

UNITED NATIONS INSTITUTE FOR TRAINING AND RESEARCH

*RESOURCE GUIDE ON TRAINING AND TECHNICAL ASSISTANCE  
ACTIVITIES OF INTERNATIONAL ORGANIZATIONS RELATED TO THE  
ENVIRONMENTALLY SOUND MANAGEMENT OF CHEMICALS*

FIRST EDITION, APRIL '94



A Contribution to the International Programme on Chemical Safety  
A Joint Programme of WHO, UNEP, and ILO

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The first edition of the *Resource Guide on Training and Technical Assistance Activities of International Organizations Related to the Environmentally Sound Management of Chemicals* has been prepared by UNITAR in close co-operation with WHO, UNEP and ILO. Seed funds for this project have been made available through UNITAR's General Fund and the UNEP/UNITAR Training Programme on the Implementation of the London Guidelines. UNITAR invites all interested parties to provide additional comments and information and apologizes for any omissions and inaccuracies in the present version of the Guide.

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## **INTRODUCTION TO THE RESOURCE GUIDE**

The "Resource Guide on Training and Technical Assistance Activities of International Organizations Related to the Environmentally Sound Management of Chemicals" has been developed in response to requests from governments, international organizations and other interested parties to obtain a better overview of chemical management related training and technical assistance activities conducted by international organizations.

The first edition of the Resource Guide includes training and technical assistance activities conducted by the present IPCS member organizations, ILO, WHO and UNEP and the relevant activities conducted by UNITAR in association with UNEP. The information presented in the Resource Guide, in most cases, covers activities of the past 3-4 years. A number of organizations, departments, branches, etc. have been in a process of reorganization during the development of the Resource Guide in early 1994. Therefore, new organizational changes may not be fully reflected in this first edition, however, they will be included in future editions. It is also planned to include activities of other international organizations such as FAO, UNIDO, IMO, the World Bank, OECD, the Regional Commissions and relevant activities of bi-lateral assistance agencies if additional resources can be mobilized.

Each organization featured in the Resource Guide is covered by a separate chapter. Each Chapter is divided into four Sections:

- |              |  |
|--------------|--|
| Section I:   | Organizational Structure and Major Programmes Related to the Environmentally Sound Management of Chemicals     |
| Section II:  | Training and Technical Assistance Activities Related to the Environmentally Sound Management of Chemicals      |
| Section III: | Training and Technical Support Materials/Services Related to the Environmentally Sound Management of Chemicals |
| Section IV:  | Contact Points and Addresses   |

**Section I: Organizational Structure and Major Programmes Related to the Environmentally Sound Management of Chemicals**

Section I of each chapter introduces the organizational structure and main programme areas of the respective organizations related to the environmentally sound management of chemicals. It also describes the relevant units of the organizations, including their main activities related to chemicals management.

**Section II: Training and Technical Assistance Activities Related to the Environmentally Sound Management of Chemicals**

Section II of each chapter contains descriptions and listings of training and technical assistance activities carried out since 1990 under various training and technical assistance projects/programmes. Each project/programme is covered in a separate entry which features the following information:

- Title of Project/Training Programme
- Time Frame
- Executing Unit
- Geographic Scope
- Responsible Officer/Contact Person
- Main Subject Categories Covered
- Description
- International Workshops
- National Workshops
- Other Activities/Services
- Project Specific Training Materials
- Planned Activities

To facilitate updating and amending the Resource Guide, each entry of Section II has an individual entry number consisting of a capital letter and number. Each unit within an organization conducting chemical management activities is assigned a different capital letter (beginning with "A") and every project or programme

conducted within a unit is designated by a number (beginning with "1"). For example, the WHO Programme for the Promotion of Chemical Safety is denoted with a letter "A" and all training and technical assistance projects of the Programme receive a specific entry numbers: A1, A2, etc..

### Description

This heading provides a description of training and technical assistance activities and includes general information such as project objectives, co-operating organizations, target groups, subjects covered, type of activities conducted, and the methodologies employed.

### International Workshops

This heading provides titles, locations and dates of international workshops, courses or seminars conducted under the relevant project. Additional information can be included, if considered important (e.g. on participants, recommendations, follow-up, etc). A "\*" after a workshop listing indicates that a workshop report is available.

### National Workshops

This heading provides titles, locations and dates of national workshops, courses or seminars conducted under the relevant project. Additional information can be included, if considered important (e.g. on participants, recommendations, follow-up, etc) A "\*" after a workshop listing indicates that a workshop report is available.

### Other Activities/Services

This heading includes information on additional activities and services provided by the project. This may include references to fellowships, country visits, equipment, and other technical support such as provision of documents, databases, and newsletters.

### Project Specific Training Materials

This heading includes training materials specifically developed for application in the project. This may include specific training manuals, audio-visual materials or complete training "modules".

Planned Activities

This heading includes information on planned activities within the project/programme. The information can be general in nature or specific, by referring to scheduled workshops and seminars.

**Section III: Training and Technical Support Materials/Services Related to the Environmentally Sound Management of Chemicals**

Section III of each chapter lists outputs and services which support training and technical assistance activities. Materials listed include, for example: Manuals, Guides and Technical Publications; Databases; Newsletters and Brochures; and Other Support Materials. This section is not meant to provide a complete list of all chemicals safety related publications, but rather focuses on those which are used for capacity building activities.

**Section IV: Contact Points and Addresses**

Section IV of each chapter provides the names, addresses, and telephone numbers of all professionals in the relevant organizations whose work is closely related to the environmentally sound management of chemicals training and technical assistance activities, including heads of departments, programmes, branches and the relevant project/programme officers.

**CHAPTER 1**

**INTERNATIONAL LABOUR ORGANIZATION**

## ILO - TABLE OF CONTENTS

### SECTION I: ORGANIZATIONAL STRUCTURE AND MAJOR PROGRAMMES

### SECTION II: TRAINING AND TECHNICAL ASSISTANCE ACTIVITIES

#### A. Occupational Safety and Health Branch

- ▶ Major Hazards Control Systems . . . . . A1
- ▶ Safety in Manufacturing and Use of Chemicals . . . . . A2
- ▶ Protection from Harmful Substances in Workers' Environment . . A3
- ▶ Promotion of Safety and Health Activities in Industrial Establishments . . . . . A4
- ▶ Training and Advisory Services in Occupational Safety and Health . . . . . A5
- ▶ Labour/Factory Inspection Service Projects . . . . . A6
- ▶ Promotion of Occupational Safety and Health in Agriculture . . . . A7
- ▶ Regular Programme Activities in Occupational Safety and Health Related Training . . . . . A8

#### B. Conditions of Work and Welfare Facilities Branch

#### C. International Occupational Safety and Health Information Centre/CIS

- ▶ East African Programme on Occupational Health and Safety . . . . C1
- ▶ African Training and Information Project on Occupational Health and Safety . . . . . C2
- ▶ Asian-Pacific Regional Programme on Occupational Safety and Health . . . . . C3
- ▶ Promotion of Safety and Health Programmes and Information Services . . . . . C4

#### D. Labour Administration Branch

- ▶ Strengthening Labour/Factory Inspection Services Through Systematic, Multi-Level Training and Manpower Development D1

#### E. Workers' Education Branch

- ▶ Workers' Education Assistance in Occupational Safety and Health to Workers' Organizations in Selected Asian Countries E1
- ▶ Workers' Education and Environment . . . . . E2

### SECTION III: TRAINING AND TECHNICAL SUPPORT MATERIALS/SERVICES

### SECTION IV: CONTACT POINTS AND ADDRESSES

**ILO - SECTION I**

**ORGANIZATIONAL STRUCTURE AND MAJOR  
PROGRAMMES RELATED TO THE ENVIRONMENTALLY  
SOUND MANAGEMENT OF CHEMICALS**

## **INTRODUCTION TO ILO**

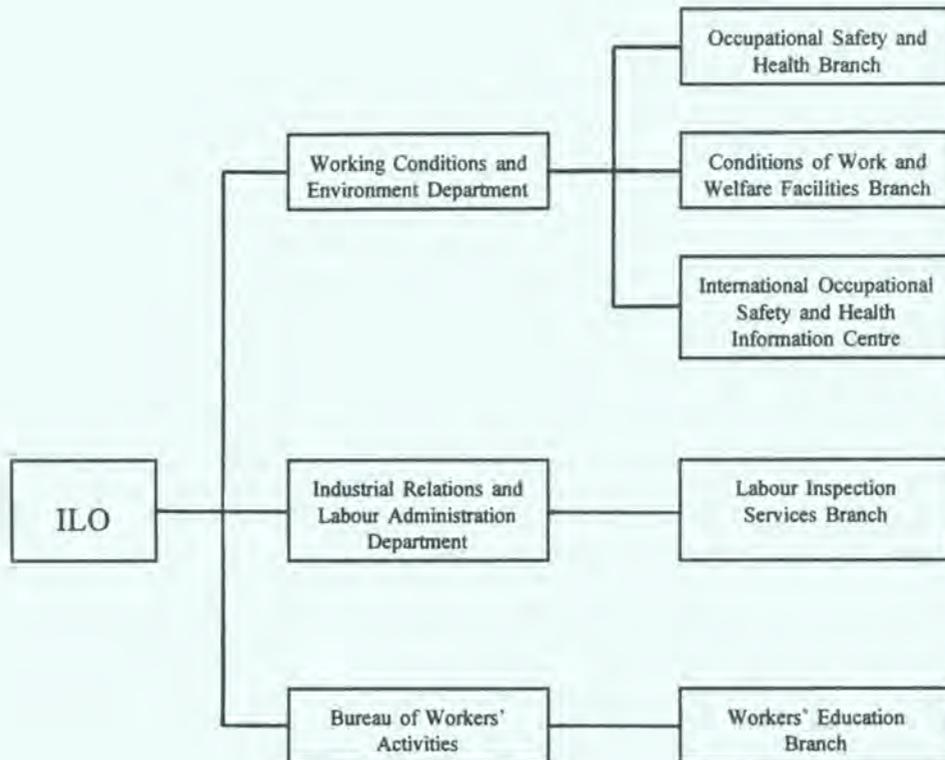
The International Labour Organization (ILO) was established in 1919 and became the first UN Specialized Agency in 1946. Its mandate is to raise standards of living worldwide, to promote social justice and reform, and to seek adequate protection for the life and health of workers in all occupations. ILO works towards these goals by setting international labour standards, by promoting research, and by providing technical assistance to Member countries. The organization has a tripartite structure in which representatives of labour, employers as well as government participate in the decision making process at all levels. As of February 1994, ILO had a membership of 170 States. The Headquarters of ILO is located in Geneva, Switzerland.

Most of ILO's activities related to chemical safety are conducted through the Working Conditions and Environment Department. The Working Conditions and Environment Department is concerned with working conditions, the working environment and well-being of workers. Activities are guided by the principle that work should take place in a safe and healthy environment; conditions of work should be consistent with workers' well-being and human dignity; and work should offer real possibilities for personal achievement, self-fulfilment and service to society. Activities conducted within the Department include setting and implementing international labour standards, collecting and disseminating information, and providing technical assistance to member States.

The Industrial Relations and Labour Administration Department is concerned with sound systems of labour relations, both collective and individual, which are fully consistent with ILO principles. Activities promote, inter alia, the development of appropriate legal frameworks for labour matters, improving the effectiveness of labour administration, and the wider observance of the Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy.

The Bureau of Workers' Activities is concerned with the overall performance of workers' organizations. Emphasis is placed on assisting trade unions to play an active part in tripartite activities and on strengthening their ability to protect workers' interests in the development of democratic structures and the realization of ILO principles and policies.

The following chart provides an overview of ILO departments and branches which execute chemical safety related programmes and activities. While Departments are responsible for implementing ILO's major programme areas, Branches carry out the relevant activities.



The majority of ILO's training and technical assistance activities are coordinated through ILO Headquarters. They are generally carried out in the framework of projects which have specific objectives, time frames, and workplans. In addition, regional activities are conducted at the request of ILO member States. Recently, ILO has started to establish multidisciplinary teams at the regional levels which are made up of several technical advisers with various professional expertise. These multidisciplinary teams provide support to ILO Regional Offices, particularly for the programming, coordinating and management of operational activities. The teams are also the focal points for the provision of technical assistance to ILO's tripartite constituents at the national, sub-regional and regional levels.

## **UNITS AND PROGRAMMES CONCERNED WITH CHEMICAL SAFETY**

### **A. Occupational Safety and Health Branch**

The Occupational Safety and Health Branch is part of the Working Conditions and Environment Department. The Branch assists in the development and promotion of international labour standards and the formulation and implementation of national policies and programmes in the fields of occupational accidents, major industrial accidents and work-related diseases. Priority is given to providing technical advisory services, organizing activities related to particularly hazardous occupations and designing and implementing enterprise-level promotional programmes.

The Occupational Safety and Health Branch training and technical assistance activities promote the implementation of international labour standards, with a view to strengthening the national regulatory infrastructure. They also aim at enhancing safety and health institutions and the national capacity to provide training and information services on occupational health related issues. Most of these activities are conducted in close cooperation with the International Occupational Safety and Health Information Centre.

#### *Harmonization of Classification and Labelling Systems of Hazardous Chemicals*

This activity is conducted within the framework of the International Programme on Chemical Safety (IPCS). ILO is currently serving as the secretariat of the IPCS Coordinating Group for the Harmonization of Classification Systems. Within this coordinating Group, ILO has taken the lead as Focal Point for the harmonization of physical hazard classification criteria. Several of ILO's training and technical assistance activities include modules on classification and labelling.

#### *Health Hazard Alert System*

The Health Hazard Alert System has the objective to facilitate the dissemination of scientific and technical information on newly discovered or suspected occupational hazards. The system transmits inquiries and information among designated bodies of 100 Member countries. The majority of alerts and requests for information processed so far relate to chemicals.

#### *Development of ILO Codes of Practice in Occupational Safety and Health*

Codes of Practice serve as guidelines for national governments and often complement conventions and recommendations. Initial drafts, prepared by the ILO, are reviewed by an expert meeting prior to final authorization by ILO's Governing Body. Examples of ILO Codes of Practice are: "Safety in the Use of Asbestos" (1984), "Safety, Health and Working

Conditions in the Transfer of Technology to Developing Countries" (1988), "Prevention of Major Industrial Accidents" (1991), and "Safety in the Use of Chemicals at Work" (1993).

*Prevention of Industrial Accidents*

ILO's work on prevention of industrial accidents has the objective to strengthen the capabilities of countries to prevent major industrial accidents through the elaboration of guidelines and provision of technical assistance. Major outputs include a Code of Practice On Prevention of Major Industrial Accidents and a manual on Major Hazard Control. A Convention concerning the Prevention of Major Industrial Accidents (No. 174) and its accompanying Recommendations were adopted by the International Labour Conference in June, 1993. Practical advice is provided through technical advisory services and tripartite training programmes on regulatory procedures, enterprise level safety and emergency plans and risk assessment.

**B. Conditions of Work and Welfare Facilities Branch**

The Conditions of Work and Welfare Facilities Branch is part of the Working Conditions and Environment Department. The overall objective of its programme is to increase the capacity of member States to provide essential minimum protection and progressive improvements in conditions of work and welfare facilities. The Branch has three main subprogrammes which deal with working time, work organization and technology; child labour and vulnerable categories of workers; and work, gender and family. Its activities relate to the promotion of international labour standards on conditions of work, developmental and research work, training, and technical advisory services. The work of the Conditions of Work and Welfare Facilities Branch does not directly focus on chemical safety. However, in its activities concerning child labour in hazardous work and in improving working conditions and productivity in small enterprises, chemical safety is one of the issues covered. With respect to child labour, for example, children who work with or are exposed to dangerous chemicals in industry or agriculture are major target groups for action. With respect to activities concerning work improvements in small enterprises (WISE), chemical safety is one of the areas covered, especially in the technical module on "control of hazardous substances" of the ILO training methodology described in the manual, *Higher Productivity and a Better Place to Work*.

### **C. International Occupational Safety and Health Information Centre<sup>3</sup>**

The International Occupational Safety and Health Information Centre is a Branch of the Working Conditions and Environment Department. It is concerned with the capacity of member states to apply new information in the formulation and implementation of occupational safety and health policies and standards. The exchange of safety and health information is organized and executed through the activities carried out under the Centre in Geneva with the assistance of designated institutions (CIS national and collaborating centres) in 85 member states. CIS collects, processes and publishes abstracts of all important safety and health literature, including documents on chemical safety, which it receives through the network of collaborating institutions. New toxicity information is a current area of priority interest. Training and technical assistance activities promote the implementation of ILO standards, the exchange of information and the provision of technical advisory services in safety and health legislation, chemical safety, and worksite safety measures. These activities of the Centre are organized in close coordination with the Occupational Safety and Health Branch.

### **D. Labour Administration Branch**

The Labour Administration Branch is part of the Industrial Relations and Labour Administration Department. The Branch works towards strengthening the labour administrations in member states with particular emphasis on national labour inspection systems and employment services. The Labour Inspection subprogramme deals with the implementation and enforcement of labour laws which includes the identification of legal gaps and recommendation of remedial measures. It also aims at strengthening the existing links between labour inspectorates and the various competent bodies concerned with the prevention of occupational accidents and diseases. Training and technical assistance activities of the Labour Inspection Services Unit include training to strengthen labour inspectorates, development of training materials, and provision of technical advice and information services. The unit also conducts tripartite missions to member countries to evaluate the effectiveness of their labour inspection systems.

### **E. Workers' Education Branch**

The Workers' Education Branch is part of the Bureau of Workers' Activities and assists trade unions to expand their negotiation skills, their capacity to participate in decision-making and their ability to defend and promote the interests of their members. Several

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<sup>3</sup>Prior to 1994 the International Occupational Safety and Health Information Centre (CIS) was a unit of the Occupational Safety and Health Branch.

## *ILO - Section I: Structure and Programmes*

training and technical assistance activities of the Workers' Education programme area deal with the safe use of chemicals and pesticides. They mainly involve raising the awareness of trade union members with emphasis placed on the involvement of women, young persons and vulnerable groups.

### *Role of Workers' Education in Occupational Safety and Health and the Environment*

Activities in this area provide workers and their representatives with education and training on occupational safety, health and environmental issues to enhance their active participation at the enterprise, community and national levels. Training and technical assistance is provided to enable workers to become effective as members of safety committees and influence decisions concerning occupational safety, health and the environment. Recent and ongoing projects include *Workers' Education and the Environment* (Caribbean, Africa and Asia) and two projects for *Workers' Education Assistance on Occupational Safety and Health and Environmental Issues* (Thailand, Philippines and Indonesia; India and Bangladesh).

### *Strengthening and Developing Rural Workers' Organizations*

Activities in this area aim at strengthening organizations representing rural workers. Training and advisory services have the objective to increase awareness of international labour standards; to develop skills for employment, occupational health, safety and the environment; to train trainers; and to train vulnerable groups such as women, young workers, migrant workers and indigenous peoples. Assistance is also provided to national and international trade union organizations which support rural workers' organizations in developing countries. Recent and ongoing projects include *Workers' Education for Rural Women Workers in Central America and the Dominican Republic*; *Workers' Education Assistance to Rural Workers Organizations in Bolivia, Colombia, Nicaragua and Peru*; *National Workshops on Environment and Rural Workers' Education Organizations* (Uganda and Ghana); *National Training Workshops on Occupational Safety and Health for Agricultural and Plantation Workers* (Sri Lanka and Indonesia); and two projects for *Workers' Education for Women Members of Rural Workers' Organizations* (Ghana, Uganda and Zimbabwe; India, Philippines and Sri Lanka).

**ILO - SECTION II**

**TRAINING AND TECHNICAL ASSISTANCE ACTIVITIES  
RELATED TO THE ENVIRONMENTALLY SOUND  
MANAGEMENT OF CHEMICALS**

## Major Hazards Control Systems

**Executing Unit:**

Occupational Safety and Health Branch

**Time Frame:**

1985 - 1991

**Geographic Scope:**

India, Thailand, Indonesia

**Responsible Officer/Contact Person:**

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Working Conditions and Environment Department

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**Main Subject Categories Covered:**

National regulatory frameworks

Major accidents control information systems

Factory inspection

**Description:**

The projects for **Major Hazard Control Systems** assisted countries to: 1) install national systems to identify, analyze and control potentially hazardous industries and 2) develop emergency operation systems to be implemented in the case of major accidents. Activities involved Ministries of Labour, Employers' Organizations and Workers' Organizations. Specifically, the projects assisted national partners to draft regulations, establish computerized data banks, and establish the institutional frameworks for the control of industrial major hazards. Activities also included:

- ▶ advisory services for factory inspectorates and industries on major hazards control and chemical safety,
- ▶ provision of specialized training of factory inspectors and of technical/safety officers of chemical factories,
- ▶ organizing and providing education for workers and local authorities in major accidents hazard control.

Entry #: A1

**International Workshops:**

Asian Regional Workshop on Major Hazards and  
their Control in Industry  
Bombay, India [November 1985]

**Project Specific Training Materials:**

- ▶ Assessment, Control and Mitigation of Major Accidents. (Slide Show of 45 slides).

## Safety in Manufacturing and Use of Chemicals

**Executing Unit:**

Occupational Safety and Health Branch

**Time Frame:**

May 1991 - October 1991

**Geographic Scope:**

Central and Eastern Europe: Poland, Rumania, Bulgaria, Hungary, United Soviet Socialist Republics, and the Czech and Slovak Federal Republics

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Chemical safety strategies  
UNEP APELL Programme  
U.S. EPA Chemical safety programmes

**Description:**

The **Safety in Manufacturing and Use of Chemicals** workshop series had the objectives:

- ▶ to exchange views and information on successful experiences in controlling chemical hazards to both workers and the environment;
- ▶ to exchange views and experiences on measures taken at the national and enterprise levels for promoting chemical safety and preventing major accidents; and
- ▶ to exchange views concerning the roles of governments, employers, and workers and their organizations for improving safety in the manufacture and use of chemicals including the prevention of industrial disasters.

The workshop series was supported and organized by ILO, the U.S. Department of Labour, and the U.S. Environmental Protection Agency. Various presentations by experts were followed by discussions based on participants experiences and field visits. Representatives from ILO presented the ILO Convention No. 170 "Safety in the Use of Chemicals at Work" and the ILO programme for the Prevention of Industrial Accidents. UNEP representatives described the UNEP "Awareness and Preparedness for Emergencies at the Local Level" (APELL) programme. Representatives from the U.S. EPA presented policies and strategies used for the control of hazardous substances in the U.S.A.

Entry #: A2

**International Workshops:**

Workshop on Safety in the Manufacture and Use of  
Chemicals

Budapest, Hungary [May 1991]\*

Workshop on Safety in the Manufacture and Use of  
Chemicals

Sec, CSFR [October 1991]\*

Workshop on Safety in the Manufacture and Use of  
Chemicals

Wroclaw, Poland [October 1991]\*

## Protection from Harmful Substances in Workers' Environment

**Executing Unit:**

Occupational Safety and Health Branch

**Time Frame:**

1988 - 1993

**Geographic Scope:**

Vietnam

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Industrial hygiene  
National occupational safety training systems

**Description:**

The **Protection from Harmful Substances in Workers' Environment** project was carried out with the cooperation of the Institute for Scientific and Technical Research on Labour Protection, and the Vietnam General Confederation of Labour (VILP). The project had the objectives to upgrade the capacity of the VILP:

- ▶ to analyze, monitor and provide services on working environments affected by dust and toxic substances; and
- ▶ to provide information and training services for the prevention of dust and toxic substance related diseases to industry, trade unions and government agencies.

**National Workshops:**

1991:

- 3 - Workshops on Protection from Harmful Substances in the Working Environment
- 1 - Post Graduate Course of High Technical Level (5 days)
- 1 - Workshop for Occupational Safety Officials (5 days)
- 1 - Workshop for Trade Union Officials and Management of Enterprises (2 days)

1992:

- 1 - Workshop for Trade Union Officials and Management of Enterprises (2 days)

**Other Activities/Services:**

- ▶ Various fellowships and study tours.

**Project Specific Training Materials:**

- ▶ Fact Sheets, transparencies, booklets and textbooks.

**Planned Activities:**

- ▶ A second phase is planned to begin in early 1995.

## Promotion of Safety and Health Activities in Industrial Establishments

**Executing Unit:**

Occupational Safety and Health Branch

**Time Frame:**

1991 - 1994

**Geographic Scope:**

Myanmar

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Industrial hygiene  
Accident reporting  
Safety and health information systems

**Description:**

The **Promotion of Safety and Health Activities in Industrial Establishments** is a UNDP-funded project carried out with the Myanmar Ministry of Labour. It has the objective to upgrade the advisory and training function of the Factories and General Labour Laws Inspection Department.

**National Workshops:**

- ▶ 1 - Information Day for Top Management Personnel, 1991.
- ▶ 6 - Training Sessions for Inspectors (4 days), 1991 and 1993.
- ▶ 3 - Training-the-Trainer Workshops (2 weeks), 1993 and 1994.
- ▶ 12 - Courses for Members of Safety Committees, Supervisors and Workers Representatives (1 week), 1993 and 1994.

Entry #: A4
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**Other Activities/Services:**

- ▶ Various fellowships and study tours.

**Project Specific Training Materials:**

- ▶ Ad Hoc training materials.

## **Training and Advisory Services in Occupational Safety and Health**

**Executing Unit:**

Occupational Safety and Health Branch

**Time Frame:**

1991 - 1994

**Geographic Scope:**

Province of Sind, Pakistan

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Technical inspection  
Basic chemical safety techniques  
Major hazards control  
Specific safety programmes  
Occupational health and ergonomics

**Description:**

The **Training and Advisory Services in Occupational Safety and Health** project assists the Department of Labour to strengthen the training and advisory capacity of the factory inspectors, to contribute to the updating of the legislation, provide facilities for accident data collection and for the control of major hazards.

**National Workshops:**

Approximately 30 specialized training sessions for: factory officers and engineers, medical officers, mining safety officers, welfare officers, engineers, trainers (including industrial workers) in selected industrial sectors, safety engineers and inspectors, supervisors and trade union representatives.

**Other Activities/Services:**

- ▶ Various fellowships and study tours

**Project Specific Training Materials:**

- ▶ Ad hoc training materials

## Labour/Factory Inspection Service Project

**Executing Unit:**

Occupational Safety and Health Branch

**Time Frame:**

1991 - 1994

**Geographic Scope:**

Botswana

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Factory inspection  
Training methodologies  
Industrial hygiene and chemical safety techniques  
Pressure vessels  
Accident reporting

**Description:**

Starting within the framework of the Sixth National Development Plan, the **Labour/Factory Inspection Service Project** contributes to the maintenance of adequate levels of safety and other aspects of labour protection.

**National Workshops:**

- ▶ Various training sessions for labour inspectors, safety officers and workers' representatives.

**Project Specific Training Materials:**

- ▶ Ad hoc training materials.

## Promotion of Occupational Safety and Health in Agriculture

**Executing Unit:**

Occupational Safety and Health Branch

**Time Frame:**

1993 - 1995

**Geographic Scope:**

Central American Countries

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

General occupational safety and health  
Basic chemical safety techniques (pesticides and other agro-chemicals)  
Occupational medicine  
Training and information programmes

**Description:**

The **Promotion of Occupational Safety and Health in Agriculture** project aims at improving the health and working conditions of the workers in agriculture and reducing occupational diseases and accidents in agriculture, especially those caused by agro-chemicals. Activities are carried out with the Ministries of Labour of the Central American countries, and with the cooperation of: national councils on occupational safety and health; departments and institutes responsible for occupational safety and health; Ministries of Agriculture, Education, Health, Natural Resources and Environment; and national universities and research institutions.

**International Workshops:**

- ▶ A sub-regional workshop was held in February 1993 which was used as a basis for developing the specifications for the future activities of the project.

**Project Specific Training Materials:**

- ▶ Specific training materials are being developed.

**Planned Activities:**

- ▶ Sub-regional and national training workshops are planned for 1994 and 1995.

## Regular Programme Activities in Occupational Safety and Health Related Training

### Executing Units:

Occupational Safety and Health Branch  
International Occupational Safety and Health Information Centre (CIS/ILO)

### Geographic Scope:

Global

### Description:

The activities listed below were not conducted within specific projects. They have often been carried out at the request of member states and may result in future training and technical assistance activities in the form of defined projects. In addition to the workshops and seminars listed below, ILO also supports fellowships for training activities in occupational safety and health and safety and health information systems at the CIS Centre in Geneva and at other occupational health centres worldwide.

### International Workshops:

Tripartite Seminar on Standards on Working Conditions and Environment  
Egypt [1988]

Workshop on Hazard Control in Industry  
Manila, Philippines [1991]

Seminar on Safety, Health and the Environment  
Sri Lanka [1991]

Three-day pilot of an Occupational Safety and Health Workshop on the National Implementation of Convention No. 155  
Bridgetown, Barbados [20 - 24 April 1992]

Workshop on Safety and Health Information Dissemination for French Speaking African Countries  
Tunis, Tunisia [21-24 April 1992]

13th World Congress on Occupational Safety and Health  
New Delhi, India [4-8 April 1993]

## East African Programme on Occupational Health and Safety

**Executing Unit:**

International Occupational Safety and Health Information Centre (CIS/ILO)

**Time Frame:**

1987 - 1990

**Geographic Scope:**

Selected East African Countries: Kenya, Tanzania, Zimbabwe

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Toxicology

Industrial Hygiene

Industrial Accident Prevention

Techniques for Safe Use of Pesticides

Health and Safety Information Services

**Description:**

The **East African Programme on Occupational Health and Safety** was funded by the Finnish International Development Agency (FINNIDA) and was conducted jointly with the Finnish Institute of Occupational Health, Helsinki which had the main responsibility for the implementation of the programme. Technical assistance and training activities of the programme had the objectives of improving occupational safety and health, increasing industrial productivity, and reducing the losses caused by the consequences of occupational injuries and diseases. Services provided included training and information transfer, expert advisory services, and provision of equipment. The training and information components were implemented through:

- ▶ long-term courses or fellowships,
- ▶ short-term courses and workshops,
- ▶ symposia,
- ▶ publication of the *East African Newsletter on Occupational Health and Safety*, and
- ▶ development of training materials.

In 1990, the project was expanded to a sub-regional African project including 23 english speaking countries (See Entry #: ILO-C2).

Entry #: C1

**International Workshops:**

East African Training Course on Occupational  
Chemical Safety  
Mombasa, Kenya [21 November - 2 December 1988]

East African Regional Symposium on Chemical  
Accidents and Occupational Health  
Mombasa, Kenya [5 - 8 December 1988]

East African Regional Programme on Occupational  
Safety and Health Symposium  
Zanzibar, Tanzania [1989]

Workshop on Safety and Health Information  
Dissemination for African Countries  
Blantyre, Malawi [3 - 6 October 1989]

East African Regional Symposium on National  
Strategies for Preventing Occupational Health and  
Safety Hazards  
Harare, Zimbabwe [3 - 6 December 1990]

**National Workshops:**

National Symposium on Future Prospects and  
Developments of Occupational Health and Safety in  
Tanzania for the Next Five Years  
Marangu, Tanzania [19-22 February 1991]

**Other Activities/Services:**

- ▶ East African Newsletter on Occupational Health and Safety.

The newsletter provided information about ongoing activities of the project and related topics of occupational safety and health. 12 regular issues and 7 supplements were published between 1989 and 1991. (ILO and Finnish Institute of Occupational Health)

Entry #: C2

## **African Training and Information Project on Occupational Health and Safety**

**Executing Unit:**

International Occupational Safety and Health Information Centre (CIS/ILO)

**Time Frame:**

1991 - Ongoing

**Geographic Scope:**

21 English Speaking African Countries: Botswana, Egypt, Ethiopia, Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mauritius, Namibia, Nigeria, Seychelles, Sierra Leone, Somalia, Sudan, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe.

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**Main Subject Categories Covered:**

CIS information centres  
National training units  
National occupational safety and health systems  
Labour standards and regulations  
Modern safety management  
Factory inspection

**Description:**

The **African Training and Information Project on Occupational Health and Safety** is part of a comprehensive programme on safety, health and inspection services in Africa financed by the Finnish International Development Agency (FINNIDA). The activities of the project are coordinated with the African Regional Labour Administration Centre (ARLAC) in Zimbabwe. This comprehensive programme also includes the "Strengthening Labour/Factory Inspection Services Project". The objectives of the project are to improve occupational safety and health and increase industrial productivity by reducing occupational injuries and diseases. The project provides assistance through basic courses, advanced courses, seminars, symposia, fellowship training, and information support. It also provides computer hardware and software, audio/visual equipment, office equipment, inspection instruments and reference libraries to the appropriate ministries and institutes in each participating country. The training and information activities have the objectives to:

- ▶ establish national CIS information centres in each country, and training and information centres in two countries,
- ▶ set up national training units capable of organizing training programmes based on a system of modular courses developed and tested by the project, and
- ▶ strengthen national infrastructure and technical capabilities of agencies involved in occupational safety and health.

### International Workshops:

Surveillance of Human Populations Exposed to Mutagens and Carcinogens  
Harare, Zimbabwe [9 - 20 September 1991]

International Symposium on Occupational Health Practices  
(jointly with FIOH)  
Marangu, Tanzania [3 - 6 March 1992]

Regional Training of Trainers Course, Part One  
(jointly with ARLAC)  
Harare, Zimbabwe [23-28 March 1992]

Upgrading Course for Experienced Factory Inspectors  
(jointly with the Labour/Factory Inspection Service Project)  
Harare, Zimbabwe [29 June-24 July 1992]

Regional Trade Union Meeting on "Trade Union Action in Health and Safety"  
(jointly with ZCTU)  
Harare, Zimbabwe [27-31 July 1992]

Regional Training of Trainers Course (OSH), Part Two  
Cairo, Egypt [16-27 August 1992]

Upgrading Course for Experienced Factory Inspectors in North-Africa  
(jointly with the Labour/Factory Inspection Service Project)  
Cairo, Egypt [22 August-10 September 1992]

Basic Safety and Health Course for Newly Recruited Inspectors in Southern Africa  
(jointly with the Labour/Factory Inspection Service Project)  
Harare, Zimbabwe [7-25 September 1992]

Technical Workshop for Chief Factory Inspectors in Africa  
(jointly with the Labour/Factory Inspection Service Project)  
Nairobi, Kenya [19-23 October 1992]

Regional Chemical Safety Course for Factory Inspectors  
(jointly with the Labour/Factory Inspection Service Project)  
Harare, Zimbabwe [26 October-13 November 1992]

Regional Workshop for Trade Unions  
Accra, Ghana [23-28 February 1993]

Regional Training Course for CIS Information Centres  
Harare, Zimbabwe [13-23 April 1993]

Occupational Safety & Health in Practice  
Stockholm, Sweden [13 April - 14 May 1993]

**National Workshops:**

Training Course on Effects of Exposure to Pesticides  
(jointly with Egyptian National Institute of  
Occupational Safety and Health)  
Cairo, Egypt [9-21 May 1992]

Tripartite OSH Seminar for Identified Safety  
Representatives for Praslin and la Digue, Seychelles  
(jointly with FEAS)  
Seychelles [25-29 May 1992]

Workshop on Modern Tools for Occupational Safety  
and Health Information and Training  
Port Louis, Mauritius [21-25 August 1992]

Seminars on Introduction to Modern Tools for  
Occupational Safety and Health Information and  
Training with Emphasis on Chemical Safety  
Port Louis, Mauritius [2-3 September 1992]

National Course on Occupational Hygiene for Factory  
Inspectors  
Lagos, Nigeria [24 August-4 September 1992]

National Course on Occupational Hygiene for Factory  
Inspectors  
Kaduna, Nigeria [7-17 September 1992]

Higher Productivity and a Better Place to Work  
(jointly with the Working Conditions and Welfare  
Facilities Branch, ILO, Geneva)  
Nairobi, Kenya [21 September-9 October 1992]

Productivity and Improved Working Conditions in  
Sierra Leone - Tripartite Seminar on OSH  
(jointly with the Ministry of Labour, Sierra Leone)  
Freetown, Sierra Leone [7-9 October 1992]

National Training of Trainers Course for Factory  
Inspectors  
Nairobi, Kenya [30 November-16 December 1992]

Productivity and a Better Place to Work  
Tanzania [15 November - 3 December 1993]

National Training of Trainers in Occupational Safety  
and Health  
Ethiopia [22 November - 3 December 1993]

WISE (Workplace Improvement in Small Enterprises)  
Pilot Course  
Harare, Zimbabwe [14 March - 1 April 1994]

**Other Activities/Services:**

- ▶ African Newsletter on Occupational Health and Safety.

This newsletter succeeds the East African Newsletter. It is published regularly and targets the participating government agencies, employers' and workers' organizations. It informs about the ongoing activities of the project and related topics of occupational safety and health. [Finnish Institute of Occupational Health and ILO]

- ▶ Chemdata Computer Databases. (Information on TLVs, and major hazard chemicals.)
- ▶ Country Information Databases. (Pilot software)

Entry #: C2

**Project Specific Training Materials:**

- ▶ Translation programme modified to allow Kiswahili translations for IPCS Chemical Datasheets.

**Planned Activities:**

**International Workshops:**

- ▶ Technical Workshop in Safety Management for Management Trainers  
Gaborone, Botswana [16-24 May 1994]
- ▶ Sub-Regional Trade Union Workshop in OSH in West-Africa  
(jointly with OATUU)  
Accra, Ghana [10-14 May 1994]
- ▶ Sub-Regional Trade Union Workshop in OSH in East-Africa  
(jointly with OTTU)  
Dar es Salaam, Tanzania [June or July 1994]
- ▶ Training of Trainers Workshop in WISE (Workplace Improvement in Small Enterprises)  
Methodology  
Harare, Zimbabwe [September 1994]
- ▶ Sub-Regional Training of Trainers in Safety and Health for Factory Inspectors  
Harare, Zimbabwe [September 1994]

**National Workshops:**

- ▶ National Training of Trainers Courses in Health and Safety  
Cairo, Egypt [April 1994]
- ▶ National Tripartite Workshop on ILO Standards  
Harare, Zimbabwe [August 1994]
- ▶ National Trade Union Workshop in OSH  
(jointly with Zambia Congress of Trade Unions)  
Kitwe, Zambia [September 1994]
- ▶ National Tripartite Workshop on OSH Networking  
Dar es Salaam, Tanzania [October 1994]
- ▶ National Trade Union Workshop in OSH  
(jointly with Nigeria Labour Congress)  
Lagos, Nigeria [October 1994]

## **Asian - Pacific Regional Programme on Occupational Safety and Health**

**Executing Unit:**

International Occupational Safety and Health Information Centre (CIS/ILO)

**Time Frame:**

1992 - Ongoing

**Geographic Scope:**

21 Asian - Pacific Countries: Bangladesh, Bhutan, Cambodia, China, Fiji, Hong Kong, India, Indonesia, Korea, Laos, Malaysia, Mongolia, Nepal, Pakistan, Papua New Guinea, Philippines, Singapore, Solomon Islands, Sri Lanka, Thailand, and Vietnam.

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**Main Subject Categories Covered:**

CIS information centres  
Networking and communication  
Training and teaching skills  
National occupational safety and health systems  
Occupational safety and health inspection  
Safe use of agrochemicals

**Description:**

The **Asian - Pacific Regional Programme on Occupational Safety and Health** (ILO/FINNIDA ASIA-OSH Project) aims to improve occupational safety and health and increase industrial productivity by reducing occupational injuries and diseases. The ILO/FINNIDA ASIA-OSH project is similar to the ILO-FINNIDA Training and Information Project for African Countries, however, it has a broader approach and project strategy. The programme seeks to:

- ▶ strengthen national infrastructures on Occupational Safety and Health, and
- ▶ establish and upgrade a network of OSH training centres and National CIS Information Centres.

The first phase of the programme (1992-1995) focuses on using information and training as a tool to develop and strengthen the infrastructures of occupational safety and health services of the participating countries.

**International Workshops:**

Asian Regional Seminar on Upgrading Labour  
Inspection Skills in the Chemical Industry  
Bombay, India [15-19 June 1992]

Workshop for Heads of Selected Occupational Safety  
and Health Institutes  
Bangkok, Thailand [24-26 August 1992]

Regional Train-the-Trainer Course on Safety in the  
Use of Agrochemicals on Plantations  
Bangkok, Thailand [9-18 December 1992]

Asian-Pacific Trainers' Workshop on Safety in the  
Use of Chemicals at Work  
Manila, Philippines [1-5 February 1993]

Asian-Pacific Regional Technical Workshop for  
Chiefs of National Safety and Health Administrations  
New Delhi, India [1-2 April 1993]

Asian Regional Seminar for the Heads of  
Occupational Safety and Health Research and  
Training Institutes  
New Delhi, India [3 April 1993]

Asian Regional Seminar on the Training of Safety  
Officers  
New Delhi, India [9-10 April 1993]

Asian-Pacific Trainers' Course on Occupational  
Safety and Health Information Services  
New Delhi, India [9-10 April 1993]

Workshop of Heads of Selected Occupational Safety  
and Health Institutes  
Singapore [18 August 1993]

Sub-Regional Trainers' Workshop on Safety in the  
Use of Chemicals for Selected Asian Countries  
(with Ministry of Labour of Japan)  
Quezon City, The Philippines [14-18 March 1994]

**National Workshops:**

Tripartite Workshop on the National Implementation of ILO Convention No. 155 Occupational Safety and Health

Bangkok, Thailand [7-9 October 1992]

Training Course on Preventative Methods Used by Labour Inspectors in the Construction Industry  
Kuala Lumpur, Malaysia [9-13 November 1992]

Tripartite Workshop on the National Implementation of ILO Convention No. 167 Safety and Health in Construction

Hong Kong [10-12 February 1993]

Workshop on Developing an Integrated National Occupational Safety and Health Information System  
Bangkok, Thailand [19-21 April 1993]

Workshop on Developing an Integrated National Occupational Safety and Health Information System  
Kuala Lumpur, Malaysia [26-28 April 1993]

Tripartite Workshop on the National Implementation of ILO Convention No. 167 Safety and Health in Construction (ASILO)

Beijing, P.R. China [5-7 May 1993]

Tripartite Workshop on the National Implementation of ILO Convention No. 167 Safety and Health in Construction (ASILO)

Seoul, Republic of Korea [12-14 May 1993]

Workshop on the National Implementation of ILO Convention No. 155 Occupational Safety and Health (ASILO)

Jakarta, Indonesia [3-5 August 1993]

Follow-up Workshop on Developing an Integrated National Occupational Safety and Health Information System

Kuala Lumpur, Malaysia [9 August 1993]

Tripartite Workshop on the National Implementation of ILO Convention No. 170 Safety in the Use of Chemicals at Work (ASILO)

Kuala Lumpur, Malaysia [10-12 August 1993]

Tripartite Workshop on the National Implementation of ILO Convention No. 155 Occupational Safety and Health

Dhaka, Bangladesh [14-16 August 1993]

Tripartite Workshop on the National Implementation of ILO Convention No. 155 Occupational Safety and Health

Hanoi, Vietnam [25-27 August 1993]

Workshop on Developing an Integrated National Occupational Safety and Health Information System  
Manila, Philippines [25-27 October 1993]

Workshop on Developing an Integrated National Occupational Safety and Health Information System  
Beijing, China [8-10 November 1993]

Train-the-Trainer Course on Occupational Safety and Health Auditing for Selected Countries in the Asia-Pacific Region

Bangkok, Thailand [10-14 January 1994]

National Tripartite Workshop on National Implementation of the Provisions of the Occupational Health Services Convention, 1985 (No. 161) (with Japan International Cooperation Agency)  
Jomtien-Pattaya, Thailand [23-26 January 1994]

Workshop on Developing an Integrated National Occupational Safety and Health Information Network  
New Delhi, India [2-4 February 1994]

Workshop on Developing an Integrated National Occupational Safety and Health Information Network  
Jakarta, Indonesia [8-10 February 1994]

National Tripartite Workshop on National Implementation of the Provisions of the Safety in the Use of Chemicals at Work Convention (No. 170)  
Quezon City, The Philippines [7-9 March 1994]

Follow-up Workshop on the Occupational Safety and Health Information Network  
Quezon City, The Philippines [10 March 1994]

National Train-the-Facilitator Workshop on Working Improvements for Small Enterprises (WISE)  
Quezon City, The Philippines [21-25 March 1994]

Workshop on Developing an Integrated National Occupational Safety and Health Information Network  
Hanoi, Vietnam [12-14 April 1994]

Follow-up Workshop on National Implementation of the Provisions of the Occupational Safety and Health Convention, 1981 (No. 155)  
Hanoi, Vietnam [15 April 1994]

Follow-up Workshop on the Occupational Safety and Health Information Network  
Beijing, China [22 April 1994]

**Other Activities/Services:**

- ▶ Asian - Pacific Newsletter on Occupational Health and Safety.

The Newsletter promotes and supports networking within the region and to provide information on special occupational safety and health problems and their solutions.

**Planned Activities:**

Workshop on the National Implementation of the Provisions of the Occupational Safety and Health Convention, 1981 (No. 155)  
Ulaanbaatar, Mongolia [26-28 April 1994]

Follow-up Workshop on the National Implementation of the Provisions of the Occupational Safety and Health Convention, 1981 (No. 155)  
Bangkok, Thailand [May 1994]

Workshop on Developing an Integrated National Occupational Safety and Health Information Network  
Suva, Fiji [June-July 1994]

Workshop on the National Implementation of the Provisions of the Occupational Safety and Health Convention, 1981 (No. 155)  
Port Moresby, Papua New Guinea [June-July 1994]

Follow-up Workshop on the Occupational Safety and Health Information Network  
Jakarta, Indonesia [3rd Quarter 1994]

National Train-the-Facilitator Workshop on Working Improvements for Small Enterprises (WISE)  
Colombo, Sri Lanka [3rd Quarter 1994]

Workshop on Developing an Integrated National Occupational Safety and Health Information Network  
Colombo, Sri Lanka [3rd Quarter 1994]

Follow-up Workshop on the National Implementation of the Provisions of the Occupational Safety and Health Convention, 1981 (No. 155)  
Dhaka, Bangladesh [3rd Quarter 1994]

Training Course on Industrial Hygiene  
Dhaka, Bangladesh [3rd Quarter 1994]

Training Course on Industrial Hygiene  
Kathmandu, Nepal [3rd Quarter 1994]

Follow-up Workshop on the National Implementation of the Provisions of the Occupational Safety and Health Convention, 1981 (No. 155)  
Kathmandu, Nepal [3rd Quarter 1994]

Train-the-Trainer Course on Occupational Safety and Health Auditing for Selected Countries in the Asia-Pacific Region  
Bangkok, Thailand [5-9 September 1994]

Workshop on Developing an Integrated National Occupational Safety and Health Information Network  
Bombay, India [19-21 September 1994]

Training Course on Industrial Hygiene  
Beijing, China [September 1994]

National Tripartite Workshop on National Implementation of the Provisions of Prevention of Major Industrial Accidents Convention, 1993 (No. 174)  
New Delhi, India [4th Quarter 1994]

Workshop on Developing an Integrated National Occupational Safety and Health Information Network  
Kathmandu, Nepal [4th Quarter 1994]

National Tripartite Workshop on National Implementation of the Provisions of the Occupational Health Services Convention, 1985 (No. 161)  
Jakarta, Indonesia [4th Quarter 1994]

## Promotion of Safety and Health Programmes and Information Services

**Executing Unit:**

International Occupational Safety and Health Information Centre (CIS/ILO)

**Time Frame:**

1991 - 1992

**Geographic Scope:**

Hungary and Poland

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Health and safety information systems  
Major accident control systems  
National training programmes  
Teaching techniques

**Description:**

The **Promotion of Safety and Health Programmes and Information Services Project** had the objectives to improve working conditions and the working environment in Hungary and Poland through better information dissemination in the field of occupational safety and health. The project supported the establishment of information retrieval facilities to analyze existing problems and to provide health and safety information services, in particular chemical safety and major accident hazards information. A CIS Centre was established in each country which included the provision of computer hardware and software. Safety and Health professionals from the Polish Central Institute for Labour Protection, the Polish National Labour Inspectorate and the Hungarian National Labour Inspectorate and National Institute were trained in the areas of safety and health information systems through training courses and fellowships abroad. In addition, fellows were trained in adult learning techniques and teaching approaches and were assisted in developing health and safety information training programmes for their own countries.

Entry #: C4

**International Workshops/Activities:**

Adult Learning Techniques/Participative Teaching Approaches

ILO - Geneva [9 - 13 September 1991]

Training Course on Occupational Health and Safety Information

ILO - Geneva [30 September - 4 October 1991]

**National Workshops:**

Training Course on Health and Safety Information (with Polish Central Institute for Labour Protection) Warsaw, Poland [4 - 7 May 1992]

Training Course for Information on Safety and Health (with Polish National Labour Inspectorate) Warsaw, Poland [11 - 14 May 1992]

Hungarian Training Program on the Application of Occupational Safety and Health Information (with Hungarian National Labour Inspectorate and National Institute)

Hungary [18 - 21 May 1992]

**Other Activities/Services:**

- ▶ Visit to Dutch Inspectorate and National Institutes Netherlands [16 - 20 September 1991]
- ▶ Visit to UK Inspectorate and National Institutes United Kingdom [23 -27 September 1991]

Entry #: D1

## **Strengthening Labour/Factory Inspection Services Through Systematic, Multi-Level Training and Manpower Development**

**Executing Unit:**

Labour Administration Branch

**Time Frame:**

1991 - Ongoing

**Geographic Scope:**

English Speaking African Countries

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**Main Subject Categories Covered:**

National systems to train labour inspectors  
Chemical safety information  
Labour inspection legislation and structures

**Description:**

The **Labour/Factory Inspection Services Project** is part of a comprehensive programme on safety, health and inspection services in Africa financed by the Finnish International Development Agency (FINNIDA). The project is executed by the ILO Labour Administration Branch and implemented by the African Regional Labour Administration Centre (ARLAC) based in Zimbabwe. The project has the objective to strengthen and develop factory and labour inspectorates through updated legislation, improved structures, and better management. It also trains inspectors to ensure they possess the necessary knowledge and skills to transfer health and safety information to employers, workers and society. Chemical safety information was a significant part of this training.

The first phase of the project focused on enhancing technical cooperation between participating countries by building a network of resource persons and strengthening ARLAC's capacity as a regional centre for inspection, training and information dissemination on factory/labour inspection and related matters. The second phase, which began in 1993, assists participating countries to plan, organize and implement systematic and comprehensive national basic-level training programmes for new factory inspectors, labour inspectors, workers and employers. After a reduction in the funding for the project the second phase was redesigned to include an increase in joint activities with the ongoing "ILO African Training and Information on Occupational Safety and Health Project".

The training courses of the project include trainer-training and human relations skill development components. The training activities are participatory in nature, allowing the participants themselves to formulate training courses, information sheets, guidelines and checklists relating directly to their daily work. Many of the training materials produced are products of the participants' work.

### International Workshops:

Upgrading Course for Experienced Factory Inspectors  
Zimbabwe (ARLAC) [17 June - 12 July 1991]\*

Symposium for Chief Inspectors of Factories on  
Safety and Health Projects Implementation  
[31 July - 2 August 1991]\*

Parallel Courses in Construction/Chemical Safety  
with a Training of Trainers Approach  
[24 September - 18 October]\*

Upgrading Course for Experienced Factory Inspection  
(jointly with African Training and Information  
Project on Occupational Safety and Health)  
Zimbabwe (ARLAC) [29 June - 24 July 1992]\*

Regional Trade Union Meeting on "Trade Union  
Action in Health and Safety"  
Zimbabwe (ARLAC) [27 - 31 July 1992]\*

Upgrading Course for Experienced Factory Inspectors  
in North-Africa  
(jointly with African Training and Information  
Project on Occupational Safety and Health)  
Cairo, Egypt [22 August - 10 September 1992]

Basic Safety and Health Course for Newly Recruited  
Inspectors in Southern Africa  
(jointly with African Training and Information  
Project on Occupational Safety and Health)  
Zimbabwe (ARLAC) [7 - 25 September 1992]\*

Training of National CIS-information officers in  
setting-up and upgrading CIS-centres and fellowships  
for practical training attachment to ARLAC library  
Zimbabwe (ARLAC) [13 -23 April 1993]

Workshop on Chemical Safety for Trade Unions in  
Southern Africa  
Zimbabwe (ARLAC) [12 - 16 July 1993]1

Occupational Health Service Workshop  
Zimbabwe (ARLAC) [8 - 19 November 1993]\*

**National Workshops:**

Lectures in the Zimbabwe Congress of Trade Unions Course for Branch Safety and Health Representatives Zimbabwe [16-17 July 1991]

Joint Course in Occupational Hygiene with ZCTU (Part 1) Zimbabwe [18 -22 November 1991]\*

Joint Course on Occupational Hygiene and Accident Investigation with ZCTU (Part 2) Zimbabwe (ARLAC) [3 -7 February 1992]

Planning and Management Workshop for Chief Factory Inspectors (jointly with African Training and Information Project on Occupational Safety and Health) Nairobi, Kenya [19 -23 October 1992]\*

**Project Specific Training Materials:**

- ▶ Inspection Services. (Training manual)
- ▶ Inspection Services - Safety and Health. (Training manual)
- ▶ Occupational Hygiene - An overview. (Training manual)
- ▶ Manuals on Chemical Safety are in production as of November 1993.
- ▶ Chemical Safety Courses.  
  
Course Curricula. Separate curricula courses with emphasis on chemical effects and use of existing chemical information.
- ▶ Occupational Hygiene Measurements. (Video)

## **Workers' Education Assistance in Occupational Safety and Health to Workers' Organizations in Selected Asian Countries**

**Executing Unit:**

Workers' Education Branch

**Time Frame:**

Phase 1: 1989 - 1991

Phase 2: 1993 - 1995

**Geographic Scope:**

Thailand, Philippines and Indonesia

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**Main Subject Categories Covered:**

Occupational safety and health standards

Establishment of occupational safety and health committees

Development of safety and health plans

Prevention of industrial injuries and diseases

**Description:**

The Project for **Workers' Education Assistance in Occupational Safety and Health to Workers' Organizations in Selected Asian Countries** raises awareness about safety and health issues and promotes the participation of workers and trade unions in the application of health and safety standards at the national and local levels. The activities of the first phase of the project involved trade union officers and focused primarily on issues related to the construction sector. Phase 2 has the additional target groups of workers educators and representatives of joint safety committees and will focus on additional industrial sectors such as textiles, engineering and manufacturing, food and beverage, and rural industries. Through technical support and advisory services, the project works to establish joint safety committees comprised of different workers' organizations. Training activities consist of study tours, national seminars for the establishment of education programmes and safety committees, and national seminars for specific industrial sectors. Training is also provided to trade union members in the use of basic industrial hygiene equipment.

**National Workshops:**

Asia and Pacific Regional Workers' Education  
Training Course on Occupational Safety and Health  
Pattaya, Thailand [4 - 15 December 1989]

**Other Activities/Services:**

- ▶ Provision of basic industrial hygiene equipment.

This equipment includes sound level meters, chemical sampling pumps and analytical tubes, thermometers, anemometers and personal protective equipment.

- ▶ Two one-week study tours in Asia.

15 trade union members will visit enterprises with well functioning joint safety committees and some major safety and health institutes and documentation units.

**Project Specific Training Materials:**

- ▶ Active Learning Methods in Workers' Education: Their Application to Occupational Safety and Health Courses. Training package. Turin, Italy, 1992. (ILO Turin Centre Publication) ISBN: 92-9049-240-6
- ▶ A Challenge to Change. Video on occupational safety and health as it relates to chemicals, noise and ergonomics. (ILO)

## Workers' Education and Environment

**Executing Unit:**

Workers' Education Branch

**Time Frame:**

Phase 1: 1991 - 1993

Phase 2: To commence May/June 1994

**Geographic Scope:**

Caribbean, Africa and Asia

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**Main Subject Categories Covered:**

Environmental pollution

Environmentally sound technology

Environmental monitoring and assessment

Environmental management techniques

Environmental law

Environmental administration

**Description:**

The **Workers' Education and Environment** Project has promoted the integration of environmental considerations and the concept of sustainable development within national development policies and strategies for the specific needs and concerns of workers and workers' organizations. The activities of the project have involved trade union leaders responsible for workers' education and/or environmental issues. The project has provided assistance through the provision of informational material and training courses. Training activities consist of regional workshops for each of the three regions covered and follow-up national workshops. Regional workshops have resulted in the drafting of regional environment strategies and action plans for the trade unions. National workshops emphasize the development of training materials and training of educators.

**International Workshops:**

Caribbean Workshop on Trade Unions' Role in Promoting Environmental Protection  
Barbados [9-13 September 1991]

African Strategy Workshop on Trade Unions' Role in Promoting Environmental Protection  
Harare, Zimbabwe [3-8 November 1991]

Caribbean Workshop on "Training and Education on Trade Unions' Role in Promoting Environmental Protection"  
Grenada [16-20 November 1992]

**National Workshops:**

Workshop on Trade Unions' Role in Promoting Environmental Protection  
New Delhi, India [3-5 February 1992]

Workshop on Trade Unions' Role in Promoting Environmental Protection  
Cavite, Philippines [11-15 February 1992]

Workshop on Trade Unions and the Environmental  
Kuala Lumpur, Malaysia [21-25 February 1992]

Workshop on Trade Unions and the Environmental  
Port-of-Spain, Trinidad and Tobago [4-8 May 1992]

Workshop on Trade Unions' Role in Promoting Environmental Protection and Sustainable Development  
Chingola, Zambia [3-8 May 1992]

Workshop on Trade Unions' Role in Promoting Environmental Protection and Sustainable Development  
Mbeya, Tanzania [12-16 May 1992]

Workshop on Trade Unions' Role in Promoting Environmental Protection  
Batangas, Philippines [6-8 October 1992]

MTUC/CUEPACS/ILO Workers' Educators Course on Environment and the Worker  
Kuala Lumpur, Malaysia [13-15 October 1992]

**Project Specific Training Materials:**

- ▶ Health is Our Right! Trade Unions and Environment. (Video and guide). Geneva, 1992. (ILO Publications) VHS-PAL: ISBN 92-2-108937-1, VHS-NTSC: ISBN 92-2-108936-3.
- ▶ Set of 7 "Discussion Booklets" on environmental issues.

**Planned Activities:**

- ▶ A Second 4-Year Phase is anticipated commencing in 1994.

**ILO - SECTION III**

**TRAINING AND TECHNICAL SUPPORT  
MATERIALS/SERVICES RELATED TO THE  
ENVIRONMENTALLY SOUND MANAGEMENT OF  
CHEMICALS**

**INDUSTRIAL RELATIONS AND LABOUR ADMINISTRATION DEPARTMENT**

**Labour Administration Branch**

Manuals, Guides and Technical Publications:

- ▶ Labour Inspection. Geneva, 1986. (ILO Publications) ISBN 92-2-105359-8.
- ▶ Main Provisions of Conventions and Recommendations Relevant to Labour Inspection.
- ▶ Guidelines on Inspection on Chemical Factories, Especially Major Accident Hazard Installations. Geneva, 1992.

**WORKERS' ACTIVITY DEPARTMENT**

**Workers' Education Branch**

Manuals, Guides and Technical Publications:

- ▶ National Workshops on the Implementation of Specific ILO Conventions. (Training Manual)
- ▶ Structure and Functions of Rural Workers' Organizations. 2nd ed. Geneva, 1990. (ILO Publications) ISBN 92-2-107098-0.
- ▶ International Labour Standards. 3rd ed. Geneva, 1990. (ILO Publications) ISBN 92-2-106445-X.

Newsletters and Brochures:

- ▶ Labour Education. Geneva. (ILO) ISSN 0378-5467.

Other Support Services/Materials:

- ▶ Learning to Make Work Safer and Healthier. (Video). Geneva, 1980.
- ▶ Health is Our Right! Trade Unions and Environment. (Video and guide). Geneva, 1992. (ILO Publications) VHS-PAL: ISBN 92-2-108937-1, VHS-NTSC: ISBN 92-2-108936-3.

Official ILO publications and lists of publications may be obtained from:

ILO Publications  
International Labour Office  
CH-1211 Geneva 22  
Switzerland

**WORKING CONDITIONS AND ENVIRONMENT DEPARTMENT**

**Occupational Safety and Health Branch and International Occupational Safety and Health Information Centre (CIS)**

Manuals, Guides and Technical Publications:

- ▶ Major Hazard Control, A practical manual. 2nd ed. Geneva, 1990. (ILO Publications) ISBN 92-2-106432-8.
- ▶ Safety and Health in the Use of Agrochemicals: A Guide. 1st ed. Geneva, 1991. (ILO Publications) ISBN 92-2-107281-9.
- ▶ Guide on Training of Trainers in Labour Inspection. Geneva, 1990. (ILO Publications)
- ▶ Guidelines for the Establishment of National CIS Centres. (ILO-CIS).
- ▶ Accident Prevention. 2nd ed. Geneva, 1986.(ILO Publications) ISBN 92-2-103392-9.

Codes of Practice:

- ▶ Safety and Health in the Use of Chemicals at Work, a Code of Practice. 1st ed. Geneva, 1993. (ILO Publications)
- ▶ Prevention of Major Industrial Accidents, a Code of Practice. Geneva, 1991. (ILO Publications)
- ▶ Occupational Exposure Limits for Airborne Toxic Substances, No. 37. 3rd Edition. Geneva, 1991. (ILO Publications)
- ▶ Classification, Identification and Labelling of Chemicals. Geneva, 1992. (ILO-CIS).

Newsletters and Brochures:

- ▶ CIS Bulletin, Safety and Health at Work.

- ▶ East African Newsletter on Occupational Health and Safety. Helsinki, Finland, 1987-1990. (ILO and Finnish Institute of Occupational Health).
- ▶ African Newsletter on Occupational Health and Safety. Helsinki, Finland, 1991-Ongoing. (ILO and Finnish Institute of Occupational Health).
- ▶ Asian Newsletter on Occupational Safety and Health. Helsinki, Finland, 1992-Ongoing. (ILO and Finnish Institute of Occupational Health).

Databases:

- ▶ The CIS Database.
- ▶ Worksite Safety Information Sheets.
- ▶ Chemical Safety Data Sheets.
- ▶ Listing of Training Materials and Training Institutions.
- ▶ Chemdata Computer Databases. (Information on major hazard chemicals and exposure limits).
- ▶ Country Information Databases. (Pilot software produced for the African Training and Information Project on Occupational Safety and Health.)

Other Support Services/Materials:

- ▶ Basic Safety Training Package on Occupational Safety and Health.  
Questionnaires for pre-course evaluation, course manual, AV-materials, group work instructions, reference textbooks, student materials and course evaluation materials.
- ▶ Basic Training Package On Occupational Hygiene.  
Questionnaires for pre-course evaluation, course manual, AV-materials, group work instructions, reference textbooks, student materials and course evaluation materials.
- ▶ Package on Training of Trainers.  
Questionnaires for pre-course evaluation, course manual, AV-materials, group work instructions, reference textbooks, student materials and course evaluation materials.

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**CHAPTER 2**

**WORLD HEALTH ORGANIZATION**

**WHO - TABLE OF CONTENTS**

**SECTION I: ORGANIZATIONAL STRUCTURE AND MAJOR PROGRAMMES**

**SECTION II: TRAINING AND TECHNICAL ASSISTANCE ACTIVITIES**

A. Programme for the Promotion of Chemical Safety (IPCS-PCS)

- ▶ Prevention and Treatment of Chemical Poisonings . . . . . A1
- ▶ Health Aspects of Chemical Emergencies . . . . . A2
- ▶ Development of Health Risk Assessment Methodologies . . . . . A3

B. Office of Global and Integrated Environmental Health

- ▶ Global Environmental Epidemiology Network (GEENET) . . . . . B1
- ▶ Global Environmental Technology Network (GETNET) . . . . . B2
- ▶ Environmental Health Information for Management  
of Development Activities (EHMDAC) . . . . . B3
- ▶ Global Environmental Library Network (GELNET) . . . . . B4
- ▶ Global Environmental Monitoring System for Human  
Exposure Assessment Location (GEMS/HEAL) . . . . . B5

C. Office of Operational Support in Environmental Health

- ▶ Global Environmental Monitoring System for Water  
(GEMS/WATER) . . . . . C1
- ▶ Global Environmental Monitoring System for Air  
(GEMS/AIR) . . . . . C2

D. Office of Occupational Health

E. Food and Nutrition Programme

- ▶ Joint UNEP/FAO/WHO Food Contamination Monitoring and Assessment  
Programme (GEMS/Food) . . . . . E1

F. International Agency for Research on Cancer

- ▶ IARC Programme for Education and Training . . . . . F1

G. Western Pacific Regional Office

- ▶ Regular Programme Activities of the Western Pacific Regional Environmental Health Centre (EHC) . . . . . G1
- ▶ WHO/UNDP Project on Safety and Control of Toxic Chemicals and Hazardous Wastes . . . . . G2

H. South-East Asia Regional Office

- ▶ Intercountry Project on Safety and Control of Pollutants and Chemicals . . . . . H1

I. Eastern Mediterranean Regional Office

- ▶ Regular Programme Activities of the Eastern Mediterranean Centre for Environmental Health Activities (CEHA) . . . . . I1

J. European Regional Office

- ▶ Regular Programme Activities of the European Centre for Environmental Health (ECEH) . . . . . J1

K. Regional Office for the Americas

- ▶ Regular Programme Activities of the Pan American Centre for Human Ecology and Health (ECO) . . . . . K1
- ▶ Central American Programme for Health and Ecology (MASICA) . . . . . K2

**SECTION III: TRAINING AND TECHNICAL SUPPORT MATERIALS/SERVICES**

**SECTION IV: CONTACT POINTS AND ADDRESSES**

**WHO - SECTION I**

**ORGANIZATIONAL STRUCTURE AND MAJOR  
PROGRAMMES RELATED TO THE ENVIRONMENTALLY  
SOUND MANAGEMENT OF CHEMICALS**

## **INTRODUCTION TO WHO**

The World Health Organization was founded in 1948 as a Specialized Agency of the U.N. WHO's general objective is the attainment of the highest level of health for all people. It works towards this goal through a broad range of operational programmes and by addressing Member states through recommendations and regulations. As of August 1993, WHO had 187 Member Countries and 2 Associate Members. The Headquarters of WHO is located in Geneva, Switzerland.

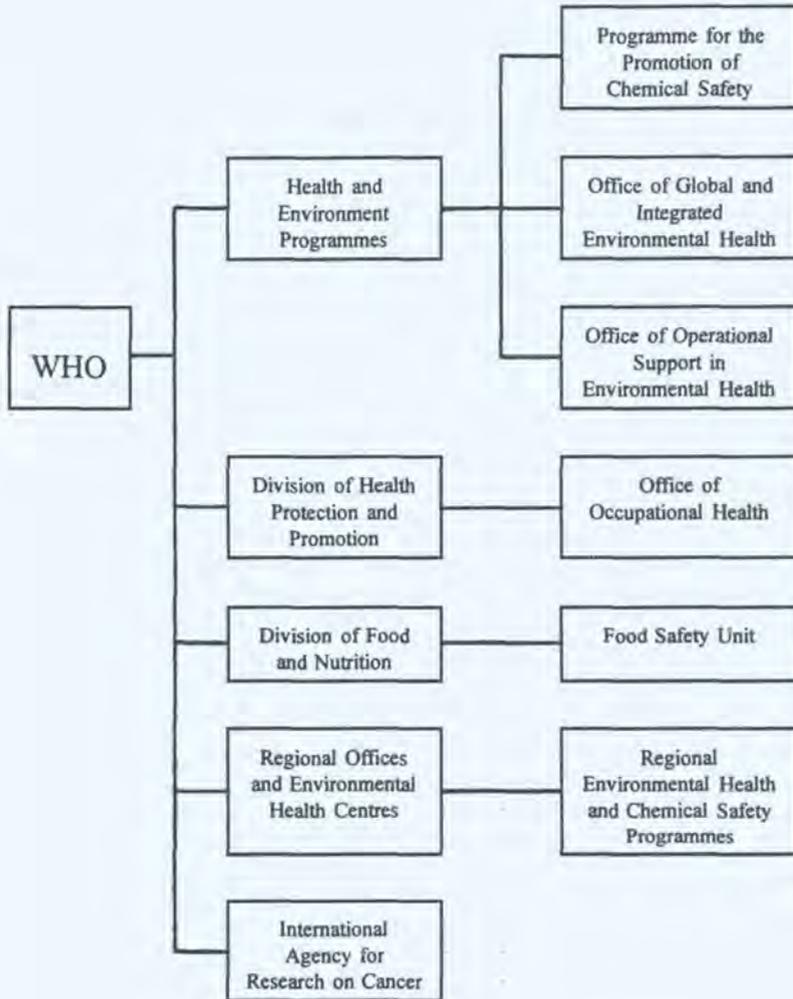
The "WHO Global Strategy for Health and the Environment", endorsed by the World Health Assembly in May 1993, provides a unifying framework for all WHO substantive and technical assistance programmes in the field of health-and-environment, including chemical safety. It defines Organization-wide objectives and action programmes and provides the basis for WHO programmes at Headquarters, in the regions and in countries to devise workplans in order to implement the health-and-environment activities of Agenda 21. The major components of the Strategy include: an enhanced programme for the promotion of environmental health; an expanded Programme for the promotion of chemical safety; and broader action and collaboration on matters affecting health and environment throughout WHO. All WHO health-and-environment programmes are coordinated by the Executive Director, Health and Environment. Relevant activities are carried out through the Programme for the Promotion of Chemical Safety, the Office of Global and Integrated Environmental Health, and the Office of Operational Support in Environmental Health.

The Division of Health Protection and Promotion is concerned with the health of a number of specific population groups and health problems, such as the health of the elderly and workers', and prevention of injuries, blindness and deafness. Relevant activities of the division are carried out by the Office of Occupational Health.

The Division of Food and Nutrition is mainly concerned with chemical safety as it relates to food safety. Relevant activities of the division are carried out by the Food Safety Unit.

Many training and technical assistance activities of WHO are organized out of its Headquarters. These activities are often conducted jointly with the regional offices which provide technical and logistical support. In addition, regional offices conduct training and technical assistance activities within their regular programme, if requested by their member states, and additionally within the framework of larger regional or sub-regional projects funded from extrabudgetary resources. In several regions technical work related to environmental health and chemical safety is implemented through associated centres for environment and health.

The following chart provides an overview of WHO Divisions, Offices and Programmes which execute chemical safety related programmes and activities.



## UNITS AND PROGRAMMES CONCERNED WITH CHEMICAL SAFETY

### A. Programme for the Promotion of Chemical Safety (PCS)

PCS serves as the Central Unit of the International Programme of Chemical Safety (IPCS), a joint programme of ILO, WHO, and UNEP. In this capacity IPCS-PCS provides coordinating services for the various activities of ILO, UNEP and WHO conducted under the umbrella of IPCS. In addition, PCS performs technical work, on behalf of the three organizations, which contributes directly to the implementation of the IPCS objectives. The activities of PCS are carried out through two units: the Unit for Prevention and Treatment (PPT), and the Unit for Assessment of Risks and Methodologies (ARM).

#### *Risk Evaluation of Priority Chemicals*

Evaluation of the risks to human health and the environment posed by specific chemicals is one of the main objectives of the IPCS. Results of these evaluations are disseminated in the form of Environmental Health Criteria Documents and Health and Safety Guides. Chemicals are chosen for evaluation on the basis of adverse effects to human health or the environment, degree of exposure to humans or the environment, size and nature of the population at risk, and international concern. Other outputs of the risk evaluations are: the International Chemical Safety Cards (prepared jointly with CEU), promotion of safe use of chemicals in the workplace; Poisons Information Monographs (PIMs) to aid the medical profession in diagnosis and treatment of poisoning; and Monographs on Toxins of Plant Origin and Pesticide Data Sheets, to provide guidance on safe use of pesticides. Training activities and workshops are organized on the use of these evaluations in chemical risk management.

#### *JECFA Evaluations of Food Additives*

The joint FAO/WHO Expert Committee on Food Additives (JECFA) provides advice to Member states and the Codex Alimentarius Commission on the level at which specific chemicals, principally food additives, can be safely tolerated in the human body. IPCS-PCS is responsible for the technical work, while the WHO Food Safety Unit is responsible for the subsequent work and recommendations of the Codex Alimentarius Commission. JECFA publishes specifications for the identity and purity of food additives and toxicological monographs which summarize safety data on selected food additives.

#### *JMPR Evaluations of Pesticide Residues*

The Joint FAO/WHO Meetings on Pesticide Residues consist of two separate bodies: The WHO Expert Group on Pesticide Residues and the FAO Panel of Experts on Pesticide Residues in Food and the Environment. JMPR provides advice to Member states and to the Codex Alimentarius Commission on the safe level and effects of pesticides in the body.

*Development of Health Risk Assessment Methodologies*

This programme area has the objective to facilitate the development and validation of internationally accepted approaches and methods for testing, assessing and predicting the effects of chemicals on human health and the environment. Technical reports and monographs published through the Environmental Health Criteria Series cover a wide variety of methodological issues. Training activities and seminars focus on chemical risk assessment processes and procedures and address in particular the needs of toxicologists and environmental health professionals in developing countries.

*Chemical Poisoning Prevention and Treatment*

This programme area aims at strengthening national capabilities to respond to emergencies and accidents involving chemicals. Activities include, *inter alia*, the preparation of guidance material for poisons control and its use in establishing poisons control facilities in countries; the evaluation and harmonization of information needed for the diagnosis and treatment of poisonings; the development of a compatible, computerized information system (INTOX); and the development and training of manpower needed to operate poison control centres and related facilities.

The programme maintains an informal network of toxicologists, health care professionals and poison control centres worldwide. The technical assistance and training activities provide advice to health care professionals and staff of poison control centres on the prevention and treatment of chemical poisonings and on the use of the INTOX software.

*Health Aspects of Chemical Emergencies*

This programme area has the objective to provide guidance and assistance to member states on the health aspects of chemical accidents. The primary responsibility of the IPCS-PCS in this area is to develop guidance documents on the health aspects of chemical accidents. Activities within the programme are integrated with those of the Prevention and Treatment of Poisonings Programme. Strengthening the role of poison centres in responding to major chemical emergencies and contingency planning is also an important element of this programme. Training activities on health aspects of chemical accidents are often conducted alongside the training activities of the Prevention and Treatment of Chemical Poisonings Programme.

**B. Office of Global and Integrated Environmental Health**

The Office of Global and Integrated Environmental Health seeks to build and strengthen national capacities for integrated management of environmental health. It also deals with health problems relating to global environmental change.

Major programme areas covered by the office include: strengthening national programme planning and infrastructure; environmental health information management; environmental health planning methods and human resource development; environmental health research and methodology development; and global environmental hazards and radiation protection. In this context the Office implements the WHO initiative "Global Networks to Strengthen Education Training and Research" through several global networks of environmental professionals, namely, the Global Environmental Epidemiology Network (GEENET), Global Environmental Technology Network (GETNET), Environmental Health Information for Management of Development Activities (EHMDAC), and Global Environmental Library Network (GELNET). In addition, the Office cooperates with UNEP in implementing WHO/UNEP Global Environmental Monitoring Programmes for Human Exposure Assessment Location (GEMS/HEAL).

*Global Environmental Epidemiology Network (GEENET)*

GEENET has the objective to strengthen education, training and applied research in environmental epidemiology in developing countries. GEENET maintains a network of professionals working at the government level, or in institutes, universities and non-governmental organizations working in the field of environmental epidemiology. The network facilitates the development of applied epidemiology research to resolve local and national environmental health problems.

Through training workshops and technical assistance, GEENET aims at strengthening basic epidemiologic skills that could be applied to any specific environmental exposure or disease. To accomplish this goal, GEENET focuses on strengthening existing programmes and courses in tertiary institutions by: convening national workshops; developing training and guidance materials; and strengthening epidemiological teaching skills through 'training the trainers' activities.

*Global Environmental Technology Network (GETNET)*

GETNET assists developing countries in securing environmental health by strengthening education, training and applied research in environmental technology. The network links various WHO programmes in environmental health and occupational health with institutions and individuals working in industrial hygiene, environmental engineering, air pollution control, water pollution control and other areas of environmental technology. GETNET facilitates information exchange, develops training activities, promotes research and fosters intersectoral cooperation. The individual participants are researchers, teachers, public health officials and other practitioners in the field.

GETNET has developed and conducts workshops on the introduction to environmental technology and management. The workshops provide an overview on pollution prevention, control technology and control design.

*Global Environmental Library Network (GELNET)*

GELNET addresses the need in developing countries for access to appropriate scientific and technical information. It undertakes to support libraries, information and documentation centres in improving the accessibility of environmental health scientific and technical information, thereby ensuring a common knowledge base. One of GELNET's major tools is the Environmental Health Reference Collection. Compiled by WHO in cooperation with UNEP, ILO, UNESCO and other international bodies, it is a bibliography designed to facilitate the access to key information in the field of environmental health available from international organizations.

*Environmental Health Information for Management of Development Activities (EHMDAC)*

EHMDAC is an information management tool used for monitoring programmes and projects in connection with national action plans for environment and health in response to the recommendations of the United Nations Conference on Environment and Development (UNCED). EHMDAC, which is a microcomputer application linked to global resource bases, is used to build national and intercountry networks to share information on projects in the area of health and environment among ministries, agencies, funding institutions and NGOs.

*Global Environmental Monitoring System for Human Exposure Assessment Location (GEMS/HEAL)*

The GEMS/HEAL Programme aims to improve monitoring and assessment of human exposure to pollutants. In each participating country institutions have been designated "Technical Coordinating Centres" which are responsible for monitoring protocols, design and implementation of quality control programmes and other technical support to help participants in implementing the project. In addition to making assessments in this area, WHO issues guidelines on methodology and conducts validation studies. The programme includes training activities which provide participating institutions with training on monitoring, sampling procedures and analytical methodologies to ensure reliability and comparability of results.

**C. Office of Operational Support in Environmental Health**

The Office of Operational Support in Environmental Health is responsible for implementing the WHO programmes for Urban and Rural Environmental Health. The urban environmental health programme focuses on: enabling countries and municipalities to deal with their urban health, environment and development situation; and promoting the incorporation of health-and-environment considerations in national and municipal policies and programmes governing urban development and growth. The fundamental aims of the Rural Environmental Health programmes are to provide Member states with the rationale, tools and support to improve environmental health services for the people, and to encourage

and enable people to manage those of their immediate environments which affect their health.

Many activities of the Office relate to air and water quality management. Specifically, the Office cooperates with UNEP in implementing the joint WHO/UNEP Global Environmental Monitoring Programmes for Water (GEMS/WATER) and Air (GEMS/AIR).

*Global Environmental Monitoring System for Water Programme (GEMS/WATER)*

The GEMS/WATER programme monitors human exposure to contaminants found in water and assesses the environmental hazards of such contaminants. It has established a global water quality monitoring network which includes 344 monitoring stations in more than 42 countries. Summaries of the collected data are published every three years. During the first phase, which was completed in 1990, the programme focused on providing technical assistance to developing countries. During Phase 2 of the programme, emphasis is given to comprehensive data interpretation, assessment of global/regional water quality issues and the analysis of management options.

Training and technical assistance activities are conducted to strengthen the capabilities in developing countries for water quality surveillance and control. The number and subjects of training courses and technical assistance activities have been expanded during the second phase of activities.

*Global Environmental Monitoring System for Air Programme (GEMS/AIR)*

GEMS/AIR has the objective to strengthen urban air quality monitoring networks in participating countries and cities; to improve the validity and comparability of data among countries and cities; and to provide assessments of air quality. Guidelines on monitoring methodology and network development have been developed and published.

In 1992 GEMS/AIR entered its second phase in which the programme was refocused and expanded. The technical assistance component for developing countries was expanded and involves expert advice, the provision of monitoring equipment, as well as training courses and regional workshops.

#### **D. Office of Occupational Health**

The Office of Occupational Health is part of the Division of Health Protection and Promotion. The Office implements the WHO Workers' Health Programme (WHP) which has the objectives of controlling occupational health risks and protecting and promoting the health of the working populations as well as the humanization of work. One of the main focuses of WHP has been to develop and publish guidelines dealing primarily with the monitoring of workers' health and environment. Presently, efforts are being made to finalize guidelines for: *Biological Monitoring of Chemical Exposure at the Workplace; Occupational Respiratory Diseases Induced by Organic Dust and Sensitizing Agents -*

*Health Screening and Surveillance*; and *Reference Method and Quality Assurance for Evaluation of Fibres in Workplace Air*. Additional guidance materials relating to chemical safety to be developed include: the updating of the *WHO Standard Protocol on Field Studies of Exposure to Pesticides*; *Biological Monitoring of Occupational Exposure to Carcinogenic/Mutagenic Chemicals*; and *Guiding Principles and Guidance Values for Occupational Exposure Limits for Chemicals*.

Upon the completion of the guidelines for fibres controls in the workplace air, training materials are to be developed and a training programme will be conducted to strengthen the capabilities of countries to implement the guidelines. A training programme is also anticipated which will assist countries in the implementation of the guidelines for biological monitoring of chemical exposure at the workplace. Other training and technical assistance activities of WHP include: the provision of technical information and advice; promoting the development of national occupational health services infrastructures; and supporting training and education. Much of this work is carried out through a global network of WHO Collaborating Centres in Occupational Health.

The Office of Occupational Health collaborates with the ILO in the *Joint ILO/WHO Committee on Occupational Health*. The Committee helps to ensure that the occupational health programmes of each organization are mutually supportive and not duplicative.

#### **E. Food Safety Unit**

Within the Division of Food and Nutrition, the Food Safety Unit seeks to reduce morbidity and mortality due to foodborne disease through the promotion of food that is safe, sound, wholesome and fit for human consumption. To this end, the Food Safety Unit supports national food safety programmes, including policy development, capacity building, awareness promotion, and information gathering and transfer with a view to protecting human health against hazards associated with biological and chemical contaminants and additives in food. Within WHO, the Food Safety Unit is responsible for exposure assessment, risk characterization and risk management aspects of chemicals in food and for the operative recommendations of UN Conference on Environment and Development and the International Conference on Nutrition which are pertinent to food safety. Through the six WHO Regional Offices, regional and national training courses and seminars are regularly convened on a variety of food safety topics, including food law and regulations, inspection methods and laboratory analysis of contaminants. In addition, consultant services, fellowships and equipment and supplies are provided to support the development of national food safety programmes.

At the global level, WHO collaborates with FAO in the inter-governmental Codex Alimentarius Commission which provides international risk management recommendations related to food additives, pesticide and veterinary drug residues and other food contaminants based on scientific evaluations of JECFA and JMPR. As a consequence of the GATT-Uruguay Round agreement, Codex recommendations, guidelines and codes of practice will be used as the basis for arbitration involving safety and health requirements employed as

non-tariff barriers to trade. In addition, WHO convenes expert consultations on new and emerging food hazards to provide Member States with guidance in risk perception, assessment and management. In particular, a series of training courses have been organized to promote the application of the Hazard Analysis Critical Control Point system in the analysis and management of food safety hazards at all stages of the food chain.

*Joint UNEP/FAO/WHO Food Contamination Monitoring and Assessment Programme (GEMS/Food)*

Since 1976, the Joint UNEP/FAO/WHO Food Contamination Monitoring and Assessment Programme (commonly referred to as GEMS/Food) has collaborated with member states in the collection and assessment of data on levels of certain pesticides, heavy metals and industrial and naturally occurring toxicants in foods and the total diet in order to provide information on human exposure to potential hazardous chemicals in the environment. Training and technical assistance can be provided through the network of GEMS/Food Collaborating Centres and participating institutions which are located in 59 countries worldwide. Beginning in 1994, the Food Safety Unit will facilitate training of professionals from developing countries in pesticide residue analysis in cooperation with a WHO Collaborating Centre in Germany.

**F. International Agency for Research on Cancer**

The International Agency for Research on Cancer (IARC) was established by WHO in 1965 and has its Headquarters in Lyon, France. IARC conducts and directs research designed to identify causes of human cancer and define the best lines for preventative action. Research conducted at IARC includes both epidemiological studies on environmental factors that may cause cancer and laboratory studies that promote better knowledge of the disease process at the molecular and biochemical levels. IARC also participates in the IPCS in the field of chemical carcinogenicity. IARC publishes a series of *Monographs on the Evaluation of Carcinogenic Risks to Humans* which may assist national and international authorities in making risk assessments and in formulating decisions regarding preventive measures. IARC also publishes volumes containing summaries of worldwide cancer incidence and mortality data, and results of analytical research.

*IARC Programme for Education and Training*

The IARC Programme for Education and Training conducts courses for cancer research personnel and public health workers in the fields of cancer epidemiology, statistical methods in epidemiology, carcinogenicity testing, molecular biology for exposure assessment and early effects of carcinogenesis, genetic toxicology and safe laboratory practices. The training courses are often conducted jointly with other international organizations or with collaborating institutions. In addition, IARC awards research training fellowships in research fields related to the Agency's own programme.

### **G. Western Pacific Regional Office/Western Pacific Regional Environmental Health Centre (EHC)**

In 1979 the WHO Regional Office for the Western Pacific established the Western Pacific Regional Environmental Health Centre (EHC)<sup>1</sup> as a technical arm for the implementation of environmental health activities. EHC implements activities in five principal sub-programme areas namely: community water supply and sanitation; environmental health in rural and urban development and housing; health risk assessment of potentially toxic chemicals; control of environmental health hazards; and food safety. The Centre provides technical cooperation services to promote the development of national environmental health policies and planning capabilities. The Centre also serves as an environmental health information service centre and facilitates information exchange and cooperation among national institutions and WHO collaborating centres in environmental health in the Region.

EHC has conducted a great number of training and technical assistance activities related to environmental health and chemical safety over the past years. One specific project was the UNDP-assisted *Inter-country Project on Safety and Control of Toxic Chemicals and Hazardous Wastes* which involved five countries of the region.

### **H. South-East Asia Regional Office**

The South-East Asia Regional Office (SEARO) of WHO focuses on strengthening manpower development for risk assessment, emergency preparedness and response, health monitoring, establishing poison control centres and environmental epidemiology. SEARO supports the institutional development for national agencies involved in the monitoring and control of environmental health hazards. In the area of food safety, SEARO supports national food safety programmes for food legislation for monitoring and inspection of food contamination, development of laboratory capabilities for chemical analysis and food standards control measures.

SEARO also provides chemical safety assistance to Member States under the sub-programme area for health risk assessment of potentially toxic chemicals which focuses on risk assessment, emergency preparedness and response, health monitoring and environmental epidemiology. Between 1988 and 1990 SEARO conducted a UNDP-assisted *Inter-country Project on Safety and Control of Pollutants and Chemicals* in five countries of its region.

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<sup>1</sup>Prior to 1993 the WPRO Environmental Health Centre (EHC) was named Centre for the Promotion of Environmental Planning and Applied Studies (PEPAS).

### **I. Regional Office for the Eastern Mediterranean/Centre for Environmental Health Activities**

In 1989, EMRO strengthened its activities in the field of chemicals safety with a regional workshop which had the objective to develop a regional strategy for chemical safety. The workshop resulted in the Eastern Mediterranean Region Chemical Safety Action Programme which has directed subsequent activities in the region. A number of priority areas were identified for establishing follow-up development assistance projects, including chemicals information facilities, poisons control programmes, monitoring capabilities, awareness and prevention activities, and human resource capabilities for these areas.

### **J. European Regional Office/European Centre for Environment and Health**

The WHO European Regional Office (EURO) was active in the development of the European Charter on Environment which was adopted by the Commission of European Communities in 1989. The Charter contains a number of principles for public policy on the environment which are related to chemicals safety issues. The Charter also initiated the establishment of the WHO European Centre for Environment and Health.

The European Centre for Environment and Health is comprised of three units located in Rome, Italy; Bilthoven, the Netherlands; and Nancy, France. The Centre implements five programmes that deal with chemical safety: European Programme on Chemical Safety (European Centre for Environment and Health/Bilthoven); Food Safety (European Centre for Environment and Health/Rome); Occupational Health (WHO Regional Office for Europe/Copenhagen); Water Quality (European Centre for Environment and Health/Rome); and National Integrated Projects on Environment and Health (European Centre for Environment and Health/Bilthoven). Recently, the Centre performed a comprehensive review of the state of environment and health in Europe which resulted in a report entitled, "Concern for Europe's Tomorrow".

In order to promote and facilitate plans and funding proposals for local and national environmental epidemiology activities, initiated via the GEENET project, a branch has been established within the Regional Office for Europe. Through support from the European Union (EU), the GEENET-Euro Branch will have a key role in focusing training activities in Eastern Europe and the Russian Federation.

#### *European Programme on Chemical Safety*

The Bilthoven Division of the European Centre for Environment and Health has full responsibility for the implementation of the European Programme on Chemical Safety. The programme comprises several areas of work. The first is concerned with the provision of guidance on aspects of environmental health risk assessment, including methodological approaches towards the derivation of guidelines for environmental pollutants. The main emphasis in this area is put, at present, on the updating and revision of the WHO Air Quality Guidelines for Europe, a project which is being conducted in collaboration with the

CEC and IPCS. Finally, work aimed at development of harmonized approaches for the assessment of risk from exposure to PCDDs, PCDFs and PCBs has been initiated within IPCS. This work includes the development of toxic equivalency factors (TEFs), and their periodic update, for these chemicals.

A second area of work within the programme deals with health aspects of chemical accidents. Guidance material has been produced in cooperation with IPCS, OECD and UNEP-IE/PAC on the role of the health sector in emergency preparedness and response. Further work in this area will concentrate mainly on the provision of assistance to member countries, in particular countries of Central and eastern Europe, in establishing their own emergency response plans and in manpower development.

Assessment of exposure to environmental pollutants is the third area of work of the European Programme on Chemical Safety. The programme contributed to the report "Concern for Europe's Tomorrow" through the multimedia exposure assessments of some environmental chemicals. In addition, a study is being conducted to assess the levels of PCDDs, PCDFs and PCBs in human milk. With respect to methodological developments, a consultation of epidemiologists and toxicologists was held in 1993 which provided guidance on the use of biomarkers in the assessment of exposure to environmental chemicals.

The fourth area of work within the Programme is concerned with the strengthening of the national capabilities in chemical safety in countries of the European Region. This is mainly done through assistance in manpower development in the areas of risk assessment and management, as well as environmental health impact assessment.

#### *National Integrated Programmes on Environment and Health (NIPEH)*

The Centre provides assistance to the countries of Central and Eastern Europe through its National Integrated Programmes on Environment and Health (NIPEH). Countries participating in the NIPEH programmes include: Czech Republic, Hungary, Poland, Rumania and Slovak Republic. The programmes aim to:

- \* identify urgent environmental problems where pollution seems to directly pose a threat to human health;
- \* establish more reliable linkages between environmental factors and the health of affected population groups by comparison of selected geographical regions;
- \* ascertain which sources contribute the most to population exposure;
- \* train environmental epidemiologists to deal with the major health problems arising from exposure to environmental contamination; and
- \* improve the quality of environment and health monitoring data

A major component of the NIPEH is the provision of training and technical assistance to address environmental health problems.

## **K. Regional Office for the Americas (AMRO/PAHO)**

The Regional Office for the Americas (AMRO/PAHO) has a number of programmes with chemicals safety components which are carried out under its Environmental Health Programme. AMRO/PAHO's work is implemented with the assistance of the Pan American Centre for Sanitary Engineering and Environmental Sciences (CEPIS) in Lima, Peru, and the Pan American Centre for Human Ecology and Health (ECO) in Metepec, Mexico. CEPIS is active in the areas of community water supply and sanitation, municipal wastes technology, and in surface and ground waters and hazardous wastes. ECO has responsibilities in the areas of epidemiology, toxicology and environmental health impact assessment. Another significant activity of the AMRO Environmental Health programme is the implementation of the Central American Programme for Health and Ecology (MASICA).

### *Pan American Centre for Human Ecology and Health (ECO)*

ECO was established in 1974 and has the mandate to collaborate with member countries on the epidemiological and toxicological aspects of the main industrial and agricultural chemical pollutants and to develop a network of collaborating centres in the region to encourage training, information exchange and applied research programmes in the area of human ecology and health.

The activities of ECO include: technical cooperation; preparation and dissemination of educational material; technical information; publication service; and support for scientific research. The main focus of the Centre is on information related activities.

ECO has established satellite offices to act as reference centres on specific areas of concern and to build up the technical competence in the areas where they are located. As of 1992 satellite offices had been established in Cuba and Columbia specializing in pesticides and health, and one in Bolivia specializing in heavy metals.

### *Central American Programme for Health and Ecology (MASICA)*

MASICA was established in 1991 and is coordinated out of San José, Costa Rica. The general objective of the programme is to advance health protection, environmental improvement, and pollution control through seven interrelated projects that address the key aspects of problems that are tightly interlinked with human health and sustainable development:

- \* Institutional Strengthening
- \* Conservation of Water Resources and Surveillance of the Quality of Drinking Water
- \* Management and Control of Solid Waste and its Effects on Health and the Environment
- \* Occupational and Environmental Aspects of the Exposure to Pesticides
- \* Industrial and Vehicular Contamination
- \* Assessment of the Impact of Development Projects on Health and the Environment
- \* Education on the Environment and Health

**WHO - SECTION II**

**TRAINING AND TECHNICAL ASSISTANCE ACTIVITIES  
RELATED TO THE ENVIRONMENTALLY SOUND  
MANAGEMENT OF CHEMICALS**

## Chemical Poisonings Prevention and Treatment

**Executing Unit:**

Programme for the Promotion of Chemical Safety (PCS): Poison Prevention and Treatment (PPT)

**Time Frame:**

1987 - Ongoing

**Geographic Scope:**

Global

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**Main Subject Categories Covered:**

Prevention and management of poisoning  
Development of poison control centres and related facilities  
Basic chemical safety techniques  
Toxicological data (especially human data and its international harmonization)  
Risk assessment (acute aspects)  
IPCS/INTOX package

**Description:**

The **Chemical Poisonings Prevention and Treatment Programme** provides technical advice to health care professionals and poison control centres on the prevention and treatment of human exposure to chemicals and poisonings. Training activities are directed at improving the awareness of senior decision-makers and the development of carefully chosen professionals, and training of trainers. A high priority is given to manpower development and training in understanding the nature of chemical hazards, the uses of toxicological and ecotoxicological test data, risk assessment, and safe use of chemicals. Specialized training is conducted in the use of the IPCS/INTOX software and in information management for poisons control. PPT also plans to organize training courses in specific areas relating to the prevention, diagnosis and management of poisonings in developing countries, such as poisonings from specific chemicals, pollutants or venoms, and analytical toxicological techniques.

**International Workshops:**

Training Workshop on Prevention and Management of Poisonings  
Kuala Lumpur, Malaysia [27 November-2 December 1989]

Sub-regional Training Course on Prevention and Treatment of Poisoning for Primary Health Care Workers  
Harare, Zimbabwe [25 January - 1 February 1991]

Sub-Regional Workshop on Prevention and Management of Poisonings  
Montevideo, Uruguay [March 1991]

INTOX Training Course on Natural Toxins  
Singapore [11 - 15 November 1991]

Regional Workshop on Prevention and Management of Poisoning  
Montevideo, Uruguay [16-18 March 1992]

INTOX Training Course  
University of Surrey, U.K. [3-5 September 1992]

INTOX Training Course  
Québec, Canada [3-5 September 1992]

IPCS/CATOX Seminar on Poisons Control: Chemicals in the Environment and Effects on Health (Supported by CATOX and health authorities in Venezuela and UNEP-RLAC)  
Valencia, Venezuela [7 - 10 November 1993]

CATOX/IPCS/UNEP Training Course on Pesticides (Supported by CATOX and health authorities in Venezuela and UNEP-RLAC)  
Valencia, Venezuela [11-13 November 1993]

**National Workshops:**

National Seminar on Poisons Control  
Ciloto, Indonesia [18-20 November 1991]

Seminar on Poisons Control (with SEARO and Thailand)  
Bangkok, Thailand [25-26 November 1991]

WHO/AIIMS Workshop on Establishment and Strengthening of Poisons Control Centres in India  
New Delhi, India [28-30 November 1991]

IPCS/Iranian Training Seminar on Setting Up of Poisons Information Centres  
Mashad, Islamic Republic of Iran [19-21 October 1993]

**Programme Specific Training Materials:**

Training Modules related to Prevention and Treatment of Poisoning:

- ▶ Module 1: Safe Use of Pesticides, a multilevel course
- ▶ Additional Training Modules
- ▶ INTOX and Poison Information Centre Slides

350 Slides with text and bullets describing INTOX, poison information centres and actual chemical poisonings, INTOX computer screen displays and dangerous/poisonous environments.

- ▶ INTOX Transparencies
- 200 Transparencies presenting the background, objectives and description of INTOX.
- ▶ Training material on diagnosis and management of human exposure and poisoning cases due to chemicals, pharmaceuticals and plant/animal toxins (150 slides/transparencies)
  - ▶ Handbook on Poisoning
  - ▶ Manual on Basic Analytical Techniques

**Planned Activities:**

- ▶ National Workshop on Safe Use of Pesticides  
Sao Paulo, Brazil [6-17 June 1994]
- ▶ IPCS/INTOX Training Course  
Sao Paulo, Brazil [25-29 July 1994]
- ▶ Training Course on Poisons Prevention and Management for French-Speaking Sub-Saharan Countries  
[October 1994]
- ▶ National Workshop on Safe Use of Pesticides  
India [October/November 1994]
- ▶ Chulabhorh Institute/IPCS Training Course on Environmental and Industrial Toxicology: Pollution Control and Management  
Bangkok, Thailand [21 November - 2 December 1994]
- ▶ National Workshop on Safe Use of Pesticides  
Thailand [November/December 1994]
- ▶ National Workshop on Safe Use of Pesticides  
China [November/December 1994]

Entry #: A1

- ▶ Training Course on Prevention and Response to Poisoning  
New Delhi, India [November/December 1994]
- ▶ IPCS/INTOX/ALATOX Training Activities in the area of Poisons Information and Chemical  
Accidents  
Planned for Bolivia, Chile and Colombia [end 1994/1995]

## Health Aspects of Chemical Emergencies

**Executing Unit:**

Programme for the Promotion of Chemical Safety (PCS): Poisoning Prevention and Treatment (PPT)

**Time Frame:**

1987 - Ongoing

**Geographic Scope:**

Global

**Responsible Officers/Contact Persons:**

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**Main Subject Categories Covered:**

Poison control centres  
Emergency response  
Contingency planning

**Description:**

The **Health Aspects of Chemical Emergencies Programme** provides technical advice and training to improve the awareness of senior decision-makers, to develop the skills of carefully chosen professionals, and to train the trainers in the area of chemical emergencies. Training activities are often conducted with the cooperation of UNEP's APELL programme, and ILO's Prevention of Industrial Accidents programme area. The workshops stress the importance of poison control centres in responding to chemical emergencies and in contingency planning. The activities of this programme are closely coordinated with those of the Chemical Poisonings Prevention and Treatment Programme.

Entry #: A2

**International Workshops:**

Workshop on Health Aspects of Chemical Accidents  
Utrecht, Netherlands [13-16 April 1993]

Regional Course on Planning, Preparedness and  
Response to Chemical Accidents in Latin America  
and the Caribbean  
(with PED/OPS-ECO/OPS-IPCS/WHO)  
Tlaxcala, Mexico [15-19 November 1993]

**Other Activities/Services:**

- ▶ Translation of the guidance materials into Spanish by PAHO/ECO

**Programme Specific Training Materials:**

- ▶ Health Aspects of Chemicals: Guidance on Chemical Accident Awareness, Preparedness and Response for Health Professionals and Emergency Responders (joint publication of IPCS/OECD/UNEP-IE PAC/WHO-ECEH)

**Planned Activities:**

- ▶ Training Course on Protection of Chemical Accidents  
Amman, Jordan [27 September-1 October 1993]

## Development of Health Risk Assessment Methodologies

**Executing Unit:**

Programme for the Promotion of Chemical Safety (PCS)

**Time Frame:**

Ongoing

**Geographic Scope:**

Global

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Chemical risk assessment methodologies

**Description:**

The **Development of Health Risk Assessment Methodologies** programme conducts training and technical assistance for toxicologists and environmental health professionals in developing countries. The training and technical assistance activities of the programme promote the standardization and harmonization of risk assessment methodologies (one of the main goals of the IPCS). Courses address methodologies for assessing exposure to chemicals, toxicological procedures, epidemiology procedures and the principles of testing protocols.

**International Workshops:**

Course on Current Topics in Fundamental and Applied Toxicology  
Buenos Aires, Argentina [2-11 April 1990]

International Workshop on In Vitro Methods in Reproductive Toxicology  
Ottawa, Canada [May 1992]

IPCS/IARC Training Course on Detection of Health Hazards in Human Populations Exposed to Mutagens and Carcinogens  
(organized with IARC and the Chulabhorn Institute, Bangkok)  
Bangkok, Thailand [15-26 November 1993]

**National Workshops:**

Training Course on Risk Assessment of Toxic Chemicals  
(organized with the Government of Thailand and WHO/SEARO)  
Bangkok, Thailand [March 1989]

**Programme Specific Training Materials:**

Training Modules related to Development of Health Risk Assessment Methodologies:

- ▶ Module 1: Chemical Safety: Fundamentals of Applied Toxicology. Geneva, 1992. (WHO/PCS/92.3)
- ▶ Additional Chemical Safety Training Modules

Training Modules on Safe Use of Chemicals at Work, classification and labelling systems, the use of Chemical Safety Cards, and an overview of basic toxicology.

**Planned Activities:**

- ▶ Training Course on Environmental and Industrial Toxicology  
Bangkok, Thailand [November 1994]

## Global Environmental Epidemiology Network (GEENET)

**Executing Unit:**

Office of Global and Integrated Environmental Health

**Time Frame:**

1987 - Ongoing

**Geographic Scope:**

Global

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**Main Subject Categories Covered:**

Environmental epidemiology  
Health impact assessment  
Epidemiology investigations  
Basic chemical safety investigation techniques

**Description:**

GEENET training and technical assistance activities address manpower needs in developing countries to strengthen their in environmental epidemiology and to enhance their skills in assessing the health risks associated with environmental hazards. Workshops introduce the basic concepts of environmental epidemiology and offer guidance to participants on topics of national and local interests. A standard format for national workshops has been developed titled *Introduction to Environmental Epidemiology*. In addition, advanced workshops are conducted for those already familiar with environmental epidemiology. These workshops demonstrate the latest techniques and approaches, bring newly emerging epidemiologic issues into focus, or provide an in-depth examination of a specific epidemiological problem.

Entry #: B1

**International Workshops:**

Regional Workshop for Western Pacific Region  
Kuala Lumpur, Malaysia [1988]

**National Workshops in Basic Environmental Epidemiology:**

(These workshops were organised jointly with national authorities and WHO Regional Offices.)

1988:

Cuba  
Malaysia

1989:

Chile  
China

1990:

Kenya  
Brazil  
Argentina  
Vietnam  
India

1991:

Peru  
Bolivia  
Mexico  
Poland  
Indonesia  
The Gambia  
Portugal

1992:

Costa Rica  
Philippines  
Vietnam  
Venezuela  
Colombia  
Latvia

1993:

Venezuela  
Indonesia  
Argentina  
Gabon  
Ethiopia  
China  
Thailand  
Nicaragua  
Hungary  
The Russian Federation  
Malaysia

**Other Activities/Services:**

## ▶ Environmental Health Reference Collections

The GEENET programme supports and establishes "Environmental Health Reference Collections" in libraries of participating countries through the provision of reference materials on environmental health hazards and their control.

**Programme Specific Training Materials:**

- ▶ Basic Epidemiology. Geneva, 1993. (WHO publication).

This book serves as the student text for the Introductory to Environmental Epidemiology workshops and provides a basic introduction to the practice and the public health role of epidemiological research.

- ▶ Teacher's Guide for Basic Epidemiology. Geneva, 1993. (WHO).

This guide is to be used in conjunction with the student text and provides advice on how to organize a course in basic epidemiology.

- ▶ One-day Workshop on Chemical Safety.

- ▶ Two-day Course in Microcomputer Uses in Epidemiology.

- ▶ Problem-based Training Exercises for Environmental Epidemiology. Geneva, 1991. (WHO/PEP/91.4)

- ▶ Investigating Environmental Disease Outbreaks - a Training Manual. Geneva, 1991. (WHO/PEP/91.35).

- ▶ Major Poisoning Episodes from Environmental Chemicals: Teaching Examples for Instructors of Environmental Health. Geneva, 1991. (WHO/PEP/91.5).

- ▶ Training package on Women, Health and Environment (in press)

- ▶ Teacher's Guide to Basic Environment Epidemiology (in press)

- ▶ Basic Environmental Epidemiology (revision of EHC27) (in preparation)

**Planned Activities:**

- ▶ Workshops in 6 - 10 countries annually
- ▶ Expanding range of topics and training materials

## Global Environmental Technology Network (GETNET)

**Executing Unit:**

Office of Global and Integrated Environmental Health

**Time Frame:**

1991 - Ongoing

**Geographic Scope:**

Global

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**Main Subject Categories Covered:**

Environmental technology  
Environmental risk assessment  
Pollution control technology  
Pollution control design

**Description:**

GETNET activities aim at strengthening education, training and research in environmental technology for the improvement of health in developing countries. A primary activity of GETNET has been to develop and conduct one week workshops on the introduction to environmental technology and management. The workshops provide an overview of pollution prevention, control technology and control design. Interactive teaching methodologies are employed, such as case studies, simulation exercises, problem solving and group discussions.

**International Workshops:**

(These workshops were organised jointly with national authorities and WHO Regional Offices)

Workshop on Environmental Health Risk Assessment  
and Management  
Jordan [18 - 22 October 1992]

Workshop on the Role of Decision Makers in  
Implementing Environmental Standards  
Mexico City, Mexico [July 1993]

Workshop on Environmental Management for Health  
Promotion in Gulf Countries  
Dubai, United Arab Emirates [21-25 November 1993]

**National Workshops:**

National Workshop on Environmental Technology  
Pattaya, Thailand [1 - 5 August 1992]

National Workshop on Environmental Technology  
Malaysia [5 - 9 October 1992]

Workshop on Management and Assessment of  
Environmental Risks from Industrial Complexes  
Bucharest, Rumania [September 1993]

National Workshop on Environmental Technology  
Philippines [August 1993]

**Programme Specific Training Materials:**

▶ GETNET Teacher's Guide

A guide to the One-Week GETNET Workshops on Environmental Technology.

▶ Assessment of Sources of Air, Water, and Land Pollution. Part One: Rapid Inventory Techniques in Environmental Pollution. Geneva, 1993. (WHO/PEP/GETNET/93.1-A).

This book introduces rapid pollution assessment factors including air, water and solid waste inventory and control models. The book also describes how to organize and carry out environmental studies.

▶ Assessment of Sources of Air, Water, and Land Pollution. Part Two: Approaches for Consideration in Formulating Environmental Control Strategies. Geneva, 1993. (WHO/PEP/GETNET/93.1-B).

This book deals with environmental management problems and describes how to: assess the current quality of air and water; formulate alternative control strategies, evaluate their effectiveness; and define high priority action programmes.

**Planned Activities:**

- ▶ One-Week Training Workshop in Assessment of Sources of Air, Water, and Land Pollution; A Tutor's Guide.

This book provides educators with information and guidance needed to organize and present a one-week workshop on the rapid inventory and pollution modeling techniques, including a variety of case studies which participants can work through progressively in learning to apply the techniques. A version is expected to be available for testing by summer 1994.

- ▶ Computerized Expert Tutorial System Implementing "Assessment of Sources of Air, Water, and Land Pollution".

This project aims to develop an interactive tutorial software package which will provide users with progressive training in source emission inventories as well as providing a productive software package for the development of such inventories. The tutorial shell and air emissions module is being developed and is expected to be available in early 1996.

As additional funding becomes available, GETNET will continue to expand its activities and services to include the following training workshops:

- ▶ Training and Support to WHO Regional Offices
- ▶ Training of Trainers
- ▶ Rapid Assessment Techniques
- ▶ GETNET Environmental Management
- ▶ Role of Decision Makers in Implementing Environmental Standards

More information on these activities is available from the GETNET Programme Officer.

## **Environmental Health Information for Management of Development Activities (EHMDAC)**

**Executing Unit:**

Office of Global and Integrated Environmental Health

**Time Frame:**

1993 - Ongoing

**Geographic Scope:**

Global

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**Main Subject Categories Covered:**

All subject areas of Health and Environment

**Description:**

**EHMDAC** activities aim at strengthening national capacities to coordinate and monitor investments in the field of health and environment. **EHMDAC** is a microcomputer based application to manage projects, programmes and plans. The system presents a powerful tool for using readily available country data to assess how effectively resources are being utilized and to guide management decisions on future priorities and the needed fund raising. The analysis of resource utilization across the health and environment field can be readily combined with qualitative and quantitative data from individual sector monitoring activities (health and population statistics, and statistics concerning environmental factors affecting health such as chemical safety, air pollution and water quality, etc.) to give managers and planners a comprehensive picture of their country's current investment needs in the area of health and environment.

**International Workshops:**

(These workshops were organised jointly with national authorities and WHO Regional Offices)

**Regional Workshops:**

Workshop on Information Management  
Costa Rica [14 - 16 July 1992]

Workshop on Information Management  
Ecuador [11 - 13 May 1993]

Workshop on Information Management  
Honduras [19 - 21 May 1993]

**National Workshops:**

National Workshop on Information Management  
Bangladesh [25 - 28 September 1993]

**Other Activities/Services:**

- ▶ Demonstration sessions on monitoring of projects and programmes in national environmental action plans: Nepal October 1993, India December 1993, Argentina May 1994

Programmes and documentation for National Planning bodies (Ministries of Planning, Planning Commissions, Ministries of Environment Health, etc.) and national Sustainable Development Network (SDN) centres.

**Planned Activities:**

- ▶ Integration of national data bases with monitoring statistics using data base management softwares.
- ▶ Support to Ministries of Health within the framework of the WHO Programme for Countries in Great Need.

## Global Environmental Library Network (GELNET)

**Executing Unit:**

Office of Global and Integrated Environmental Health

**Time Frame:**

1992 - Ongoing

**Geographic Scope:**

Global

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**Main Subject Categories Covered:**

Environmental health hazards:

Air pollution  
Water pollution  
Radiation  
Ozone layer depletion  
Climate change  
Toxic waste

Environments supportive to health:

Water supply and sanitation services  
Solid waste management  
Healthy cities

**Description:**

GELNET works to counteract the problem whereby environmental health work is held up due to difficulties in obtaining vital information. GELNET works by facilitating effective and systematic provision of scientific information, and thereby ensuring a common knowledge base and contributing to equality of access to scientific information for the members of other global networks (GEENET, GETNET), via libraries located in the areas in which they live.

**Activities/Services:**

- ▶ The Environmental Health Reference Collection

Compiled by WHO, this is essentially a bibliography of the key scientific and technical environmental health information available from WHO and other international organizations.

**Planned Activities:**

- ▶ Set of guidelines concerning basic documentation techniques

The Documentation Centre of the Office of the Global and Integrated Environmental Health, plans to develop these guidelines in order to help smaller libraries, information centres or documentation units, to increase their capacity to store and access environmental health information efficiently.

## **Global Environmental Monitoring System for Human Exposure Assessment Location (GEMS/HEAL)**

**Executing Unit:**

Office of Global and Integrated Environmental Health

**Time Frame:**

1986 - Ongoing

**Geographic Scope:**

Global

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**Main Subject Categories Covered:**

Analytical methods

Quality assurance/quality control

**Description:**

**GEMS/HEAL** training activities focus on analytical methods and quality assurance/quality control to ensure comparability of data. The samples collected for the programme are not analyzed until satisfactory performance is achieved in an initial training phase. The training involves the analysis of several quality control samples with assistance from technical consultants from the project's Technical Coordinating Centres (TCCs) in each country. Results of the pilot study phase of the programme, which was completed in 1991, indicate that training will be necessary in subsequent phases for all stages of human exposure assessment, including sample collection, sample analysis, and assessment. In addition to training activities, the project also provided some participating institutes with laboratory equipment.

**Other Activities/Services:**

- ▶ Computerized information exchange system.

## **Global Environmental Monitoring System for Water (GEMS/WATER)**

**Executing Unit:**

Office of Operational Support in Environmental Health

**Time Frame:**

1977 - Ongoing

**Geographic Scope:**

Global

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Water quality surveillance and control  
Analytical quality control/quality assurance  
Groundwater and sediment monitoring  
"Regional Analysis by Intelligent Systems on a Microcomputer" (RAISON/GEMS)

**Description:**

**GEMS/WATER** training activities are conducted to strengthen the capabilities in developing countries for water quality surveillance and control. During the first phase of activities (1977-1990), courses stressed improving basic analytical quality control/quality assurance and water quality monitoring capabilities. Additional subject areas offered in the second phase (1990-2000) include groundwater monitoring, sediment monitoring and the use of "Regional Analysis by Intelligent Systems on a Microcomputer" GEMS (RAISON/GEMS) for presenting statistically treated monitoring results. Training workshops include formal presentations, demonstrations, field work and discussions led by groups of international experts, many of which are drawn from the main GEMS/WATER collaborating organizations such as, the Monitoring and Assessment Research Centre (MARC), National Water Research Institute (NWRI), WMO and UNEP.

**International Workshops:**

GEMS/WATER Workshop  
Arusha, Tanzania [March/April 1992]\*

GEMS/WATER Workshop  
Moscow, Russia [June 1993]

2 RAISON/GEMS Courses; 1 Sediment Monitoring  
Course and 1 Biological Monitoring Course  
Mekong River Basin [May 1993]

GEMS/WATER Workshop  
Russia and CIS Countries [June 1993]

Water Quality Workshop  
(with WMO)  
Caribbean Region [July 1993]

RAISON/GEMS Training Course  
Nairobi, Kenya [October 1993]

GEMS/WATER Workshop  
Harare, Zimbabwe [November 1993]

Training Course for Assessing Water Quality in Nile  
Basin Countries  
Entebbe, Uganda [14-28 February 1994]

**National Workshops:**

RAISON/GEMS Training Course  
Rio de la Plata, Argentina [1993]

2 National Groundwater Monitoring Courses  
Latin America [1993]

RAISON/GEMS Training Course  
Burlington, Canada [November 1993]

**Planned Activities:**

1994:

- ▶ Regional Sediment/Global Flux Monitoring Course  
Rio de la Plata, Argentina
- ▶ Training Course on Field Monitoring Methods  
Amman, Jordan

## **Global Environmental Monitoring System for AIR (GEMS/AIR)**

**Executing Unit:**

Office of Operational Support in Environmental Health

**Time Frame:**

1975 - Ongoing

**Geographic Scope:**

Global

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Air quality surveillance and control  
Analytical quality control/quality assurance  
Ambient air quality monitoring and emissions estimation

**Description:**

**GEMS/AIR** training activities are intended to strengthen urban air pollution monitoring and assessment capabilities among participating countries, and to improve the validity and comparability of data among cities. Initial training activities were aimed at preparing cities in less developed countries to monitor, assess, and manage their air quality properly, enabling them to participate fully in the GEMS/AIR programme. Additionally, GEMS/AIR provided particular emphasis on procedures for analyzing and interpreting air monitoring data, on methods of measuring air pollutants, and on estimating human exposures to air pollution. In Phase 2 of the GEMS/AIR programme, additional support will be provided for regional training courses and expert advice on air pollution monitoring, assessment and management. Training in the use of rapid assessment methods, in collaborating with GETNET will further enable developing countries to establish effective air quality management programmes. Regional audit centres will be strengthened to assist GEMS/AIR members in improving the validity and quality of their measurements.

**International Workshops:**

Urban Air Pollution Monitoring: Meeting of  
UNEP/WHO Government-Designated Experts  
Geneva, Switzerland [5-8 November 1991]\*

**Other Activities/Services:**

- ▶ Training support and Expert/Technical Assistance

Training support and expert/technical assistance are provided by GEMS/AIR collaborating organizations, including, but not limited to, the GEMS Monitoring and Assessment Research Centre in London, U.K.; the GEMS Harmonization of Environmental Measurements office in Munich, Germany; and the U.S. Environmental Protection Agency in Research Triangle Park, North Carolina, USA.

**Programme Specific Training Materials:**

- ▶ Selected Methods of Measuring Air Pollutants. Geneva, 1976. (WHO Offset Publication No. 24)
- ▶ Analyzing and Interpreting Air Monitoring Data. Geneva, 1980. (WHO Offset Publication No. 51)
- ▶ Estimating Human Exposure to Air Pollutants. Geneva, 1982. (WHO Offset Publication No. 69)
- ▶ GEMS/DATA software for GEMS air quality data management and 1992 upgrade.

**Planned Activities:**

- ▶ Evaluations of urban air quality monitoring and assessment capabilities in major cities which may join the GEMS/AIR programme.
- ▶ Expansion of the GEMS/AIR network to include at least 100 cities in the GEMS/AIR network by the year 2000, including any necessary training and assistance.
- ▶ Regional training workshops on air pollution monitoring and assessment
- ▶ Establish and strengthen regional support centres.
- ▶ Pilot studies to strengthen air pollution management and investigate reduction strategies with local partners.
- ▶ Publication of the GEMS/AIR Methodology Review Handbook series, addressing quality assurance in air quality monitoring, primary standard calibration methods and network intercalibrations for air quality monitoring, measurement of suspended particulate matter in ambient air, and active and passive sampling methodologies for measurement of air quality.

## **Joint UNEP/FAO/WHO Food Contamination Monitoring and Assessment System (GEMS/FOOD)**

**Executing Unit:**

Food Safety Unit, Division of Food and Nutrition

**Time Frame:**

1976 - Ongoing

**Geographic Scope:**

Global

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Food contamination monitoring methods and procedures  
Sampling and methods of analysis  
Analytical quality control/quality assurance  
Risk assessment and management

**Description:**

**GEMS/Food** training and technical assistance activities seek to improve the international comparability and overall validity of the monitored and reported levels of food contaminants data through the introduction of standard methods for collecting and recording data (supported by quality assurance programmes). National monitoring programmes in participating countries have been strengthened by providing technical support and training. The programme includes the monitoring of 19 priority chemical contaminants (aldrin/dieldrin, DDT, endosulfan, endrin, gamma-hexachlorobenzene, hexachlorohexane, heptachlor, polychlorinated biphenyls, lead, cadmium, mercury, aflatoxin and the organophosphorus pesticides, diazinon, fenitrothion, malathion, parathion and methyl parathion). Foods monitored included staple foods, indicator foods (e.g. fish), drinking water, breast milk and the total diet. Training is provided through the network of GEMS/Food Collaborating Centres, the WHO European Centre for Environmental Health-Rome Division (which is responsible for **GEMS/Food-EURO**) and other collaborating organizations such as the UNEP Monitoring and Assessment Research Centre (MARC) and the International Agency for Research on Cancer (IARC).

**International Workshops:**

Workshop on the analysis of organochlorine pesticides in food  
(Supported by UNEP and organized by the Unified Food and Drug Control Laboratory (LUCAM))  
Guatemala [30 March - 8 April 1992]

Workshop on the analysis of organochlorine pesticides in food  
(Supported by UNEP and organized by the Instituto Aldolfo Lutz)  
Sao Paulo [1-9 September 1992]

GEMS/Food-EURO Technical Subcommittee for Quality Assurance  
(Convened by WHO in cooperation with the GEMS/Food Collaborating Centre, United Kingdom)  
Norwich, U.K. [1-2 April 1993]\*

GEMS/Food-EURO Technical Subcommittee for Evaluation of Dietary Intake  
(Convened by WHO in cooperation with the Bundesanstalt für Fleischforschung)  
Kulmbach, Germany [2-5 March 1994]\*

**Other Activities/Services:**

- ▶ Training Fellowships in Pesticide Residue Analysis.

Four fellowships will be offered for up to six weeks each for training in pesticide residue analysis at the WHO Collaborating Centre for Pesticide Residue Analysis in Darmstadt, Germany.

- ▶ GEMS/Food Database.

The GEMS/Food database includes analytical results on various food/contaminant combinations monitored by the programme as well as the results of total diet studies which provide a direct assessment of dietary exposure.

**Planned Activities:**

- ▶ GEMS/Food-EURO Subcommittee on Data Management  
(Convened by WHO in cooperation with the GEMS/Food Collaborating Centre, Germany)  
Berlin [13 May 1994]
- ▶ GEMS/Food-EURO Subcommittee on Analytical Quality Assurance  
(Convened by WHO in cooperation with the GEMS/Food Collaborating Centre, Germany)  
Berlin [16-17 May 1994]
- ▶ Workshop on prediction of dietary intake of pesticide residues  
(Organized by WHO in cooperation with the GEMS/Food Collaborating Centre, United Kingdom and the US Environmental Protection Agency)  
Norwich [Third Quarter 1994]
- ▶ Consultation on monitoring of food contaminants  
(Convened by WHO in cooperation with the GEMS/Food Collaborating Centre, Germany and the German Ministry of Research and Technology)  
Berlin [Second Quarter 1995]

## IARC Programme for Education and Training

**Executing Unit:**

International Agency for Research on Cancer/Unit of Field and Intervention Studies

**Time Frame:**

Ongoing

**Geographic Scope:**

Global

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Cancer research  
Cancer epidemiology  
Statistical methods  
Carcinogenicity testing  
Molecular biology  
Genetic Toxicology  
Safe laboratory practice

**Description:**

The IARC **International Programme for Education and Training** conducts training courses at its headquarters in Lyon, France, and in developing countries in all the regions of WHO, aimed at cancer research personnel in the areas of cancer epidemiology, statistical methods of epidemiology, carcinogenicity testing, molecular biology, genetic toxicology and safe laboratory practice. Training courses are often conducted jointly with other international organizations or with collaborating institutions. Fellowships for young researchers to spend time at IARC or in other institutions are awarded.

**International Workshops:**

International Course on Detection of Health Hazards in Human Populations Exposed to Mutagens and Carcinogens  
Mexico City, Mexico [16-27 January 1989]

Course on Epidemiological Aspects of Occupational Cancer Registries  
Ljubljana, Slovenia [18-26 September 1989]

Course on Cancer Epidemiology  
Lyon, France [20 November - 1 December 1989]

Training Course on Safe Handling of Cytostatic Drugs for Health Workers  
Lyon, France [13-14 March 1990]

Training Course on Safe Handling of Genotoxic Substances in Research Laboratories  
Lyon, France [15-16 March 1990]

Course on Modern Epidemiological Methods  
Shanghai, China [7-18 May 1990]

International Course on Epidemiology and Cancer Control  
(Organized with WHO-WPRO)  
Manila, Philippines [15-26 October 1990]

Course on Cancer Epidemiology  
(Organized with PAHO)  
Havana, Cuba [11-22 March 1991]

Course on Cancer Epidemiology  
(Organized with INSERM)  
Lyon, France [8-19 April 1991]

International Course on Detection of Health Hazards in Human Populations Exposed to Mutagens and Carcinogens  
(In collaboration with IPCS)  
Harare, Zimbabwe [9-20 September 1991]

Course on Safe Handling of Cytostatic Drugs  
Lyon, France [24-25 February 1992]

European Educational Programme in Epidemiology - Annual Residential Summer Course  
Florence, Italy [22 June-10 July 1992]

Workshop on Respirable Synthetic Fibres and Minerals  
Lyon, France [7-9 September 1992]

Cancer Epidemiology Course  
Ostrava, Czech Republic [17-28 May 1993]

European Educational Programme in Epidemiology - Annual Residential Summer Course  
Montecatini Terme, Italy [21 June-9 July 1993]

International Course on Detection of Health Hazards in Human Populations Exposed to Mutagens and Carcinogens  
Bangkok, Thailand [15-26 November 1993]

**Other Activities/Services:**▶ **IARC Fellowships**

IARC awards approximately 13 fellowships per year to young scientists in the field of cancer research from around the world.

**Planned Activities:**

1994:

- ▶ Introduction to Cancer Epidemiology  
Fajara, The Gambia [31 May - 10 June 1994]
- ▶ International Course on Cancer Epidemiology with Emphasis on Occupational Cancer  
Pelotas, Brazil [22 August - 2 September 1994]
- ▶ European Educational Programme in Epidemiology - Annual Residential Summer Course  
Florence, Italy [27 June - 16 July 1994]

Entry #: G1

## **Regular Programme Activities of the Western Pacific Regional Environmental Health Centre (EHC)**

**Executing Unit:**

Western Pacific Environmental Health Centre (EHC)

**Time Frame:**

Ongoing

**Geographic Scope:**

Western Pacific Region

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Health risk assessment  
Environmental impact assessment  
Groundwater monitoring  
Industrial accident prevention

**Description:**

The training and technical assistance activities of the **Western Pacific Regional Environmental Health Centre (EHC)**<sup>1</sup> aim at developing environmental health manpower and national environmental health policies and planning capabilities. EHC conducts national training courses and workshops on chemical safety within its programme areas for Environmental Health in Rural and Urban Development and Housing, Health Risk Assessment of Potentially Toxic Chemicals and Food Safety. EHC also conducted significant chemical safety related activities with a UNDP-assisted intercountry project carried out between 1991 and 1993 (See Entry #: G2).

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<sup>1</sup>Prior to 1993 the WPRO Environmental Health Centre (EHC) was named Centre for the Promotion of Environmental Planning and Applied Studies (PEPAS).

**National Workshops:**

Training Course on Economic Aspects of Environmental Pollution  
(Organized with the Chinese Research Academy of Environmental Sciences)  
Beijing, China [8-29 May 1989]

Training Course on Environmental Impact Assessment  
Philippines [12-23 November 1990]

Training Course on Practical Aspects of Environmental Science and Technology  
Viet Nam [10-21 December 1990]

Workshop on the Monitoring of Groundwater Pollution  
(Organized with the Malaysia Department of Environment)  
Malaysia [July and August 1991]

Workshop on Environmental Risk Assessment and Control Technology  
Kuala Lumpur, Penang and Kedah, Malaysia [22 June - 18 July 1992]

Environmental Impact Assessment Course  
(Organized with Malaysian National Institute of Public Administration - INTAN)  
Sarawak, Malaysia [18-26 May 1993]

Course on the Planning and Control of the Environment  
(Organized with the Malaysian National Institute of Public Administration - INTAN)  
Kuala Lumpur, Malaysia [14-17 June 1993]

Course on Environmental Risk Assessment and Management  
(Organized with the Malaysian National Institute of Public Administration - INTAN)  
Kuala Lumpur, Malaysia [5-8 July 1993]

Workshop on Groundwater Resources Management  
Beijing, China [5-10 July 1993]

National Workshop on Management of Environmental Health Hazards  
(Organized with the National Institute of Hygiene and Epidemiology)  
Vientiane, Laos [4-17 February 1993]

Seminar on Safe Management of Chemical Substances for Prevention of Industrial Accidents  
(Organized with Malaysian Ministry of International Trade and the Japan External Trade Organization)  
Kuala Lumpur, Malaysia [22 February 1993]

## **WHO/UNDP Project on Safety and Control of Toxic Chemicals and Hazardous Wastes (EHC)**

**Executing Unit:**

Western Pacific Environmental Health Centre (EHC)

**Time Frame:**

1991 - 1993

**Geographic Scope:**

China, Malaysia, the Philippines, Republic of Korea, and Singapore

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Safe chemical and hazardous wastes management  
Chemical safety legislation  
Chemical safety information systems

**Description:**

The EHC of the WHO Western Pacific Regional Office implemented the UNDP funded "Project on Safety and Control of Toxic Chemicals and Hazardous Wastes" in which training and technical assistance activities were conducted in each country. Activities included national workshops in each country, review of national legislation and regulations, technical studies, development of project proposals, fellowship training, and preparation of educational materials.

**International Workshops:**

Regional Workshop on Chemical Safety Legislation  
Kuala Lumpur, Malaysia [7-11 October 1991]\*

**National Workshops:**

National Workshop on Safety and Control of Toxic  
Chemicals and Hazardous Wastes  
Republic of Korea [1991]

National Workshop on Safety and Control of Toxic  
Chemicals and Hazardous Wastes  
(Organized with the Malaysia Department of  
Environment)  
Malaysia [10-13 June 1991]

Workshop on Safety and Control of Toxic Chemicals  
and Hazardous Wastes  
(Organized with the China Ministry of Chemical  
Industry)  
Beijing, China [27-30 August 1991]

National Workshop on Control of Toxic Chemicals  
and Hazardous Wastes  
Singapore [27-29 January 1992]

Symposium on Safety and Management of Chemicals  
and Hazardous Wastes  
(Organized with the Philippine Environmental  
Management Bureau)  
Quezon-City, Philippines [29 March 1993]

Seminar-Workshop on Safety and Management of  
Chemicals and Hazardous Wastes  
(Organized with Philippine Environmental  
Management Bureau)  
Cagayan de Oro city, Philippines [1-2 April 1993]

National Training Course on Chemical Safety  
(Organized with Chinese Ministry of Chemical  
Industry)  
China [1993]

Consultation on the Improvement of Chemical Safety  
Information Systems in Singapore  
(Collaboration with the Singapore Ministry of  
Environment)  
Singapore [14-22 February 1993]

**Other Activities/Services:**

- ▶ Country profiles for each participating country.

Entry #: H1

## **Intercountry Project on Safety and Control of Pollutants and Chemicals**

**Executing Unit:**

South-East Asia Regional Office (SEARO)

**Time Frame:**

1988 - 1990

**Geographic Scope:**

India, Indonesia, Myanmar, Sri Lanka and Thailand

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Safe use of chemicals  
Environmental pollution and health hazards prevention  
Chemical regulatory framework and operational procedures  
Chemical information systems  
Environmental monitoring and risk assessment  
National poison centres

**Description:**

The **Intercountry Project on Safety and Control of Pollutants and Chemicals** had the objectives to cooperate with the participating countries in developing national institutions, coordinating national programmes and capabilities for the safe use of chemicals, and the protection against environmental pollution and health hazards. The project assisted participating countries in establishing regulatory framework and operational procedures for information storage and retrieval systems, environmental monitoring and risk assessment. Training was provided for upgrading the technical, planning and managerial skills of the national staff. In addition, the project sought to establish national poison centres and to inform community health workers of the health hazards of pesticides.

Entry #: H1

**International Workshops:**

Intercountry Course on Risk Assessment/Risk  
Management  
New Delhi, India [15-26 October 1990]

**National Workshops:**

National Workshop on Safety and Control of Toxic  
Chemicals and Pollutants  
Sri Lanka [February 1990]

National Workshop on Safety and Control of Toxic  
Chemicals and Pollutants  
Myanmar [April 1990]

**Project Specific Training Materials:**

- ▶ Preparation of Posters and Leaflets in Bahasa, Indonesia, 1991.  
(WHO SEARO with Dr Santoso Karo Karo, Indonesia)
- ▶ Manual for Community Health Workers on Diagnosis and Treatment of Pesticide Poisoning,  
May 1991. (WHO SEARO with Malaria Research Centre, Delhi, India)
- ▶ Manual for Trainers of Community Health Workers on Diagnosis and Treatment of Pesticide  
Poisoning, May 1991. (WHO SEARO with Malaria Research Centre, Delhi, India)

## Regular Programme Activities of the Eastern Mediterranean Centre for Environmental Health Activities (CEHA)

**Executing Unit:**

Centre for Environmental Health Activities (CEHA)

**Time Frame:**

Ongoing

**Geographic Scope:**

Eastern Mediterranean Region

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Prevention of environmental pollution

Air pollution

**Description:**

CEHA is in the process of developing a Regional Strategy for Chemical Safety. The training and technical assistance activities of CEHA have not yet been incorporated into defined programme areas. Workshops have focused on air pollution control and pollution prevention.

**International Workshops:**

Regional Workshop on Development of Chemical Safety Programme  
Amman, Jordan [13-16 November 1989]

Second Regional Workshop on CEHANET Procedures  
Amman, Jordan [19-29 May 1990]

Regional Training Course on Air Pollution  
Amman, Jordan [4-9 August 1990]

Regional Workshop for Environmental Health Educators  
Amman, Jordan [25-29 November 1990]

Development of Regional Strategy for Health and Environment  
Amman, Jordan [June 1993]

Workshop on Prevention of Environmental Pollution at Source  
Nicosia, Cyprus [20-23 September 1993]

**Other Activities/Services:**

- ▶ CEHA study on the impact of pesticides.

## **Regular Programme Activities of the European Centre for Environmental Health**

**Executing Unit:**

European Centre for Environmental Health - Bilthoven Division

**Time Frame:**

Ongoing

**Geographic Scope:**

European Region

**Responsible Officer/Contact Person:**

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Project Manager

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**Main Subject Categories Covered:**

Environmental epidemiology

Quality control/quality assurance

Good laboratory practices

Geographical information systems

Good agricultural practices

Toxicology

**Description:**

Much of the training and technical assistance activities of the **European Centre for Environmental Health** are conducted through National Integrated Programmes on Environmental Health (NIPEH). Activities of the programme aim at the development of indigenous capacity in environmental health management. Training and technical assistance activities are carried out to improve knowledge and skills in the areas of environmental epidemiology, quality control/quality assurance, good laboratory practices, application of geographical information systems, good agricultural practices and modern approaches to toxicology. Short courses are organized at appropriate institutions within the country and a number of professionals are selected and receive more extensive training at centres of excellence in environmental health in Europe. The project also provides laboratory and computer equipment to participating national institutes for use in environmental health research.

**International Workshops:**

Training Course on Environmental Health Impact Assessment  
(Organized with National Institute of Hygiene)  
Budapest, Hungary [18-22 October 1993]

Training Seminar on Environmental Health Impact Assessment  
(Organized with Institute of Hygiene and Public Health)  
Bucharest, Rumania [13-17 December 1993]

**National Workshops:**

Workshop on Basic Elements of Quality Assurance/Quality Control  
(Organized with the Lodz Institute of Occupational Medicine)  
Lodz, Poland [25-29 May 1992]

Course on Good Agricultural Practice  
(Organized with Agricultural Consulting Centre)  
Modliszewice, Poland [16-21 November 1992]

Workshop on Development of Joint Protocols for 4 Areas  
Dolovany, Slovak Republic [24-30 June 1992]

Course on Basic Elements of Quality Assurance/Quality Control  
(Organized with the National Institute of Public Health)  
Prague, Czech Republic [25-29 January 1993]

Workshop on Integrated Programmes on Environment and Health Standardized Joint Protocols  
(Organized with National Institute of Public Health)  
Prague, Czech Republic [14-16 September 1992]

Training Course on Modern Epidemiological Methods and Design  
(Organized with National Institute of Public Health)  
Prague, Czech Republic [19-23 April 1993]

Course on Good Agricultural Practice  
(Organized with Solidarity Training Centre)  
Lublin, Poland [23-26 October 1992]

**Other Activities/Services:**

- ▶ Air Pollution Exposure Database.

WHO EURO has developed a geographically based database on human exposure to air pollutants in the European region.

**Programme Specific Training Materials:**

- ▶ Training Manuals translated into the national languages:
  - Quality Control/Quality Assurance
  - Environmental Epidemiology
- ▶ Training Packages on the following topics:
  - quality control/quality assurance
  - epidemiology - the basics
  - advanced methods of environmental epidemiology
  - good laboratory practices
  - application of geographical information systems
  - good agricultural practices
  - modern approaches in toxicology

**Planned Activities:**

- ▶ Environmental Physician Training Scheme  
Sosnowiec, Poland [September 1994]
- ▶ Course on Good Laboratory Practice  
Lodz, Poland [February 1994]
- ▶ Course on Basic Elements of Quality Assurance/Quality Control  
Budapest, Hungary [February 1994]
- ▶ Course on Good Laboratory Practice  
Lodz, Poland [March 1994]
- ▶ Summer School on Epidemiology and Public Health  
Prague, Czech Republic [July 1994]

Entry #: K1

## **Regular Programme Activities of the Pan American Centre for Human Ecology and Health (ECO)**

**Executing Unit:**

Centre for Human Ecology and Health (ECO)

**Time Frame:**

Ongoing

**Geographic Scope:**

Latin American and Caribbean Region

**Responsible Officer/Contact Person:**

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Pan American Centre for Human Ecology and Health  
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**Main Subject Categories Covered:**

Risk assessment  
Environmental epidemiology  
Toxicology

**Description:**

The training and technical assistance activities of the Pan American Centre for Human Ecology and Health (ECO) aim at developing environmental health manpower and national environmental health policies in the areas of epidemiological and toxicological aspects of the main industrial and agricultural chemical pollutants. The Centre provides technical support and information to national and sub-regional programmes to reduce, prevent and control human exposure to toxic substances. In addition to the regular programme activities, ECO has an informal agreement with the Inter-American Development Bank (IDB) in which ECO provides training of IDB sectorial field staff on conducting Environmental Impact Assessments. The cooperative agreement involves developing and conducting 2½-day seminars. ECO also jointly carries out a training programme on risk assessment and management in the Latin American region with the U.S. EPA.

**International Workshops:**

Workshop on Chemical Information Centres  
Metepac, Mexico [27 February - 3 March 1989]

**National Workshops:**

Seminar for Inter-American Development Bank  
Directors on Environmental Impact Assessment  
Bogota, Columbia [1992]

Seminar for Inter-American Development Bank Staff  
on Environmental Impact Assessment  
Bogota, Columbia [1992]

Seminar for Inter-American Development Bank Staff  
on Environmental Impact Assessment  
Port of Spain, Trinidad and Tobago [1992]

Seminar for Inter-American Development Bank Staff  
on Environmental Impact Assessment  
Guatemala City, Guatemala [1992]

Seminar for Inter-American Development Bank Staff  
on Environmental Impact Assessment  
Buenos Aires, Argentina [1992]

Introduction to Risk Assessment and Management  
(with MASICA an U.S. EPA)  
Managua, Nicaragua [12-16 July 1993]

**Other Activities/Services:**

- ▶ PROECO Network. (Intersectoral, multiagency network of collaborating institutions)
- ▶ ECO-LINE CD-ROM. (On-line bibliographic data base)
- ▶ Chemical information facilities.

ECO assists countries of the region in establishing local information facilities on chemical substances.

- ▶ Specific Chemical Safety Studies.

ECO is conducting studies of the health effects of: hazardous wastes in Cd. Juárez, México; Mercury pollution from gold mining in the Brazilian Amazon Region; and heavy metals in drinking water in La Paz, Bolivia.

**Programme Specific Training Materials:**

- ▶ 14 Sets of training materials.

ECO has developed materials in Spanish for 600 hours of training in environmental epidemiology, toxicology, and risk assessment.

## Central American Programme for Health and Ecology (MASICA)

**Executing Unit:**

Regional Office for the Americas (AMRO/PAHO)

**Time Frame:**

1991 - Ongoing

**Geographic Scope:**

Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Chemicals safety institutional strengthening  
Pesticides  
Industrial and vehicular pollution

**Description:**

The **MASICA** training and technical assistance activities aim at advancing health protection, environmental improvement, and pollution control through seven interrelated projects that address the key aspects of problems that are tightly interlinked with human health and sustainable development. Of the seven projects, three have an explicit chemicals safety training and technical assistance component. These include the projects for: Institutional Strengthening; Occupational and Environmental Aspects from Exposure to Pesticides; and Industrial and Vehicular Contamination. MASICA also cooperates with the joint ECO/U.S. EPA training programme on risk assessment and management.

**International Workshops:**

First Meeting of Focal Points of MASICA  
Managua, Nicaragua [2-5 April 1991]

**WHO - SECTION III**

**TRAINING AND TECHNICAL SUPPORT  
MATERIALS/SERVICES RELATED TO THE  
ENVIRONMENTALLY SOUND MANAGEMENT OF  
CHEMICALS**

## **HEALTH AND ENVIRONMENT PROGRAMMES**

### **Programme for the Promotion of Chemical Safety**

Manuals, Guides and Technical Publications:

- ▶ Guidelines for Poisons Information Centres: Their Roles in Poisons Control Programmes. Geneva, 1994.
- ▶ Manual on Simple Analytical Toxicology Techniques. Geneva, 1994.
- ▶ IPCS/INTOX Poison Information Package. (WHO/PCS, Canadian Centre for Occupational Health and Safety (CCOHS) and the Centre de Toxicologie du Québec (CTQ))
- ▶ Health Aspects of Chemicals: Guidance on Chemical Accident Awareness, Preparedness and Response for Health Professionals and Emergency Responders. (IPCS/OECD/UNEP IE-PAC/WHO-ECEH)
- ▶ Chemical Safety Matters. (IUPAC/IPCS joint publication by CUP)

Newsletters and Brochures:

- ▶ IPCS News.
- ▶ The International Programme on Chemical Safety (IPCS). Geneva. (English, French, Spanish, German, Russian and Chinese)

### **Office of Global and Integrated Environmental Health**

Manuals, Guides and Technical Publications:

- ▶ Basic Epidemiology. Geneva, 1993. (WHO publication).

This book serves as the student text for the Introductory to Environmental Epidemiology workshops and provides a basic introduction to the practice and the public health role of epidemiological research.

- ▶ Teacher's Guide for One-Week Training Workshop: Basic Epidemiology. Geneva, 1994. (WHO/EHG/94.01).

This guide is to be used in conjunction with the student text and provides advice on how to organize a course in basic epidemiology.

*WHO - Section III: Training and Technical Support Materials/Services*

- ▶ One-day Workshop on Chemical Safety. (WHO).
- ▶ Two-day Course in Microcomputer Uses in Epidemiology.
- ▶ Problem-based Training Exercises for Environmental Epidemiology: Instructor's Guide. Geneva, 1992. (WHO/PEP/92.05A)
- ▶ Problem-based Training Exercises for Environmental Epidemiology: Group Practice Exercises for Students. Geneva, 1992. (WHO/PEP/92.05B)
- ▶ Investigating Environmental Disease Outbreaks - a Training Manual. Geneva, 1991. (WHO/PEP/91.35).
- ▶ Health Monitoring in the Prevention of Diseases Caused by Environmental Factors. Geneva, 1990. (WHO/PEP/89.23)
- ▶ Biological Monitoring of Metals. Geneva, 1994. (WHO/EHG/94.02)
- ▶ Major Poisoning Episodes from Environmental Chemicals: Teaching Examples for Instructors of Environmental Health. Geneva, 1991. (WHO/PEP/91.5).
- ▶ User's Manual for the CARDBOX Read-only Version Software. Geneva, 1989. (WHO/PEP/89.27).
- ▶ User's Guide for the GEENET Database. Geneva, 1991. (WHO/PEP/91.15).

Newsletters and Brochures:

- ▶ GEENET Update.
- ▶ GETNET Update.

Databases:

- ▶ GEENET Database.

Other Materials/Services:

- ▶ A Course in Microcomputer Use for Epidemiologists. Geneva, 1993. (WHO/PEP/GEENET/93.19).
- ▶ GEENET Worldwide Inventory of Courses: 1991-1993. Geneva, 1992. (WHO/PEP/92.15).
- ▶ Inventory of Audiovisual Materials in the Environmental and Occupational Health Field. Geneva, 1990. (WHO/PEP/90.14)

*WHO - Section III: Training and Technical Support Materials/Services*

- ▶ Assessment of Training Needs in Environmental and Occupational Health. Geneva, 1992. (WHO/PEP/92.23).
- ▶ Inventory of Ongoing Research in Occupational Health and Environmental Epidemiology in Developing Countries. Geneva, 1991. (WHO/PEP/91.03).

**Office of Operational Support in Environmental Health**

Manuals, Guides and Technical Publications:

- ▶ Motor Vehicle Air Pollution: Public Health Impact and Control Measures. Mage D T, Zali O (eds.). Geneva, 1992. (WHO/PEP/92.4)
- ▶ GEMS/AIR: A Global Programme for Urban Air Quality Monitoring and Assessment. Geneva, 1993. (WHO/PEP/93.7 UNEP/GEMS/93.A.1)
- ▶ Assessment of Sources of Air, Water, and Land Pollution: A Guide to Rapid Source Inventory Techniques and Their Use in Formulating Environmental Control Strategies, Part One: Rapid Inventory Techniques in Environmental Pollution. Economopoulos, A P. Geneva, 1993. (WHO/PEP/GETNET/93.1-A).
- ▶ Assessment of Sources of Air, Water, and Land Pollution: A Guide to Rapid Source Inventory Techniques and Their Use in Formulating Environmental Control Strategies, Part Two: Approaches for Consideration in Formulating Environmental Control Strategies. Economopoulos, A P. Geneva, 1993. (WHO/PEP/GETNET/93.1-B).
- ▶ Selected Methods of Measuring Air Pollutants. Geneva, 1976. (WHO Offset Publication No. 24)
- ▶ Analyzing and Interpreting Air Monitoring Data. Geneva, 1980. (WHO Offset Publication No. 51)
- ▶ Estimating Human Exposure to Air Pollutants. Geneva, 1982. (WHO Offset Publication No. 69)
- ▶ GEMS/Water Operational Guide. 3rd ed. Canada, 1992. (National Water Research Institute (NWRI) and WHO)
- ▶ GEMS/Water Analytical Quality Control Guidelines for Water Laboratories. 1985. (WHO/EFP/85.4.)
- ▶ Water Quality Assessments: A Guide to the Use of Biota, Sediments and Water in Environmental Monitoring. (UNESCO, WHO, and UNEP) 1st ed. London, 1992. (Chapman & Hall Ltd).

*WHO - Section III: Training and Technical Support Materials/Services*

- ▶ Manual on Water Quality Monitoring, Operational Hydrology Report No. 27. 1988. (WMO)
- ▶ Establishing and Equipping Water Laboratories in Developing Countries. Geneva, 1986. (WHO/PEP/86.2).
- ▶ Handbook for Water Quality Monitoring in Developing Countries. Geneva, 1991.

Databases:

- ▶ GEMS/DATA software for GEMS quality data management and 1992 upgrade.

Newsletters and Brochures:

- ▶ GEMS Water Quality Newsletter. (National Water Research Institute (NWRI) of Canada and UNEP/GEMS).

Other Materials/Services:

- ▶ GEMS/WATER 1990-2000: The Challenge Ahead. Geneva, 1991. (WHO/PEP/91.2).

## **DIVISION OF FOOD AND NUTRITION**

### **Food Safety Unit**

Manuals, Guides and Technical Publications:

- ▶ WHO/FAO Data Sheets on Pesticides. (FAO and WHO)
- ▶ Principles for the Toxicological Assessment of Pesticide Residues in Food, Environmental Health Criteria, No. 104. 1990.
- ▶ Guidelines for Predicting Dietary Intake of Pesticide Residues. 1989.
- ▶ Guidelines for the Study of Dietary Intakes of Chemical Contaminants. 1985. (WHO Offset Publication, No. 87).

## **REGIONAL OFFICES**

### **Regional Office for Europe**

Manuals, Guides and Technical Publications:

- ▶ Technical Guide for Health and Other Professionals Involved in the Health Aspects of Chemical Accidents. 1993. (WHO/EURO, OECD and UN/IE-PAC)
- ▶ Checklist of Items for Responsible Officers in Health, Environment and Other Ministries. 1993. (WHO/EURO, OECD and UN/IE-PAC)

### **Regional Office for the Americas**

Newsletters and Brochures:

- ▶ Human Ecology and Health. (Newsletter of AMRO/PAHO/ECO).

Official WHO publications may be ordered from:

World Health Organization Publications  
Distribution and Sales  
1211 Geneva 27  
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**CHAPTER 3**

**UNITED NATIONS ENVIRONMENT PROGRAMME**

## UNEP-TABLE OF CONTENTS

### SECTION I: ORGANIZATIONAL STRUCTURE AND MAJOR PROGRAMMES

### SECTION II: TRAINING AND TECHNICAL ASSISTANCE ACTIVITIES

#### A. International Register of Potentially Toxic Chemicals PAC

- ▶ Training Programme on the Implementation of the London Guidelines in Developing Countries . . . . . A1
- ▶ Training Programme on Chemicals Management in Countries with Economies in Transition . . . . . A2
- ▶ Training Programme on Control of Chemical Hazards (1981-1991) . . . . . A3
- ▶ Training on the Establishment of National Registers of Potentially Toxic Chemicals (1984-1988) . . . . . A4
- ▶ Training and Capacity Building Activities for Strengthening of Information Exchange of Chemicals (1988-1991) . . . . . A5

#### B. Global Environmental Monitoring System PAC

For relevant training and technical assistance activities see Chapter 2 - WHO

#### C. Industry and Environment PAC

- ▶ Awareness and Preparedness for Emergencies at the Local Level (APELL) . . . . . C1
- ▶ Cleaner Production Programme . . . . . C2
- ▶ OzonAction Programme . . . . . C3
- ▶ Industrial Pollution Management Programme . . . . . C4

#### D. Terrestrial Ecosystems Branch

- ▶ Agricultural Lands and Agrochemicals . . . . . D1

#### E. Oceans and Coastal Areas PAC

- ▶ Implementation of the Regional Action Plan for the Mediterranean . . . . . E1
- ▶ Implementation of the Regional Action Plan for the Wider Caribbean . . . . . E2

F. Environmental Law and Institutions PAC

G. Regional Office for Asia and the Pacific

- ▶ Asia-Pacific Network for Tertiary-Level Environmental  
Training ..... G1

H. Regional Office for Latin America and the Caribbean

**SECTION III: TRAINING AND TECHNICAL SUPPORT MATERIALS/SERVICES**

**SECTION IV: CONTACT POINTS AND ADDRESSES**

**UNEP - SECTION I**

**ORGANIZATIONAL STRUCTURE AND MAJOR  
PROGRAMMES RELATED TO THE ENVIRONMENTALLY  
SOUND MANAGEMENT OF CHEMICALS**

## **INTRODUCTION TO UNEP**

The United Nations Environment Programme was established in 1972 following a recommendation of the United Nations Conference on the Human Environment, held in Stockholm in 1972. As mandated by the 1972 Stockholm Conference, UNEP catalyses and coordinates environmental work within and outside of the U.N. System. UNEP also provides leadership and encourages partnership in caring for the environment by inspiring, informing and enabling nations and people to improve their quality of life without compromising that of future generations.

In 1993, UNEP started a major re-organization of its Work Programme taking into account the following criteria: responsiveness to Agenda 21; Governing Council guidance; needs of Governments; regional integration; partnerships; and focus on achievement of results. The 1994/1995 UNEP Work Programme builds on the strengths and past achievements and recognizes the necessity of creating intra-UNEP coordination, strong partnerships, and the avoidance of duplication of efforts. The sectorial approach to environmental problems as practised in the past in the UNEP administration is replaced by clustering programmes to encourage synergy and more effective results. At present these clusters are:

- \* international consensus building;
- \* national environmental management support;
- \* environmental assessment, information for decision making and disaster prevention, preparedness and response; and
- \* core (Headquarters Management).

The following 13 programme areas were adopted by the 17th Governing Council in May 1993: Atmosphere; Freshwater Resources; Terrestrial Ecosystems; Oceans and Coastal Areas; Health, Human Settlements & Welfare; Environmental Economics; Environmental Law; Toxic Chemicals and Waste; Industry and Energy; Earthwatch; Capacity Building; Regional Cooperation, and Core.

UNEP's Regional Offices aim at enhancing environmental awareness of governments and the general public in the countries of the various regions (Asia and the Pacific, Latin America and the Caribbean, Europe, West Asia, and Africa). In addition, UNEP Regional Offices are mandated to participate in planning and implementing the activities of UNEP originating from the major programme areas and assist countries in implementing Regional and National Environmental Action Plans.

The UNEP sub-programme 8 **Toxic Chemicals and Waste** has the objective to provide guidance, information, and tools for the environmentally sound management of chemicals for sustainable development. The programme will thereby help increase capacities of nations to assess and manage risks posed by chemicals and to adopt risk reduction activities as appropriate. Through the strengthened International Programme on Chemicals Safety (IPCS), UNEP will play an active role: with U.N. agencies, other international organizations, national institutions, NGOs and industry in the practical assessment of health and environmental hazards and risks posed by chemicals; in information exchange on chemical risks, use and emissions; and in the development of guidelines for national risk reduction programmes.

The following are the essential components of UNEP's strategy in toxic chemicals and waste management:

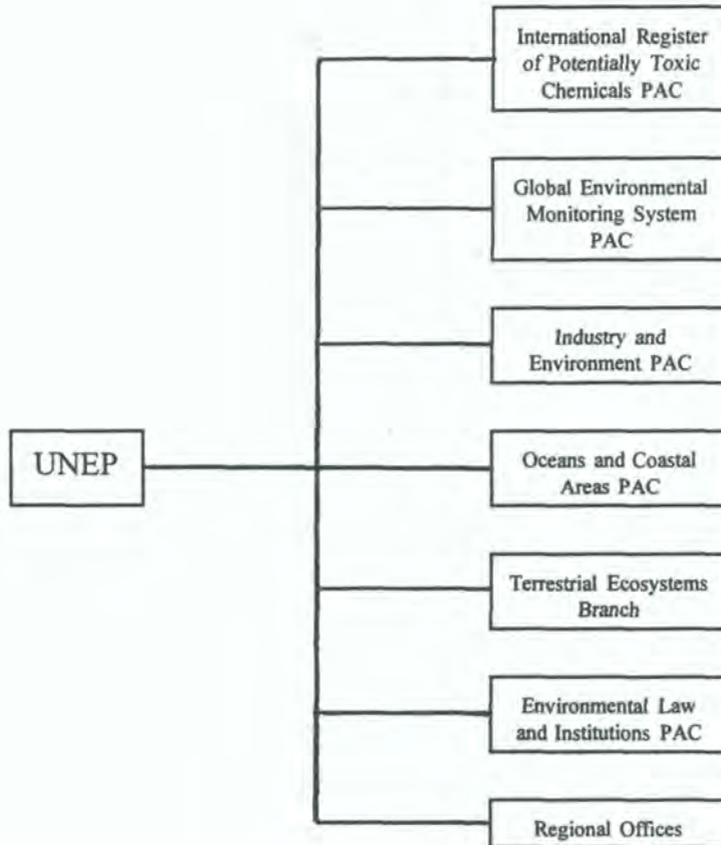
- (1) further enhancement of an *information* clearing house, including data collection, validation and data compilation in databases, and data dissemination and exchange through regional and national networks;
- (2) promotion of the development and application of *methodologies* relevant at national and sub-regional level for assessing health and environmental hazards and risks;
- (3) promotion of development and application of methodologies and tools for the implementation of effective national *chemical management systems*, ensuring safer and cleaner production.

Other sub-programmes of UNEP which are closely related to the *Toxic Chemicals and Waste* sub-programme include *Health, Human Settlement and Welfare, Environmental Law, Industry and Energy*, and *Capacity Building*.

Within UNEP, the International Register of Potentially Toxic Chemicals PAC, the Industry and Environment PAC, the Environmental Law and Institution PAC, the Secretariat of the Basel Convention, and the Regional Offices of UNEP will co-operate in planning and implementing the elements of the *Toxic Chemicals and Waste* sub-programme. Capacity building is one of the major elements of the UNEP *Toxic Chemicals and Waste* Sub-Programme. Relevant activities will be implemented in co-operation with Regional Offices and with partners in the new IPCS as well as UNITAR.

Programme integration and regional delivery are two crucial elements of the UNEP 1994/1995 Programme. With this strategy in mind, existing cooperation with FAO and UNITAR on training related to the implementation of the PIC procedure will be strengthened. Additional cooperation is being developed: with UNEP ELI/PAC on proving legislative guidance; and with WHO on risk assessment methodology. Regional delivery and consultation with UNEP Regional Offices has been initiated, in particular, with the UNEP Regional Office for Europe on the Training Programme on Chemicals Management in Countries with Economies in Transition.

The following is an overview of the UNEP units and Programme Activity Centres (PACs) which execute chemical related activities (please note that due to the on-going re-orientation process institutional changes may occur).



## UNITS AND PROGRAMMES CONCERNED WITH CHEMICALS MANAGEMENT

### A. International Register of Potentially Toxic Chemicals (IRPTC PAC)

The International Register of Potentially Toxic Chemicals (IRPTC) operates several activities and services related to chemicals management. These include the implementation of the London Guidelines for the Exchange of Information on Chemicals in International Trade, the operation of the IRPTC Databank and a global network for the exchange of information through network partners, and the implementation of a Toxic Chemicals and Waste Management Capacity Building Programme.

#### *Implementation of the London Guidelines*

IRPTC has the responsibility to facilitate the implementation of the London Guidelines for the Exchange of Information on Chemicals in International Trade, in particular, the Prior Informed Consent (PIC) procedure. Jointly with FAO, IRPTC operates the FAO/UNEP Joint Programme on the Operation of PIC. Under this programme Decision Guidance Documents for chemicals included in the PIC procedure are issued and a databank with all PIC relevant information (e.g. import decisions) is maintained.

#### *IRPTC Databank and Its Use in Decision Making*

Data on the hazards of chemicals and the methodologies to assess such hazards are the corner stone of chemicals management. The IRPTC databank, which is available to users as a personal computer version, contains *Data Profiles* on over 800 chemicals. Information contained in the files is meant to provide a basis for sound risk management decisions, in particular, for chemicals subject to the PIC procedure. The *Legal File* contains national and international regulatory and legal information on over 8000 chemicals. Together with its partners, IRPTC is developing methodology for the use of these data in decision making e.g. for priority setting and hazard assessment.

#### *IRPTC's Global Network of Partners*

IRPTC has established several global networks which address specific issues of international information exchange: National Correspondents assist IRPTC in information gathering and dissemination; Contributing Network Partners assist with the collection and validation of data and provide scientific and technical expertise upon request; and Designated National Authorities are governments institutions which are responsible at the national level for implementing the London Guidelines.

IRPTC's emerging Global Network of Partners for Electronic Exchange of existing information is one of the keys for future information exchange and data management. Presently, IRPTC is engaged with UNECE, IPCS and specific member countries to identify important data sources and to explore the possibility of standardizing data exchange mechanisms within the framework of UN Electronic Data Interchange (EDI) programme.

*Toxic Chemicals and Waste Management Capacity Building Programme*

In 1991 IRPTC started a process of consolidating and strengthening its training and technical assistance activities in countries of Central and Eastern Europe and in developing countries. Building on its earlier capacity building activities in Central and Eastern Europe (see Section II, Entry #s: A3 and A5), IRPTC, in light of political changes resulting in the establishment of many new states and bringing a larger number of countries in economic transition, started to develop a new concept and new approaches to help improve chemicals management schemes for these countries. In developing countries, agreement on co-operation with UNITAR and the initiation of a joint UNEP/UNITAR Training Programme on the Implementation of the London Guidelines in developing countries constituted a major step in strengthening IRPTC capacity building activities in the developing regions.

IRPTC's ongoing training activities aim at strengthening the capabilities and capacities in countries to identify, better manage and reduce the risks posed by chemicals to human health and the environment throughout their entire life cycle as an integral part of sustainable development. One of the major goals of this approach is to contribute to the development of national strategies and action plans for management and reduction of chemicals risks.

The new IRPTC strategy has streamlined relevant experience and methodologies resulting from previous activities and incorporates new approaches. The strategy has a modular approach including modules such as: providing access and training on the IRPTC databank and other relevant chemical data sources; training related to the implementation of the PIC procedure; training on methodologies needed to assess health and environmental risks posed by exposure to chemicals and wastes; and training on chemical management tools related to the London Guidelines, such as inventory building and priority setting for chemicals in use.

The IRPTC training approach is global, however, taking into consideration different stages of development and institutional resources in various regions as well as different training needs, the elements and sequence of activities are adapted to meet the requirements of the recipient countries and regions. The following table summarizes a framework of objectives and activities of the global IRPTC training strategy which will be further developed and implemented with partners in the context of the new IPCS as well as UNITAR. (For their adaption to the various regions please refer to Section II of the UNEP chapter, Entry #s: A1 and A2).

Framework of Objectives and Activities of the IRPTC Capacity Building Strategy

Objectives	Activities
Introduction of general provisions of the London Guidelines and PIC procedure	Workshops for Designated National Authorities, other concerned government officials, and industry
Awareness raising on existing international, regional and national data and information sources and data bases on toxic chemicals and hazardous wastes	Workshops on information access and use of the IRPTC Databank (computer training) and other relevant databases  On-the-job follow-up training
Strengthening of the exchange of scientific, legal, and regulatory information	Workshops to strengthen national information systems/centres on chemicals  Workshops on national inventories and registers for chemicals in use
Improvement of risk assessment methodologies and procedures and their application in chemicals management	Workshops on the use of data and methodologies for hazard assessment  Workshops on priority setting for chemicals in use
Facilitation of national strategies and action plans for chemicals management and risk reduction	Workshops for decision makers from various concerned ministries (cross sectoral)
Development of chemicals legislation and decision-making schemes for chemicals management	Workshops on the development of legislative systems for chemicals control  Consultant assistance on legal aspects of chemicals management

## **B. Global Environmental Monitoring System (GEMS PAC)**

GEMS is a part of the Earthwatch Programme and is located at UNEP Headquarters in Nairobi. Its principal role is to make assessments of the present state of the global environment, identify trends and, where possible, determine their causes. GEMS links together 25 major global monitoring networks and has activities in 142 countries concerned with five principal areas: climate, transboundary pollution, terrestrial renewable natural resources, oceans and environmental pollution. GEMS networks and activities related to environmental pollution and its health effects are implemented primarily by WHO. These include the GEMS/WHO Water Programme (GEMS/WATER), the GEMS/WHO Air Programme (GEMS/AIR), the GEMS/WHO Human Exposure Assessment Location project (GEMS/HEAL) and the GEMS/WHO/FAO Food Contamination Monitoring and Assessment Program (GEMS/FOOD).

## **C. Industry and Environment Programme Activity Centre (IE PAC)**

The Industry and Environment Programme Activity Centre is part of the Environmental Management Programme and works with industry, governments and non-governmental organizations towards environmentally sound forms of industrial development. In addition to the programmes introduced below, IE PAC operates a query-response service, maintains an extensive library and bibliographic data base and publishes a *Technical Report Series*. These services address the information needs of governments, industry and environmental associations on issues and methods of environmental management. IE PAC also encourages the use of technology assessment as a tool to support the development and application of environmentally sound technologies. Technical cooperation activities of IE PAC consist of providing experts to industrial organizations and countries to help devise and implement programmes for reducing industrial pollution.

### *Awareness and Preparedness for Emergencies at the Local Level (APELL)*

The APELL Programme assists decision-makers and technical personnel in improving community awareness of hazardous installations and in preparing appropriate response plans to deal with potential industrial emergencies. The objectives of the programme are to prevent loss of life or damage to health and social well-being; avoid property damage; and ensure environmental safety in the local community. APELL Seminar/Workshops address senior level participants from industry, government, academia and non-government organizations (NGOs). The Seminars/Workshops introduce the APELL process and feature case studies on industrial emergencies in developed and developing countries.

### *Cleaner Production Programme*

The Cleaner Production Programme facilitates worldwide awareness, development, adoption and transfer of cleaner production technologies. Through an informal network of experts in the public and private sectors, the programme collects and disseminates information on

## *UNEP - Section I: Structure and Programmes*

cleaner production concepts, technical applications, and assists in the development of cleaner production programmes. The programme maintains the International Cleaner Production Information Clearinghouse (ICPIC) which is an on-line system providing cleaner production case studies, a bibliography of document abstracts, a listing of experts worldwide, and cleaner production news and events. The Centre also published technical reports and manuals on cleaner production technologies and Working Groups collect and disseminate industry specific information. Technical assistance activities consist of fostering links between experts and launching demonstration projects, including assistance in establishing National Cleaner Production Centres. Training activities involve government, industry and academia, and are intended to prompt action and the development of programmes on cleaner production at the national and institutional levels.

### *Ozonaction Programme*

The Ozonaction Programme is the UNEP contribution to the Interim Multilateral Ozone Fund (IMOF). The IMOF was established to provide financial and technical assistance to developing countries that are party to the Montreal Protocol. The OzonAction programme provides information exchange, country programmes and training/networking to developing countries for the reduction of Ozone Depleting Substances (ODSs). The information exchange element of the programme transfers information concerning policy and technical options to developing countries for the phase-out of the controlled ODSs. The country programmes establish a baseline survey on the use of the controlled substances in developing countries and draw up policy strategies for their replacement and control. Sectoral activities provide guidance to specific industries through training, technical reports and the development of management tools. The training/networking elements of the programme consist of regional workshops, national activities and the development of training materials. Regional workshops are designed to provide government and industry decision makers with basic information on ODS control policies and strategies.

### *Industrial Pollution Management Programme*

The Industrial Pollution Management Programme provides information and advise on environmental management options specifically to priority industry sectors such as tanning, textiles, electronic component manufacture, and pulp and paper. Prevention of pollution (both through cleaner production and through treatment and safe disposal) as well as chemical safety are among the programme's objectives. Through a cross-sectoral approach, the programme deals with issues such as environmental audits, chemical storage and monitoring. A recent initiative has been the train-the-trainers programme to improve environmental training at tertiary institutes so as to incorporate Agenda 21 issues more thoroughly in engineering and science curricula. The training activities promote technical aspects of industrial pollution management as well as interactive training methodologies. This activity is run in collaboration with other UNEP units and with ILO and WHO.

#### **D. Terrestrial Ecosystems Branch**

The Terrestrial Ecosystems Branch is part of the Environmental Management Programme and conducts activities related to the monitoring, assessment and preservation of ecosystems worldwide. The Branch provides assistance to countries through support for national and regional programmes, research, developing publications and training. The activities of the Branch are divided into a number of programme areas corresponding to various types of ecosystems and areas of concern of which, the Agricultural Lands and Agrochemicals programme area has a chemicals safety training and technical assistance component.

##### *Agricultural Lands and Agrochemicals*

The Agricultural Lands and Agrochemicals programme area of the Terrestrial Ecosystems Branch responds to the increasing dangers to human health and the environment that result from abuse and misuse of chemical pesticides. The activities of this programme aim at assisting developing countries to develop and apply sustainable agricultural systems and reduce over-dependence on pesticides in agricultural and livestock production. The programme assists the IPCS-PCS to publish Environmental Health Criteria documents and is also active in the FAO/UNEP/WHO Panel of Experts on Environmental Management for Vector Control (PEEM) and the FAO/UNEP Panel of Experts on Integrated Pest Control. The main training and technical assistance activities of the Agricultural Lands and Agrochemicals programme are conducted on the effective use and correct handling of pesticides as well as on biological pest control in order to reduce pesticide use. Activities address government administrators, scientists, farm advisors, and farmers. The programme also provides support to the training activities of IPCS-PCS in the area of Prevention and Treatment of Chemical Poisonings.

#### **E. Oceans and Coastal Areas Programme Activity Centre (OCA PAC)**

The Oceans and Coastal Areas Programme Activity Centre (OCA/PAC) is part of the Environmental Management Programme and has three components: Global Marine Environment, Regional Marine Environment and Living Marine Resources. Chemical safety is addressed through the implementation of the Action Plans under UNEP's Regional Seas Programme. Each Regional Action Plan outlines areas for the participating countries of the region to cooperate in the areas of research, monitoring, control of pollution and development of coastal and marine resources. Participating countries of each region agree to a legally binding convention embodying general commitments and detailed protocols dealing with specific issues, such as oil spills, dumping, emergency cooperation and protected areas. The Regional Action Plans for the Mediterranean and the Wider Caribbean have UNEP-sponsored coordinating units to carry out the training and technical assistance activities.

*Regional Action Plan for the Mediterranean*

The Regional Action Plan for the Mediterranean is implemented by the Mediterranean Regional Coordinating Unit (MEDU) located in Athens, Greece. The plan is structured around the Convention for the Protection of the Mediterranean Sea Against Pollution. The convention is supplemented by four protocols on, respectively, Prevention of Pollution by Dumping from Ships and Aircraft; Pollution by Oil and Other Harmful Substances; Pollution from Land-Based Sources; and Specially Protected Areas. In recent years the programme has focused on integrated coastal zone management to give greater prominence to the management of coastal areas and to integrate more closely the various components of the Action Plan. MEDU also implements an extensive marine pollution monitoring programme and a Regional Marine Pollution Emergency Response Centre in Malta. MEDU conducts training workshops and seminars on methods for monitoring marine pollution and on establishing monitoring programmes.

*Wider Caribbean Action Plan*

The Regional Coordinating Unit (RCU) for implementing the Wider Caribbean Action Plan is located in Kingston, Jamaica. The RCU has five regional subprogrammes: Specially Protected Areas and Wildlife (SPAW); Assessment and Control of Marine Pollution (CEPPOL); Integrated Planning and Institutional Development (IPID), Information Systems (CEPNEP); and Education, Training and Awareness (ETA). The sub-programme area for Assessment and Control of Marine Pollution (CEPPOL) is jointly implemented by UNEP and UNESCO's Intergovernmental Oceanographic Commission (IOC). The programme provides governments with guidelines and information on the enforcement and establishment of measures to control and reduce marine pollution. It focuses on controlling domestic, industrial and agricultural sources of pollution, as well as monitoring pollution by oil and marine debris. It also conducts and supports research on damaged ecosystems and pesticide contamination. Research results are used to develop proposals for remedial action. CEPPOL has conducted training workshops and seminars for national policy-makers and decision-makers to facilitate the development of water quality and effluent guidelines. Training activities are also conducted on methods for monitoring marine pollution and on establishing monitoring programmes.

*Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region*

The OCA/PAC acts as a Secretariat for the Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region which is structured around the Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region. This convention has two related protocols namely the Protocol concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region and the Protocol concerning Co-operation in Combating Marine Pollution in Cases of Emergency in the Eastern African Region. The focus of the Programme is on integrated coastal zone management, marine pollution assessment and

control and the development of a resource atlas and database for the region. The projects entail training workshops on methodologies for the development of integrated coastal management plans, quantification of land-based sources of pollution, provision of equipment, specialized training and public awareness programmes.

*Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the West and Central African Region*

The OCA/PAC acts as a Secretariat for the Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the West and Central African Region which is structured around the Convention for the Protection, Management and Development of the Marine and Coastal Environment of the West and Central African Region and its related protocol: Protocol concerning Co-operation in Combating Marine Pollution in Cases of Emergency. The focus of the Programme is on integrated coastal zone management and marine pollution assessment. The projects entail training workshops on methodologies for the development of integrated coastal management plans, quantification of land-based sources of pollution and specialized training and public awareness programmes.

**F. Environmental Law and Institutions PAC (ELI PAC)**

The ELI PAC of UNEP is part of the Support Measures Programme and has developed and helped to implement several major international agreements, including the Vienna Convention for the Protection of the Ozone Layer. ELI PAC also assists developing countries to enact and administer national environmental legislation. In the area of chemical safety ELI PAC issues legislative guidance documents on various aspects of chemicals management and facilitates the international discussions on the possible development of a legally binding instrument for the application of the PIC procedure. Jointly with UNITAR, ELI PAC has developed a Training Programme in Environmental Law and Policy which conducted its first workshop on December 1993. This programme includes modules which relate in particular to the London Guidelines.

**G. Regional Office for Asia and the Pacific (ROAP)**

UNEP-ROAP provides technical co-operation and advise to the Governments of the region on strengthening environmental management capabilities. The Office also cooperates with the environmental programmes of the Economic and Social Commission for Asia and the Pacific (ESCAP).

*Asia-Pacific Network for Tertiary-Level Environmental Training*

The Asia-Pacific Network for Tertiary-Level Environmental Training aims to strengthen the environmental expertise of decision-makers, policy formulators, tertiary level educators and tertiary level students in the region. The project was established in response to the recommendations of a regional meeting of experts which was held in Bangkok in 1985 to develop a programme of action for environmental education and training in Asia and the Pacific. The network for Toxic Chemicals and Hazardous Processes and Wastes has a chemical safety training and technical assistance component. The first regional workshop on Toxic Chemicals and Hazardous Wastes was held in 1993 and additional sub-regional workshops are planned. The workshops participants are chosen from active tertiary educators in the region.

**H. Regional Office for Latin America and the Caribbean (ROLAC)**

A primary activity of Regional Office for Latin America and the Caribbean (ROLAC) is coordinating the implementation of the Regional Action Plan for the Environment. Support programmes for the Action Plan include: National and Multinational Watershed Management, Transfer and Adaptation of Environment Protection Technologies and Environmental Information Services.

*Environmental Training Network for Latin America and the Caribbean*

In 1990, the Environmental Training Network for Latin America and the Caribbean was initiated to enhance information exchange and international cooperation in the Region. The Network aims to facilitate cooperation between universities, training centres, international agencies, non-governmental organizations and environmental administrations to strengthen professional environmental training. Activities of the network include coordinating the activities of training institutions, providing and finding financial support, and publishing a Network newsletter.

**UNEP - SECTION II**

**TRAINING AND TECHNICAL ASSISTANCE ACTIVITIES  
RELATED TO THE ENVIRONMENTALLY SOUND  
MANAGEMENT OF CHEMICALS**

## Training Programme on the Implementation of the London Guidelines in Developing Countries

**Executing Unit:**

United Nations Institute for Training and Research  
(on behalf of, and jointly with, UNEP/IRPTC)

**Time Frame:**

1991 - Ongoing

**Geographic Scope:**

**Asia and the Pacific, Latin America and the Caribbean, Africa** - The programme involves all countries which have appointed a Designated National Authority for the implementation of the Prior Informed Consent procedure. These are, by region (date refers to starting year of activities):

**Asia and the Pacific (1991 - ):** Australia, Bangladesh, Bhutan, China - People's Republic of, Fiji, India, Indonesia, Japan, Korea - Republic of, Malaysia, Nepal, Pakistan, Papua New Guinea, Philippines, Solomon Islands, Sri Lanka, Thailand, Vanuatu, Western Samoa

**Latin America and the Caribbean (1992 - ):** Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica - Commonwealth of, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Vincent and the Grenadines, Saint Lucia (West Indies), Trinidad and Tobago, Venezuela

**Africa (1994 - ):** Angola, Benin, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Congo - République populaire du, Côte d'Ivoire, Egypt, Ethiopia, Gambia, Ghana, Guinea - Republic of, Kenya, Libyan Arab Jamahiriya, Madagascar, Mauritius, Morocco, Mozambique, Niger, Nigeria, Rwanda, Sao Tome et Principe, Senegal, Sierra Leone, Sudan, Tanzania - United Republic of, Tchad, Togo, Tunisia, Uganda, Zaire, Zambia, Zimbabwe

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**Main Subject Categories Covered:**

- PIC - related legal, institutional and technical issues
- Decision making (risk/benefit assessment) for chemicals in use
- Training on the IRPTC Databank and other relevant databases
- Inventory building for chemicals in use
- Priority setting for chemicals in use
- National information centres for chemical management, including national registers

**Description:**

The **UNEP/UNITAR Training Programme on the Implementation of the London Guidelines** is an integral component of the IRPTC capacity building strategy which is described in Section II of the UNEP chapter. It has the objective to strengthen the legal, institutional, administrative and technical infrastructures of developing countries relevant to the implementation of the Prior Informed Consent (PIC) procedure and related issues of chemical management. Emphasis is placed on the identification of training needs in each target region, the organization of workshops to facilitate the implementation of the PIC procedure, and training and technical assistance to strengthen National Information Centres/Systems for Chemical Management. In each target region the programme conducts a series of policy level and technical training activities which build on and complement each other:

- Phase 1:** Assessment of Region- and Country-Specific Training and Technical Assistance Needs
- Phase 2:** Regional Awareness Raising Workshop on the Implementation of PIC
- Phase 3:** Sub-Regional Workshop(s) on the Development of National Implementation Strategies for PIC and Related Issues of Chemicals Management
- Phase 4:** Workshop to Strengthen National Information Centres for Chemical Management
- Phase 5:** Regional Workshop on the Role of Industry and Trade Associations in the Implementation of PIC
- Phase 6:** National Workshops on the Implementation of the London Guidelines
- Phase 7:** On-the-Job Training and Technical Assistance to Strengthen National Information Centres for Chemicals Management
- Phase 8:** Assessment/Evaluation of Training Activities
- Phase 9:** Regional Follow-up Workshop on the Implementation of PIC and Related Issues of Chemicals Management

The primary target groups of the training programme are the Designated National Authorities (DNAs) for the Prior Informed Consent (PIC) procedure, however, several ministries concerned with chemicals management (environment, agriculture, health, labour, industry/trade, customs authorities) are regularly invited to workshop activities to facilitate inter-agency dialogue and co-operation. Additional subjects addressed by the training programme include, as appropriate, hazard assessment, risk assessment, risk/benefit assessment, inventory building, and priority setting for chemicals in use. Based on the positive experience gained through joint activities with the FAO, UNEP and UNITAR plan to implement a FAO/UNEP/UNITAR joint programme on the implementation of the PIC procedure. Other partners of the programme are WHO, ILO, UNIDO, UNEP Regional Offices, the Regional Economic Commissions, and several bi-lateral aid agencies.

**International Workshops:**

Regional Workshop on the Implementation of PIC  
(jointly with FAO)  
Manila, Philippines [29 July-2 August 1991]

Sub-Regional Follow-up Workshop on the  
Implementation of PIC  
Kuala Lumpur, Malaysia [9-13 December 1991]

Regional Workshop on National Registers of  
Potentially Toxic Chemicals (NRPTCs)  
Cha-Am, Thailand [30 March - 10 April 1992]

Regional Workshop on the Problems Associated with  
the Use of Pesticides  
(jointly with ECO/OPS and GTZ)  
Bogota, Columbia [21-24 April 1992]

Regional Workshop on the Role of Industry and  
Trade in the Implementation of PIC  
(in assoc. with ESCAP, FAO, UNIDO, WHO,  
GIFAP, ICCA)  
Cha-Am, Thailand [3-5 February 1993]

Sub-Regional Workshop on the Implementation of  
PIC in Spanish Speaking Countries of Central  
America and the Caribbean  
(jointly with FAO, ECO/OPS, GTZ)  
San Jose, Costa Rica [3-7 May 1993]

Regional Workshop on Progress Made in the  
Implementation of the Code of Conduct and the  
FAO/UNEP Joint Programme on PIC  
(jointly with FAO)  
Santiago de Chile, [19-23 July 1993]

Regional Follow-up Workshop on the Implementation  
of PIC  
(jointly with FAO)  
Cha-Am, Thailand [13-16 December 1993]

Regional Informational Session on the International  
Conference on Chemical Safety  
(jointly with FAO, GTZ, IPCS)  
Bangkok, Thailand [17 December 1993]

**National Workshops/Training Activities:**

(National Workshops are organized and implemented by the national governments, but support can be provided by the training programme in the form of technical support, resource persons, etc.

National Workshop on the Implementation of the London Guidelines Beijing, Republic of China [7-10 September 1991]	Assessment of Training and Technical Assistance Needs Bolivia [1-5 February 1994]
National Workshop on the Implementation of the London Guidelines and NRPTC New Delhi, India [8-10 February 1993]	Assessment of Training and Technical Assistance Needs Peru [7-10 February 1994]
National Workshop on the Implementation of the London Guidelines Havana, Cuba [December 1993]	On-the-job Technical Training to Strengthen National Information Systems for Chemical Management India [7-11 February 1994]
On-the-job Technical Training to Strengthen National Information Systems for Chemical Management, Thailand, [10-14 January 1994]	On-the-job Technical Training to Strengthen National Information Systems for Chemical Management The Philippines [21-25 February 1994]
Assessment of Training and Technical Assistance Needs Ecuador [17-21 January 1994]	Assessment of Training and Technical Assistance Needs Columbia [7-11 March 1994]
On-the-job Technical Training to Strengthen National Information Systems for Chemical Management Malaysia [17-21 January 1994]	

**Other Activities/Services:**

- ▶ Inventory of Training and Technical Assistance Activities of International Organizations and Bi-lateral Aid Agencies Related to the Environmentally Sound Management of Chemicals (Draft inventory for ILO, WHO and UNEP activities available)

The inventory has the objective to facilitate the exchange of information training activities of international organizations related to the management of chemicals, as one of the basis for better coordination of such activities.

- ▶ Resource Guide on Scientific, Legal and Technical Literature Reference Related to Chemical Management (Pre-publication version available for review.)

This Resource Guide provides practical information on various literature sources which may be useful for developing countries in the process of strengthening their chemical management schemes.

- ▶ Resource Guide on Chemical Management Databases (In preparation)

This Resource Guide provides practical information on various chemical safety databases which may be useful for developing countries in the process of strengthening their chemical management schemes.

- ▶ Inventory of Country Papers/National Profiles Related to Chemical Management (In preparation)

The inventory of country profiles refers to country information on chemical safety developed through various training and technical assistance programmes of international organizations.

- ▶ Development of Methodology for Preparing Country Profiles Related to the Management of Chemicals (In preparation)

This methodology is meant to assist countries and international organizations in getting a better understanding of the existing national infrastructure as it relates to chemical management, as one of the basis for identifying needs for training and technical assistance activities.

**Programme Specific Training Materials:**

- ▶ Training Materials to Strengthen Capabilities of Countries to Make Risk Management Decisions for Chemicals in Use.

**Planned Activities:**

- ▶ On-the-job Technical Training to Strengthen National Information Systems for Chemical Management in Sri Lanka [23-27 May 1994], Indonesia [September 1994], Colombia [September 1994], Costa Rica [October 1994], Mexico [November 1994]
- ▶ National Workshop on the Implementation of the London Guidelines and Related Issues of Chemical Management in Mexico, [20-24 June 1994]
- ▶ Sub-Regional Workshop on the Implementation of PIC and Related Issues of Chemical Management for Countries of the Andean Region, [27 June - 1 July 1994]
- ▶ Sub-Regional Workshop on the Implementation of PIC in the Caribbean (third quarter 1994)
- ▶ Regional Workshop to Strengthen National Information Centres for Chemical Safety for Latin America and the Caribbean (first quarter of 1995)

Entry #: A2

## **Training Programme on Chemicals Management in Countries with Economies in Transition**

**Executing Unit:**

International Register of Potentially Toxic Chemicals (IRPTC)

**Time Frame:**

1991 - Ongoing

**Geographic Scope:**

Countries with economies in transition: Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Mongolia, Poland, Romania, Russian Federation, Slovak Republic, Slovenia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan

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**Main Subject Categories Covered:**

IRPTC Databank and its use in decision making  
Other international sources of data and information on chemicals  
National and regional/sub-regional information systems on chemicals  
National inventories of chemicals in use  
Priority setting for chemicals in use  
Risk assessment of chemicals  
Legal, institutional and technical aspects of the implementation of the London Guidelines and Prior Informed Consent (PIC)  
Chemicals legislation and regulations

**Description:**

The **IRPTC Training Programme for Chemicals Management in Countries with Economies in Transition** is an integral component of the IRPTC capacity building strategy which is described in Section II of this chapter. It has the objective to strengthen the legal, institutional, administrative and technical infrastructure of countries with economies in transition relevant to chemicals management with an emphasis on the implementation of the London Guidelines and the Prior Informed Consent (PIC) procedure. The activities in the region aim to strengthen the capabilities and capacities of countries to identify, better manage and reduce the risk posed by chemicals to human health and the environment throughout their entire life cycle as an integral part of sustainable development.

The following activities are being implemented:

- \* Workshops on the environmentally sound management of chemicals;
- \* Workshops for national registers of hazardous chemicals;
- \* Workshops on information access and use of the IRPTC Databank and other relevant databases;
- \* On-the-Job follow-up training;
- \* Workshops on the implementation of the London Guidelines and PIC for Designated National Authorities and other concerned government officials.

Cooperation is being developed with UN ECE and OECD through the UNEP Regional Office for Europe in the context of implementing the recommendations generated through the Lucerne Conference.

#### International Workshops:

Inter-Republic Workshop on Information Exchange on Chemicals and Implementation of the London Guidelines  
Moscow, Russian Federation [15-18 June 1992]

Sub-Regional Training Workshop for Users of the IRPTC Data Base  
Kiev, Ukraine [8-12 December 1992]

Sub-Regional Training Workshop for Users of the IRPTC Databank  
Vilnius, Lithuania [20-24 April 1993]

Sub-Regional Workshop for Users of the IRPTC Database  
Almaty, Kazakhstan [22-27 November 1993]

Sub-Regional Meeting of Government Officials on the Implementation of the London Guidelines  
Kiev, Ukraine [30 November - 2 December 1993]

#### National Workshops:

Training Workshop for Users of the IRPTC Databank  
Moscow, Russian Federation [13-17 July 1993]

#### Planned Activities:

- ▶ Sub-Regional Workshop on Environmentally Sound Management of Chemicals  
Vilnius, Lithuania [18-21 April 1994]
- ▶ On-the-Job Technical Training for National Registers of Hazardous Chemicals  
Lithuania [19-21 April 1994]
- ▶ Sub-Regional Training Workshop for Users of the IRPTC Databank  
Beijing, China [17-21 May 1994]
- ▶ Sub-Regional Workshop on the Implementation of the London Guidelines and PIC Procedure  
Pruhonice, Czech Republic [15-18 June 1994]

- ▶ On-the-Job Technical Training for National Registers of Hazardous Chemicals  
Estonia [4-6 July 1994]
- ▶ On-the-Job Technical Training for National Registers of Hazardous Chemicals  
Latvia [7-11 July 1994]
- ▶ Regional Workshop on National Information Systems on Chemicals  
St. Petersburg, Russian Federation [12-15 July 1994]
- ▶ On-the-Job Technical Training for National Registers of Hazardous Chemicals  
Moldova [20-23 September 1994]
- ▶ Regional Workshop for Users of the IRPTC Databank  
Budapest, Hungary [26-30 September 1994]
- ▶ Sub-Regional Training Course on Health and Environmental Aspects of Pesticide Use  
Tashkent, Uzbekistan [4-15 October 1994]
- ▶ Regional Workshop on National Strategy and Action Plan for Safe Management of  
Chemicals and Wastes  
Minsk, Belarus [14-17 November 1994]
- ▶ Sub-Regional Training Course on Safe Use of Agrochemicals  
Vilnius, Lithuania [23 May-2 June 1995]

## Training Programme on Control of Chemical Hazards

**Executing Unit:**

International Register of Potentially Toxic Chemicals (IRPTC)

**Time Frame:**

1981 - 1991

**Geographic Scope:**

Africa: Burundi, Egypt, Ethiopia, Ghana, Guinea, Kenya, Liberia, Mauritius, Nigeria, Senegal, Sudan, Tanzania, Tchad, Uganda, Zambia, Zimbabwe

Asia and the Pacific: Afghanistan, Bangladesh, China - People's Republic of, Cook Islands, Korea - Democratic People's Republic of, Korea - Republic of, India, Indonesia, Iran, Malaysia, Maldives, Mongolia, New Zealand, Pakistan, Papua New Guinea, Philippines, Sri Lanka, Thailand, Vietnam

Europe: Austria, Bulgaria, Cyprus, Czechoslovakia, Greece, German Democratic Republic, Hungary, Malta, Poland, Portugal, Rumania, Turkey, Yugoslavia

Latin America and the Caribbean: Argentina, Bolivia, Brazil, Colombia, Cuba, Ecuador, Mexico, Nicaragua, Panama, Venezuela

West Asia: Iraq, Jordan, Kuwait, Sultanate of Oman, Syria

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**Main Subject Categories Covered:**

General, preventative and clinical toxicology  
Ecotoxicology  
Hazard and risk assessment of chemicals  
Priority setting and health standards development for chemicals  
International data sources and evaluation documents on chemical hazards  
Chemical legislation  
Legal mechanisms

**Description:**

The IRPTC Training Programme on Control of Chemical Hazards started in 1981 within the framework of the USSR-UNEP/IRPTC Project "Control of Hazards Posed by Chemicals to Human Health and the Environment", which was implemented in cooperation with the Government of the former USSR. In 1982, a comprehensive Programme for Training Courses in Preventative Toxicology was developed and approved at an international workshop held in Moscow, USSR. In collaboration with the IPCS and the Council for Mutual Economic Assistance (CMEA), training course programmes focused on Preventive Toxicology of Industrial and Household Chemicals, Health Aspects of Pesticide Use and Control of Chemical Hazards. The training courses/seminars were designed for trainees mainly from developing countries who occupied advisory or decision-making positions in government departments or institutions involved in public or occupational health, environmental protection, food, water, or air quality control, etc.

The main objectives were to update knowledge in the application of toxicology and ecotoxicology to chemicals in order to ensure their safe use, improve the formulation of national standards and exposure limits as part of measures aimed at prevention of chemical-related diseases and pollution of the environment. The relevant international documents such as the IPCS Environmental Health Criteria, IPCS Health and Safety Guides, IPCS International Chemical Safety Cards, IRPTC Data Profiles and IARC Monographs were also introduced. Their optimal use and adaptation in risk assessment of chemicals and of control measures at the national level were presented and discussed. Training programmes were comprised of lectures, practical exercises, case studies, panel discussions, demonstration and field visits, and national presentations.

**International Workshops:**

Third IRPTC/IPCS/CMEA Training Seminar on Control of Chemical Hazards  
Moscow, USSR [20 September - 4 October 1988]

IPCS/IRPTC International Training Course on Health Aspects of Pesticide Use  
Kiev-Kishinev, USSR [18 April - 6 May 1989]

Fourth International Training Course in Preventive Toxicology: Industrial and Household Chemicals  
Moscow-Leningrad, USSR [5-20 September 1989]

IRPTC/IPCS/CMEA Fourth Training Seminar on Control of Chemical Hazards  
Moscow-Volgograd, USSR [24 September - 6 October 1990]

IPCS/IRPTC International Training Course on the Health Aspects of Pesticide Use  
Moscow-Kiev-Yalta, USSR [5-27 April 1991]

IRPTC/IPCS Fifth International Training Course in Preventive Toxicology  
Moscow-Volgograd-Kislovodsk, USSR [9-26 September 1991]

**Other Activities/Services:**

- ▶ Consultation to Consolidate and Further Develop Training Activities of the USSR-UNEP/IRPTC Project  
Moscow, USSR [28 February - 2 March 1991]
- ▶ Principles of Pesticide Toxicology. Yu. S. Kagan. CIP, Moscow, 1985. (USSR-UNEP/IRPTC). 176 pp. (English)

- ▶ Problems of Industrial Toxicology. CIP, Moscow, 1986. (CMEA/UNEP). 132 pp. (English and Spanish)
- ▶ Long-term Effects of Chemicals on the Organism. I.V. Sanotsky and V.N. Fomenko. CIP, Moscow, 1986. (USSR-UNEP/IRPTC). 206pp. (English)

**Programme Specific Training Materials:**

- ▶ Preventive Toxicology. Collection of Training Materials, Vol. I, Vol. II, Part I and II. CIP, Moscow, 1984. (USSR-UNEP/IRPTC). 1470 pp. (English and Russian)
- ▶ Use of Internationally-Prepared Health Risk Evaluations and Other Relevant Documents for the Protection of Human Health and the Environment. Collection of Training Materials of the Joint CMEA/IRPTC/IPCS Training Seminar. CIP, Moscow, 1986. (USSR-UNEP/IRPTC). 430 pp. (English and Russian)
- ▶ Health Aspects of Pesticide Use. Collection of Training Materials. CIP and Kiev Research Institute of Labour Hygiene and Occupational Diseases. Moscow, 1991. (IPCS-UNEP/IRPTC). 538 pp. (English); Vol. I and II. Moscow, 1992. 540 pp. (English)

**Planned Activities:**

- ▶ Major elements of the programme have been incorporated and further developed in the context of a new programme (see Entry #: A2).

Entry #: A4

## **Training on the Establishment of National Registers of Potentially Toxic Chemicals**

**Executing Unit:**

International Register of Potentially Toxic Chemicals (IRPTC)

**Time Frame:**

1984 - 1988

**Geographic Scope:**

Developing countries: Brazil, China - People's Republic of, Colombia, the Gambia, Indonesia, Malaysia, Sri Lanka, Tanzania, Thailand, Zambia

**Responsible Officer/Contact Person:**

Information Processing Unit  
IRPTC/UNEP  
Case Postale 356  
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Switzerland  
Telephone: +(41) 22 979 91-89/91  
Facsimile: +(41) 22 797 3460

**Main Subject Categories Covered:**

National Registers of Potentially Toxic Chemicals  
National and regional information systems on chemicals  
IRPTC Data Bank

**Description:**

Within its project for **National Registers of Potentially Toxic Chemicals** supported by the Governments of the Netherlands, IRPTC provided training to promote the establishment of NRPTCs in selected developing countries. Training and technical assistance was provided in the countries by consultants and workshops were organized in Geneva for IRPTC's National Correspondents. Training activities focused on training national network partners on the structure and content of the IRPTC data bank.

Entry #: A4

**International Workshops:**

IRPTC Training Course on National Registers of Potentially Toxic Chemicals  
Geneva, Switzerland [29 October - 16 November 1984]

Training Course on National Registers of Potentially Toxic Chemicals  
Geneva, Switzerland [6-24 October 1986]

**National Workshops:**

Workshop on the Establishment of a National Information System on Potentially Toxic Chemicals  
Beijing, China [18-29 April 1988]

**Planned Activities:**

- ▶ Activities were continued in the context of the UNEP/UNITAR Training Programme on the Implementation of the London Guidelines in Developing Countries. (see Entry #: A1)

## **Training and Capacity Building Activities for Strengthening of Information Exchange on Chemicals**

**Executing Unit:**

International Register of Potentially Toxic Chemicals (IRPTC)

**Time Frame:**

1988 - 1991

**Geographic Scope:**

Former CMEA Countries: Bulgaria, Cuba, Czechoslovakia, German Democratic Republic, Hungary, Mongolia, Poland, Romania, the USSR, Vietnam; and the Democratic People's Republic of Korea

**Responsible Officer/Contact Person:**

Mr G. Chkolenok  
Scientific Affairs Officer  
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Switzerland  
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Facsimile: +(41) 22 797 3460

**Main Subject Categories Covered:**

National Registers of Potentially Toxic Chemicals  
National and regional information systems on chemicals  
IRPTC Data Bank  
London Guidelines for the Exchange of Information on Chemicals in International Trade (amended 1989)

**Description:**

The project **Training and Capacity Building Activities for Strengthening of Information Exchange of Chemicals** organized workshops for IRPTC's National Correspondents and focused on training national network partners on the structure and content of the IRPTC databank. Similar activities were also undertaken under the USSR-UNEP/IRPTC project for IRPTC National Correspondents and other network partners/clients in countries of Central and Eastern Europe and other former CMEA countries. In addition, IRPTC initiated training and capacity-building activities aimed at further improvement of information exchange with and within the region as well as with other interested countries. Existing national databank and information exchange networks were studied and procedures for the exchange of data in a consistent format were considered. Training on the implementation of the London Guidelines and application of the PC version of the IRPTC databank was also incorporated into the project activities.

**International Workshops:**

Expert Consultation on a Regional Information Exchange Network for Chemicals  
Moscow, USSR [18-21 October 1988]

Training Seminar for IRPTC National Correspondents and Other Users of the IRPTC Database from CMEA Member Countries  
Moscow, USSR [12-16 February 1990]

Workshop to Study the Feasibility of Establishing a Regional Information Exchange Network on Chemicals  
Moscow, USSR [12-15 March 1990]

Regional Workshop on the Legal and Technical Aspects of the Implementation of the London Guidelines  
Moscow, USSR [10-13 December 1990]

Regional Training Seminar on the PC Version of the IRPTC Databank  
Moscow, Russia [November 1991]

**Other Activities/Services:**

- ▶ Manual for Users of the IRPTC Data Profiles. UNEP/IRPTC, Geneva, 1991.

**Programme Specific Training Materials:**

- ▶ Sets of work-sheets for practical training on the IRPTC Data Profiles.

**Planned Activities:**

- ▶ Follow-up activities are being conducted under the IRPTC Training Programme on Chemicals Management in Countries with Economies in Transition. (see Entry #: A2)

## Awareness and Preparedness for Emergencies at the Local Level (APELL)

**Executing Unit:**

Industry and Environment PAC

**Time Frame:**

1988 - Ongoing

**Geographic Scope:**

Global

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Emergency response plans  
Risk communication  
Safety audits

**Description:**

The training and technical assistance activities of the APELL Programme assist decision-makers and technical personnel in facilitating community awareness of hazardous installations and in preparing appropriate response plans to deal with potential industrial emergencies. The *APELL Handbook* outlines the APELL process and provides the basis for the training activities. The process focuses on local participation and joint working, principally addressing the roles of local authorities, plant managers and workers, community leaders and interest groups. APELL Seminars/Workshops are structured for senior level participants from industry, government, academia and non-governmental organizations (NGOs). The Seminars introduce the APELL process followed by case studies from developed and developing countries. The Workshops enable participants to develop ideas into programme plans for their own country, locality or area of influence.

Entry #: C1

**International Workshops:**

Regional Seminar/Workshop  
Mexico City, Mexico [May 1990]

Regional Seminar/Workshop  
Cairo, Egypt [1993]

Regional Seminar/Workshop  
China [1993]

**National and Local Workshops:**

National Seminar/Workshop  
Bahrain [November 1989]

Local Seminar/Workshop  
Cubatao, Brazil [February 1990]

National Seminar/Workshop  
Philippines [May 1990]

National Seminar/Workshop  
Bogota, Columbia [November 1990]

National Seminar/Workshop  
Izmit, Turkey [September 1991]

National Seminar/Workshop  
Tunisia [7-11 October 1991]

National Seminar/Workshop  
Moscow, Russia [December 1991]

Local Seminar/Workshop  
Alexandria, Egypt [23-26 June 1992]

National Seminar/Workshop  
Yemen [July 1992]

National Seminar/Workshop  
Hungary [8-11 September 1992]

National Seminar/Workshop  
Czech and Slovak Federal Republics [14-18  
September 1992]

Local Seminar/Workshop  
Madras, India 7-10 October 1992]

Local Seminar/Workshop  
Macei, Brazil [2-6 November 1992]

Local Seminar/Workshop  
Lhokseumawe, Indonesia [October 1993]

Local Seminar/Workshop  
Tula, Russia [7-12 March 1994]

**Other Activities/Services:**

- ▶ APELL Newsletter. Biannual (English, French and Spanish).
- ▶ Technical assistance for local APELL activities.

**Programme Specific Training Materials:**

- ▶ Training Module on Industrial Accidents - 70pp. 1994.
- ▶ *Awareness and Preparedness for Emergencies at Local Level (APELL): A Process for Responding to Technological Accidents*. 1st ed. Paris, 1988. (UNEP IE/PAC) U.N. Publications Sales No. E.88.III.D.3, ISBN: 92-80711830.  
  
This book outlines the APELL process and is used as a training manual and as a technical guide. Available in English, French, Spanish and several other languages.
- ▶ *Storage of Hazardous Materials*, UNEP IE/PAC Technical Report No. 3, . Paris, 1990.
- ▶ *Hazard Identification and Evaluation in a Local Community*, UNEP IE/PAC Technical Report No. 12, . Paris, 1992.
- ▶ *Health Aspects of Chemical Accidents*, UNEP IE/PAC Technical Report No. 19, OECD Environmental Monograph No. 81. Paris, 1994.

## Cleaner Production Programme

**Executing Unit:**

Industry and Environment PAC

**Time Frame:**

1989 - Ongoing

**Geographic Scope:**

Global

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Cleaner production technologies  
Cleaner production information sources  
Economic aspects of cleaner production

**Description:**

Technical assistance activities of the **Cleaner Production Programme** consist of fostering links between experts and launching demonstration projects, including assistance in establishing National Cleaner Production Centres. Training activities involve government, industry and academia, and are intended to prompt action and the development of programmes on cleaner production at the national and institutional levels. In addition, IE PAC working groups which collect and disseminate information on specific industries and cleaner production techniques, occasionally conducts and provides expertise for national seminars and conferences to promote Cleaner Production and occasionally organizes sub-regional and regional conferences.

**International Workshops:**

Cleaner Production Seminar  
Canterbury, U.K. [17-20 September 1990]

Workshop on Country Specific Activities to Promote  
Cleaner Production  
Paris, France [17-19 September 1991]

Ministerial Meeting and Second Senior Level  
Seminar on Cleaner Production  
Paris, France [October 1992]

Expert Seminar on Life Cycle Assessment and its  
Applications  
Amsterdam, Netherlands [9-10 June 1993]

International Short Course in Environmental  
Management for Developing Countries  
Dresden, Germany [5-8 December 1993]

**National Workshops:**

National Cleaner Production Workshop  
Kenya [January 1992]

National Cleaner Production Workshop  
Xiamen, China [May 1992]

National Cleaner Production Workshop  
Shaoxing, China [1992]

National Cleaner Production Workshop  
Yemen [6-9 July 1992]

National Cleaner Production Workshop  
Bombay, India [3-4 September 1992]

National Cleaner Production Workshop  
Lisbon, Portugal [5-6 April 1993]

National Cleaner Production Workshop  
Yantai, China [7-9 October 1993]

**Other Activities/Services:**

- ▶ Demonstration projects.

UNEP IE/PAC demonstrates the opportunities for and obstacles to cleaner production in developing countries. The demonstrations bring together government and industry in order to identify the technical, social, financial and institutional aspects of cleaner production.

- ▶ International Cleaner Production Information Clearinghouse (ICPIC).

The ICPIC is an on-line system containing technical case studies, bibliographic entries, a message centre, and other information in the field of cleaner production.

- ▶ Working Groups.

The Working Groups collect information, disseminate it and provide expertise for training workshops. The Groups cover 9 specific industrial sectors.

**Programme Specific Training Materials:**

- ▶ Training Module on Cleaner Production - 75pp. 1994.
- ▶ Audit and Reduction Manual for Industrial Emissions and Wastes. Technical Report Series No 7. Paris, 1991. (UNEP and UNIDO) U.N. Publications Sales No. 91-III-D6, ISBN: 92-807-1303-5

**Planned Activities:**

- ▶ Establishment of National Cleaner Production Centres.  
  
IE/PAC and UNIDO will provide training and technical assistance to help establish 20 National Cleaner Production Centres in 20 developing countries and countries in transition by 1998.
- ▶ Third High Level Advisory Seminar on Cleaner Production  
Warsaw, Poland [12-14 October 1994]
- ▶ Workshop on Green Productivity in Small and Medium Enterprises  
Hong Kong [16-21 May 1994]

Entry #: C3

## OzonAction Programme

**Executing Unit:**

Industry and Environment Programme Activity Centre

**Time Frame:**

1991 - Ongoing

**Geographic Scope:**

Global

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

ODS control policies and strategies  
Montreal Protocol  
ODS substitutes and replacement technologies

**Description:**

The training/networking elements of the **OzonAction Programme** consist of regional workshops, national activities and development of training materials. Regional workshops provide government and industry decision-makers with basic information on the Montreal Protocol and ODS control policies and strategies. National activities consist of more focused, in-depth technical training on specific technical subjects related to the implementation of the Montreal Protocol.

**International Workshops:**

Regional Workshop on the Implementation of the Montreal Protocol  
Jomtien, Thailand [26-29 November 1991]

Regional Workshop on the Implementation of the Montreal Protocol  
(Organized with the UNEP Regional Office for Western Asia)  
Cairo, Egypt [9-12 December 1991]

Regional Workshop on the Implementation of the Montreal Protocol  
Caracas, Venezuela [12-15 May 1992]

First Regional Training Course on Refrigeration  
Nairobi, Kenya [2-4 December 1992]

Regional Workshop on the Implementation of the Montreal Protocol  
Nairobi, Kenya [7-11 December 1992]

Regional Training Course on Aerosol Conversion  
Amman, Jordan [22-24 March 1994]

Regional Halon Conference and Workshop  
Kuala Lumpur, Malaysia [18-20 January 1994]

Regional Workshop on Refrigeration and Air Conditioning Training Programmes  
Jakarta, Indonesia [12-15 April 1994]

**National Workshops:**

Training Courses (2) on Improved Practices in Refrigeration and Air Conditioning  
Accra, Ghana [11-16 October 1993]

Training Courses (2) on Improved Practices in Refrigeration and Air Conditioning  
Nairobi, Kenya [14-18 December 1993]

**Other Activities/Services:**

- ▶ OzonAction Information Clearinghouse.

This is an on-line system containing case studies; a data base of ODS-reduction products and services; national and corporate programme summaries; a calendar of ODS events; a directory of ODS-reduction experts; and abstracts of significant ODS reduction documents.

- ▶ *Protecting the Ozone Layer* Technical Brochures.

These brochures cover each specific technical sector and are aimed at providing the basic information to general and technical audience in industry and government, to facilitate the preparation and implementation of phase-out programmes.

- ▶ CFC-Free Technology Catalogues.

These catalogues are being developed for the different industrial sectors to describe the state of the art of alternative technologies and processes for the substitution of ODSs.

- ▶ OzonAction Newsletter.

This newsletter describes the latest developments in governments, industry, and NGOs relating to ozone protection. It provides information about alternative technologies, products, and programmes, and raises public awareness about the need for ozone protection. The newsletter is published quarterly in five languages.

**Programme Specific Training Materials:**

- ▶ Training Module on OzonAction - 85 pp. 1994.
- ▶ Manual/Guidelines on Good Maintenance and Service Practices.  
  
This manual/guidelines includes information for recovery and recycling for small and medium sized refrigeration systems. The manual is targeted at refrigeration training institutes and service engineers.
- ▶ Technical Directory of Recovery and Recycling Machines in Refrigeration.  
  
This manual incorporates technical guidelines on how to select recovery and recycling machines. The manuals are targeted at ODS officers, Focal Points and service engineers.
- ▶ Training Manual on Centrifugal Chillers. (Targeted at trainers in the industry.)
- ▶ Handbook on "Conservation Technology" for the Aerosol Sector. (This handbook contains safety issues for manufacturers, fillers and users in the aerosol industry.)
- ▶ Practical Guide to Policy Guidelines for Industry on Management of Phase-out of ODS. (Targeted at CEO's and managers of SME's.)
- ▶ Elements for Establishing Policies, Strategies, Policies and Institutional Framework for Ozone Layer Protection. (Targeted at ODS-officers/Focal Points.)

**Planned Activities:**

- ▶ Regional Workshop for Industry (SMEs) on Management of ODS Phase-Out India [1st Quarter 1995]
- ▶ Workshop on Management of a National ODS Phase-Out Information Clearinghouse

## Industrial Pollution Management Programme

**Executing Unit:**

Industry and Environment Programme Activity Centre. Training activities jointly with UNEP/EETU and in collaboration with ILO and WHO.

**Time Frame:**

1993 - Ongoing

**Geographic Scope:**

Global

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Priority Industry Sectors:

Tanning  
 Textiles  
 Mininig  
 Electronics  
 Pulp and paper  
 Wood preservation  
 Oil exploration  
 Iron and steel  
 Recycling  
 Breweries

Environmental Issues:

Cleaner Production  
 Industrial accidents  
 Hazardous waste  
 Chemical management and safety  
 Environmental technologies  
 Assessment of pollution sources  
 OzonAction  
 Environmental assessment

**Description:**

The training and technical assistance activities of the Industrial Pollution Management Programme aim to improve the capacity of technical institutions in developing countries to train their own environmental specialists to deal with sector-specific pollution problems in a systematic and integrated manner. The programme publishes and disseminates industry specific technical manuals and guidelines on the prevention of industrial pollution and promotes information exchange on environmentally sound technology. The *train the trainers* activities of the programme consist of regional workshops in the African and European Regions to be repeated each year. Workshops participants include teachers and programme coordinators from universities or national training institutes and cover both the technical issues relating to pollution management and interactive training techniques.

Entry #: C4

**International Workshops:**

Regional (African) Workshop to Train the Trainers in  
Environmental Management in Industry  
Mauritius [4-8 October 1993]

Regional Workshop on Environmental Management  
at Mining Sites  
Zambia [6-10 December 1993]

**Other Activities/Services:**

▶ Regional Networks.

Regional networks will be created in each region based on an extended network of workshop participants.

**Programme Specific Training Materials:**

▶ Training Modules in Pollution Management.

Training modules have been produced covering the subject areas of the programme and additional modules will be developed to cover other environmental management subject areas and further industry sectors.

**Planned Activities:**

- ▶ First Train the Trainers Workshop for Europe  
Dresden, Germany [May 1994]
- ▶ Follow-up Train the Trainers Workshop for Africa  
[late 1994]
- ▶ Annual workshops for a period of 4 years in each region.

Entry #: D1

## **Agricultural Lands and Agrochemicals**

**Executing Unit:**

Terrestrial Ecosystems Branch

**Time Frame:**

Ongoing

**Geographic Scope:**

Global

**Responsible Officer/Contact Person:**

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Terrestrial Ecosystems Branch  
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Facsimile: +(254) 2 22 68 86

**Main Subject Categories Covered:**

Agrochemical safety techniques

**Description:**

**International Workshops:**

Training Course on the Safe and Effective Use of Pesticides  
(Organized with FAO)  
Port of Spain, Trinidad and Tobago [August 1989]

Training Course on Biological Control of Agricultural Pests  
West Asia Region [1990]

Training Course on Effective Use and Correct Handling of Pesticides  
(Organized with FAO)  
Kingston, Jamaica [August 1991]

Training Course on Biological Control of Agricultural Pests  
(Organized with Centre for International Projects, Moscow)  
Kishinev and Tashkent, USSR [12-30 September 1991]

Training Course on Cancer Epidemiology with Emphasis on Occupational Cancer and Cancer Registration  
(Organized with IARC)  
Ahmedabad, India [9-20 November 1992]

Course on Aflatoxin Analysis in Foods  
Hydrabad, India [21 June-2 July 1993]

Regional Training Course in Sampling Techniques for Mycotoxin Detection  
Bangkok, Thailand [25-29 October 1993]

Seminar for Africa, Europe, the Middle East and the Mediterranean on Radiobiological Techniques in the Comparative Estimation of Carcinogenic Induction by Chemical Pollutants and Low-dose Radiation  
Nairobi, Kenya [8-12 November 1993]

Asian Regional Workshop on Pesticide and Aflatoxin Analysis of Food Using Immunoassay Techniques  
Tianjin, China [20-25 November 1993]

Mycotoxin Prevention and Control Programme Management  
Manila, Philippines [6-9 December 1993]

## Implementation of the Regional Action Plan for the Mediterranean

**Executing Unit:**

Oceans and Coastal Areas PAC - Mediterranean Coordinating Unit

**Time Frame:**

1980 - Ongoing

**Geographic Scope:**

Mediterranean Region

**Responsible Officer/Contact Person:**

The Coordinator  
Mediterranean Coordinating Unit (MEDU)  
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**Main Subject Categories Covered:**

Coastal zone management  
Integrated planning of coastal zones  
Monitoring and control of marine pollution

**Description:**

**International Workshops:**

Workshop on the Transport and Dispersion of  
Pollution in the Sea  
Athens, Greece [12-16 November 1990]

Workshop on Biologic Effects of Pollution on Marine  
Organisms  
(Organized with FAO)  
Malta [10-14 September 1991]

Training Course on Marine Oil Pollution Prevention,  
Control and Response  
Alexandria, Egypt [23 September - 30 October 1991]

Training Workshop on the Techniques for Monitoring  
Biological Effects of Pollutants in Marine Organisms  
(Organized with FAO and IOC)  
Nice, France [14-25 September 1992]

Training Course on the Monitoring and Assessment  
of Pollution of the Mediterranean  
(Organized with WMO)  
Valleta, Malta [9-18 February 1993]

Training Course and Intercalibration Exercise on  
Microbiological Methods for Marine Pollution  
Monitoring  
(Organized with WHO)  
Tunis, Tunisia [20-25 September 1993]

Entry #: F2

## Implementation of the Regional Action Plan for the Wider Caribbean

**Executing Unit:**

Oceans and Coastal Areas PAC - Caribbean Regional Coordinating Unit

**Time Frame:**

Ongoing

**Geographic Scope:**

Wider Caribbean Region: U.S.A., Central America, Northern Brim of South America and all islands

**Responsible Officer/Contact Person:**

Ms B.A. Miller  
Acting Coordinator  
Regional Coordinating Unit  
Caribbean Environment Programme  
United Nations Environment Programme  
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Kingston, Jamaica  
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**Main Subject Categories Covered:**

Water quality criteria  
Assessment and control of marine pollution  
Information systems  
Institutional development  
Integrated planning

**Description:**

**International Workshops:**

CEPPOL Workshop on Development of Water  
Quality Criteria  
San Juan, Porto Rico [5-15 November 1990]

CEPPOL Workshop on Land-based Sources of  
Pollution  
Vera Cruz, Mexico [4-6 December 1991]

**Other Activities/Services:**

- ▶ CEPNET Decision Support Network
- ▶ Technical Advisory Services (consultancies and fellowships)

## **Asia-Pacific Network for Tertiary-Level Environmental Training**

**Executing Unit:**

Regional Office for Asia and the Pacific

**Time Frame:**

1991 - Ongoing

**Geographic Scope:**

Asia and Pacific Region

**Responsible Officer/Contact Person:**

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**Main Subject Categories Covered:**

Development and evaluation of environmental educational programmes  
Toxic chemicals and hazardous wastes management techniques  
Pollution prevention technologies

**Description:**

The activities of ROAP implemented **Asia-Pacific Network for Tertiary-Level Environmental Training** Project are focused on the staff of tertiary institutions with responsibilities for courses on toxic chemicals and wastes. It is expected that the information and skills provided through the project will be transferred to a large and influential constituency. The workshop activities include the development and evaluation of educational programmes related to the classification, appropriate use, transport, disposal, storage and handling of toxic and hazardous substances and wastes. In addition, educational programmes are developed for the use of alternative materials and processes to limit the production of toxic and hazardous wastes. Workshop participants are expected to present case studies of toxic chemicals and hazardous processes and wastes problems and their solutions from their countries and the methods used to cover the subject matter in their curriculum.

Entry #: G1

**International Workshops:**

Sub-Regional Technical Training Workshop for  
Tertiary Educators in Toxic Chemicals and  
Hazardous Wastes and Processes  
Bangkok, Thailand [28-30 September 1993]\*

**Planned Activities:**

- ▶ Sub-Regional training workshops are planned for countries in West Asia, South Asia and Northeast Asia.

**UNEP - SECTION III**

**TRAINING AND TECHNICAL SUPPORT  
MATERIALS/SERVICES RELATED TO THE  
ENVIRONMENTALLY SOUND MANAGEMENT OF  
CHEMICALS**

### **International Register of Potentially Toxic Chemicals PAC**

#### Manuals, Guides and Technical Publications:

- ▶ IRPTC Personal Computer Databank, Version 2.0, User's Manual. Geneva, 1994. (UNEP/IRPTC)
- ▶ IRPTC Personal Computer Databank, Version 2.0, Administrator's Manual. Geneva, 1994. (UNEP/IRPTC)
- ▶ IRPTC Legal File 1992/1993. Geneva.
- ▶ Guidance for Governments. (Joint UNEP/FAO Programme for the Operation of Prior Informed Consent)
- ▶ Decision Guidance Documents, Issues Nos. 1-3. (Joint UNEP/FAO Programme for the Operation of Prior Informed Consent)
- ▶ Survey of Technical Guidance Material Developed by International Organizations, OECD and EU for Priority Setting of Existing Chemicals.
- ▶ International Survey of Classification Systems for Chemicals Based on Their Toxicity and Hazards. (Prepared for Printing)
- ▶ IRPTC Waste Management - Technical Manual. (In Preparation)
- ▶ Training Material for Priority Setting of Existing Chemicals for Developing Countries. (In Preparation)

#### Newsletters and Brochures:

- ▶ IRPTC Bulletin. (English, French, Russian and Spanish)
- ▶ International Register of Potentially Toxic Chemicals (IRPTC). 1990. Brochure. (English, French, Russian and Spanish)

#### Databases:

- ▶ IRPTC Personal Computer Databank Version 2.0. Geneva, 1994. (UNEP/IRPTC)

## **Industry and Environment PAC**

### Manuals, Guides and Technical Publications:

- ▶ Awareness and Preparedness for Emergencies at Local Level (APELL): A Process for Responding to Technological Accidents. 1st ed. Paris, 1988. (UNEP IE/PAC) U.N. Publications Sales No. E.88.III.D.3, ISBN: 92-80711830.

- ▶ Technical Report Series.

The Technical Report Series aims to meet the needs of government officials, industry managers and environment protection associations, by providing information on the issues and methods of environmental management relevant to various industrial sectors.

- ▶ International Directory of Emergency Response Centres. Technical Report Series No 8. Paris, 1991. (UNEP and OECD)
- ▶ Audit and Reduction Manual for Industrial Emissions and Wastes. Technical Report Series No 7. Paris, 1991. (UNEP and UNIDO) U.N. Publications Sales No. 91-III-D6, ISBN: 92-807-1303-5
- ▶ Storage of Hazardous Materials - A Technical Guide for Safe Warehousing of Hazardous Materials. Technical Report Series No 3. Paris, 1990. (UNEP IE/PAC) ISBN: 92 807 12381
- ▶ Hazard Identification and Evaluation in the Local Community. Technical Report Series No 12. Paris, 1992. (UNEP IE/PAC) ISBN: 92 807 1331 0
- ▶ From Regulations to Industry Compliance: Building Institutional Capabilities. Technical Report Series No 11. Paris, 1992. (UNEP IE/PAC) ISBN: 92 807 1342
- ▶ Health Aspects of Chemical Accidents. Technical Report Series No 19, OECD Environmental Monograph No. 81. Paris, 1994.
- ▶ Manual/Guidelines on Good Maintenance and Service Practices.

This manual/guidelines includes information for recovery and recycling for small and medium sized refrigeration systems. The manual is targeted at refrigeration training institutes and service engineers.

- ▶ Technical Directory of Recovery and Recycling Machines in Refrigeration.

This manual incorporates technical guidelines on how to select recovery and recycling machines. The manuals are targeted at ODS officers, Focal Points and service engineers.

- ▶ Training Manual on Centrifugal Chillers. (Targeted at trainers in the industry.)
- ▶ Handbook on "Conservation Technology" for the Aerosol Sector. (This handbook contains safety issues for manufacturers, fillers and users in the aerosol industry.)
- ▶ Practical Guide to Policy Guidelines for Industry on Management of Phase-out of ODS. (Targeted at CEO's and managers of SME's.)
- ▶ Elements for Establishing Policies, Strategies, Policies and Institutional Framework for Ozone Layer Protection. (Targeted at ODS-officers/Focal Points.)

#### Databases/Information Services:

- ▶ International Cleaner Production Information Clearinghouse (ICPIC).
- ▶ OzonAction Information Clearinghouse.

#### Newsletters and Brochures:

- ▶ Industry and Environment Review. Quarterly, ISSN 0378-9993.
- ▶ APELL Newsletter.
- ▶ The Cleaner Production Newsletter.
- ▶ OzonAction Newsletter.

### **Oceans and Coastal Areas PAC**

#### Manuals, Guides and Technical Publications:

- ▶ Reference Methods for Marine Pollution Studies.
- ▶ Mediterranean Action Plan Technical Report Series.

#### Newsletters:

- ▶ Medwaves. (Newsletter of the Mediterranean Action Plan).
- ▶ CEPNEWS. (Newsletter of the Caribbean Action Plan).

## REGIONAL OFFICES

### **Regional Office for Latin America and the Caribbean**

Newsletters and Brochures:

- ▶ Environmental Training. (Newsletter of the Environmental Training Network for Latin America and the Caribbean).

Official UNEP Publications may be ordered from:

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## LISTING OF ACRONYMS

AMRO	WHO Regional Office for the Americas
APELL	Awareness and Preparedness for Emergencies at the Local Level
ARLAC	African Regional Labour Administration Centre
ARM	WHO/PCS Unit for Assessment and Risk Methodologies
ASILO	Australian Support for ILO Programmes in Asia Project
AV	Audio-Visual
CEHA	WHO Eastern Mediterranean Centre for Environmental Health Activities
CEPIS	Pan American Centre for Sanitary Engineering and Environmental Sciences
CEPPOL	Assessment and Control of Marine Pollution Programme
CEU	Commission of the European Union
CIS	International Occupational Safety and Health Information Centre
CMEA	Council for Mutual Economic Assistance
CSFR	Czech and Slovak Federal Republics
DNA	Designated National Authority
ECEH	European Centre for Environmental Health
ECO	Pan American Centre for Human Ecology and Health
EETU	UNEP Environmental Education and Training Unit
EHC	WHO Western Pacific Environmental Health Centre
EHMDAC	Environmental Health Information for Management of Development Activities
ELI PAC	UNEP Environmental Law and Institutions Programme Activity Centre
EMRO	WHO Eastern Mediterranean Regional Office
ESCAP	Economic and Social Commission for Asia and the Pacific
EURO	WHO European Regional Office
FAO	Food and Agriculture Organization
FINNIDA	Finnish International Development Agency
FIOH	Finnish Institute of Occupational Health
GATT	General Agreement on Tariffs and Trade
GEDNET	Global Environmental Educators Network
GEENET	Global Environmental Epidemiology Network
GELNET	Global Environmental Library Network
GEMS	Global Environmental Monitoring System
GETNET	Global Environmental Technology Network
GIFAP	International Group of National Associations of Manufacturers of Agrochemical Products
GTZ	German International Aid Agency
HEAL	Human Exposure Assessment Location (GEMS)
IARC	WHO International Agency for Research on Cancer
ICCA	International Council of Chemical Associations
ICPIC	International Cleaner Production Information Clearinghouse

IDB	Inter-American Development Bank
IE PAC	UNEP Industry and Environment Programme Activity Centre
ILO	International Labour Organization
IMO	International Maritime Organization
IMOF	Interim Multilateral Ozone Fund
INTAN	Malaysian National Institute of Public Administration
INTOX	WHO Computerized Toxic Information System
IOC	Intergovernmental Oceanographic Commission
IPCS	International Programme on Chemical Safety
IRPTC	International Register of Potentially Toxic Chemicals
IWCCCS	Intra-WHO Coordinating Committee on Chemical Safety
JECFA	Joint FAO/WHO Expert Committee on Food Additives
JMPR	Joint FAO/WHO Meetings on Pesticide Residues
MARC	UNEP/Monitoring and Assessment Research Centre
MASICA	Central American Programme for Health and Ecology
MEDU	Mediterranean Regional Coordinating Unit
NGO	Non-Governmental Organization
NIPEH	National Integrated Programmes on Environment and Health
NRPTC	National Register of Potentially Toxic Chemicals
NWRI	National Water Research Institute (Canada)
OATU	Organization of African Trade Unions
OCA PAC	UNEP Oceans and Coastal Areas Programme Activity Centre
ODS	Ozone Depleting Substance
OECD	Organisation for Economic Co-operation and Development
OSH	Occupational Safety and Health
OTTU	Organization of Tanzanian Trade Unions
PAC	Programme Activity Centre
PAHO	Pan American Health Organization
PCB	Poly Chlorinated Biphenyl
PCDD	Poly Chlorinated Dibenzo Dioxins
PCDF	Poly Chlorinated Dibenzo Furons
PCS	WHO Programme for the Promotion of Chemical Safety
PEEM	Panel of Experts on Environmental Management for Vector Control
PEP	WHO Programme for the Promotion of Environmental Protection
PEPAS	WHO Western Pacific Centre for the Promotion of Environmental Planning and Applied Studies
PIACT	Programme for the Improvement of Working Conditions and Environment
PIC	Prior Informed Consent
PIM	Poison Information Monograph
PPT	WHO/PCS Unit of Poison Prevention and Treatment
RAISON	Regional Analysis by Intelligent Systems on a Microcomputer
RCU	Regional Coordinating Unit
ROAP	UNEP Regional Office for Asia and the Pacific
ROLAC	UNEP Regional Office for Latin America and the Caribbean
SDN	Sustainable Development Network
SEARO	WHO South East Asia Regional Office
TCC	GEMS/HEAL Technical Coordinating Centre
TLV	Threshold Limit Value

UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIDO	United Nations Industrial Development Organization
UNITAR	United Nations Institute for Training and Research
U.S. EPA	United States Environmental Protection Agency
VILP	Vietnam General Confederation of Labour
WHO	World Health Organization
WHP	World Health Programme
WISE	ILO Programme for Workplace Improvement in Small Enterprises
WMO	World Meteorological Organization
WPRO	WHO Western Pacific Regional Office
ZCTU	Zimbabwe Confederation of Trade Unions



## UNITAR

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- To ensure liaison with organizations and agencies of the United Nations and with permanent missions accredited in Geneva, New York and other cities hosting United Nations Institutions and to establish and strengthen cooperation with faculties and academic institutions.
- To conduct training programmes in multilateral diplomacy and international cooperation for diplomats accredited in Geneva and the national officials, involved in work related to United Nations activities.
- To carry out a wide range of training programmes in the field of social and economic development which include:
  - a. Training Programme in Multilateral Diplomacy, Negotiations and Conflict Resolution;
  - b. Environmental and Natural Resource Management Training Programmes;
  - c. Training Programme on Debt and Financial Management with special emphasis on the Legal Aspects;
  - d. Training Programme on Disaster Control;
  - e. Training Programme on Peace-Keeping, Peace-Making, and Peace-Building.

UNITAR's activities in the field of chemicals management include the implementation of the *UNEP/UNITAR Training Programme on the Implementation of the London Guidelines*, a series of *Pilot Studies to Assess the Feasibility of Establishing Emissions Inventories in Industrializing and Developing Countries* and close collaboration with the International Programme on Chemical Safety (IPCS) and its member organizations on general issues of training and capacity building for the environmentally sound management of chemicals.

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