considered directly relevant for chemicals management capacity building initiatives in developing countries and countries with economies in transition. As the demand by countries for such information increases, the IOMC Participating Organizations feel it is necessary to update existing documents and/or develop new material. Moreover, while a wide range of documents and materials are available, it is often challenging to identify and obtain access to this information. For these reasons, UNITAR, with the support of the IOMC Participating Organizations, presents the second edition of this Annotated Resource Guide.

As in the first edition, this resource document provides annotated references including a brief summary highlighting the relevance of each document in the context of national capacity building initiatives. The documents have been clustered around seven main chapters/topics of chemicals management capacity building; often with several more detailed sub-sections, as appropriate (see Table of Contents). The topics broadly reflect the elements of a national chemicals management system as identified in Programme Area E of Chapter 19 of the United Nations Conference on Environment and Development (UNCED) Agenda 21 as well as the priority topics identified by countries through the National Profile process and reported as national priorities in the context of the 1998 IFCS/UNITAR National Profile Survey. Within the chapters and sub-sections, the documents are listed by the relevant publishing organization(s) in reverse chronological order. In cases where several documents form part of a series, documents have been listed separately.

The development of this Annotated Resource Guide is considered a first step towards the development of a comprehensive capacity building library on key publications and materials for chemicals management capacity building. UNITAR, in collaboration with the IOMC Participating Organizations, plans to develop this Annotated Resource Guide in CD ROM format, which will include all listed documents that are publicly available from the IOMC participating organizations in an effort to facilitate access to available resources.

This Annotated Resource Guide can also be downloaded from UNITAR's website at:
<http://www.unitar.org/cwm/publications>

List of IOMC Participating Organizations' publications pages:

FAO: <http://www.fao.org/catalog/giphome.htm>

ILO: <http://www.ilo.org/public/english/support/publ/index.htm>

OECD: <http://www.oecd.org/ehs/ehsmono/index.htm>

UNEP Chemicals: <http://irptc.unep.ch/irptc/Publications/pb0901.html>

UNEP Industry and Environment: http://www.unepie.org/enta/en_publi.html

UNIDO: <http://www.unido.org/doc/publications.htmls>

UNITAR: <http://www.unitar.org/cwm/publications>

WHO: <http://saturn.who.ch/>

¹ The following organizations are participating in the IOMC: UNEP, ILO, FAO, WHO, UNIDO, UNITAR and OECD.

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1. Legislation, Policies and Enforcement

1.1 Legislation and Policies - General

OECD

Proceedings of the OECD Workshop on Non-Regulatory Initiatives for Chemical Risk Management, OECD, 1997, 200 Pages. [English](#).

This publication points out the value of non-regulatory initiatives in the field of chemicals management. It presents a series of case studies submitted by representatives of governments and industry during the OECD workshop on non-regulatory initiatives for chemical risk management. This publication is a useful means for the dissemination of information on this issue and identifies the elements generally found successful in these programmes.

UNEP

Legislating Chemicals: An Overview, UNEP, IRPTC, UNEP ELI/PAC, 1995, 80 Pages. [English](#).

The document provides an overview of instruments and approaches taken by countries in legislating chemicals. It is intended to provide governments with general background information to assist them in diagnosing their needs regarding legislation on chemicals.

From Regulations to Industry Compliance: Building Institutional Capabilities, UNEP, IE, 1992, 62 Pages. [English](#), [French](#).

The goal of the report is to provide government officials with some guidance on organizational principles necessary to ensure that their environmental protection laws and pollution control standards are efficiently followed. It thus focuses on building institutional capability for legally binding facilities to operate according to established environmental standards and to check that the facilities are meeting existing standards.

WHO

Public Health and Chemical Incidents: Guidance for National and Regional Policy Makers in the Public/Environmental Health Roles, WHO, 1999. [English](#).

This document provides examples of major chemical incidents and a description of major public health problems. It explains how countries can improve the public health response to acute chemicals incidents and presents a summary of actions to be taken by the policy makers. The goal of this publication is to provide policy makers with an insight of the public health approach and to provide guidelines to ensure an adequate public health response.

1.2 Pesticides Legislation and Policies

FAO

Guidelines on Initial Introduction and Subsequent Development of a Simple National Pesticide Registration and Control Scheme: Guidelines, FAO, 1991, 17 Pages. [English](#).

The guidelines are intended to provide assistance to those countries that do not yet have a pesticides registration and control scheme in operation. It discusses the need for controls, the scope of a simple scheme, and makes the point that before controls can be put into place there must be appropriate legislative powers.

Guidelines for Legislation on the Control of Pesticides, FAO, 1989, 15 Pages. [English](#), [Spanish](#).

This document is intended to give guidance to governments wishing to develop a legal framework for the control of pesticides or wishing to review and possibly strengthen existing pesticides control legislation. It addresses the scope of legislation and essential features such as organization and administration, registration, maximum residue limits, control of imports, licensing and certification, advertising, record keeping and reporting, and enforcement.

Revised Guidelines on Environmental Criteria for the Registration of Pesticides, FAO, 1989, 51 Pages. [English](#), [Spanish](#).

The document highlights the importance of assessing the effects of pesticides on the environment as an integral part of the process of pesticide development and registration. It provides guidance on principles and guidelines for appropriate test procedures in order to weigh adverse environmental effects to expected benefits of pesticide use.

Guidelines on Post-registration Surveillance and Other Activities in the Field of Pesticides, FAO, 1988, 11 Pages. [English](#).

The document provides guidance on post-registration surveillance to ensure enforcement and monitoring of the actual use of pesticides to ascertain that the goals of registration are met. It highlights that a well-devised and operated registration scheme for pesticides does not stop at a pre-market evaluation and acceptance of claims for efficacy and safety.

Guidelines on The Registration of Biological Pest Control Agents, FAO, 1988, 7 Pages. [English](#).

There are two major categories of biological pest control agents: biochemical and microbial. This document provides guidance on the registration of these control agents. It illustrates technical criteria for distinguishing them from conventional pesticides and provides details on data requirements for their registration.

FAO (continued)

Guidelines on Pesticide Residue Trials to Provide Data for the Registration of Pesticides and the Establishment of Maximum Residue Limits, FAO, 1986, 40 Pages. [English](#), [Spanish](#).

These Guidelines have been developed to address the need to improve and harmonize the procedures for obtaining residue data for proposing and enforcing maximum residue limits of pesticides in food. Part I addresses the problems related to residues in plants and plant products, whereas Part II concerns residues in foods of animal origin.

Guidelines on Efficacy Data for the Registration of Pesticides for Plant Protection, FAO, 1985, 51 Pages. [English](#).

This document provides basic information to governments on the role of efficacy testing in the registration of pesticides. It addresses issues related to efficacy testing such as its role in registration and in efficacy trials Programme. It also provides guidance for designing and reporting individual efficacy trials.

Guidelines on Registration and Control of Pesticides - Guidelines and Addenda, FAO, 1985, 42 Pages. [English](#), [Spanish](#), [French](#).

The guidelines highlight the need for the control of pesticides and provide guidance for ensuring the appropriate design of a regulatory scheme. Specific issues covered in the document include: planning the establishment of a regulatory organization, data required for registration, packaging and labeling, harmonization of registration requirements and quality control. The guidelines also include a model scheme for the establishment of a national organization.

OECD

Agriculture, Pesticides and the Environment: Policy Options, Annexes, OECD, 1997, 264 Pages. [English](#), [French](#).

This document provides an analysis of economic and agricultural policies to control pesticides use and their detrimental effect on the environment and human health. It also reviews the effects of a mixture of policies in addressing local and global environmental problems caused by pesticides. To complement this information, a series of policy case studies in OECD countries are presented.

Towards Sustainable Agricultural Production: Cleaner Technologies, OECD, 1994, 99 Pages. [English](#).

The report investigates the major environmental impacts of conventional agricultural practices, the environmentally sound technologies and practices addressing the problems raised by conventional practices, and the obstacles to the greater diffusion of cleaner production technologies. It concludes with a discussion of actions that OECD country governments can take, or are taking, to stimulate institutional and policy reform and to encourage continued technological innovation.

1.3 Policies for Pollution Prevention and Cleaner Production

OECD

Extended Producer Responsibility - A Guidance Manual for Governments, OECD, 2001, 161 Pages. English

Extended Producer Responsibility (EPR) is a policy approach under which producers accept significant responsibility -financial and/or physical -for the treatment or disposal of post-consumer products. Assigning such responsibility could provide incentives to prevent wastes at the source, promote product design for the environment and support the achievement of public recycling and material management goals. This Guidance Manual is intended to make information available to member governments on EPR issues and benefits and on the actions required to establish effective EPR policies and programmes.

Technology and Environment - Policies to Promote Technologies for Cleaner Production and Products: Guide for Government Self-Assessment, OECD, 1995, 48 Pages. English.

The OECD Technology and Environment Programme focuses on technological innovation as a means to achieve pollution reduction and prevention in the sectors of agriculture, energy, transport and industry/manufacturing. The policy option adopted takes the form of a "Guide for Government Self-Assessment" and has been tested by the Governments of Austria, the Netherlands and the United Kingdom. This report presents the results of the pilot-tested and amended Guide; it describes uses, benefits and certain drawbacks of the self-assessment process, suggests audiences for its results and lists approaches for performing such assessments.

Technology and Environment: supply side policies to augment government support for promoting cleaner technologies, OECD, 1994, 63 Pages. [English](#).

This report recognises financial assistance as an important policy tool by some governments for moving cleaner technology research. Furthermore, it provides an insight of the financial assistance mechanisms for promoting the transformation of industry into a cleaner technology. It also highlights the different components of an efficient financial assistance programme and lists the options and lessons learned for the application and design of programmes that promote cleaner technologies.

Integrated Pollution Prevention and Control, OECD, 1991, 27 Pages. English.

The publication includes a Guidance Document and a Report for the implementation of Integrated Pollution Prevention and Control. The Guidance Document provides a series of suggestions in relation to possible goals, elements, decision-making, legislation, and the institutional framework for an integrated approach. The Report illustrates the nature of the problems related to integrated pollution prevention and control, and focuses on the decision-making process as well as instruments available.

UNEP

Government Strategies and Policies for Cleaner Production, UNEP IE, 1994, 32 Pages. [English](#).

The purpose of the report is to explain to leaders in government and industry that cleaner production is likely to lead to economic benefits as well as environmental ones. It emphasizes the importance of developing strategies and policies to implement cleaner production and to spell out an effective overall strategy in the beginning of a cleaner production programme. Examples of instruments are provided that are available to governments for implementing these policies.

2. Information Collection and Exchange

2.1 General

ILO

Guidelines for the Establishment of National CIS Centres, ILO International Occupational and Health Information Centre (CIS), 1994, 103 Pages. English.

These Guidelines provide practical support to new National Centres in setting up an information unit and to publicize the services available relevant to occupational safety and health. In particular, the following issues are addressed: the role of ILO/CIS and the National Collaborating Centres, the ILO/CIS Worldwide Network, how to become a National Centre, and how to start a National Centre.

UNEP

Chemical Inventories. Chemicals Management Instruments: Module 1. UNEP, UNITAR, 1999, 42 Pages. English.

This publication describes chemical inventories as policy instruments that can provide the foundation for a sound management of chemicals programme. It also contains a general description of chemical inventories, their purpose and objectives, potential benefits/problems, limitations, relationships with other policy instruments and resources required for their implementation. Information is complemented with case studies from industrialized and developing countries.

New Chemical Notification System. Chemicals Management Instruments: Module 2. UNEP, UNITAR, 1999, 96 Pages. English.

New Chemical Notification Systems (NCNS) represent a complement to chemical management programmes. Most countries develop and implement more basic chemical management programmes before establishing a NCNS. This publication describes NCNS, states its purposes, benefits, financial resources required for the establishment of a NCNS and also highlights common elements among all NCN systems. It also provides information on notification, assessment and post notification activities through country experiences.

Proceedings: Joint UNEP/OECD Workshop on Notifications and Assessment of New Industrial Chemicals for Countries of Central and South America, UNEP, OECD, IOMC, 1999, 205 Pages. English.

This publication highlights the value, advantages, disadvantages and requirements of establishing/implementing a Notifications and Assessment of New Industrial Chemicals system. It presents a series of case studies submitted by representatives of governments and industry during the UNEP/OECD workshop on notification and assessment of new industrial chemicals for the Latin America Region. It also identifies the elements generally found successful in these programmes.

UNEP (continued)

Inventory of Worldwide PCB destruction capacity, UNEP, 1998, 72 Pages. [English.](#)

In 1998 UNEP collected, by means of a questionnaire, information on the number and location of PCB-destruction facilities in different regions. This inventory lists facilities that can store, handle and dispose of PCBs, in various forms. It describes the various processes for PCB wastes, such as incineration, dechlorination, land filling, etc. It also gives a clear picture of the worldwide capacity for PCB destruction, classifying the information by regions. This document becomes a useful tool for national authorities and others concerned with the management of PCBs.

UNITAR

Strengthening National Information Systems and Information Exchange for the Sound Management of Chemicals: Observations and Conclusions of an International Expert Meeting. Thematic Session (No.1), UNITAR/IOMC, 1998, 42 Pages. [English.](#)

The report of the thematic session provides general, non-technical guidance to countries for strengthening their national information system for chemicals management. Particular focus is put on suggestions and considerations towards strengthening collaboration and information exchange amongst national stakeholders, making effective use of nationally and internationally available chemicals information, addressing needs of information users, and ensuring the long-term sustainability of the system.

2.2 Pollutant Release and Transfer Registers (PRTRs)

OECD

Presentation and Dissemination of PRTR Data: Practices and Experiences, OECD, 2000, 115 Pages. [English.](#)

The dissemination of Pollutant Release and Transfer Register data is a powerful tool for communicating information about the environment. This publication shows at what extent PRTR data presentation and dissemination can affect the usefulness and value of the register. The fundamental value of a PRTR can be enhanced by the techniques used to present and disseminate the data, thereby helping a wide variety of audiences to access PRTR data and better comprehend what they mean.

PRTR Implementation: Member Countries Progress, OECD, 2000, 104 Pages. [English.](#)

This report summarises actions taken by Member countries to implement a Pollutant Release and Transfer Register in accordance with the OECD PRTR Council Act and the guiding principles found in its Annex. It describes steps OECD countries have taken to implement a PRTR and discusses progress made.

OECD (continued)

Pollutant Release and Transfer Registers PRTRs: Guidance Manual for Governments, OECD, 1996, 141 Pages. [English](#), [French](#), Japanese, [Russian](#), Spanish.

The purpose of the manual is to provide information primarily aimed at governments that are considering implementing a PRTR system. It provides a set of options for how to implement the various principles underlying an effective PRTR system. The manual is meant to provide a firm foundation of the basic principles of a PRTR and to assist national governments as they seek to establish a system.

UNITAR

Guidance Series on Implementing a National PRTR Project

Implementing a National PRTR Design Project: A Guidance Document, UNITAR/IOMC, 1997, 62 Pages. [English](#), [Spanish](#).

The guidance document is the core of the *UNITAR Guidance Series for Implementing a National PRTR Design Project* and has been developed to assist countries in implementing a national Pollutant Release and Transfer Register (PRTR) design project. It builds on the substantive and technical information contained in the *OECD Guidance Manual for Governments* by providing countries with a suggested step-wise approach for undertaking the design of a national PRTR system. Four supplements have been published to complement this guidance document.

Supplement 1: Preparing a National PRTR Infrastructure Assessment, UNITAR/IOMC, 1997, 17 Pages. [English](#), [Spanish](#).

This document provides specific guidance on implementing Stage 2 of the suggested PRTR design process. It addresses the preparation of a National PRTR Infrastructure Assessment Report. This comprehensive report documents the existing legal, institutional, administrative and technical infrastructure and available national expertise relevant to the design and implementation of a national PRTR system, and thus is a key input for the PRTR design process.

Supplement 2: Designing the Key Features of a National PRTR System, UNITAR/IOMC, 1997, 17 Pages. [English](#), [Spanish](#).

This document provides specific guidance on implementing Stage 3 of the suggested PRTR design process. For each of the main features of a PRTR system, which will need to be considered. The guide indicates key decisions that need to be taken and provides references to other documents where additional information can be found.

Supplement 3: Implementing a PRTR Reporting Trial, UNITAR/IOMC, 1997, 14 Pages. [English](#), [Spanish](#).

This document provides specific guidance on implementing Stage 4 of the suggested PRTR design process, "Conducting a PRTR Pilot Reporting Trial". It addresses issues and challenges associated with this process to test the preliminary design of the national PRTR system in order to obtain practical feedback for finalizing the national PRTR proposal.

UNITAR (continued)

Supplement 4: Structuring a National PRTR Proposal, UNITAR/IOMC, 1997, 9 Pages. [English](#), [Spanish](#).

This document provides specific guidance on implementing Stage 5 of the suggested PRTR design process, "Finalizing the National PRTR Proposal". It provides an overview and suggested structure of the National PRTR Proposal, including a sample table of contents. The final section provides some important points that the National Coordinating Team should consider in preparing the final National PRTR Proposal document.

Series of PRTR Technical Support Materials

Addressing Industry Concerns Related to Pollutant Release and Transfer Registers, UNITAR/IOMC, 1998, 28 Pages. [English](#).

Countries, which are developing or planning a national PRTR programme, may be faced with questions regarding the implications of PRTR reporting for industry. To assist countries in addressing some of these issues, this document presents five of the most common concerns related to PRTR from the perspective of industry. Drawing upon experiences in countries with existing PRTR programmes, the document describes actions that have been taken and lessons learned.

Guidance for Facilities on PRTR Data Estimation and Reporting, UNITAR/IOMC, 1998, 56 Pages. [English](#).

Facilities faced with a requirement to report under a Pollutant Release and Transfer Registers system may find the prospect daunting and might not know where to start or even whether they have to report. This brief guidance document attempts to outline possible answers to the types of information which will be needed to estimate releases and transfers, the best method for making such estimates and where a facility can find more information on how to employ such methods.

Guidance on Estimating Non-point Source Emissions, UNITAR/IOMC, Ministry of Housing Spatial Planning and the Environment of the Netherlands, 1998, 82 Pages. [English](#).

This document provides an introductory overview of methods to estimate pollutant emissions from non-point sources for Pollutant Release and Transfer Registers. The document aims to inform PRTR designers on what methods and data requirements are entailed in the decision to include the contribution of non-point source emissions in the national PRTR system. Concrete examples and simple calculations are given to illustrate the basic principles behind the estimation methods used and the types of data needed in the treatment of these sources. Appended to the document is a list of references.

3. Hazard & Risk Assessment and Communication

3.1 Hazard Identification, Classification and Labelling

FAO

Guidelines on Good Labelling Practice for Pesticides, FAO, 1995, 51 Pages. [English](#), [Spanish](#).

These Guidelines are intended for use by those in industry involved with label preparation and also by national regulatory personnel involved with the approval of labels and the specification or recommendation of suitable text and layout. The document identifies the main objectives and considerations in preparing a label, as well as the information that must appear on it; it also deals with the style and clarity of the label's text and investigates the establishment of toxicity and hazard classifications for a product.

ILO

Classification, Identification and Labelling of Chemicals, ILO International Occupational and Health Information Centre (CIS), 1992, 76 Pages. [English](#).

This document may serve as training material or as a reference document at work to assist and provide guidance when individual labels are checked or prepared. It describes the labelling system used in the countries of the European Union as an example and presents a model for the development of national labelling systems. The United Nations Recommendations on the Transport of Dangerous Goods is also briefly presented.

OECD

Guidance Document on the Recognition, Assessment and Use of Clinical Signs as Human Endpoints for Experimental Animals Used in Safety Evaluation, OECD EHS Publication, Series on Testing and Assessment No. 19, 2000, 39 Pages. [English](#).

This document provides guidance on when laboratory animals are used in toxicity testing studies should be euthanized for humane reasons. OECD Test Guidelines state that animals, which are moribund or obviously in pain or severe distress should be humanely killed. The objective of the document is to provide useful guidance and criteria for determining when an animal is or expected to become moribund, or experiencing significant pain and distress, and should therefore be euthanized.

OECD (continued)

Guidance Document for the Performance of Out-door Monolith Lysimeter Studies. OECD EHS Publication, Series on testing and Assessment No. 22, 2000, 26 Pages. [English](#).

Man-made chemicals may reach soil directly via deliberate application (e.g. agrochemicals) or via indirect routes (e.g. wastewater - sewage sludge - soil or air - wet/dry deposition). For risk assessment of these chemicals it is important to predict their potential for transformation in soil and for migration from the topsoil layer to the subsoil and to groundwater. Monolith lysimeters are used to study the fate and behaviour of chemicals in an undisturbed soil profile under outdoor conditions. Although most experience has been gained with crop protection products, the test is applicable to all chemical substances.

Guidance Documents on Aquatic Toxicity Testing of Difficult Substances and Mixtures, OECD EHS Publication Series on Testing and Assessment No. 23, 2000, 53 Pages. [English](#).

A number of chemicals are classed as "difficult to test" for the purposes of determining their aquatic toxicity. This document provides guidance for the testing of difficult substances and mixtures, as for example chemicals that are poorly water-soluble, volatile, chemically unstable, biodegradable, absorbing, complex, coloured, hydrophobic, ionised, etc. The guidance document relates to the practical aspects of carrying out valid tests with difficult substances and mixtures and presenting the results.

Guidelines for the Testing of Chemicals, OECD, 1993 - 2000. [English](#), [French](#).

The OECD Guidelines for the Testing of Chemicals are a collection of internationally agreed testing methods used by government, industry and academia for the safety testing and assessment of new and existing chemicals, including industrial chemicals, pesticides, pharmaceuticals and food additives. They cover tests for physical-chemical properties, human health effects, and environmental fate and effects. They are used in various programmes of testing and assessment, among them the OECD programme on SIDS.

Final Guidance Document for Distinguishing Waste From Non-Waste, OECD, 1998, 18 Pages. [English](#).

In response to the need to develop a guidance to differentiate waste from non-waste, the Organisation for Economic Cooperation (OECD) established the Waste Management Policy Group (WMPG), which attempted to characterise waste in comparison with other materials (non-waste). This document has been developed by the WMPG and tries to identify common factors, which can be evaluated to indicate whether or not a material is considered as a waste.

OECD (continued)

Detailed Review Paper On Aquatic Testing Methods for Pesticides and Industrial Chemicals, OECD, 1998, 259 Pages. [English.](#)

This publication reviews the area of aquatic toxicity testing, including the pelagic (water) and benthic (sediment) environment. It reviews nearly 450 pelagic and 260 benthic testing methods developed in the last decade. It contains testing methods requested in environmental effects, methods collected from OECD countries, evaluation of testing methods, and recommendations for pelagic and benthic environments.

UNEP

Guidelines for the Identification of PCBs and Materials Containing PCBs, UNEP, 1999, 34 Pages. [English.](#)

PCBs are one of the most widespread and dangerous environmental pollutants and are found in almost all environmental media. This document provides guidance on practical ways to identify PCBs and PCB-containing materials through information on general applications, specific sources, and typical locations of equipment and materials that contain PCBs.

WHO

Information Useful for the Identification of Hazards During the Manufacture, Storage, Transport, Use and Disposal of Substances: An Annotated Checklist, WHO, IPCS, 1990, 32 Pages. [English.](#)

The document relates to substances, which may, in certain circumstances, have the potential for one or more of the following types of hazards: major accidents, pollution, and worker health and safety. Chapter 1 comprises an overview of the three conceptually distinct stages in the assessment of risks, whereas Chapter 2 consists of a checklist indicating the information that may be needed to identify, assess and control the hazards. The checklist may be used for planning new activities or for identifying hazards of existing ones.

3.2 Exposure Assessment

OECD

Report of the OECD Workshop on Improving the Use of Monitoring Data in the Exposure Assessment of Industrial Chemicals, OECD, 2000, 125 Pages. [English.](#)

This publication contains the report of an OECD workshop that took place in Berlin, Germany in May 2000. It includes workshop conclusions (on criteria for quality and representativeness of monitoring data; improvements for the design of monitoring programmes; model calibration and validation; and use of models in the design of new monitoring initiatives) and recommendations, as well as some presentations made during the workshop.

OECD (continued)

Environmental Exposure Assessment Strategies for Existing Industrial Chemicals in OECD Member Countries, OECD, 1999, 31 Pages. [English](#).

The purpose of exposure assessment is to describe the exposure of one or more populations or organisms to a chemical stressor or to describe the concentration of a chemical in various compartments, which can potentially affect organisms. This publication presents some strategies used by OECD countries when assessing chemicals risk. This documents provides background information on exposure assessment to industrial chemicals, assessment strategies, different ways to estimate a Predicted Environmental Concentration (PEC) and a comparison of the different practice of environmental exposure assessment in OECD member countries.

Guidance Document for the Conduct of Studies of Occupational Exposure to Pesticides During Agricultural Application, OECD, 1997, 61 Pages. [English](#).

The guidance document presents an internationally harmonized approach to the conduct of studies of occupational exposure to pesticides during agricultural application. Its purpose is to review and compare the available methods for measuring pesticide exposure and to provide guidance on the design of studies for the determination of exposure to, and absorption of, pesticides by workers involved in their use. The focus is on mixer/loader/appliator exposure during agricultural uses of pesticides. Non-occupational exposure to pesticides and the exposure of pesticide manufacturing and formulation workers are not covered.

Occupational and Consumer Exposure Assessments, OECD, 1994. [English](#).

The document offers a choice of possible approaches for assessing occupational and consumer exposure, both by dermal and inhalation routes, primarily to chemicals produced in high volumes and for which only limited data are available. The purpose of the exposure assessment is to obtain the estimated human exposure level, which, in combination with assessments of health effects of toxicity studies, can be used to judge whether further action in relation to a chemical is required.

Report of the OECD Workshop on the Application of Simple Models for Environmental Exposure Assessment, OECD, 1993, 143 Pages. [English](#).

The document presents conclusions and recommendations of the workshop regarding the following three aspects of application of simple models for environmental exposure assessment: (1) the emission factors and use categories of chemicals, (2) the local models and global models, and (3) the models for estimating indirect exposure to man via food and water. Simple models, which can be used for environmental exposure assessment of new and existing chemicals with limited data, were identified, with particular focus on models for use within the OECD work on High Production Volume (HPV) chemicals.

WHO

Public Health Impact of Pesticides Used in Agriculture, WHO, UNEP, 1990, 128 Pages. [English](#), French, Russian and Spanish.

The publication reviews current knowledge on the health effects of pesticides and on the level of exposure of various population groups. It provides an assessment of the scope and severity of exposure to pesticides, estimates future trends, and reviews the effects of pesticides on human health with special reference to the general population in developing countries. It concludes that a major effort is needed to reduce the number of cases of pesticide poisonings, which will require action by a wide range of national actors within and outside of government.

Guidelines for Predicting Dietary Intake of Pesticide Residues, WHO, UNEP, FAO, 1997, 33 Pages. [English](#) and [French](#).

These guidelines describe procedures that can be used by national authorities to predict the dietary intake of pesticide residues and reach conclusions concerning the acceptability of the Codex Maximum Residue Limits from a public health point of view.

3.3 Toxicology

WHO

Chemical Safety: Fundamentals of Applied Toxicology - The Nature of Chemical Hazards, Second (Revised) Edition, IPCS, WHO, 1997, 258 Pages. [English](#).

This module covers basic aspects of chemistry, health effects of chemicals and environmental toxicology. It is intended as a primer for those needing grounding in these chemical safety topics. It has been developed by IPCS to assist countries in organizing and running training activities in this field. The module can be used for distance learning as well as for course instruction and can be adapted to meet local needs.

Basic Analytical Toxicology, IPCS, ILO, UNEP, WHO, 1995, 274 Pages. [English](#), [French](#) and [Spanish](#).

This manual is intended for physicians in developing countries; it describes simple analytical techniques that do not require sophisticated equipment or expensive reagents, or even a continuous supply of electricity. The aim is to help hospital laboratories in developing countries to provide a basic analytical toxicology service using a minimum of special apparatus.

3.4 Epidemiology and Monitoring

WHO

Assessing the Health Consequences of Major Chemical Incidents: Epidemiological Approaches, WHO, 1997, 90 Pages. [English](#).

This publication highlights the importance of epidemiology to evaluate the health consequences of chemical incidents or environmental contamination on populations. It contains detailed analysis of the role of epidemiology in assessing health effects and also introduce some the epidemiological tools and supportive actions to overcome a chemical incident. This publication is directed to the public health officials or epidemiologists who might plan to study populations exposed to major incidents or environmental contamination.

Teacher's Guide for Basic Epidemiology, WHO, 1994, 216 Pages. [English](#) and [French](#).

The publication provides practical assistance for teachers using the WHO student manual, Basic Epidemiology. Designed for general introductory teaching, the guide has two aims: to assist the teacher in the initiation, organization, delivery and evaluation of a course, and to provide ready-made resource material for the teacher.

Basic Epidemiology, WHO, 1993, 174 Pages. [Chinese](#), [English](#), [French](#), [Russian](#) and [Spanish](#).

The textbook provides a basic introduction to the principles, methods, and applications of epidemiology in medicine and public health. Intended for use in a formal training course, the book aims to prepare students for an approach to health care that is increasingly concerned with preventive medicine and the most efficient use of resources. To this end, the authors use numerous examples from the scientific literature to show how the tools of epidemiology can be applied to the prevention of disease, the promotion of health, and the formulation of rational policies.

3.5 Risk Assessment

FAO

Assessing soil contamination: a reference manual, FAO, 2000, 218 Pages. [English](#).

This manual addresses problems of soil contamination due to improper storage of obsolete pesticides. It aims to help the user determine if pesticides spills have caused soil or groundwater contamination and, if so, whether or not that contamination implies risks for human health. The purpose of this manual is not to deal with the health risks related to the general use or handling of pesticides.

OECD

Guidance Document for Aquatic Effects Assessment, OECD, 1995, 116 Pages. English.

The document presents an OECD scheme for aquatic effects assessment, which can be used for risk assessment of new and existing chemicals. It provides flexible guidance on a series of methods that can be used to derive a Maximum Tolerable Concentration (MTC) in water, i.e. the maximum concentration of a chemical at which no adverse effects on the aquatic ecosystem are expected. Various ways of deriving a MTC, which depend on toxicity data available, are described.

WHO

Chemical Risk Assessment - Human Risk Assessment, Environmental Risk Assessment and Ecological Risk Assessment, WHO, 1999, 222 Pages. [English](#).

This training module, which is comprised of three parts, is intended to provide the reader with an understanding of key concepts and methodologies for carrying out human risk assessment, environmental risk assessment and ecological risk assessment, respectively. In addition to the explanatory text, it includes examples as well as self-assessment questions.

Environmental Health Criteria Series, WHO, IPCS, 1976-2000. [English](#).

The goal of this publication is to give national authorities all the information needed to understand the specific hazard posed by a chemical to adopt the necessary appropriate environmental protective measures to safeguard the environment and/or the health of a population. This series provides guidance and methodologies for various aspects of risk assessments for health risks from chemicals and detailed information on specific chemicals. Substances to be evaluated are selected according to an internationally agreed list of priorities. So far, more than 200 risk assessments on specific chemicals have been completed through this series.

4. Risk Management/Reduction

4.1 Chemical Safety - General

ILO

Chemical Safety: Training Modules, ILO, IPCS, UNEP, WHO, 1998, 215 Pages. [English](#).

This training material is intended for those who need to widen their general knowledge of chemical safety at the workplace. It consists of ten independent chapters that cover different types of chemical hazards. The text is designed to be used as background material for workshops and discussions. Following an exhaustive introduction to safety in the use of chemicals, it addresses the issues of identification, classification and labelling of chemicals; chemical safety data sheets; transport and storage; major hazard chemicals; metals; corrosive materials and polymers.

WHO

Laboratory Handling of Mutagenic and Carcinogenic Products, WHO, IPCS, 1998, 118 Pages, [English](#).

This document provides useful information on handling mutagenic and carcinogenic products, with subjects ranging from protective equipment to accidental contamination measures and disposal of mutagenic and carcinogenic waste. The abstracts contained in this document provide a good theoretical and practical description of the work involving contact with mutagenic and carcinogenic products.

Series of Health and Safety Guides, IPCS, WHO, 1986. [English](#).

Booklets in this series meet the need for concise, authoritative advice on the best ways to prevent accidents and protect the health of workers and other users of chemical substances exposed to potentially toxic chemicals. Each Health and Safety Guide concentrates on a single chemical, translating what is known about its properties and the hazards of exposure into clear instructions for safe handling, storage, transport, and disposal.

International Chemical Safety Card Series, ILO, IPCS, EU. [English](#), [Chinese](#), [Finnish](#), [French](#), [German](#), [Hungarian](#), [Japanese](#), [Korean](#), [Malaysian](#), [Russian](#), [Spanish](#), [Swahili](#), [Thai](#).

International Chemical Safety Cards (ICSCs) are one-sheet guides to the proper handling of chemical products. Each card describes the chemical and physical properties of a pure substance, any health and safety hazards it may present and ways to deal with those hazards. Preventive measures are stressed, but guidance for first aid; fire fighting and clean up of leaks and spills is also included. The cards are drafted by specialists in national agencies and subject to critical review by a panel of experts.

4.2 Safe Handling and Use of Pesticides

FAO

Manual on the Development and Use of FAO Specifications for Plant Protection Products, FAO, 1999, 157 Pages. [English](#).

The objective of this manual is to provide advice, instruction and information to all involved in the development or application of plant protection products. The specifications may be used to provide an international point of reference against which products can be judged, either for regulatory purposes or in commercial dealings, and can thus prevent the trading of inferior products.

Agricultural Pesticide Sprayers Volume I: FAO guidelines on equipment quality control and use and FAO minimum standards, FAO, 1998, 32 Pages, [English](#), [French](#).

Currently, there are not standards for agricultural pesticide sprayers in FAO member countries. To address this challenge and to contribute to safer and more efficient spray equipment, FAO developed this document with the aim to guide purchasing agencies in ensuring that sprayers purchased offer adequate levels of safety to users, and the environment. This document is divided three sections; the first section provides guidelines on equipment quality control and use, the second and third sections provide information on minimum standards on portable sprayers and vehicle mounted and trailer sprayers, respectively.

Agricultural Pesticide Sprayers Volume II: FAO technical standards:sprayer specifications and test procedures, FAO, 1998, 63 Pages, [English](#), [French](#).

This publication aims to provide growers, manufacturing industry and government agencies with an appropriate, practical and consistent quality assurance system for all mayor crop sprayers. This document has three sections: The first section covers the principal portable (operator-carried) equipment. The second section covers vehicle-mounted and trail field crop and orchard sprayers. Each part has a section on sprayer specifications followed by a section on test procedures.

Towards Safe and Effective Use of Chemicals in Coastal Aquaculture, FAO, IMO, UNESCO-IOC, WMO, WHO, IAEA, UN, UNEP, 1997, 40 Pages. [English](#).

This report provides a global overview of chemicals in use and their applications in coastal aquaculture. The main issues of concern are: persistence in aquatic environments, residues in non-cultured organisms, toxicity to non-target species, stimulation of resistance, effects on sediment biogeochemistry, nutrient enrichment, health of farm workers, and residues in seafood.

FAO (continued)

Guidelines for Personal Protection When Working with Pesticides in Tropical Climates, FAO, 1990, 17 Pages. [English](#), French.

These guidelines are aimed principally at government registration officials and agricultural officers and consultants dealing with information on the safe use of pesticides in tropical conditions. They offer practical advice by taking into account the safety of the pesticide user while ensuring comfortable and efficient work. This document is intended as complementary to the FAO International Code of Conduct on the Distribution and Use of Pesticides.

Guidelines on Retail Distribution of Pesticides with Particular Reference to Storage and Handling at the Point of Supply to Users in Developing Countries, FAO, 1988, 9 Pages. [English](#).

These guidelines give basic indications as to the safe storage and handling of pesticides in developing countries. They focus in particular on general precautions and requirements in the context of the sale, storage and transportation of these substances.

Guidelines on Good Practice for Ground and Aerial Application of Pesticides, FAO, 1988, 9 Pages. [English](#).

These guidelines have been prepared to assist pesticide regulatory officials to carry out post-registration activities. They deal in particular with the issues of control measures, choice of pesticides, preliminary controls, application, post-application devices, aerial application and control droplet application.

ILO

Safety and Health in the Use of Agrochemicals: A Guide, ILO, 1991, 79 Pages. English, Spanish, also published in local languages.

This simple, non-technical guide places the emphasis on the safe handling and use of agrochemicals, and gives practical safety measures that are easy to follow. The guide is intended for all those who handle agrochemicals or who have a role in educating and informing workers, the public, community leaders and agricultural extension workers.

UNIDO

Integrated International Safety Guidelines for Pesticide Formulation in Developing Countries, UNIDO, 1992, 72 Pages. English, French, Spanish.

These guidelines provide a set of safety rules to be followed in the formulation of pesticides in developing countries, including operational and managerial aspects. The role of governments and industry is addressed within this context.

WHO

Multilevel Course on The Safe Use of Pesticides and on the Diagnosis and Treatment of Pesticide Poisoning, IPCS, ILO, UNEP, WHO, 1994. English.

This package is comprised of a manual for a two-week course and a set of modules. The course package attempts to meet the need for wide-scale training in the safe and effective use of pesticides and in the diagnosis and treatment of pesticide poisoning. In particular it provides training in safe practices for the handling of these chemicals and supports doctors in the diagnosing and treating of poisoning cases. It also gives insight into the safety aspects of the use of pesticides for those engaged in pesticide registration procedures and provides a structure for further training on pesticide-related subjects.

4.3 Chemical Safety in the Workplace

ILO

Recording and Notification of Occupational Accidents and Diseases, ILO, 1996, 97 Pages. English, French and Spanish.

This code of practice seeks to improve preventive occupational safety and health measures by offering detailed and practical guidelines to improve the recording and notification of accidents and diseases. Topics include legal and administrative arrangements, enterprise-level recording, the extension of safety and health provision to the self-employed, the compilation of statistics and the investigation of occupational accidents and diseases.

Safety, Health and Welfare on Construction Sites: A Training Manual, ILO, 1995, 107 Pages. English.

This manual provides guidance in the planning of practices for improving safety, health and welfare conditions on construction sites and to learn about possible solutions to the problems, which are typically encountered in relation to these issues. It covers all aspects of work on construction sites including specific sections on chemical and hazardous substances and processes.

Basic Training Manual on Occupational Safety and Health: Training Package, ILO, 1994. English.

This document comprises a curriculum for a ten-day basic training course on the topic as well as a curriculum for a one-day course for factory managers. The package includes a number of support materials to be used during a training course.

ILO (continued)

Training of Trainers' Package, ILO, 1993, 235 Pages. English.

This package is comprised of a *Trainer's Manual* and a *Participants' Handout*. It is based on experiences gained during the Training of Trainers' Workshops held in Kenya (1992) and Ethiopia (1993). In the first part of this document a new training methodology is proposed, which focuses on participation and action-orientation of training. The second part is dedicated to putting the methodology into practice and includes documents and information to be provided to participants in the training event.

Chemicals in the Workplace (incl. Appendices), ILO, 1993, 46 Pages. English.

This module is a practical guide intended to provide trainees with background information on chemical hazards at the workplace. It points out the types of chemicals generally found in a workplace and their potential hazardousness, and indicates the priorities for their sound management and use. In the appendices the chemicals are categorized and grouped up by type and effects.

Safety in the Use of Chemicals at Work: A Code of Practice, ILO, 1993, 95 Pages. English.

This code of practice provides guidance on the implementation of the ILO Chemicals Convention No. 170 (1990), and Recommendation No. 177 (1990) for all those engaged in framing provisions. The practical recommendations of the code cover all the elements necessary to ensure an efficient flow of information from manufacturers or importers to users of chemicals. They will also enable employers to formulate measures to protect workers, the public and the environment.

Safety and Health in the Use of Chemicals at Work: A Training Manual, ILO, IPCS, UNEP, WHO, 1993, 78 Pages. English.

This training manual provides a system for the classification, identification and labelling of chemicals to assist countries in the field of chemicals safety at the workplace. It also includes the texts of ILO Convention No. 170 and ILO Recommendation No. 177.

Active Learning Methods in Workers' Education - Their Application to Occupational Safety and Health Courses, ILO, 1992, 150 Pages. English.

The purpose of this selection of training materials is to provide trainers in trade unions with a ready reference that can be used to meet their local training needs. The package deals with education methodology, specific health and safety experiences, practical teaching and training skills, evaluation techniques and personal action plans.

ILO (continued)

Safety-Health and Working Conditions - Training Manual, IPCS, ILO, UNEP, WHO, 1987, 106 Pages. English.

This manual is prepared as a tool for training people directly concerned with workplace improvements. It is designed particularly for use in developing countries and deals with the issues of technical equipment, workplace environment, chemical risk, ergonomics, work and time organization, and preventive health and safety measures.

Safety in the Use of Asbestos: An ILO Code of Practice, ILO, 1990, 116 Pages. English.

In consideration of the growing concern about the harmful effects that exposure to asbestos dust can have on human health, this code of practice gives detailed guidance on possibilities for limiting such exposure. It includes sections on mining and milling, asbestos cement, textiles, friction materials and removal of asbestos-containing materials.

Occupational Hygiene Package, ILO. English.

This training package is targeted at factory inspectors in developing countries. It comprises a tutor's guide, student notes, case studies and test questions.

UNIDO

Industrial Safety, UNIDO, 1994, 164 Pages, English.

This document deals with issues related to industrial safety and risk, and covers plant operation and occupational health and safety regulations. The first article concerns accident and risk management and was developed as a guide on the subject for UNIDO activities. It covers the types of industrial risks and the nature of control that may be applied to various stages of industrial development, including decommissioning. Abstracts include technical safety guidelines for pesticide formulation in developing countries, and safety in the agro-processing and food industries.

4.4 Chemical Accidents

ILO

Accident Prevention on Board Ship at Sea and in Port, ILO, 1996, 194 Pages, English, French, Spanish.

This code of practice aims at improving safety at sea by providing guidelines to evaluate the special risks of bulk cargoes such as oil, gas and chemicals, and the hazards relating to roll-on/roll-off vessels, ferries and container ships. It also deals with generic problems - anchoring, mooring, access to the ship, use of hoisting devices, general cargo working and maintenance, for example - taking account of the changing nature of sea-borne commerce in recent years.

ILO (Continued)

Guidelines on Inspection on Chemical Factories Especially Major Accident Hazard Installations, ILO, 1992, 107 Pages. English.

These guidelines describe key issues to be considered by inspectors at hazardous installations. They concentrate on identifying and maintaining items in the plant that, in the event of failure, may give rise to serious risks to the safety of personnel both on and/or off-site. The document addresses various issues, including: co-ordination with the management, sampling procedures, standard conditions of process and storage, plant integrity, process deviations, emergency procedures, visits to the site, recording and reporting, and special inspections.

Prevention of Major Industrial Accidents: An ILO Code of Practice, ILO, IPCS, 1991, 108 Pages. English.

The practical recommendations of this code of practice are intended for the use of all those who have responsibility for the prevention of major industrial accidents. The document provides guidance in the setting up of an administrative, legal and technical system for the control of major hazard installations. It seeks to protect workers, the public and the environment by preventing major accidents and minimising their consequences if they do occur.

Major Hazard Control: A Practical Manual, IPCS,ILO, UNEP, WHO, 1988, 296 Pages. English.

This manual aims at assisting all countries, which are considering major hazard control and it is written particularly for factory inspectorates, managements of major hazard installations, trade unions and local authorities, as well as the police, fire stations, hospitals and emergency units. The guidance provided is intended both for countries that already apply measures of hazard control and for those that are considering these for the first time.

OECD

International Assistance Activities Related to Chemical Accident Prevention, Preparedness and Response, OECD, 1997, 122 Pages. [English](#).

The publication includes two sections: First, the Conclusions and Recommendations of the Workshop to Promote Assistance for the Implementation of Chemical Accident Programmes which provides practical steps and considerations for countries and international organizations to promote an effective use of available resources and materials and the transparency of on-going activities. Second, an overview of on-going activities in this field with particular reference to intergovernmental organizations, international coordinating mechanisms, regional and bi-lateral activities, and non-governmental organizations.

OECD (continued)

Report of the OECD Workshop on Risk Assessment and Risk Communication in the Context of Accident Prevention, Preparedness and Response, OECD, 1997, 102 Pages. [English](#).

The report recommends steps for the planning and implementation of a national strategy, taking into account the cross-sectoral nature of the topic and the role of a wide range of stakeholders. It focuses on practical aspects for choosing risk assessment approaches, the application of assessments, and the communication of results.

Guidance Concerning Chemical Safety in Port Areas: Guidance for the Establishment of Programmes and Policies Related to Prevention of, Preparedness for, and Response to Accidents Involving Hazardous Substances, OECD, IMO, 1996, 63 Pages. [English](#), [French](#).

This document is intended to complement existing OECD and IMO guidelines on chemical accident prevention, preparedness and response in port areas. The guidance provided addresses issues related to the ship-port interface and the interface with other transport modes serving the port area concerned with potentially hazardous cargo. The subject is addressed in a comprehensive way, including, inter alia, the economic dimension of safety in ports, planning, construction and land use planning.

Guidance Concerning Health Aspects of Chemical Accidents: For Use in the Establishment of Programmes and Policies Related to Prevention of, Preparedness for, and Response to Accidents Involving Hazardous Chemicals, IPCS, OECD, UNEP, WHO, 1996, 62 Pages. [English](#), [French](#).

Accidents resulting in the release of hazardous substances can have adverse effects on human health, property and the environment. This guidance focuses on the protection of human health in relation with this issue. The aim of this text is to provide guidance to managers and other decision-makers in order to improve the prevention of accidents involving hazardous substances and, in case of occurrence, minimise adverse effects on human health.

Report of the OECD Special Session on Chemical Accident Prevention, Preparedness and Response at Transport Interfaces, OECD, 1995, 68 Pages. [English](#).

This Environment Monograph contains the preliminary conclusions of the Special Session and a discussion paper. The issues addressed are: legal and regulatory matters, roles and responsibilities of the stakeholders, and emergency preparedness and response.

OECD (continued)

Report of the OECD Workshop on Small and Medium-sized Enterprises in Relation to Chemical Accident Prevention, Preparedness and Response, OECD, 1995, 80 Pages. English.

This publication includes the workshop's conclusions and recommendations as well as the discussion document, which was revised following the workshop. Some main questions discussed included how SMEs can be made aware of guiding principles for accident prevention, preparedness and response, and what actions can be taken to assist SMEs in implementing them.

Guiding Principles for Chemical Accident Prevention, Preparedness and Response: Guidance for Public Authorities, Industry, Labour and Others for the Establishment of Programmes and Policies Related to Prevention of, Preparedness for, and Response to Accidents, OECD, 1992, 123 Pages. English, French, Russian and Spanish.

Based on the premise that all hazardous installations should comply with the same overall safety objectives, the publication provides advice related to the role and responsibilities of public authorities, industry, employees, trade unions and NGOs. The guiding principles apply to all hazardous installations, i.e. fixed plants or sites that produce, process, use handle, store or dispose of hazardous substances such that there is as risk of a major accident.

UNEP

Management of Industrial Accident Prevention and Preparedness: A Training Resource Package, UNEP IE, UNEP EETU, 1994, 110 Pages. English.

The package provides a set of resource materials to help teachers and trainers who do not have personal expertise in this area to develop curricular, workshops, or seminars. It provides background papers, transparencies, references and information sources and exercises that can be used in teaching sessions. The training resource package is designed to introduce the concepts and methodologies of APELL to professionals who may one day need to participate in it.

Health Aspects of Chemical Accidents - Guidance on Chemical Accident Awareness, Preparedness and Response for Health Professionals and Emergency Response, IPCS, OECD, UNEP IE/PAC, WHO ECEH, 1994, 147 Pages. English, French.

This publication contains three documents: (1) A General Guidance Document, which is meant to assist decision-makers in developing appropriate policies for chemical accident prevention, preparedness and response; (2) Practical Guides, which cover health-related information and communications needs, the organisation and planning of health-related response to chemical accidents, health aspects of chemical accident response and health-related training and education; and (3) a Checklist for Action, a memory aid setting out a series of items concerning priorities in planning and implementing health-related chemical accident prevention, preparedness and response measures.

UNEP (continued)

Hazard Identification and Evaluation in the Local Community, UNEP, IE, 1992, 86 Pages. English, French.

The handbook is part of UNEP's Awareness and Preparedness at the Local Level (APELL) programme and deals and expands step 2 of the APELL process "evaluate the risks and hazards which may result in emergency situations in the community". The aim is to show how risk objects can be identified, evaluated and ranked by a basic "rough-analysis" method and encourages an increased risk consciousness and environmental awareness in the community.

Storage of Hazardous Materials: A Technical Guide to Safe Warehousing of Hazardous Materials, UNEP IE, 1990, 80 Pages. English, French.

These guidelines are aimed to assist the warehouse management to prepare an emergency plan for the surroundings of the warehouse and to provide the necessary information to the population. The guidelines are based upon experiences gained in the chemical industry with warehouses controlled by chemical manufacturers as well as by contractors.

APELL Awareness and Preparedness for Emergencies at the Local Level: A Process for Responding to Technological Accidents, UNEP IE, 1988, 63 Pages. English.

This handbook aims at increasing awareness about the provisions of national law and international activities concerning emergency planning for natural and technological disasters. It presents the scope of the APELL process, its main objectives and how to start it. It also addresses the issue of community awareness and finally outlines the APELL planning process.

4.5 Poisoning Prevention, Treatment and Control

WHO

Management of Poisoning: A handbook for health care workers, IPCS, ILO, UNEP, WHO, 1997, 315 Pages. English, French, Russian and Spanish.

This handbook is written for people with little or no medical training and it is meant to be used as a practical reference book in an emergency. It gives people living in places far from medical help information on what to do when someone is poisoned and suggests ways to prevent poisoning.

Guidelines for Poison Control, IPCS, WHO, 1997, 112 Pages. English, French, Russian and Spanish.

Recognising the need for advice on poison control, the document intends to help countries to establish or strengthen facilities for the prevention and management of poisoning. Part 1 is written primarily for administrators and decision-makers and provides a policy overview of the problems. Part II offers technical guidance and is intended for those with direct responsibility for the establishment and operation of specific poison control facilities.

4.6 Chemical-Specific Risk Reduction

OECD

Lead Risk Management Activities in OECD Member Countries (1993 to 1998), OECD, 2000, 683 Pages, [English](#).

This document presents the results of an OECD survey on lead risk management activities in Member countries and in the lead producing and using industry. This report describes the level of exposure as well as risk management activities at the government and industry level in each OECD Member country.

Recycling of copper, lead and zinc bearing wastes, OECD, 1995, 27 Pages, [English](#), [French](#).

This document describes the principal recovery operations applicable to copper, lead and zinc wastes. It has been prepared primarily as guidance to assist those who may be concerned with the granting of authorisations for the trans-frontier movements of wastes for recovery. It highlights the processes used and capable of being operated in an environmental sound manner.

Selected Brominated Flame Retardants: Background and National Experiences with Reducing Risk, OECD, 1994, 152 Pages. [English](#).

This monograph contains sections on: the commercial life cycle; the environmental life cycle, including the sources of environmental releases, pathways and estimation of exposure; risk reduction and control measures; and international positions on the perceived risk, related to these substances.

Methylene Chloride: Background and National Experiences with Reducing Risk, OECD, 1994, 123 Pages. [English](#).

This monograph contains sections on: the commercial life cycle; the environmental life cycle, including the sources of environmental releases, pathways and estimation of exposure; risk reduction and control measures; and international positions on the perceived risk, related to these substances.

Mercury: Background and National Experiences with Reducing Risk, OECD, 1994, 159 Pages. [English](#).

This monograph contains sections on: the commercial life cycle; the environmental life cycle, including the sources of environmental releases, pathways and estimation of exposure; risk reduction and control measures; and international positions on the perceived risk, related to these substances.

OECD (continued)

Cadmium: Background and National Experiences with Reducing Risks, OECD, 1994, 195 Pages. [English](#).

This monograph contains sections on: the commercial life cycle; the environmental life cycle, including the sources of environmental releases, pathways and estimation of exposure; risk reduction and control measures; and international positions on the perceived risk, related to these substances.

Lead: Background and National Experiences with Reducing Risk, OECD, 1993, 277 Pages. [English](#).

These monographs contain sections on: the commercial life cycle; the environmental life cycle, including the sources of environmental releases, pathways and estimation of exposure; risk reduction and control measures; and international positions on the perceived risk, related to these substances.

UNEP

Global Opportunities for Reducing the Use of Leaded Gasoline, UNEP, UNICEF, UNITAR, 1998, 59 Pages. [English](#).

The purpose of the report is to provide a general overview of the global use of lead in gasoline and the possible effects of exposure. The document highlights some aspects relating to the contribution of lead use in gasoline to exposures, including technical and policy considerations for phasing out this particular use.

Environmental and Technological Issues Related to Lead-Acid Battery Recycling: A Training Resource Package, UNEP/IEO, UNEP EETU, 1994, 130 Pages. [English](#).

This package is designed to help teachers and trainers who do not have personal expertise in this area to develop curricula, workshops and seminars. The package provides background material, transparencies, references, information sources and exercises that can be used in teaching sessions.

Environmental Management of Nickel Production: A Technical Guide, UNEP, 1993, 90 Pages. [English](#).

This technical guide is an overview for planners and senior government officials. It aims at informing readers of the potential environmental impacts associated with the extractive metallurgy of nickel ores. It is intended to provide guidance regarding the incorporation of pollution abatement criteria at the project planning stage and on the elaboration of good environmental management procedures for nickel production operations.

UNEP (continued)

Environmental Aspects of Selected Non-ferrous Metals (Cu, Ni, Pb, Zn, Au) Ore Mining: A Technical Guide, UNEP IE, ILO, 1991, 116 Pages. English.

This Guide is intended for readers from several different backgrounds and areas of responsibility. Mining industry personnel will find descriptions of procedures and technologies that minimise environmental impact, as well as policy and management guidelines for ensuring effective low-impact operations. Government personnel and industry regulators will find indications as to the level of environmental performance that can be expected of the industry, together with a description of technical, planning and management tools that foster its achievements. The general reader will find an overview of environmental impacts related to the mining industry and recommended strategies for regulating these effects.

4.7 Industry Sector-Specific Risk Reduction

UNEP

Cleaner Production in Breweries: A Workbook for Trainers, UNEP IE, 1996, 96 Pages. English.

This support package focuses on some selected aspects that are central to cleaner production in the brewing industry. The trainer's package aims to develop insights and decision-making skills of those involved in this field. It provides case studies and situation scenarios that can be used as basis for interactive training and simulated decision-making.

Environmental Management in the Brewing Industry, UNEP IE, 1996, 106 Pages. English.

The purpose of this guide is to raise awareness of environmental issues related to the brewing industry and to highlight the possible approaches that industry and government can take to avoid or minimize the related environmental impacts. In particular, it addresses the issues of different malting and brewing processes, environmental impacts, occupational health, resource consumption and emissions, cleaner production, waste treatment methods and policies which government can pursue towards promoting cleaner production in this industrial sector.

Environmental Management in the Pulp and Paper Industry, UNEP IE, 1996, 232 Pages. English.

This technical report provides an outline of the potential of improving environmental performance through the application of environmental management systems and cleaner production concepts to smaller mills, including those using predominantly non-wood raw materials. In particular, it focuses on the issues of environmental impacts of production, fiber raw materials, cleaner production technologies, energy use, chemicals handling, wastewater treatment, air pollution control systems, solid waste management, noise abatement, regulatory frameworks, environmental management, and education and training.

UNEP (continued)

Cleaner Production in Leather Tanning: A Workbook for Trainers, UNEP, IE, 1996, 188 Pages. English.

This support package focuses on some selected aspects that are central to cleaner production in the leather tanning industry. The trainers' package aims to develop insights and decision-making skills of those involved in the industry. It provides case studies and situation scenarios that can be used as basis for interactive training and simulated decision-making.

Mineral Fertilizer Production and the Environment, UNEP IE, UNIDO, IFA, 1996, 150 Pages. English.

The report is targeted at relevant governmental agencies and ministries and the manufacturing industry dealing with mineral fertilizers. It aims to provide guidelines on how environmental objectives might be achieved in the fertilizer industry by means of integrated industrial and environmental policies. Although some mention of the agricultural use of fertilizers is provided, the guide is devoted to the industrial aspects of the manufacture of mineral fertilizers, including: production processes, environmental issues, environmental management systems, environmental auditing and reporting, and the role of industry associations.

Cleaner Production in Textile Wet Processing: A Workbook for Trainers, UNEP, IE, 1996, 154 Pages. English.

This support package aims to provide trainers with support material and ideas through some situation scenarios that can be used as a basis for interactive training and simulated decision-making. Work exercises are predominately based on interactive group-work and a team approach to problem solving.

Environmental Aspects of Industrial Wood Preservation: A Technical Guide, UNEP, IPCS, FAO, 1994, 105 Pages. English.

This document provides practical guidance for the improvement of industrial wood preservation through the introduction of safer professional practices. It is intended for application in all types of wood preservation plants, whatever their size and location. In particular, it addresses the issues of preservatives and industrial methods of treatment, chemical toxicity and potential impacts, site design and operation for environmental and health protection, environmental management, safe use of treated timber, and key issues relating to a regulatory framework to supports good practices.

The Textile Industry and the Environment, UNEP IE, 1994, 120 Pages. English.

This Technical Report aims at providing guidance on measures to prevent pollution and save raw materials through a cleaner production approach both at the conception stage and for ongoing operations. It provides an overview of the many specific elements that contribute to good environmental performance, addressing in particular the issues of textile wet processing operations (overview), environmental impacts, available cleaner production options, end-of-pipe treatment, and the policy and legal framework.

UNEP (continued)

Tanneries and the Environment: A Technical Guide to Reducing the Environmental Impact of Tannery Operations, UNEP IEO, UNIDO, 1991, 119 Pages. English.

This Guide is intended for government officials, industry, regulators and operators in the sector of leather tanning. It presents an outline of common processes with respect to environmental implications and it addresses the issues of cost, energy consumption, process efficiencies, maintenance questions, operational and control factors. It provides an outline of environmental considerations on infrastructure, supervision and control needs, and illustrates process and maintenance details of the production process, its environmental implications and possible legal requirements.

4.8 Prevention and Disposal of Obsolete Pesticides and Pesticide Waste

FAO

Pesticides Disposal Series

Prevention and disposal of obsolete and unwanted pesticide stocks in Africa and the Near East, Second Consultation Meeting, FAO, 1997, 46 Pages, English.

The document provides the outcomes from the Second Consultation on the Prevention and Disposal of Obsolete Pesticides in Africa and the Near East. It presents an overview of the activities of several international and bi-lateral organizations in this domain. It also includes presentations from donor agencies, discussions about policies, disposal methods, available technology and future plans, as well as a set of recommendations.

Pesticide Storage and Stock Control Manual, FAO, 1995, 32 Pages. [English](#), [Spanish](#), [French](#), [Arabic](#).

This manual addresses the issues of pesticide stores, storage, shelf-life, stock planning and recording systems, local transport, leaks and disposal, decontamination, emergencies and personal safety. Despite the limited geographical scope of the project from which it originates, is considered applicable and useful in many countries, particularly in the management and stock control of stored pesticides.

FAO (continued)

Disposal of Bulk Quantities of Obsolete Pesticides in Developing Countries: Provisional Technical Guidelines, FAO, WHO, UNEP, 1996, 44 Pages. [English](#), [Spanish](#), [French](#).

The objective of these guidelines is to promote principles and practices for environmentally sound management of pesticides. They address the problem of large stocks of obsolete pesticides in developing countries and the need for their containment and disposal. As well as a technical review of available disposal methods, the guidelines offer information on the legal and logistical aspects of disposal operations, on how to conduct and evaluate pesticides inventories, on disposal of empty containers and on site clean up.

Prevention and Disposal of Obsolete and Unwanted Pesticide Stocks in Africa and the Near East: The First FAO Consultation Meeting, FAO, 1995, 43 Pages. [English](#).

The document provides an overview of the situation with regard to obsolete pesticides in Africa and the Near East and activities of several international and bilateral organizations in this domain. It also includes an evaluation of recommended disposal methods and draft guidelines on prevention and accumulation of obsolete pesticide stocks.

Prevention of Accumulation of Obsolete Pesticide Stocks - Provisional Guidelines, FAO, 1995, 31 Pages. [English](#), [Spanish](#), [French](#), [Arabic](#).

The objective of these guidelines is to raise awareness about the mechanisms through which obsolete pesticide stocks accumulate and to enhance the formulation of policies and procedures aimed at the prevention of such accumulations. The guidelines analyse the causes of accumulation and recommend how to prevent it. They provide guidance to the governments of developing countries, aid agencies and the pesticide industry.

Provisional Guidelines on Tender Procedures for the Procurement of Pesticides, FAO, 1994, 27 Pages. [English](#).

This document is intended to provide guidance to both suppliers and procurers of pesticides, on the steps to be taken to ensure that pesticides obtained are of the required quality and are suitably packaged and labelled, taking into account local transport and warehousing facilities.

OECD

Report of the OECD-FAO-UNEP Workshop on Obsolete Pesticides, OECD, 2001, 26 Pages. [English](#) and [French](#).

An OECD Workshop on Obsolete Pesticides was held in Alexandria, USA, in September 2000. It was organised jointly with FAO, UNEP and the OECD Development Assistance Committee (DAC) Working Party on the Environment. The workshop report describes the problem of obsolete pesticide stocks and makes recommendations for eliminating existing stocks and preventing the accumulation of new ones. Individual recommendations are made for developing countries, pesticide donor countries and aid agencies, non-governmental organisations, the pesticide industry and international organisations, all of which were considered important and were represented at the workshop.

4.9 Management and Prevention of Chemical Pollution and Waste

FAO

Wastewater Treatment in the Fishery Industry, FAO, 1999, 60 Pages, [English](#).

This document presents the various types of treatment utilised for wastewater in the fishery industry, such as: characterization analysis, primary treatment, biological treatment, and physicochemical treatment including disinfections, sludge treatment and disposal. It also provides a series of concepts of wastewater in fisheries. An analysis of economic considerations is presented in the final section of the document.

OECD

Considerations for Evaluating Waste Minimisation in OECD Member Countries, OECD, 1998, 46 Pages, [English](#).

This report presents the outcome of Project 2 of the OECD Waste Minimisation Work Programme for 1996-1997. This document contains definitions, terms, concepts, measurement and evaluation, case studies and conclusions and recommendations on waste minimisation. It tries to identify means to better evaluate waste minimisation, with particular focus to the role of incineration with energy recovery.

Reduction and Recycling of Packaging Waste, OECD, 1992, 111 Pages, [English](#), [French](#).

This report presents information available on packaging waste such as types, amounts and methods in OECD countries. It also highlights the measures to reduce the amount of toxicity of packaging and to encourage its recycling. The first section of this report summarizes available information for 19 OECD countries, describing the generation and management of packaging waste as well as policies adopted to reduce or recycle package in each country. The second section focuses on the types of packaging materials providing industry data on waste generation and recycling rates. And the last section presents conclusions and questions for discussion.

UNEP

Environmental Management System Training Resource Kit, UNEP IE, ICC, FIDIC, 1997, 492 Pages. Arabic, Chinese, Czech, English, Estonian, German, Hungarian, Icelandic, Italian, Japanese, Lithuanian, Polish, Slovak, Spanish and Russian.

The package contains a set of resources, which can be used to support the design and implementation of environmental management systems (EMS) in private and public enterprises. It provides background information on the origin and development of an EMS, a generic approach for developing and implementing an EMS, examples of implementing an EMS in several companies, and suggestions for adapting the material to local conditions and conducting the training courses.

Monitoring Industrial Emissions and Wastes, UNEP IE, UNIDO, 1996, 131 Pages. English.

With the adoption of ISO 14001, audits and monitoring are becoming a part of the overall management systems employed by companies. This manual suggests procedures for the stages and steps required to develop and implement systematic monitoring programmes. It addresses in particular the issues of plant monitoring, training and costing, and provides several examples and case studies.

Cleaner Production: A Training Resource Package, UNEP IE, UNEP EETU, 1994, 98 Pages. English, Spanish.

The package is a basic resource kit on cleaner production for persons who wish to teach on the subject, but who have not yet developed their curriculum material. It is aimed at educators who, while technically trained, may not have specialized knowledge in this particular area. The package includes a set of slides, assignments and key publications on the subject.

Landfill of Hazardous Industrial Wastes: A Training Manual, UNEP IE, 1993, 315 Pages. English.

This manual allows the user to explore the complex aspects of hazardous waste landfill by working on practical exercises. The exercises are based on a case study specifically developed for the manual. The case study is in the form of a national report such as might be prepared for any country in the world. As presently structured, the manual serves best as a resource book for the professional trainer, and some parts of it may not be suited for individual study.

Hazardous Waste Policies and Strategies - A Training Manual, UNEP IE, UNEP EETU, ISWA, 1991, 256 Pages. English.

This manual is intended to assist in the training of decision-makers who have direct responsibility for the management of hazardous wastes. The manual simulates the problems and options for solutions that are faced by national administrators. It is directly applicable to the implementation of national and international initiatives for hazardous waste management, as for example the Basel Convention.

UNEP (continued)

Audit and Reduction Manual for Industrial Emissions and Wastes, UNEP IE, UNIDO, 1991, 127 Pages. English, French.

This manual is a practical working document intended for the use within industry. It can be used by factory personnel at all levels interested in upgrading their own process, consultants reporting to an industrial client and government personnel reviewing existing factory operations. It presents guidelines for identifying the sources of industrial emissions and wastes and choosing the most cost-effective options for their reduction.

UNIDO

Hazardous Waste Management in Industry, UNIDO, 1994, 170 Pages, English.

This volume examines the options for the management, treatment and disposal of existing wastes. It covers ways to manage and avoid environmental hazards resulting from a range of industrial activities. Abstracts cover the following subject areas: metallurgy, plastics, ceramics and other composite materials, including business aspects. In addition, a special set of abstracts on waste/site remediation is presented for the consideration of eastern European countries with economies in transition.

Waste Minimization in Industry, UNIDO, 1994, 223 Pages, English.

This publication includes coverage of key topics in waste minimization, cleaner production and pollution prevention. In addition, it contains abstracts of papers presented at seminars on cleaner production; the full text of more than 100 case studies on cleaner production; and almost 100 references on waste minimization.

WHO

Safe Management of Wastes from Health-Care Activities, WHO, 1999, 230 Pages, [English](#).

This publication pays particular attention to processes, technologies and, more sophisticated or advanced methods to manage health-care wastes in a safely manner. This publications aims to promote a sound management of wastes, the use of appropriate technologies, and also to inform countries about the health risks that result from inadequate management of health-care waste. It is intended for public health managers, hospital managers and other administrators of health-care establishments, policy makers, regulators, waste managers, and environmental health professionals.

WHO (continued)

Site Selection for New Hazardous Waste Management Facilities, WHO, 1993, 118 Pages, English.

This document gives particular attention to the measures needed to protect health, preserve environmental quality, and respect the social values and economic well being of the host community. It has five chapters. The first provides guidance on selecting a site. The second chapter points out the importance of facilities, including technologies that can reduce emissions at the source. The third explains the technical and procedural considerations and presents two models: voluntary and technical model. The fourth discuss the risk, environment and health assessment aspects. And the final chapter provides an insight of social and economic considerations.

One-week Training Workshop in Environmental Control Technology: A Tutor's Guide, WHO, 1991, 82 Pages. English.

This curriculum is intended for instructors of workshops on environmental control technology. It provides an overview of the field, an introduction to control design in selected areas and facilitates a planning process to improve control technology in a specific country or region. Participants of the workshops will be environmental engineers and industrial hygienists (or technicians performing these functions) who are involved in education, training, research and practice in the field of environmental control technology. The workshop relies primarily on problem-solving exercises that should be tailored to the needs of a particular country or region.

5. Education, Awareness Raising and Human Resource Development

ILO

Workers' Education and Environment: Discussion Booklets, ILO, 1993, 202 Pages. [English](#).

This package aims at raising the environmental awareness of trade unionists, encouraging trade unions to design strategy and action plans at local and national levels supporting environmental protection and sustainable development, and inspiring production of training materials by trade unionists in their local unions, centres and communities. The package is comprised of seven booklets including a guide, a glossary, and papers addressing environmental issues in relation to workers, the workplace and the community, as well as global environmental problems.

UNEP

Overview of Outcomes from POPs Awareness Raising Workshops Working Groups, UNEP, 1998, 123 Pages, [English](#).

This documents summarises the results of the eight sub-regional workshops to raise awareness on POPs in developing countries and countries with economies in transition. In each workshop, except the first in St Petersburg, countries of the sub-region met in working group sessions to discuss themes such as: sources and releases, national strategies, regional strategies, specific issues for pesticides, further assistance and possible immediate, medium-term and long-term follow up actions.

Pesticides, Human Health and the Environment: A Training Manual for Leaders of Women's Groups, UNEP ROAP, 1992, 40 Pages. [English](#).

This manual is mainly intended to educate and train different women's groups such as housewives, mothers, farmers, community leaders, agricultural extension workers and others, who may lack formal education and training on the effects of pesticides on human health and the environment. The manual provides information about the principles of pest control and the effects of pesticides; it also addresses a set of different safe handling techniques and precautionary measures to be followed during pesticide handling operations.

Household Chemicals, Their Safe Handling and Use: A Training Manual for Leaders of Women's Groups, UNEP ROAP, 1992, 24 Pages. [English](#).

This manual is mainly intended to educate and train different women's groups, such as housewives, mothers, community leaders, social leaders, on the safe handling and use of household chemicals. It divides different household chemicals according to their usage and recommends a series of precautionary measures for their safe handling. It also recommends natural substitutes for common household chemical products.

UNITAR

Strengthening National Awareness Raising and Education for Chemicals Management. Thematic Workshop (No. 2), UNITAR/IOMC, 1998, 48 Pages. [English](#).

The report provides practical guidance to countries for designing and developing awareness-raising and education strategies for chemicals management. It discusses means and benefits of involving various national stakeholders from within and outside of government in these activities and outlines a step-by-step approach. Key considerations are raised towards identifying main target groups, developing an effective message, and measuring the impact of awareness raising and education programmes.

WHO

Hazardous Chemicals in Human and Environmental Health: a Resource Book for School, College and University Students, WHO, IPCS, 2000, 110 Pages, [English](#).

This book presents, in a pedagogical manner, the potential detrimental effects on health and the environment of hazardous wastes. It is intended for students who will work in industry, agriculture, government and other public or private sectors and that could potentially take actions at the local, national or international level for an environmental sound management of chemicals. The book discusses the following themes: sources of chemicals in the environment, routes of exposure, adverse effects of chemicals, assessing human health risks, environmental effects of chemicals and environmentally sound management of toxic chemicals.

Teacher's Guide: Management of Wastes from Health-Care Activities, WHO, 1998, 227 Pages, [English](#).

This guide complements the WHO publication *Safe Management of Wastes from Health Care Activities* (WHO 1999, see section 4.9). It aims to raise awareness on public health and environment, to provide information on sound management practices of health-care waste, to identify safe, efficient, sustainable, economic and culturally acceptable waste management practices. It assists teachers in developing a three or five-day course on health-care wastes. The course material includes overhead transparencies, handouts and the material necessary for a workshop. This course is targeted at managers, regulators and policy makers.

Teacher's Guide on Basic Environmental Health, WHO, UNESCO, UNEP, CRE Copernicus, 1996, 227 Pages. [English](#).

This teacher's guide is designed to accompany the text Basic Environmental Health. It was developed to assist teachers in developing interactive, problem-oriented curricula on environmental themes covered in the text.

WHO (continued)

Women, Health & Environment: A Teachers' Guide, WHO, GEENET, 1995, 45 Pages. English.

The document aims to assist teachers to clarify and raise awareness on the impact of environment and development factors on women's health and well being, and to demonstrate how women's position in society is frequently a major determinant of their health status. This guide is intended for use in conjunction with the Anthology on Women, Health and the Environment (WHO, 1994) and is aimed at disciplines ranging from public and environmental health, medical anthropology and sociology, to women's study or development programmes. It is suitable for those involved in education, training, research, planning and practice in environment and sustainable development.

Human Resources Development: A National Framework for Capacity-Building in Environmental and Occupational Health, WHO, 1995, 8 Pages. English.

The aim of this document is to provide a framework for national development of human resources in environmental health through a description of development projects in Mexico, Cuba and South Africa. The paper also indicates a series of possible steps to take in the development of a new framework for the development of human resources.

6. Technical/Laboratory Infrastructure Building

OECD

OECD Series on Principles of Good Laboratory Practice (GLP) and Compliance Monitoring No. 1-12, OECD, 1992-2000, 183 Pages. [English](#), [French](#), [German](#) and [Spanish](#).

This series provides technical guidelines on good laboratory practice for pre-clinical safety studies on chemicals and compliance monitoring. It addresses the issues of laboratory inspections and study audits, quality assurance, laboratory suppliers, application of GLP principles to field work, short-term studies, role and responsibilities of the study director in GLP studies, GLP inspection reports, and application of GLP principles to computerised systems. The primary document in the series "The OECD Principles of GLP" is used for pre-clinical safety studies on chemicals for regulatory purposes.

7. General Issues of Capacity Building

UNITAR

Guidance on Action Plan Development for Sound Chemicals Management (Working Draft), UNITAR/IOMC, 2001, 45 Pages, English, French, Spanish.

This document outlines a step-by-step approach for developing Action Plans for priority topics of national chemicals management. It is intended to provide background for a UNITAR Training/Skills-Building Workshop for Action Plan Development. Detailed guidance and relevant examples are presented for those who have been mandated to develop an Action Plan on a particular priority topic.

Developing and Sustaining an Integrated National Programme for the Sound Management of Chemicals, (Working Draft), UNITAR/IOMC, 2001, 68 Pages, English, French, Spanish.

The guidance and suggested activities presented in this document are intended to assist countries in developing and sustaining an integrated national programme. The document provides context and background on the importance of chemical management (including international and regional policy frameworks, the importance of sound cooperation within government and with stakeholders, and the development of a national policy on chemicals management); a range of activities and practical suggestions for taking concrete action towards an integrated national programme; and introduces the Action Plan development approach to sound chemicals management as a key strategic planning tool.

Organizing a National Workshop on Chemicals Management and Safety, UNITAR/IOMC, 1997, 20 Pages. [English](#), [French](#), Spanish.

The guidance provided in this document is intended to assist countries in organizing national workshops to promote, review and develop follow-up action related to the strengthening of national capabilities and capacities for the sound management of chemicals. Specific attention is given to the organization of a National Priority Setting Workshop as a key step in the development of a national action programme, following the preparation of a National Profile.

Strengthening National Capabilities and Capacities for the Sound Management of Chemicals: Observations and Conclusions of an International Expert Meeting - Montezillon, Switzerland, August 1996, UNITAR/IOMC, 1996, 57 Pages. [English](#).

Recognizing the importance of a multi-stakeholder approach to chemicals management, the document provides ideas on practical ways to motivate action on the part of government, industry, public interest groups, research/academic institutions and other key actors to reduce chemical risks and strengthen national capacities to manage chemicals.

Guidance Series for Integrated Chemicals Management

Preparing a National Profile to Assess the National Infrastructure for Management of Chemicals, UNITAR/IOMC, 1996, 102 Pages. [English](#), [French](#), [Spanish](#).

The document aims to assist countries in preparing comprehensive National Profiles to assess their national infrastructure for the sound management of chemicals through a process, which involves all interested parties at the country level. It covers the international and national policy framework and provides guidelines for organising the preparation of a national profile, including suggestions regarding structure and contents.

WHO

Key Elements of a National Programme for Chemicals Management and Safety, IPCS, WHO, UNITAR, 1998, 115 Pages. [English](#).

The document proposes a framework for a cross-sectoral, comprehensive approach to chemicals management. It is provided as a resource for countries to be used in their efforts to establish, update or implement national programmes and policies related to chemicals management.

Annex 1: Reference Documents and Directories**ILO**

Catalogue of ILO Publications on Occupational Safety and Health, ILO, 1998, 103 Pages. English.

International Directory of Occupational Safety and Health Institutions, ILO, 1990, 272 Pages. English.

UNEP

Cleaner Production: A Guide to Sources of Information, UNEP IE, 1998, 35 Pages. English.

Inventory of Information Sources on Chemicals: Intergovernmental Organizations, UNEP Chemicals, 1997, 240 Pages. English.

International Activities Related to Chemicals: Overview of international agreements/instruments, organizations and programmes concerning chemicals management, UNEP Chemicals, IOMC, 2000, 224 Pages. English

Internet Guide: Finding Information on Chemicals, UNEP, 1997. English.

Inventory of Critical Reviews on Chemicals, UNEP, ECETOC, 1996, 452 Pages. English.

APELL Annotated Bibliography, UNEP IE, Environment Canada, 1994, 117 Pages. English.

Internet Guide Finding Information on Chemicals, UNEP, 1997. English.

FAO/UNEP

List of Designated National Authorities (DNAs) for the Implementation of the Prior Informed Consent (PIC) FAO/UNEP Joint Secretariat for the Implementation of PIC. 2000, [English](#).

OECD

International Directory of Emergency Response Centres, OECD, UNEP, 1991, 77 Pages. English.

WHO

World Directory of Poison Centers, IPCS, 199X. English.

IFCS

List of IFCS National Focal Points, IFCS. English.

Annex 2: CD ROMs

National Chemicals Management Profiles: A compilation of National Profiles Worldwide, UNITAR, IOMC, EC, ECB and IFCS, 2000, [English](#).

This CD ROM is intended to assist countries in managing chemicals through the facilitation of worldwide access to National Chemicals Management Profiles. It contains 30 National Chemicals Management Profiles from countries around the world, National Chemicals Management Profiles Contact Points in 81 countries, UNITAR/IOMC guidance document, status of National Profiles preparation worldwide and international recommendations related to National Chemicals Management Profiles. National Chemicals Management Profiles are presented in their original languages.

Designing and Implementing National Pollutant Release and Transfers Registers, UNITAR, IOMC, 2000, [English](#).

This CD-ROM contains policy recommendations, international guidance documents on PRTR design, official national PRTR data reports, documents on public dissemination, right to know and data evaluation, guidance on emission release estimation, reports of international conferences, workshops and related events and PRTR website addresses. Its goal is to assist governments and interested parties in making informed choices in designing national PRTR systems.

IPCS INTOX Package (CD-ROM), Version 3.2, IPCS, WHO, 1997. [English](#).

The IPCS INTOX Package is designed to strengthen and enhance the services of poison information centres. It provides capabilities to set up and operate efficient poison information facilities and to manage information collected by these centres. It also provides evaluated information on how to diagnose and treat poisoning. The package consists of an information management system and a supporting database on CD-ROM.

INCHEM CD-ROM, WHO, IPCS, 1997. [English](#).

The International Programme on Chemical Safety (IPCS) INCHEM CD-ROM was produced in order to consolidate relevant data on chemical information, which are available from international bodies. It includes, inter alia, Environmental Health Criteria Monographs, Health and Safety Guides, International Chemical Safety Cards, Poison Information Monographs and UNEP IRPTC Data Profiles.

Chemical Safety CD-ROM, ILO, IPCS, 1997. [English](#).

The CD-ROM includes a massive amount of information from international sources to promote safety in the use of chemicals at work, at home and in the environment. It includes, inter alia, International Chemical Safety Cards, more than 20.000 references on chemical safety from the CISDOC database of the ILO, ILO-CIS Chemical Safety Training Modules, and ILO Conventions, Recommendations and Codes of Practice.

Annex 3: IOMC Contact Information and Publication Offices

While some of the documents listed in the Annotated Resource Guide are sold on a commercial basis, some of the publications are available free of charge. In order to obtain further information or copies of the publications listed in the Annotated Resource Guide, please contact the relevant IOMC organization or publication office, details of which are provided below.

FAO

Sales and Marketing Group, FAO,
Viale delle Terme di Caracalla
00100 Rome, Italy
Fax: +39 06 5705 3360
email: publications-sales@fao.org

ILO

ILO Publications (PUB/VENTE)
ILO Geneva, Switzerland
Tel: +41.22.799 73 01
Fax: +41.22.799 69 38
email: pubvente@ilo.org

UNEP

1. UNEP Chemicals (IRPTC)

UNEP Chemicals (IRPTC)
11-13 Chemin des Anémones
CH-1219 Geneva, Switzerland
Fax: +41 22 797 34 60

2. UNEP Industry and Environment Office (UNEP IE)

Tour Mirabeau 39-43 quai André Citroën
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Fax: +33 1 44 37 14 74
email: unepie@unep.fr

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UNITAR

Training and Capacity Building Programmes in
Chemicals and Waste Management
Palais de Nations
CH-1211 Geneva 10, Switzerland
Fax: +41.22.917 80 47

WHO

Publications can be ordered from national WHO sales agents, from booksellers, from the WHO Publications Center USA, or directly from WHO, Geneva.

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<http://electrade.gfi.fr/cgi-bin/OECDBookShop.storefront>