Series on Chemical Accidents No. 3

International Assistance Activities Related to Chemical Accident Prevention, Preparedness and Response

Follow-up to the Joint OECD and UN/ECE Workshop to Promote Assistance for the Implementation of Chemical Accident Programmes

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Paris

59139

OECD Environmental Health and Safety Publications

Series on Chemical Accidents

No. 3

International Assistance Activities Related to Chemical Accident Prevention, Preparedness and Response

Follow-up to the Joint OECD and UN/ECE Workshop to Promote Assistance for the Implementation of Chemical Accident Programmes

Environment Directorate

Organisation for Economic Co-operation and Development

Paris 1997

Other OECD publications related to chemical accident prevention, preparedness and response include:

Guiding Principles for Chemical Accident Prevention, Preparedness and Response: *Guidance for Public Authorities, Industry, Labour and Others for the Establishment of Programmes and Policies related to Prevention of, Preparedness for, and Response to Accidents Involving Hazardous Substances* (1992)

International Directory of Emergency Response Centres (first edition, 1992). Prepared as a joint publication with UNEP IE [under revision as a joint effort with UNEP IE and the UNEP/DHA Joint Environment Unit]

Report of the OECD Workshop on Strategies for Transporting Dangerous Goods by Road: Safety and Environmental Protection (1993)

Health Aspects of Chemical Accidents: *Guidance on Chemical Accident Awareness, Preparedness and Response for Health Professionals and Emergency Responders* (1994). Prepared as a joint publication with IPCS, UNEP IE, and WHO-ECEH

Report of the OECD Special Session on Chemical Accident Prevention, Preparedness and Response at Transport Interfaces **(**1995)

Report of the OECD Workshop on Small and Medium-sized Enterprises in Relation to Chemical Accident Prevention, Preparedness and Response (1995)

Guidance Concerning Chemical Safety in Port Areas. *Guidance for the Establishment of Programmes and Policies Related to Prevention of, Preparedness for, and Response to Accidents Involving Hazardous Substances. Prepared as a joint effort of the OECD and the International Maritime Organization (IMO)* (1996)

Guidance Concerning Health Aspects of Chemical Accidents. *For Use in the Establishment of Programmes and Policies Related to Prevention of, Preparedness for, and Response to Accidents Involving Hazardous Substances* (1996)

NEW SERIES ON CHEMICAL ACCIDENTS

Report of the OECD Workshop on Risk Assessment and Risk Communication in the Context of Chemical Accident Prevention, Preparedness and Response (1997) [new Series on Chemical Accidents No. 1]

Report of the OECD Workshop on Pipelines (Prevention of, Preparedness for, and Response to Releases of Hazardous Substances) (1997) [new Series on Chemical Accidents No. 2]

About the OECD

The Organisation for Economic Co-operation and Development (OECD) is an intergovernmental organization in which representatives of 29 industrialized countries in North America, Europe and the Pacific, as well as the European Commission, meet to co-ordinate and harmonize policies, discuss issues of mutual concern, and work together to respond to international problems. Most of the OECD's work is carried out by more than 200 specialized Committees and subsidiary groups composed of Member country delegates. Observers from several countries with special status at the OECD, and from interested international organizations, attend many of the OECD's Workshops and other meetings. Committees and subsidiary groups are served by the OECD Secretariat, located in Paris, France, which is organized into Directorates and Divisions.

The work of the OECD related to chemical accident prevention, preparedness and response is carried out by the Expert Group on Chemical Accidents, with Secretariat support from the Environmental Health and Safety Division of the Environment Directorate. As part of its work on chemical accidents, the OECD has issued several Council Decisions and Recommendations (the former legally binding on Member countries), as well as numerous Guidance Documents and technical reports including the OECD *Guiding Principles for Chemical Accident Prevention, Preparedness and Response*; *Guidance Concerning Chemical Safety in Port Areas; Guidance Concerning Health Aspects of Chemical Accidents*; the joint IPCS/OECD/UNEP/WHO publication, *Health Aspects of Chemical Accidents*; and the joint OECD/UNEP *International Directory of Emergency Response Centres* (currently being revised as a joint effort of the OECD, UNEP IE and the Joint UNEP/DHA Environment Unit).

The Environmental Health and Safety Division publishes documents in six different series: **Testing and Assessment**; **Good Laboratory Practice and Compliance Monitoring**; **Pesticides**; **Risk Management**; **Harmonization of Regulatory Oversight in Biotechnology**; and the new **Chemical Accidents** series. More information about the Environmental Health and Safety Programme and EHS publications is available on the OECD's World Wide Web site (see next page).

This publication was produced within the framework of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC).

The Inter-Organization Programme for the Sound Management of Chemicals (IOMC) was established in 1995 by UNEP, ILO, FAO, WHO, UNIDO and the OECD (the Participating Organizations), following recommendations made by the 1992 UN Conference on Environment and Development to strengthen co-operation and increase international co-ordination in the field of chemical safety. UNITAR joined the IOMC in 1997 to become the seventh Participating Organization. The purpose of the IOMC is to promote co-ordination of the policies and activities pursued by the Participating Organizations, jointly or separately, to achieve the sound management of chemicals in relation to human health and the environment.

This publication is available electronically, at no charge.

For the complete text of this and many other Environmental Health and Safety publications, consult the OECD's World Wide Web site (http://www.oecd.org/ehs/)

or contact:

OECD Environment Directorate,
Environmental Health and Safety Division

2 rue André-Pascal
75775 Paris Cedex 16
France

Fax: (33-1) 45 24 16 75

E-mail: ehscont@oecd.org

Foreword

The **Workshop to Promote Assistance for the Implementation of Chemical Accident Programmes** was held in Divonne, France, in February 1995. It was hosted by the Government of France, in co-operation with the United Nations Economic Commission for Europe (UN/ECE) and the OECD. There were approximately 60 participants, representing ten OECD Member countries and the European Commission, eight European countries in economic transition, and ten international organisations, as well as industry and trade unions.

Among the aims of the Workshop were:

- to promote programmes to assist governments and others in countries in economic transition to strengthen systems for the prevention of major industrial accidents and for emergency preparedness, response and clean-up;

- to enhance the effectiveness of such assistance programmes through improved sharing of information; and

- to facilitate the practical implementation and co-ordination of these assistance programmes.

While the focus was on assistance to all countries in economic transition, the emphasis of the Workshop was on the countries of Central and Eastern Europe.

This publication has two parts. The first is the **Conclusions and Recommendations of the Workshop**, which have been reviewed by the OECD and UN/ECE policy bodies responsible for work on chemical accident prevention, preparedness and response. Both of these policy bodies endorsed the Conclusions and Recommendations and agreed that they should be published and widely disseminated.

The second part is an **overview of assistance activities of intergovernmental organisations, countries, and non-governmental organisations related to chemical accident prevention, preparedness and response**. This document, prepared in response to a request from workshop participants, is based on a background document discussed at the workshop. It has been circulated for review to the organisations and countries about which it provides information.

The OECD's Expert Group on Chemical Accidents recommended that this report be forwarded to the Joint Meeting of the Chemicals Group and Management Committee of the Special Programme on the Control of Chemicals for consideration as an OECD publication. The Joint Meeting agreed with this recommendation. The report is published on the authority of the Secretary-General of the OECD.

Table of Contents

Introduction

This publication has been prepared as a joint effort of the Organisation for Economic Co-operation and Development (OECD) and the UN Economic Commission for Europe (UN/ECE) in order to improve assistance activities related to chemical accident prevention, preparedness and response. Specifically, it contains the Conclusions and Recommendations of a joint OECD-UN/ECE workshop at which a wide range of experts considered how to enhance the effectiveness of assistance programmes and help ensure that such programmes address priority needs of recipient countries. The Workshop also considered how the experiences gained from assistance activities could be shared among interested parties.

The second part of this publication is a document which summarizes the relevant assistance activities of international organisations and individual countries, to the extent that such information was available. The Workshop concluded that such a document could help improve understanding of the available activities, facilitate sharing of experience, and promote increased co-ordination and co-operation.

Background of the Workshop

The ***Workshop to Promote Assistance for the Implementation of Chemical Accident Programmes*** took place in Divonne, France, on 6-7 February 1995. It was hosted by the Government of France, in co-operation with the United Nations Economic Commission for Europe (UN/ECE) and the Organisation for Economic Co-operation and Development (OECD). The approximately 60 participants represented ten OECD countries and the European Commission, eight European countries in economic transition, and ten international organisations, as well as industry and trade unions.

Among the aims of the Workshop were:

- to promote programmes to assist governments and others in countries in economic transition to strengthen systems for the prevention of major industrial accidents and for emergency preparedness, response and clean-up;

- to enhance the effectiveness of such assistance programmes through improved sharing of information; and

- to facilitate the practical implementation and co-ordination of these assistance programmes.

While the focus was on assistance to all countries in economic transition, the emphasis of the Workshop was on the countries of Central and Eastern Europe.

To meet the Workshop's objectives, sessions were designed to:

- exchange experience of OECD Member and non-member countries, industry and labour in implementing accidents-related policies and programmes;

- take stock of the needs and experiences of countries in transition;

- improve understanding of current and planned bilateral and multilateral assistance programmes in this field, including the outputs/tools which are generally available;

- identify gaps between the needs identified in the countries in transition and the existing and planned assistance programmes;

- consider what further efforts are needed to improve the effectiveness of assistance activities, minimise duplication of effort, and maximise the use of the limited resources available to donor and recipient countries and organisations; and

- discuss follow-up activities.

Background documents

Two background documents were prepared for the Workshop by a consultant, Francine Schulberg. The first document, "An Indication of the Needs of Countries in Transition for Assistance Related to Industrial Accident Prevention, Preparedness, Response and Clean-up", was based on a series of activities related to the development of a UN/ECE work programme to facilitate the implementation of the Convention on the Transboundary Effects of Industrial Accidents. Three general areas were highlighted as priorities from the perspective of the countries in transition: institutional development (including legislative and administrative frameworks); safety management and technology (to improve the capabilities of industry and public authorities and to facilitate public information and participation); and training and exercises for all interested parties.

This background document also described a number of suggestions for successful assistance programmes. Specifically, assistance programmes should: be action-oriented and practical; be part of an overall plan to ensure continuity and follow-up; take into account the experience, skills and activities existing in target countries; seek to develop internal capacity ("train the trainers"); involve appropriate participants from the target countries and require that participants be active in preparation and follow-up; recognise the resource constraints in target countries; promote continuing exchange of information and experience; and work to ensure co-ordination and co-operation among related assistance programmes.

The second background document, "Relevant Assistance Activities of Intergovernmental Organisations, Countries and Non-governmental Organisations," although not comprehensive, addressed numerous international assistance activities related to chemical accident prevention, preparedness and response or to more broad-based environmental assistance programmes which could include co-operative work concerning chemical/industrial accidents or related fields. This document also described several activities undertaken as a co-operative effort of two or more organisations (for example, PEER, a joint project of industrial, intergovernmental and non-governmental organisations, and the health-related activities undertaken as a co-operative effort by WHO, IPCS, UNEP and OECD). Finally, it included descriptions of mechanisms established to facilitate co-ordination (for example, the two UN/ECE Regional Co-ordinating Centres in Warsaw and Budapest).

One of the Recommendations of the Workshop was that the OECD, in co-operation with the UN/ECE, "should prepare and regularly revise an expanded and updated version of the [second

background] document on existing bilateral and multilateral assistance activities, with wide circulation to interested parties in both donor countries/organisations and the countries in transition."

Therefore, an updated and expanded version of this document is included in this publication under the title "Assistance Activities of Intergovernmental Organisations, Countries and Non-Governmental Organisations Related to Chemical Accident Prevention, Preparedness and Response".

This document was circulated for review to the organisations and countries about which information is provided. It should be noted that relevant organisations and countries were solicited for information for inclusion in this document before the Workshop, and for supplementary information following it.

Conclusions and Recommendations of the Divonne Workshop

*The following Conclusions and Recommendations of the **Workshop to Promote Assistance for the Implementation of Chemical Accident Programmes** (held in Divonne, France, on 6-7 February 1995) have been reviewed by the OECD and UN/ECE policy bodies responsible for work on chemical accident prevention, preparedness and response (i.e., the OECD Expert Group on Chemical Accidents and the UN/ECE Meeting of the Signatories to the Convention on the Transboundary Effects of Industrial Accidents). Both of these policy bodies endorsed the Conclusions and Recommendations and agreed that they should be published and widely disseminated.*

Conclusions

1. Participants emphasised the importance of the Workshop and its outcome. They expressed the hope that the Workshop would set the stage for more extensive co-operation and sharing of the efforts to promote accident prevention, preparedness, response, and clean-up programmes and policies. In this regard, they concluded that their recommendations should be circulated widely to interested organisations, at both international and national levels, and that the recommendations should lead to immediate action.

2. A basic premise underlying the Workshop discussions was that improvements in industrial accident prevention, preparedness and response are critical to protect human health and the environment, as well as to promote investment and improve the viability of the chemical industry and other industries that use or handle hazardous chemicals. Decision-makers in the countries in economic transition have expressed the need for assistance from other industrialised countries, in order to improve their policies and programmes. At the same time, there is a need to make the most effective use of increasingly scarce resources (in terms of specialists and skills, as well as funds) from both the perspective of the donor and that of recipient organisations/countries.

3. Workshop participants recognised that economic transition in a region has a direct impact on the safety of hazardous installations. Safety can often be compromised during periods of change, for example when there are competing needs for limited resources, when processes or systems are modified, when facilities are shut down, or when the regulatory environment is changing. At the same time, many companies in countries in economic transition are seeking to modify or overhaul management and financial systems, attract investments, develop a safety culture, and allocate budgets for process safety, training, maintenance, and other prerequisites for safe operating conditions. In order to better compete with companies from other regions, many companies are also seeking to develop markets, to adapt products to meet demand, and to be price/cost competitive, while feeling the pressure to incorporate international safety and environmental standards/guidelines as elaborated by UNCED Agenda 21, the European Union, the UN/ECE, the OECD or other international organisations, and by industrial and other non-governmental organisations.

4. Numerous assistance programmes have been organised by OECD countries on a bilateral or multilateral basis (for example, through international organisations) and industrial and other non-

governmental organisations also have programmes to aid their constituents and others in countries in economic transition. It was widely agreed that most of these programmes have been very successful in achieving their objectives, and that many donor organisations have been actively co-ordinating their activities with those of other such organisations. Furthermore, it was noted that international activities have an important function in establishing informal networks of experts who can assist each other in carrying out their responsibilities.

5. It was stressed that the existence of numerous activities in this field is logical, and is justified by the range and complexity of the issues involved. Programmes have been developed in response to recognised needs. Issues concerning chemical accident prevention, preparedness and response involve many different sectors and disciplines. In addition, industrial safety is closely linked with a range of other issues, including occupational health and safety, general environmental protection and planning, industrial audits, and civil defence. Moreover, each country is different in terms of legal and industrial development and, therefore, not all international programmes will fit the needs of all countries.

6. However, it was recognised that many assistance programmes still have related or overlapping components. In some cases, this has resulted in duplication of activities and inefficiencies on the part of donors, leading to a diversion of resources that could be more effectively used elsewhere. Furthermore, when two or more well intended assistance projects have been designed in isolation from each other, officials in target countries may end up having to duplicate work or to deal with confusing messages or "information overload".

7. Therefore, the Workshop concluded that immediate action should be taken to improve information sharing and co-ordination among and within donor and recipient countries and organisations, in order to eliminate any truly redundant activities and to increase the effectiveness of all programmes. Such action would permit organisations/countries to make better use of resources and draw on their particular strengths. It would also permit the recipient organisations/countries improved access to, and use of, available programmes and materials while reducing confusion due to possibly conflicting messages from different organisations. Other benefits of co-operation would include: less demand on the time and resources of participants, more effective projects and outputs utilising expertise from a wider variety of sectors than would be possible with separate efforts, and elimination of conflicts over the "best" guidance.

8. The Workshop also concluded that increased transparency and accountability of the various programmes, and improved co-ordination among donors and recipients, would allow donors more effectively to target assistance programmes to priority subjects (i.e., make the assistance more demand driven) and to involve all relevant stakeholders in assistance activities.

9. It was stressed that, for co-ordination to be successful, donor countries/organisations need to accept that their "packages" may not always be appropriate in their entirety or may not be appropriate in a given location. Donor countries/organisations should also be prepared to recognise that another country/organisation could better meet the needs of a particular situation and, therefore, should be prepared to defer to the more suitable donor.

10. Some participants suggested that the Intergovernmental Forum on Chemical Safety (IFCS) provides a valuable opportunity for liaison among various players and for examining effective ways of implementing national programmes and policies related to chemical accident prevention, preparedness and response. The IFCS was established to promote the implementation of the priorities set out in UNCED Agenda 21, Chapter 19 on environmentally sound management of chemicals, with the

participation of governments as well as intergovernmental and non-governmental organisations. The Inter-organization Programme on the Sound Management of Chemicals (IOMC), which provides the mechanism for co-ordinating international work by WHO, ILO, UNEP, FAO, UNIDO and OECD, should also be encouraged to discuss implementation of the needed co-ordination in the field of chemical accident prevention, preparedness and response.

11. Workshop participants concluded that it is important for international organisations and their member countries to critically appraise the needs of potential recipients before creating new bodies/programmes. In the past, organisations and countries have tended to approve proposals for new activities without careful consideration of possible duplication of effort, or of the fact that another group might be better placed to carry out the proposed work. Recipient countries may not be able to resist participating in a newly proposed activity, even if it is duplicative or less than fully effective.

12. In addition, it was agreed that existing assistance programmes should be reviewed regularly to assess their effectiveness and determine whether they are continuing to address priority needs.

13. While no specific gaps were recognised between the identified needs for assistance and the types of activities that were ongoing or planned, a number of process-related "gaps" were described. For example, there is a need for improved technical and scientific knowledge to assess risks, reduce the likelihood of accidents, and prepare for and respond to accidents in order to minimise adverse effects. There is also a "gap" in the effective implementation of programmes, for example concerning stakeholder involvement and the transparency of work being undertaken. With respect to participation, it is critical for all stakeholders to be aware of relevant activities and to understand their role and the benefits of participation.

14. It was the consensus of the Workshop that chemical accident policies and programmes should be integrated, at the national and international levels, into related policies including those addressing technical, industrial and environmental/health matters. In this regard, participants concluded that there should be close co-ordination of accidents-related activities with those related to, *inter alia*, cleaner production, chemicals management, environmental action plans, industrial/safety audits, corporate management, and civil defence.

15. In addition to discussing the need for improved co-ordination and transparency of assistance programmes, the Workshop addressed the improvement, in general terms, of the delivery of such programmes. They concluded that assistance programmes are most effective if they are responsive to specific, well-defined needs (are "demand-driven") and are results-oriented. It was recommended that assistance programmes utilise local experts and local language(s), and that they take into account a long-term perspective rather than providing single, stand-alone activities. Furthermore, for chemical accident policies and programmes to be effective, there must be active participation of all relevant stakeholders, which would include, as appropriate, public authorities at all levels, industry (management and workers, including worker representatives), and community organisations.

Recommendations

1. It is the responsibility of both donor and recipient countries/organisations to take action, consistent with the Conclusions and Recommendations of this Workshop, to improve the transparency of assistance programmes and related materials, to facilitate co-ordination among programmes, and to commit to making the programmes as effective as possible.

2. In order to achieve active, continuing co-ordination and transparency of assistance activities, focal points and co-ordinating mechanisms should be created in and among donor and recipient countries and international organisations. These mechanisms should, *inter alia:* include regular exchanges of calendars of events; regularly update and distribute inventories of products/activities available, under preparation and being planned; and carefully consider mandates, activities and project objectives, including their particular strengths and limitations. Projects should be referred to the most appropriate lead agencies and, where appropriate, joint or co-operative activities should be undertaken. To the extent possible, use should be made of existing co-ordination mechanisms such as the Intergovernmental Forum on Chemical Safety (IFCS), the Inter-Organization Programme for the Sound Management of Chemicals (IOMC), and the two regional co-ordinating centres established in Warsaw and Budapest in connection with the UN/ECE Convention on Transboundary Effects of Industrial Accidents.

3. Organisers of assistance programmes should critically examine their work programmes on a regular basis in order to consider, for example, what tools or instruments are already available to support their programmes, whether there are advantages in the use of certain approaches, whether the programmes address the real needs of the target audience and take into account their specific conditions, and how the organisation of the programmes and co-ordination with other programmes can be improved to more effectively and efficiently deliver products that are wanted and can be used in practice. In addition, programmes would be reviewed to foster accountability and to determine whether any lessons have been learned which could improve future activities and which could be shared with other donors.

4. The OECD, in co-operation with the UN/ECE, should prepare and regularly revise an expanded and updated version of the consultant's background document on existing bilateral and multilateral assistance activities,[1] with wide circulation to interested parties in both donor countries/organisations and countries in economic transition. In addition to a description of ongoing and planned activities and results achieved to date, this publication should include a calendar of activities, a statement of the mandate of each organisation or activity, the objectives of its work, the perception of its particular strengths and limitations, and a contact point for further information. The increased transparency resulting from such a publication could: greatly facilitate co-ordination of various activities; improve awareness of available guidance materials and other relevant documentation; help to avoid duplication of effort; permit countries to assess priorities for future assistance activities; and facilitate involvement of interested parties. This would in turn facilitate better scheduling, reduce travel demands, and allow back-to-back or joint activities to be planned, as well as permitting assistance activities to gain from and use the results of others preceding them.

5. To complement the OECD effort, all recipient countries/organisations should, to the extent possible, prepare an inventory of relevant assistance activities in which they participate. They should

---

[1] A revised, expanded and updated version of the background document is included in this publication under the title “Assistance Activities of Intergovernmental Organisations, Countries and Non-governmental Organisations Related to Chemical Accident Prevention and Response.”

also establish mechanisms to co-ordinate these activities and to ensure wide distribution of related information and documentation.

6. All donors and recipients should seek to improve the effectiveness in the delivery of assistance programmes. All programmes should be well-planned, taking into account the items described in paragraph 15 above, with sufficient allocation of resources (human and financial) to permit appropriate follow-up activities. Existing guidance and training materials should be used, to the extent possible, and relevant documentation should be made widely available. It is important, at an early stage, to define the objectives of assistance programmes, the target audiences, and the appropriate range of participants. In this regard, it is critical to involve the full range of stakeholders, to secure the commitment of the stakeholders, and to ensure that participation is appropriate for the particular activity. This will help to ensure the appropriate allocation of roles and responsibilities among public authorities, industry, workers and their representatives, community organisations, emergency responders and others. Participants should play an integral role in the development, implementation and follow-up of assistance activities.

7. All relevant parties should make efforts to integrate work on chemical accident prevention, preparedness and response with other industrial and environmental management matters (for example, cleaner production, emergency response to all emergencies, general corporate management, environmental action plans, industry and technology policies). This should be reflected in national policies and programmes, as well as in international activities and assistance programmes.

8. It was suggested that sector-specific networks should be improved, and better utilised, in order to facilitate exchange of information among experts, to develop co-operative programmes (for example, among research institutes), and to provide for an exchange of inspectors or other specialists.

9. Work should be initiated to develop means for measuring progress and performance with respect to the development and implementation of programmes and policies for chemical accident prevention, preparedness, response and clean-up.

10. The results of this Workshop should be distributed widely within concerned international organisations (including donors and co-ordinating bodies such as the Commission on Sustainable Development) and donor and recipient countries/organisations.

Assistance Activities of Intergovernmental Organisations, Countries and Non-Governmental Organisations Related to Chemical Accident Prevention, Preparedness and Response

Table of Contents

(continued next page)

A. INTRODUCTION

The purpose of this document is to describe, in summary fashion, activities which could assist countries in economic transition to improve chemical/industrial accident prevention, preparedness, response and clean-up policies and programmes. These include ongoing and planned multilateral activities of international, regional and non-governmental organisations, as well as bilateral activities initiated by countries within the OECD and UN/ECE regions.

This document is based on a background document prepared to support discussions at the OECD-UN/ECE **Workshop to Promote Assistance for the Implementation of Chemical Accident Programmes** held in December 1995 in Divonne, France, at the invitation of the French Government. A major objective of the Divonne Workshop was to facilitate the practical implementation and co-ordination of relevant programmes to assist countries in economic transition. The premise was that increased awareness, and improved co-ordination of programmes where appropriate, would enhance their effectiveness.

The document was then revised and updated in accordance with the Conclusions of the Workshop in order, *inter alia*, to provide additional information of use to potential donors of financial or technical assistance related to chemical accident prevention, preparedness and response (for example, contact points have been included).

The primary focus of this document is on assistance to countries in Central and Eastern Europe, although countries in economic transition in other parts of the world are addressed to some extent. The focus is also on work related to fixed installations, including storage facilities and transport interfaces such as ports and rail yards. For purposes of this document, the word "chemical" is used in a broad sense and includes petroleum products.

The term "chemical accident" is used to refer generally to the range of related activities described in this report. However, a variety of terms are used by different organisations to cover approximately the same subject matter. These include, for example, "major hazards", "industrial accidents", "accidents involving hazardous substances", or "accidents involving dangerous goods". While the use of one term rather than another may suggest small differences in scope, this document will not attempt to define or compare these terms. The document does not directly address activities related to accidents involving nuclear materials.

Some of the activities described in this document deal specifically with issues related to industrial accident prevention, preparedness and/or response. Other activities are more broad-based environmental assistance programmes, with an emphasis on Central and Eastern Europe, which could include co-operative work in the area of chemical accidents or in related fields. For example, such activities may involve assistance to improve monitoring and assessment capabilities, to make data available on chemicals, or to improve systems for provision of information to the public. Organisations/countries are listed in alphabetical order; the order does not reflect the nature or extent of activities undertaken.

The document was prepared based on information provided by the organisations and countries themselves. This information was supplemented by drawing on additional sources, including official

documentation from the relevant organisations and conversations with officials from the organisations and countries, as well as the following documents:

- UN/ECE, “Activities of Other United Nations Bodies and International Organisations and Institutions Related to Industrial Accidents." ENVWA/WG.4/R.6 plus corrigenda;

- UN/ECE, "Bilateral and Multilateral Financial Co-operation in the ECE Region of Relevance to Environmental Protection," ENVWA/R.64, as revised;

- UN/ECE, Consultant's Report on "Multilateral and Bilateral Activities Relevant to the Workshop on Strengthening the Ability of Countries in Transition to Prevent, Prepare for and Respond to Industrial Accidents," May 1993;

- UNEP IE (Industry and Environment centre), "Activities of United Nations Institutions in the Field of Industrial Accidents," prepared for the Senior Level Expert Advisory Group Meeting on APELL, December 1994;

- UNEP UNCUEA (UN Centre for Urgent Environmental Assistance), Consultant's Report on "International Emergency Response Capacities: A Review of Existing Arrangements both Within and Outside the UN System," October 1993;

- UNITAR (UN Institute for Training and Research), "Resource Guide on Training and Technical Assistance Activities of International Organisations related to the Environmentally Sound Management of Chemicals," April 1994; and

- Programme Proposals of the two UN/ECE Regional Co-ordinating Centres, established by the Third Meeting of the Signatories to the Convention on the Transboundary Effects of Industrial Accidents.

This document is not comprehensive. While it includes most of the major intergovernmental organisations working in this field, there are other organisations with relevant activities concerning chemical safety or industrial development. With respect to bilateral activities, several OECD and other countries have established programmes to provide bilateral assistance to countries in economic transition which are not included in this document. Attempts were made to be as inclusive as possible, but many organisations and countries did not provide information as requested. Furthermore, there are a number of multilateral and bilateral agreements regarding the prevention of, preparedness for and response to industrial accidents which are not described in this document.

In addition, numerous non-governmental organisations, including industry, legal and environmental groups, have established projects related to environmental protection and industrial development in Central and Eastern Europe and in other countries in economic transition. While it was not possible to survey all such groups, some projects have been included here by way of example.

B. OVERVIEW

It is a given that countries and international organisations providing assistance in the field of chemical accidents (or, in fact, any field) should undertake to co-ordinate and co-operate with each other in order to improve the quality of work products (agreements, guidance, training programmes, etc.) and to increase the efficiency in the delivery of such products. This is particularly important in the current climate of decreasing resources (financial and human) being made available to support international and national programmes and the large number of valuable activities competing for these limited resources. In fact, organisations are increasingly finding that there are not sufficient resources to support projects which have been approved and that countries are unable to provide the necessary support at national level.

In addition to being inefficient, overlapping programmes can lead to conflicting or confusing guidance being presented to target audiences. And even if multiple projects are consistent and of high quality, they can lose their effectiveness under their sheer weight (for example, outputs are less valuable if countries have to sort through large numbers of documents to determine which are the most useful). Moreover, it is frustrating for countries to be subject to multiple reporting requirements from different organisations, or to have to pick and choose among the many international activities in which they might wish to participate.

It should be recognised, however, that despite the large number of international activities in the field of chemical accidents, there is considerably less overlap or conflict than might appear on the surface. First, the subject of chemical accident prevention, preparedness and response is quite complex, incorporating a number of different elements. Furthermore, over time there has been improved co-ordination of activities, as well as an increase in the number of co-operative activities, among international organisations working in this field. The work related to health aspects of chemical accidents and to chemical safety in port areas are two examples of such international co-operative work.

There are a number of possible, non-exclusive explanations for the improved co-ordination. First, it may be a natural evolution as the work in this area has developed over the past ten years. As representatives of the Secretariats, countries and other stakeholders get to know each other better, there is an improved atmosphere for communication and co-operation. Second, certain individuals involved in the steering/policy groups of a number of relevant organisations have worked towards improved co-ordination. Third, recently (post-UNCED) a number of mechanisms have been established to facilitate co-operation in areas related to chemical accidents. Fourth, the Secretariats in many organisations have made concerted efforts to promote appropriate co-ordination in accordance with their mandates. Fifth, organisations may be forced to increase co-operation as a direct result of the limitation in resources; projects can move forward more easily if the associated costs are shared among organisations.

It should be recognised that, in some cases, overlapping work programmes and seeming duplication of effort may not always be a bad thing, particularly when the programmes reach out to very different constituencies. However, in such cases the overlapping projects should be undertaken knowingly and should not lead to conflicting outcomes.

Failures at co-ordination stem from a number of inter-related reasons, which should be addressed at both the international and national levels.

First, some assistance activities of countries/organisations are not well known by others not directly involved. There is a need to increase awareness of such activities, from the perspective of inter-

organisation communication as well as in order to improve access to information by stakeholders within countries. Certain organisations have been identified as having a history of being less known and less willing (or able) to engage in multi-organisation discussions or activities. Some international organisations seem to have difficulty in disseminating the outputs of their work beyond their constituents and regular contacts. This contributes to inefficiencies, as organisations attempt to "reinvent the wheel" because their policy bodies are unaware of the existence of outputs from other organisations. This particular problem may be mitigated in the future due to the availability and use of on-line publications and information networks.

Second, the limited resources available to intergovernmental organisations could also contribute to problems of co-ordination. For example, in some cases work programmes are approved in principle without adequate Secretariat resources to carry them out. It then becomes difficult to share the burden of carrying out work. In addition, as budgets are being cut, there may be pressure within each organisation simply to increase the scope of their mandate and to show progress by the number of activities and outputs, without sufficient credit being given to efforts aimed at co-ordination and co-operation. Furthermore, delegations to international organisations often approve work programmes in their enthusiasm for the intended output, without sufficient regard to the resource implications for the countries themselves. Many projects require substantial input from countries, and problems arise when they are unable to follow through on their commitments.

Third, some organisations may simply not be respected by certain groups and, therefore, their outputs are distrusted or ignored. This could be the result of a "not invented here" attitude, or could derive from political or historical reasons. It could also have more substantive causes, for example that the process utilised for developing guidance or other materials is not sufficiently inclusive of various perspectives or is not subject to a sufficient review process.

Fourth, a major factor is the failure of national delegates to properly co-ordinate “at home" with their colleagues in other agencies in national governments. The intergovernmental organisations are creatures of their member states. Thus, to the extent that work programmes exist with overlapping or conflicting elements, this is a reflection of countries' decisions. For example, a representative to ILO from a labour ministry may approve an ILO work programme while, at the same time, his/her colleague from an environment or health ministry may agree that work should move forward in the same area as part of an OECD proposal.

A related area of concern is country-initiated projects (bilateral or multilateral). In undertaking these projects, countries may be motivated by political objectives, by a laudable desire to fill a perceived need, or perhaps even by the fact that they have money to spend which they will otherwise lose in the budget process. Recipient countries and international organisations are often hard-pressed to reject a project proposal which is accompanied by an offer of significant resources, even if the proposal is not consistent with overall programme objectives.

It should also be recognised that international activities are not limited to the work of governmental organisations. International industry, trade union, and environmental/consumer organisations also undertake activities which overlap, or could be better integrated, with governmental initiatives. One good example of multi-sector co-operation is the joint effort of industry, the Green Cross and UNEP in the PEER (Partnership for Environmental Emergency Response in the Chemical Industry of Central and Eastern Europe) Project.

C. INTERGOVERNMENTAL ORGANISATIONS

C.1 COUNCIL OF EUROPE

Ms. Françoise TONDRE
EUR-OPA Major Hazards Agreement
Executive Secretariat
F-67075 Strasbourg Cedex
FRANCE
TEL: (33) 88.41.26.16
FAX: (33) 88.41.27.87

In 1987 the Council of Europe's Committee of Ministers adopted Resolution (87)2, which initiated the "Open Partial Agreement on the prevention of, protection against, and organisation of relief in major natural and technological disasters". The Agreement's principal objective is to activate co-operation between the various signatory states by ensuring that all available resources and expertise are harnessed to the improvement of prevention, protection and assistance in connection with major disasters.

The Agreement is "open" because any non-member state can ask to take part. It is "partial" as only interested member states of the Council of Europe are taking part. European and international organisations can also ask to participate, as has been the case with the European Commission, UNESCO, WHO (see **C.16**) and DHA (see **C.11**). The International Federation of Red Cross and Red Crescent Societies also participates.

As of 1994, 20 countries had acceded to the Open Partial Agreement (including, from the European Union, Belgium, France, Greece, Italy, Luxembourg, Portugal and Spain).

The Agreement's decision-making body, a meeting of the participating states' ministers, is convened every two years. Those participating in Ministerial Meetings differ from country to country: they may represent the ministry of interior, civil defence, public works and/or environment. The Ministerial Meetings decide on the Agreement's programme of activities and budget proposals, with the budget adopted by the Committee of Ministers of the Council of Europe after consultation with the governments of the States which are parties to the Agreement and not members of the Council of Europe. The Ministerial Meetings are prepared by Permanent Correspondents who meet twice during the interval between the Ministerial Meetings. Each state appoints a Permanent Correspondent. There is an Executive Secretariat which, *inter alia*, manages the Special European Fund, the Partial Agreement budget, and the general operation of the Agreement and its programmes.

There are three major fields of activity under the convention:

- research and training, based on a network of twelve European centres with complementary specialties;

- organisation of aid and co-operation in the event of a disaster, through a European alert system;

- carrying out of specific programmes such as research into earthquake prediction, development of a system of epidemiological information and assistance for medical decision-making following the Chernobyl accident, and preparation of a conservation project for the coral ecosystems in the Gulf.

The network of specialised centres includes: (i) the European Centre for Disaster Medicine, San Marino; (ii) the European University Centre for the Cultural Heritage, Ravello, Italy; (iii) the European Training Centre for Natural Disasters, Ankara, Turkey; (iv) the European Centre for Geodynamic and Morphodynamic Hazards, Strasbourg, France; (v) the European Centre for Geodynamics and Seismology, Luxembourg; (vi) the European Centre for Prevention and Forecasting of Earthquakes, Athens, Greece; (vii) the European Mediterranean Centre for Marine Contamination Hazards, Valletta, Malta; (viii) the European Centre for Information to the Public in the Event of a Disaster, Madrid, Spain; (ix) the European Oceanology Observatory: Major Disaster Prediction and Environment Regeneration, Monaco; (x) the European Centre for Non-linear Dynamics and the Theory of Seismic Risks, Moscow, Russian Federation; (xi) the European Centre for the Legislative Aspects of Disasters, Florival, Belgium; and (xii) the European Centre for Major and Industrial Disasters, Aveiro, Portugal. A 1994 publication, *Network of European Specialised Centres*, describes each of these centres and their respective activities.

The Council of Europe also published a document in 1994 on "international organisations and major hazard management" which addresses intergovernmental and non-governmental organisations involved in all aspects of major hazards including natural and industrial hazards.[1]

[1] It was not used in the preparation of this document.

C.2 EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT (EBRD)

One Exchange Square
London EC2A 2EH
UNITED KINGDOM
TEL: (44-171) 338-6000
FAX: (44-171) 338-6100

The EBRD was established in 1991 by 43 countries to help Central and Eastern European countries and the former Soviet Union make the transition toward open, market-oriented economies. The EBRD's primary purpose is to support the development of the private sector and of infrastructure, energy and environment.

The EBRD is directed by its Foundation Agreement to "promote in the full range of its activities, environmentally sound and sustainable development." In order to play a leadership role in the recovery of Central and Eastern Europe, the Bank incorporates environmental sections into sector and country strategy documents, requires operations to meet the more stringent of national and EU or World Bank environmental standards, and promotes energy efficiency and cleaner technology. The Bank believes that effective public consultation is a way of improving the quality of operations.

In Central and Eastern European countries, the issue of environmental risk and potential liability has special importance due to mass privatisation and the transfer of assets and liabilities. Investors perceive environmental concerns and potential liabilities as serious impediments to foreign direct investment in the region. In the Bank's environmental due diligence, required for all its potential operations, environmental audits, environmental assessments and analyses, and other environmental studies (e.g., risk assessments) are required to identify potential environmental or worker health and safety hazards associated with proposed operations. This information helps to ensure that prevention, mitigation, and response plans are satisfactory, and that the capital expenditure programme includes adequate human and capital resources for implementing management action plans to address potential hazards.

Environmental requirements are included as covenants in legal documents, along with other legal and financial requirements. The Bank continues to monitor environmental performance and progress on environmental management plans throughout the operation's execution.

C.3 INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)

Mr. Andrzej STRUPCZEWSKI
Safety Assessment Section
Division of Nuclear Installation Safety
Wagramerstrasse 5
P.O. Box 100
A-1400 Vienna
AUSTRIA
TEL: (43-1) 20-60-22513
FAX: (43-1) 20-607

In addition to its activities designed to help prevent or respond to accidents in the nuclear field, the IAEA has been co-operating since 1986 with UNEP IE, UNIDO and WHO in an inter-agency programme on the "Integrated Assessment and Management of Health and Environmental Risks from Energy and Other Complex Industrial Systems". The purpose of the inter-agency programme is to promote and facilitate implementation of an integrated approach to the identification, prioritisation and minimisation of important industrial hazards in a given area. The initiative includes the compilation of procedures and methods for environmental and public health risk assessment, and the transfer of knowledge and experience in the application of these procedures and in the implementation of an integrated approach to risk management.

The primary activities of this programme have included:

- the preparation and dissemination of guidance materials, for example the *Manual for the Classification and Prioritization of Risks due to Major Accidents in Process and Related Industries* (1993). A revised version of this document was published in November 1996 as IAEA-TECDOC-727 (Rev. 1). Another document, *Guidelines for Integrated Risk Assessment and Management in Large Industrial Areas,* is under preparation.

- the development of models and computer codes to assist with different tasks related to risk assessment/management methodology. A Decision Support System and other software packages, as well as a technical document on environmental models for risk assessment and management of air and surface water pollution, have been developed. "General Guidelines for the Comparative Assessment of Health and Environmental Impacts of Electrical Energy Systems" are under preparation.

- support for national case studies. These case studies assess the potential health and environmental impacts in a region and, *inter alia*, look at potential sources of major accidents and their potential effects on health, property and the environment. Case studies have been undertaken in several countries. In particular, projects in Zagreb, Republic of Croatia, in Sosnovy Bor, Russian Federation, and in Manila, Philippines, were supported actively by the IAEA. Several expert assistance missions were organised to those countries and IAEA sponsored visits of national experts involved.

- training at national and regional levels.

A workshop was held for 40 participants from throughout the Russian Federation, with the objective of introducing the methodology for integrated risk assessment and management.

In the future, work will be undertaken to encourage the use of the tools developed through training and technical assistance activities and to improve and develop, as necessary, databases, analytical techniques and other tools. The programme will continue to try to provide technical assistance, where possible, to national activities in the area of risk management, for example by brokering bilateral aid arrangements. With respect to training, a modular training programme/syllabus on integrated risk assessment and management is being developed. There will be an effort to encourage co-operation with other government and non-government institutes and academic bodies doing research and practical work in the field of risk management for industrial/energy complexes.

In 1997 and 1998, the activities of the IAEA connected with chemical and radiological hazards will focus on estimating and comparing risks from low level exposures resulting from emissions from energy systems and their wastes, and comparisons of accidents risks in different energy systems. In addition, the IAEA will continue to lead the work on comparative risk assessment of various energy sources, including a co-ordinated research programme, maintaining a database on the health and environmental impacts of energy systems and solid wastes from those systems, preparation of guidelines, and development of comparative information.

The following meetings will take place in 1997 at the IAEA headquarters in Vienna:

- Research Co-ordination Meeting on Comparative Health and Environmental Risks of Nuclear and Other Energy Systems, Using Case Studies (April);

- Advisory Group on Calculation and Comparison of Health and Environmental Impacts Associated with Radioactive and Non-Radioactive Contaminants in Energy System Wastes (April);

- Technical Committee on Recommended Approaches for Estimating and Comparing Risks from Energy Systems in the Far Future (October);

- Advisory Group to Maintain and Update Databases on Technical, Economic, Health and Environmental Parameters of Energy Sources (November);

- Research Co-ordination Meeting on Formulation of Approaches to Compare the Potential Impacts of Waste from Electricity Generation Technologies (November);

- Technical Committee on Estimating and Comparing Risks from Very Low Levels of Exposure Resulting from Emissions from Energy Sources (December).

C.4 INTERNATIONAL CIVIL DEFENSE ORGANIZATION (ICDO)

10-12, Chemin de Surville
CH-1213 Petit-Lancy/Geneva
SWITZERLAND
TEL: (41-22) 793-4433
FAX: (41-22) 793-4428

The work of the ICDO, established as an intergovernmental organisation by means of a 1966 Treaty, involves promoting protection and safety measures for persons and property as a consequence of all kinds of disasters. It develops, strengthens and co-ordinates civil protection in different countries and collaborates with its Member States, with the United Nations and with other institutions to prevent, prepare for and respond to natural catastrophes, technological disasters and major disasters.

The small permanent Secretariat, based in Geneva, operates a Documentation Centre, issues a quarterly ICDO journal, and provides technical assistance and organises training courses for civil protection personnel. In 1989, ICDO signed a co-operative agreement with DHA (see C.11) which, among other things, gives the two organisations reciprocal access to lists of experts and consultants.

As of 28 November 1992, the only UN/ECE country which is a member of the ICDO is Bulgaria. In addition, the Republic of Moldova, the Russian Federation and France have observer status.

C.5 INTERNATIONAL LABOUR OFFICE (ILO)

Mr. Nabil WATFA
Occupational Safety and Health Branch
4, route des Morillons
CH-1211 Geneva 22
SWITZERLAND
TEL: (41-22) 799-6802
FAX: (41-22) 799-6878
e-mail: watfa@ilo.org

The ILO has a broad mandate to promote social progress. Among its ten goals, one which is relevant to the ILO work on chemicals relates to "adequate protection for life and health of workers in all occupations".

The objective of the ILO Safety and Health Programme is to promote and support efforts to reduce occupational accidents and diseases and to improve the working environment. As part of that Programme, ILO has undertaken work on chemical accidents, in order to strengthen the capabilities to prevent such accidents. The work consists in the elaboration of guidelines and international agreements, and in the provision of technical assistance and training programmes through workshops. Furthermore, as described below, the ILO collects information on hazardous chemicals which could be used to support national activities related to chemical accident prevention, preparedness and response.

As a general matter, there is a hierarchy of four types of documents which are issued by the ILO, in increasing order of importance: manuals; codes of practice; recommendations; and conventions. Work in the field of chemical accidents has resulted in publication of each of these types of documents. Specifically, the following documents have been issued by ILO:

- In 1988, the ILO published *Major Hazard Control: A Practical Manual*. It sets forth comprehensive guidelines on the planning and management of preventive programmes at national and enterprise levels. It explains how to identify major hazard installations and describes the components of an effective programme to prevent accidents. Information is also provided on emergency planning.

- In 1991, the ILO published a *Code of Practice on Prevention of Major Industrial Accidents*. This Code of Practice was designed to assist countries in establishing national systems and legislation for the prevention of major accidents.

- In June 1993, the ILO adopted the Convention concerning the Prevention of Major Industrial Accidents (No. 174). The Convention requires ratifying States, in consultation with employers and workers and other interested parties, to formulate a coherent national policy for the protection of workers, the public and the environment against the risk of major accidents. This policy is to be implemented through preventive and protective measures for major hazard installations and, where practicable, the promotion of the use of the best available safety technologies. Employers are required to identify any major hazard installations within their control, notify the competent authority, and maintain a major hazard control system including provision for the identification of hazards and assessment of risks, technical measures such as

design and safety systems, organisational steps such as staff training, emergency plans and procedures, and measures to limit the consequences of a major accident. Competent authorities are to ensure that emergency plans and procedures containing provisions for the protection of the public and the surrounding environment are established, including warning systems and provision of information to the public. The Convention also sets out the rights and duties of workers and their representatives, including the right to interrupt an activity where they have reasonable justification to believe there is imminent danger of a major accident.

- In June 1993, the ILO also adopted the *Recommendation concerning the Prevention of Major Industrial Accidents* (No. 181) which provides for an international exchange of information on major accidents and on safety and organisational measures. It states that national policies should be guided by the 1991 ILO *Code of Practice on Prevention of Major Industrial Accidents*. It calls on countries to promote systems to compensate workers as quickly as possible after major accidents, and to address adequately the effects of such accidents on the public and the environment.

- In a related activity, in June 1990 the ILO adopted the *Convention concerning Safety in the Use of Chemicals at Work* (No. 170) and its accompanying Recommendation (No. 177). The purpose of the Convention is to protect workers from the risks associated with the use of chemicals at their workplace. It applies to all branches of economic activity in which chemicals are used. It covers all chemicals without exception and provides for specific measures in respect of hazardous chemicals. States ratifying the Convention are required to work out a national policy for safety in the use of chemicals at work in accordance with the general principles it sets forth, adopt classification and labelling systems for all such substances, and introduce chemical safety data sheets. The Convention specifies the responsibilities of suppliers in respect of labelling and data sheets and those of employers, which are to be discharged in co-operation with the workers and their representatives as regards the identification of substances, operational control, including monitoring of exposure to chemicals, waste disposal, and the information and training of workers. The Convention also details the duties and rights of workers. Lastly, exporting States are responsible for supplying information to States importing their chemicals. The Recommendation gives additional details on these provisions, together with guidelines on how the principles of the Convention should be translated into national legislation.

- In the field of chemical safety, the ILO has also published *the Code of Practice on Safety in the Use of Chemicals at Work; Safety and Health in the Use of Agrochemicals – A Guide*; and a *Training Manual on Safety in the Use of Chemicals at Work.*

The ILO has organised, or co-sponsored, a series of national and regional workshops on chemical safety and the prevention of accidents. These included three workshops held in 1991 in Central and Eastern Europe on "Safety in the Manufacture and Use of Chemicals." The workshops, held in Hungary, the former Czechoslovakia and Poland, were organised jointly with the Regional Environmental Center and were sponsored by the US Department of Labor and Environmental Protection Agency. These workshops provided the opportunity to exchange views on: successful experiences in controlling chemical hazards to both workers and the environment; measures taken at the national and enterprise levels for promoting chemical safety and preventing major accidents; and the roles of governments, employers and workers and their organisations in improving safety in the manufacture and use of chemicals. A national workshop on the prevention of major industrial accidents was also held in the Russian Federation in 1991.

A regional workshop on the prevention of major industrial accidents was held in Belarus on 27-29 April 1993, with participants from approximately 17 countries of the former USSR and from Central and Eastern Europe. Participants examined national and international practices in the field of the prevention of major industrial accidents, exchanged views on preventive measures to be taken at the national and enterprise levels, and discussed implementation of a major hazard control system based on the ILO Code of Practice.

A number of training and assistance activities on prevention of major accidents have been undertaken in other regions, notably in Asia. These activities were designed to assist countries to install national systems to identify, analyse and control potentially hazardous industries, to develop emergency operation systems, and to provide training of inspectors, safety officers, workers and local authorities.

Several related activities at national and regional levels are being undertaken within the ILO International Programme for the Improvement of Working Conditions and Environment. These include the provision of technical advisory services to governments and to employers' and workers' organisations and the organisation of various meetings.

Current activities related to chemical accidents focus on supporting implementation and ratification of Convention No. 174. Work in this regard is being undertaken as one part of a three-part interdepartmental project on "environment and the world of work." This specifically supports the implementation of Convention No. 174 as well as Convention No. 170 concerning *Safety in the Use of Chemicals at Work*.

The 1996-1997 Action Programme on Safety in the Use of Chemicals at Work will contribute to the overall implementation of the occupational safety and health programme through action aimed at controlling the health effects of toxic chemicals and wastes and the danger of fires and explosions. It is being implemented as a contribution from the ILO to the goals defined by Chapter 19 of UNCED Agenda 21 on the environmentally sound management of chemicals and the relevant recommendations of the Intergovernmental Forum on Chemical Safety. The objectives of this programme are the design and implementation of eight national programmes for the environmentally sound management of hazardous chemicals and their waste at work.

In support of the establishment of national chemical safety co-ordinating units in the Ministry of Labour or Factories Inspectorate in eight countries, the Action Programme aims at achieving the following outputs:

- National chemical safety guidelines on priority chemicals. This will include collection of information regarding chemicals used in selected countries, compilation of material safety data sheets (MSDS) for selected chemicals, and revision and analysis of MSDS and available literature.

- Guidelines on chemical risk assessment and occupational hygiene preventive measures produced for small and medium-sized enterprises. This involves a survey of literature and the collection of information on SMEs.

- Technical guidance notes on the development of curricula for the inclusion of chemical safety courses at secondary and university education levels, including vocational and professional training. This involves the collection of information on safety and health education at the national level and a literature survey on existing chemical safety training in schools, colleges and vocational institutes.

- Training activities on handling, transport, packaging, marketing, use and disposal of priority chemicals. This involves collection and compilation of training materials.

- National and regional seminars on safety in the use of chemicals and the prevention of major industrial accidents. This involves preparation for national tripartite seminars on chemical safety and the prevention of major industrial accidents in each of the countries, preparation for regional seminars in consultation with other UN agencies, and the convening of national and regional seminars.

The criteria for selection of the target countries include: demonstration of the country's interest in creating or strengthening a chemical safety unit within an existing occupational safety and health infrastructure; inclusion of two countries covered by the IPCS project on national training activities for developing countries on toxic chemicals, environment and health (funded by the Netherlands); countries which have not benefited from previous ILO or other UN agencies' chemical safety projects; and geographical coverage.

In a related activity, the ILO International Occupational Safety and Health Information Centre (CIS) provides information on workplace hazards and their control, including legislation, training materials and safety data sheets. Chemical safety sheets available from ILO contain full information, in several languages, about more than 100,000 chemicals, including chemical hazards and precautionary measures. The ILO has also established the International Occupational Safety and Health Hazard Alert System, which rapidly disseminates scientific and technical information on newly discovered or suspected occupational hazards.

The ILO is one of the co-operating organisations of the IPCS. It is also one of the IOMC’s Participating Organisations.

C.6 INTERNATIONAL MARITIME ORGANIZATION (IMO)

Marine Environment Division
4 Albert Embankment
London, SE1 7SR
UNITED KINGDOM

Oil Pollution Co-ordination Centre
TEL: (44-171) 587-3247
(44-171) 463-4211

after hours emergencies: (44-171) 587-3200

FAX: (44-171) 587-3261
(44-171) 587-3195

Head of Centre:	--------
Information Officer:	Kiyoshi OHNE
Principal Secretary:	Lesley BROOKS

Mr. David EDWARDS
Head, Pollution, Preparedness and Response Section
TEL: (44-171) 735-7611
FAX: (44-171) 587-3261

The IMO is a specialised agency of the United Nations established to promote the safety of maritime shipping and counter the threat of marine pollution.

The purposes of the IMO are, *inter alia*: to provide machinery for co-operation among governments in the field of governmental regulation and practices relating to technical matters affecting shipping engaged in international trade; to encourage and facilitate the general adoption of the highest practicable standards in matters concerning maritime safety, efficiency of navigation, and prevention and control of marine pollution from ships; and to deal with administrative and legal matters related thereto. In addition, the IMO considers any matters concerning shipping and the effect of shipping on the marine environment that may be referred to it by any part of the United Nations.

The prevention and mitigation of damage to human health and the marine environment from the maritime transportation and related handling of hazardous substances forms a significant element of IMO's mandate and is the subject of comprehensive and effective international rules and regulations developed under the auspices of the Organization. Such international instruments aim to ensure that ships are built, equipped and operated in a safe and environmentally friendly manner and to limit the damage to the marine environment in the event of ships getting involved in collisions, stranding or other incidents involving structural damage. The instruments, *inter alia*, provide for the notification in a timely manner of accidents involving hazardous substances on board ship or in a port area to coastal States that may be affected.

Examples of such instruments are the following IMO conventions:

- International Convention for the Safety of Life at Sea (SOLAS) 1974, as amended;

- International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78), as amended;

- Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (LC) 1972, as amended;

- International Convention on Oil Pollution Preparedness, Response, and Co-operation (OPRC), 1990.

The primary purpose of the OPRC is to facilitate international co-operation and mutual assistance in the event of major marine pollution emergencies regardless of source. The main provisions of the Convention include requirements to: prepare and implement oil pollution emergency plans; set up and use oil pollution reporting procedures in the event of an incident; and assess such incidents and their consequences and transmit this information, including details concerning actions to be taken by all States whose interests are affected or likely to be affected by such incidents. The Convention also requires national and regional systems for preparedness and response to be set up. The Convention tasked IMO with creating and maintaining databases to promote international co-operation and mutual aid for major marine pollution emergencies and to facilitate co-operation in oil spill research and development. To this end, IMO maintains a database of oil spill research and development abstracts.

Although the OPRC was initially limited to oil pollution, expansion to include hazardous and noxious substances is planned.

In addition to a regime of compensation in case of oil pollution damage, work is ongoing to establish similar compensation schemes in cases of damage involving hazardous and noxious substances. Other activities are underway to provide technical documentation, contingency planning and advisory services for chemical spillages, as has been developed in the past for marine oil spills.

IMO has also promulgated international guidelines, codes, standards and recommendations dealing with the prevention of marine pollution and with emergency preparedness and response to maritime accidents involving hazardous substances. Examples of these, concerning marine pollution prevention and safety, are:

- International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code);

- Standards for Procedures and Arrangements for the Discharge of Noxious Liquid Substances; and

- International Maritime Dangerous Goods (IMDG) Code.

In the field of preparedness and response, the documents include:

- Emergency Procedures for Ships Carrying Dangerous Goods;

- Recommendations on the Safe Transport of Dangerous Cargoes and Related Activities in Port Areas, covering acceptability of dangerous substances in ports, advance notification, inspection, emergency procedures, fire precautions, reporting, compatibility, containment, etc.;

- Medical First Aid Guide for Use in Accidents involving Dangerous Goods (Chemicals Supplement to *International Medical Guide for Ships*);

- Manual on Chemical Pollution, covering identification, assessment and hazard evaluation, emergency response, personnel safety and health, response organisation and training, and search and recovery of packaged goods lost at sea;

- OPRC Guide to International Assistance, which contains national contact points of participating countries, capabilities of nations, and lists of relevant international, regional, intergovernmental and industrial organisations.

Activities are underway in IMO to develop additional guidance materials and technical documentation. Among the subjects expected to be addressed in the next three years are salvage and chemical response at sea and in ports.

In February 1991, the Oil Pollution Co-ordination Centre (OPCC) was established to pursue functions and activities assigned to IMO under article 12 of the OPRC. One of the OPCC's primary functions is to respond, at the request of IMO member countries, to major marine oil and chemical spills and, in particular, to act as a "clearinghouse" of assistance by seeking and co-ordinating services from other member countries, to maximum efficiency and support. It can provide advice or on-scene support from a cadre of experts. It can also search its database to identify equipment and trained personnel from neighbouring countries and facilitate their provision (i.e., by providing a clearinghouse function). This assistance is funded by donor support provided on a case-by-case basis. IMO receives approximately four requests a year for assistance following an accident and receives about 250 requests for information or advice concerning prevention, preparedness or response. Through the Centre, the IMO managed the clean-up of the Persian Gulf following the 1991 war, which included 30 separate projects costing approximately 6 million dollars provided through voluntary contributions.

Apart from such emergency situations, the OPCC is engaged in providing information services, education and training, and technical assistance to countries preparing for marine spills.

Current plans call for additional work to assist developing countries to improve their national capacities to deal with chemical accidents. A series of technical assistance projects, in conjunction with industry, are planned for the next five years, utilising industry's expertise and resources with government participation financed by bilateral and multilateral funding sources. This project will include assistance with respect to national contingency planning, training programmes for oil pollution preparedness and response, establishment of networks and regional oil pollution centres, and development of financial mechanisms for ensuring sustainability of project activities. A key feature of this project is the emphasis on strengthening industry/government co-operation. It is the intention to provide assistance which will carry through from the development stage to a fully tested or exercised national contingency plan.

Further work will be undertaken on model training courses for operators and supervisors/on-scene co-ordinators, and work will begin on a course for senior management.

With respect to chemical safety in port areas, IMO seeks to co-operate with other international organisations to provide guidelines for prevention, control and response to pollution arising at the interface between land and marine transport occurring in ports. Two recent examples of collaborative effort are:

- IMO and UNEP IE developed a joint publication for port users and operators on how to apply APELL in ports. It highlights the unique nature of ports, with specific guidance on applying APELL methodology for building a preparedness and response infrastructure.

- In October 1993, a Workshop on Chemical Safety in Port Areas was co-sponsored by OECD, IMO and UNEP IE. Subsequently, guidance was prepared as a joint activity of OECD and IMO.

IMO is involved in a number of co-operative activities within the United Nations, as a follow-up to UNCED, in the field of environmentally sound management of toxic chemicals. This includes, in particular, the harmonization of classification and labelling of chemicals in close co-operation with the UN Committee of Experts on the Transport of Dangerous Goods and with the IPCS Co-ordinating Group for the Harmonization of Chemical Classification Systems.

IMO, in co-operation with UNEP and other international organisations, has been actively involved in the development of regional Protocols or Agreements that provide for the timely notification of marine pollution emergencies likely to affect neighbouring states. These agreements also provide the legal framework for mutual assistance in case of accidents involving hazardous substances or having the potential for release of such substances.

With funding from the IMO/SIDA Programme for the Protection of the Marine Environment, IMO, in co-operation with the International Tankers Owners Pollution Federation (ITOPF), the European Commission and Videotel Marine International Limited, produced a series of five training films/videos entitled "Response to Marine Oil Spills" which have been made available, together with support material, to many developing countries. IMO has also co-operated in the production of a series of films/videos with supporting documentation on Planning and Response to Chemical Spills at Sea, as well as videos on handling and storage of packaged dangerous goods in port areas.

C.7 INTERNATIONAL PROGRAMME ON CHEMICAL SAFETY (IPCS)

World Health Organization
20 Avenue Appia
CH-1121 Geneva 27
SWITZERLAND

Dr. M. MERCIER
Director
TEL: (41-22) 791-3588
FAX: (41-22) 791-4848

Dr. J.A. HAINES
Chief, Poisoning Prevention and Treatment Unit
IPCS INTOX Project Leader
TEL: (41-22) 791-3573
FAX: (41-22) 791-4848
e-mail: haines@who.ch

Dr. J. PRONCZUK
Medical Officer
TEL: (41-22) 791-3602
FAX: (41-22) 791-4848
e-mail: pronczukj@who.ch

The IPCS was established in 1980 as a co-operative programme of WHO, ILO and UNEP to: provide internationally evaluated assessments of the risks caused by chemicals to human health and the environment, which countries may use in developing their own chemical safety measures; and strengthen national capabilities for prevention and treatment of harmful effects of chemicals and for managing the health aspects of chemical emergencies.

Following UNCED in 1992, the IPCS has been designated as the nucleus for strengthened international co-operation in the field of environmentally sound management of chemicals. The IPCS Co-operating Organizations participate in the Inter-organisation Programme on the Sound Management of Chemicals (IMOC) established with the three founding organisations, along with the Food and Agriculture Organization, UNIDO and OECD, as a co-ordinating mechanism for activities carried out in support of UNCED Agenda 21 Chapter 19.

The overall objectives of the IPCS are to establish the scientific basis for assessment of the risk to human health and the environment from exposure to chemicals, through international peer-reviewed processes, as a prerequisite for the promotion of chemical safety, and to provide technical assistance in strengthening national capabilities for the sound management of chemicals.

More directly related to the specific subject of accidents is the work undertaken to improve the ability of countries and health professionals to deal with health aspects of chemical accidents and, in particular, to respond to toxic exposures of humans and animals to chemicals.

The IPCS issues a series of "Poisons Information Monographs", as part of its INTOX project, as well as Treatment Guides for the various syndromes and clinical features related to chemical exposures. These are prepared for health professionals to assist in diagnosis and treatment of persons exposed to chemicals.

In addition, a number of documents have been prepared by IPCS as part of its activities directed towards supporting poison control programmes, for example:

- *Guidelines for Poisons Control* provides advice on setting up and running poison control programmes;

- *Handbook on Poisoning* has been prepared for use by non-specialist medical and paramedical professionals. It describes how to recognise, prevent and treat poisoning; and

- *Manual on Simple Analytical Techniques* has been prepared for use by developing country laboratory hospitals.

A series of documents are being published on the evaluation of the clinical and field use efficacy of antidotes and guidance on decontamination and elimination techniques for poisoned patients; three volumes have been issued and a further three are in press. In addition, IPCS is preparing a guidance document on chemical incident response and follow-up, as well as guidance material on prevention and public awareness in relation to chemical exposures.

IPCS undertakes a number of activities to support national poison control programmes. For example, its INTOX project provides evaluated information on diagnosis and treatment of victims of chemical accidents. The IPCS INTOX Poisons Information Package is available on an annual subscription basis and consists of a CD-ROM containing Poisons Information Monographs and other relevant information for the health professional, as well as interactive, multilingual software for recording and managing data on chemical exposures and poisoned patient treatment. In addition, a worldwide network of poison control centres offers information on a 24-hour basis.

The IPCS has also published several documents relevant to risk assessment of hazardous installations. These include:

- an annotated checklist of "Categories of Information Useful for the Identification of Hazards during the Manufacture, Storage and Transport of Chemicals"; and

- a methodology for risk assessment (14 volumes), including validation of test methods.

Furthermore, the IPCS sponsors the Scientific Group on Methodologies for the Safety Evaluation of Chemicals (SGOMSEC) in collaboration with the Scientific Committee on Problems of the Environment (SCOPE). Through the SGOMSEC, *Methods for Assessing and Reducing Injury from Chemical Accidents* was published.

The IPCS prepares a number of types of documents relating to individual chemicals which could support prevention, preparedness and response activities. Specifically, the following publications provide evaluations of the health and environmental risks of specific chemicals and information on treatment of victims of chemical accidents:

- Environmental Health Criteria documents (providing health and environmental risk evaluations of specific chemicals, based on a thorough review of the scientific literature);

- Concise International Chemical Assessment Documents (based on high quality national reviews, providing a focused assessment of the key data on effects on health and environment of chemicals);

- Health and Safety Guides (giving a summary of the evaluation and practical advice for managers and decision-makers); and

- International Chemical Safety Cards (summarising essential data on substance identity, symptoms of poisoning, safety procedures and first aid).

All IPCS documents are now being published on the IPCS INCHEM CD-ROM, which is issued twice a year and available on a subscription basis.

IPCS is responsible for the organisation of different training courses throughout the world and will continue to organise, with WHO regional offices and others, training activities on subjects within their mandate including health sector preparedness and response to chemical accidents.

IPCS was one of the co-sponsors of the 1993 Workshop on Health Effects of Chemical Accidents (Utrecht, Netherlands) and helped prepare, with the other sponsoring organisations (see **C.9**), the related guidance material. The IPCS is in the process of preparing a detailed guidance document on the role of the health sector in chemical incident response and follow-up. This will take into account the outcome of the 1993 workshop and materials as well as related activities, including the OECD guidance document. IPCS also organised, jointly with the Istituto Superiore Sanita and WHO/EURO, the World Conference on Chemical Accidents held in July 1987 in Rome.

The University of Wales Institute, Cardiff, United Kingdom, has been designated as a WHO Collaborating Centre for a Clearing House for Major Chemical Incidents, in addition to the WHO Collaborating Centre for Health Aspects of Chemical Accidents in Utrecht, Netherlands. The Cardiff Centre will provide a focus for collection and analysis of health-related data on chemical incidents and their follow-up, in order to benefit from experience of past accidents. It will also provide training in the management of acute chemical incidents.

With the assistance of the Cardiff Centre and the WHO Collaborating Centre for International Drug Monitoring (Uppsala, Sweden), the IPCS is establishing harmonized formats for the international collection of comparable data on chemical accidents and on the clinical features and patient management of health impacts on victims. This work will enable situations of chemical accidents and cases of exposure to chemicals to be compared internationally, and early indications of new health problems from exposure to chemicals to be identified.

WHO Headquarters and its Regional Offices have well-established programmes for emergency and humanitarian action concerned with preparedness and response to all types of disasters, including technological accidents. Within WHO Headquarters, the IPCS provides the technical support to WHO's Programme for Emergency and Humanitarian Action in relation to chemical accidents.

C.8 NORTH ATLANTIC TREATY ORGANIZATION (NATO)

Ms. Deniz BETEN
CCMS Programme Director
Scientific and Environmental Affairs Division
NATO
B-1110 Brussels
BELGIUM
TEL: (32-2) 707 4846/4850
FAX: (32-2) 707 4232

Dr. Francesco P. PALMERI
Director
Civil Emergency Planning Directorate
Division of Infrastructure, Logistics and Civil Emergency Planning
TEL: (32-2) 707 4139
FAX: (32-2) 707 5227

The structures established within NATO allow member countries to co-ordinate policies and ensure the complementary nature of their tasks. They provide a possibility for consultation and co-operation not only in military matters, but also in political and economic matters and in other non-military areas, such as civil emergency planning.

There are two Divisions with the NATO Secretariat with activities related to chemical accidents: the Division of Infrastructure, Logistics and Civil Emergency Planning (Civil Emergency Planning Directorate) and the Scientific and Environmental Affairs Division (CCMS Programme).

Both divisions are active participants in the Euro-Atlantic Partnership Council (EAPC) and the activities carried out previously under the North Atlantic Cooperation Council (NACC) and in the context of Partnership for Peace.[1] In addition, civil emergency planning is one of the topics identified within the Founding Act on Mutual Relations, Cooperation and Security between NATO and the Russian Federation.

Civil Emergency Planning Directorate

Civil Emergency Planning (CEP) has been part of NATO since the inception of the Alliance in 1949. While CEP is primarily a national responsibility, nations have agreed that CEP is essential to the implementation of NATO's strategy and actions of the Alliance in this field must be based on maximum co-operation between capitals and at the NATO level. The Civil Emergency Planning Directorate (CEPD), on behalf of the Senior Civil Emergency Planning Committee (SCEPC), oversees CEP activities in nine technical subordinate committees in the following areas: air, land and ocean transport; industrial supply, petroleum, food and agriculture; medical, civil protection, and communications. Supported by CEPD, the

[1] EAPC countries are: Albania, Armenia, Austria, Azerbaijan, Belarus, **Belgium,** Bulgaria, **Canada,** Czech Republic, **Denmark,** Estonia, Finland, **France**, Georgia, **Germany**, **Greece**, Hungary, **Iceland**, **Italy**, Kazakhstan, Kyrghyz Republic, Latvia, **Lithuania**, **Luxembourg**, Moldova, **Netherlands**, **Norway**, Poland, **Portugal**, Romania, Russian Federation, Slovak Republic, Slovenia, **Spain**, Sweden, Switzerland, Tajikistan, The Former Yugoslav Republic of Macedonia, **Turkey**, Turkmenistan, Ukraine, **United Kingdom**, **United States** and Uzbekistan (NATO nations are in bold.)

SCEPC serves as a forum for the exchange of information and the focal point in the Alliance for all matters related to CEP.

Since 1994, more than 6000 personnel from NATO and Partner countries have participated in the CEP programme of PFP co-operation. The programme builds on the considerable national experience in preventing and responding to emergencies. The programme of exercises, seminars, workshops and courses focuses on five broad priorities: emergency legislation and development of emergency planning structures under civil and democratic control, disaster preparedness, civil-military co-operation, good neighbourly relations, and planning for the best use of resources in an emergency.

In the context of chemical accidents, the reader may wish to note that this specific topic has been the subject of a number of NATO and EAPC activities dealt with within the Civil Protection Committee. While priority is given to preventing accidents, a number of EAPC activities are carried out with a view to enhancing skill and improving standards. A CEP Home Page for the World Wide Web is now under development. Specific activities are open to all EAPC nations. Invitations are distributed through national authorities. As the result of a recent Council decision, a limited number of EAPC activities have been opened to Mediterranean Dialogue Partners.[2]

In May 1995 the NATO Council, *inter alia*, agreed to a revised "NATO Policy on Cooperation for Disaster Assistance in Peacetime" and tasked the Senior Civil Emergency Planning Committee with follow-on work relating to pre-disaster preparedness and bilateral agreements. The policy states that NATO's role is potentially three-fold: to act where necessary for information sharing and co-operation among NATO member countries, Partner countries and relevant international organisations; to take on any assisting co-ordinating role as may be identified; and to provide disaster assistance where appropriate NATO resources are available as may be identified. It specifically states that NATO should not duplicate or cut across the work of other international organisations set up specifically to alleviate disasters, and that civil assets remain at all times under national control. In this context, NATO works closely with the United Nations Department of Humanitarian Affairs, including active support for the UN project on the use of Military and Civil Defense Assets in Disaster Relief (MCDR).

Scientific and Environmental Affairs

The Scientific and Environmental Affairs Division has the following responsibilities: advising the Secretary General on scientific and technological matters of interest to NATO; implementing the decisions of the Science Committee; supervising the development of pilot projects initiated by the Committee on the Challenges of Modern Society (CCMS); and ensuring liaison in the scientific field with the International Staff of NATO, with NATO agencies, with agencies in member countries responsible for implementation of science policies, and with international organisations engaged in scientific, technological and environmental activities.

The CCMS was established in 1969 to give the Alliance a new "social dimension." Its aim is to attack practical problems already under study at the national level and, by combining the expertise and technology available in member countries, arrive fairly rapidly at valid conclusions, and to make recommendations for action to benefit all.

In 1991, a Declaration on Peace on Cooperation was issued which defined the future tasks and policies of NATO in relation to the evolving partnership and co-operation with countries of Central and

---

[2] Egypt, Israel, Jordan, Morocco, Mauritania, and Tunisia.

Eastern Europe. In 1992, the Workplan for Dialogue, Partnership and Cooperation issued at the meeting of the North Atlantic Cooperation Council (NACC) included enhancement of participation of the Cooperation Partners' experts in CCMS activities. Within the 1992 Workplan, two pilot studies were launched. One addressed "Protection of Civil Populations from Toxic Material Spills during Movements of Military Goods".

The first plenary meeting of NATO/CCMS with NACC countries[3] was held in early 1993. Cooperation Partner representatives listed many environmental challenges confronting their nations and expressed their interest in having the CCMS help to address these problems. All recognised that the CCMS represented a unique forum for the exchange of information, on both civilian and military environmental matters.

The Committee meets twice a year in plenary and annually with NACC countries. The Committee does not itself engage in any research activities; its work is carried out on a decentralised basis through pilot studies. No programme funds for CCMS activities were made available through the NATO budget.

Work is undertaken by member countries acting as pilot countries for particular projects. Each pilot country is responsible for developing, conducting, and disseminating the results of a pilot study. Co-pilot countries and other participants share the workload according to their interest. No member is required to participate in any study, and each country is free to choose where best to apply its resources and expertise. Results, on the other hand, are available to all. For subjects that are also the concern of specialised international organisations, the Committee has developed complementary pilot studies. The results of the Committee's studies are available to institutions and individuals on a world-wide basis. Each pilot country assumes the responsibility of ensuring that its study plays the most appropriate role in stimulating national and/or international action.

Emphasis is on projects which can guide policy formulation and stimulate domestic and international action. It was agreed that Cooperation Partners could propose new pilot studies provided that there is an Alliance country as co-pilot and at least two other Alliance countries as participants.

Four accidents-related studies have been completed or are close to completion: on "Disaster Preparedness Plans Responding to Chemical Accidents (Health and Medical Aspects)," initiated in 1988, piloted by Belgium and co-piloted by the United States; on "Assessment of the Risk of Accidental Pollution from the Maritime Transport of Dangerous Products," competed in 1992 and led by France; on "Health and Medical Aspects of Disaster Preparedness," completed in 1988 and led by the United States and Belgium (involving both natural and man-made disasters); and on "Improvement in Emergency Medical Services," completed in 1981, led by the United States and included as one of five "Poisons Control" projects led by Italy.

Among the recommendations of the Health and Medical Aspects project was that "NATO should become actively involved in programmes of international co-ordination and co-operation in the following areas of hazardous substance preparedness: mutual aid, response, evaluation, health responsibilities, resources and use of risk assessment methodologies. Such programmes should be conducted in concert

---

[3] NACC countries (Cooperation Partners) are: Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Poland, Romania, Russian Federation, Slovak Republic, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.

with organisations such as WHO, IPCS, UNEP, OECD, APELL, UN/ECE, etc." There were also recommendations for additional follow-up activities.

Among the ongoing studies listed under defence-related issues is: "Protection of Civil Populations from Toxic Material Spills During Movements of Military Goods". It was begun in 1992, with Canada taking the lead and participation by Germany, the Netherlands, Spain and the U.S. There is also a great deal of interest in the project among several Cooperation Partner countries.

With respect to publications, the CCMS offers comprehensive and up-to-date information of a technical nature resulting from the pilot studies. More than 200 publications have been made available under CCMS auspices. Among these is a final report on *Disaster Preparedness Plans Responding to Chemical Accidents (Health and Medical Aspects).* In addition, there is a 1988 CCMS report on *Management of Accidents Involving the Release of Dioxins and Related Compounds.*

Regular news on CCMS activities is published in the quarterly bulletin, "NATO Science and Society Newsletter."

In May 1995 the NATO Council agreed to a revised "NATO Policy on Cooperation for Disaster Assistance in Peacetime" and tasked the Senior Civil Emergency Planning Committee with follow-on work relating to pre-disaster preparedness and bilateral agreements. The policy states that NATO's role is potentially three-fold: to act where necessary for information sharing and co-operation among NATO member countries, Partner Countries and relevant international organisations; to take on any assisting co-ordinating role as may be identified; and to provide disaster assistance where appropriate NATO resources are available as may be identified. It specifically states that NATO should not duplicate or cut across the work of other international organisations set up specifically to alleviate disasters, and that civil assets remain at all times under national control.

C.9 ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD)

Environmental Health and Safety Division
Environment Directorate
2, rue André Pascal
75775 Paris Cedex 16
FRANCE
FAX: (33 1) 45.24.16.75
e-mail: ehscont@oecd.org
Web site: http://www/oecd.org/ehs/

Dr. Rob VISSER
Head of Division

Dr. Peter KEARNS
Administrator
TEL: (33 1) 45.24.16.77
FAX: (33 1) 45.24.16.75

The OECD is an intergovernmental organisation in which 29 industrialised countries in North America, Europe and the Pacific meet to compare, co-ordinate and, where appropriate, harmonize national policies, discuss issues of mutual concern, and work together to respond to problems with international dimensions. Observers from several countries with special status at the OECD, and from interested international organisations, attend many of the OECD's workshops and meetings. The European Commission participates in the work of the Organisation.

Since 1988, the OECD has had a comprehensive programme relating to chemical accident prevention, preparedness and response as part of its Environment Programme. The focus of OECD work on accidents is on providing a forum for exchange of information and experience, for the development of guidance materials, and for the analysis of issues of mutual concern. The OECD Chemical Accidents Programme is administered by the OECD Expert Group on Chemical Accidents, which is made up of representatives of Member countries with observers from other international organisations.

The OECD works closely with other international organisations involved in the area of chemical accidents, including UNEP IE, IPCS, WHO, IMO, ILO and DHA. It has also included representatives of industry, labour and other non-governmental organisations in activities such as workshops and development of guidance materials.

Using a consensus approach, the OECD Council (the organisation's highest level decision-making body, made up of ambassadors from each Member country) can reach various types of agreements, called "Council Acts." These include Council Decisions, which are legally binding on Member countries, and Council Recommendations, which are expressions of political will. As part of the Chemical Accidents Programme, four OECD Council Acts have been issued:

- *Decision of the Council on the Exchange of Information Concerning Accidents Capable of Causing Transfrontier Damage* [C(88)84(Final)], in which Member countries agreed, *inter*

alia, to exchange information and consult in order to prevent accidents capable of causing transfrontier damage and reduce damage should an accident occur. An appendix sets out procedures for implementing the Decision.

- *Decision-Recommendation of the Council Concerning Provision of Information to the Public and Public Participation in Decision-Making Processes Related to the Prevention of, and Response to, Accidents Involving Hazardous Substances* [C(88)85(Final)], in which Member countries agreed to provide information to the potentially affected public, including information on actions to be taken in the event of an accident as well as general information concerning the nature and potential effects of possible accidents. The Act also recommends that countries take action to facilitate public participation. An appendix contains guidance for the implementation of the Decision-Recommendation.

- *Recommendation of the Council on the Application of the Polluter-Pays Principle to Accidental Pollution* [C(89)88(Final)], establishes the principle that the Polluter-Pays Principle should be applied as far as possible in connection with accidental pollution and, in this regard, recommends use of guiding principles set out in an Appendix.

- *Recommendation of the Council Concerning Chemical Accident Prevention, Preparedness and Response* [C(92)1/Final] which, *inter alia*, recommends that countries establish or strengthen national programmes for chemical accident prevention, preparedness and response and, in so doing, take into account the *Guiding Principles for Chemical Accident Prevention, Preparedness and Response*, the Executive Summary of which is appended to the Recommendation.

The OECD has sponsored, or co-sponsored, a series of workshops bringing together representatives of public authorities, industry, labour, citizens groups, international organisations and academia, including experts from non-OECD countries. The workshops have provided an opportunity for exchange of information and experience, and for reaching conclusions on best practice. Following each of the workshops, the conclusions and recommendations and primary discussion document(s) have been published for general distribution.

Utilising the results of the first five workshops, the OECD Expert Group on Chemical Accidents developed the OECD *Guiding Principles for Chemical Accident Prevention Preparedness and Response*, published in 1992. This comprehensive text describes the roles and responsibilities of public authorities, industry, labour and other interested parties in the range of activities involved with accident prevention, preparedness and response at fixed installations. It also includes a section on bilateral and multilateral technical and financial assistance. UNEP IE has prepared supplemental text, which is being distributed in conjunction with the *Guiding Principles*, outlining the responsibilities of stakeholders in countries receiving technology or investments. In addition to being published in the official OECD languages (French and English), the Guiding Principles have been translated into Russian and Spanish. Several countries have also translated the Guiding Principles for their national purposes, including Japan, Poland and India.

Two additional guidance documents were published in 1996: *Chemical Safety in Port Areas* (prepared in co-operation with IMO); and *Health Aspects of Chemical Accidents* (based on a co-operative activity with IPCS, UNEP IE and WHO-ECEH).

In addition, OECD and UNEP IE published the *International Directory of Emergency Response Centres* in 1992 (scheduled to be updated in 1998 as a joint effort with UNEP IE and the UNEP/DHA Environment Unit).

OECD guidance materials and other documents are designed to be valuable to stakeholders in all countries, not just those within the OECD region. Therefore, OECD is working in co-operation with other international organisations, notably UNEP IE and UN/ECE, to facilitate the worldwide distribution and adaptation of all OECD documents, in particular the *Guiding Principles* and related guidance documents, and the *International Directory*.

OECD workshops have been held on:

- Prevention of Accidents involving Hazardous Substances: Good Management Practice (1989, Berlin);
- Provision of Information to the Public and on the Role of Workers in Accident Prevention and Response (1989, Stockholm);
- Role of Public Authorities in Preventing Major Accidents and in Major Accident Land Use Planning (1990, London);
- Emergency Preparedness and Response and on Research in Accident Prevention, Preparedness and Response (1990, Boston);
- Prevention of Accidents Involving Hazardous Substances: The Role of the Human Factor in Plant Operations (1991, Tokyo);
- Strategies for Transporting Dangerous Goods by Road (in conjunction with the OECD Road Transport Research Programme) (1992, Karlstad, Sweden);
- Health Aspects of Chemical Accidents (in conjunction with IPCS, UNEP IE and WHO-ECEH) (1993, Utrecht, the Netherlands);
- Chemical Safety in Port Areas (in conjunction with IMO and UNEP) (1993 Naantali, Finland);
- Small and Medium-sized Enterprises in Relation to Chemical Accidents (1994, Toronto);
- Risk Assessment and Risk Communication in the Context of Accident Prevention, Preparedness and Response (in conjunction with the European Commission, IPCS, UNEP IE, WHO-ECEH, and UN/ECE) (1995, Paris);
- Pipeline Safety (1996, Oslo);
- Human Performance in Chemical Process Safety (1997, Munich).

In addition, the OECD in conjunction with the UN/ECE organised the 1995 Divonne Workshop.

One major ongoing activity of the OECD is the development and implementation of a reporting scheme for significant chemical accidents, in order to facilitate sharing of information and learning from the experience of other countries. This work is led by the French authorities through the Bureau for Risk and Industrial Pollution Analysis (BARPI) in Lyon. Similar work is being undertaken by BARPI on behalf of UN/ECE. Efforts are underway to ensure that the reporting scheme is consistent with that established by the European Commission and UN/ECE.

An extensive project on risk assessment began in 1996 as a follow-up to the 1995 workshop listed above. The objective of this project is to: facilitate understanding of risk assessment related to accident prevention, preparedness and response; improve communication both within countries and between countries; and provide an aid to decision-makers in choosing methodologies for undertaking assessments. Specifically, work is being undertaken to develop two computer-based tools: a "dictionary/thesaurus" of risk-related terms; and a "users' manual". The latter would describe the various risk assessment approaches and methodologies, with their constituent parts and advantages and disadvantages, to assist users in choosing the most suitable tools/approaches given the requirements of regulatory or voluntary codes and taking into account factors such as the availability of resources, time and data. The project will not seek to harmonize definitions or approaches used by countries and organisations, but would provide the basis for improved understanding and communication.

Other new projects address the economic aspects of chemical accidents and approaches to accident investigations, and improving communication with small and medium-sized enterprises.

One of the continuing elements of the OECD Chemical Accidents Programme is outreach to non-OECD countries and co-operation with other international organisations in order to assist non-member countries. With respect to countries in economic transition, this primarily involves the development and dissemination of practical guidance related to infrastructure and institution building, as well as training and education to implement the *Guiding Principles*. This work will be carried out in co-operation with UN/ECE, in the context of the implementation of its Convention, and its two Regional Co-ordinating Centres (see C.12). In addition, OECD countries have agreed to share information concerning their planned and ongoing bilateral activities in order to assist Central and Eastern European countries in setting up and strengthening accident prevention, preparedness and response programmes so as to avoid duplication, fill gaps, and discover opportunities for multilateral co-operation.

The OECD is one of the IOMC's Participating Organizations (see **D.3**).

In a broader context, the OECD has established a Center for European Economies in Transition (CCEET) with the mandate to promote outreach by all parts of the OECD to non-member countries in Central and Eastern Europe. With respect to environmental issues, the focus is on assisting the countries in economic transition to:

- identify opportunities for, and overcome impediments to, the integration of environmental considerations into the process of economic reconstruction;

- establish environmental priorities and apply technical, human and financial resources in a cost-effective manner;

- draw upon the experience of the OECD in the development and implementation of environmental policies and in the establishment of appropriate environmental institutions;

- assess environmental conditions and environmental policy performance.

A project related to chemical safety undertaken by the CCEET in the framework of activities concerning the former Soviet Union involved a workshop held in Ukraine in the fall of 1993 on improving environmental performance in the chemical industry, including accident prevention, preparedness and response. The workshop included a safety audit conducted at a hazardous installation. While focusing on Ukrainian industry, observers from other parts of the former Soviet Union were invited to participate. Follow-up activities on this subject are being planned. The proceedings of this workshop have been published by the OECD.

C.10 UN COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS

Mr. Olivier KERVELLA
United Nations Economic Commission for Europe (UN/ECE)
Transport Division
Palais des Nations
CH-1211 Geneva 10
SWITZERLAND
TEL: (41-22) 917-2456
FAX: (41-22) 917-0039

The UN Committee of Experts on the Transport of Dangerous Goods is a subsidiary body of the United Nations Economic and Social Council. The secretariat services are provided by the UN/ECE Secretariat.

The Committee develops and keeps up to date recommendations related to the safe transport of dangerous goods by all modes of transport. These recommendations are addressed not only to governments for the development of their national requirements for domestic traffic of dangerous goods, but also to international organisations such as the International Maritime Organization (IMO), the International Civil Aviation Organization (ICAO), and regional commissions such as the Economic Commission for Europe (UN/ECE) for regulations and international/regional agreements or conventions governing the international transport of dangerous goods by sea, air, road, rail and inland waterways.

The recommendations address the following main areas:

- list of dangerous goods most commonly carried and their identification and classification;
- consignment procedures: labelling, marking, and transport documents;
- standards for packaging, test procedures, and certification;
- standards for multimodal tank-containers, test procedures, and certification.

These recommendations contain all basic provisions for the safe carriage of dangerous goods, but they have to be completed by additional requirements which may have to be applied at national level or for international transport, depending on the mode of transport envisaged. These recommendations are now in the process of being restructured in the form of model regulations, so that they can be more easily transposed into national or international legislation (UN Recommendations on the Transport of Dangerous Goods, 10th revised edition, ST/SG/AC.10/1/Rev. 10; and UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, second revised edition, ST/SG/AC.10/11/Rev. 2).

The main international instruments based on the UN Recommendations on the Transport of Dangerous Goods are:

- the International Maritime Dangerous Goods Code (IMDG Code) (see **C.6**);

- the ICAO Technical Instructions for the Safe Carriage of Dangerous Goods by Air;

- the European Agreement concerning the international carriage of dangerous goods by road (ADR) (see **C.12**);

- the European Provisions concerning the international carriage of dangerous goods by inland waterways (AND) (see **C.12**);

- the Regulations concerning the international carriage of dangerous goods by rail (RID).

These various instruments contain detailed requirements for the purposes of emergency response in case of transport accidents involving dangerous goods, such as packages and transport unit marking/labelling requirements, substance identification numbers (UN numbers), hazard identification numbers (Kemler Code in RID/ADR), EmS and MFAG numbers (IMDG Code).

C.11 UN DEPARTMENT OF HUMANITARIAN AFFAIRS (DHA)

Joint UNEP/DHA Environment Unit
Relief Co-ordination Branch
UN Department of Humanitarian Affairs
Palais des Nations
1211 Geneva 10
SWITZERLAND
TEL: (4122) 917-1142
(4122) 917-1173

emergencies only: (4122) 917-2010

FAX: (4122) 917-0023

Senior Programme Officer: Vladimir SAKHAROV
Secretary: Isabelle PRUDON

In April 1992, the Department of Humanitarian Affairs was established with responsibility for providing a rapid and well co-ordinated response to major and complex emergencies in order to save lives and contribute to rehabilitation and development for the affected populations. The Department incorporates the former UN Disaster Relief Organization (UNDRO).

DHA is mandated by UN Resolution 42/186 and 26/2816 as the prime focal point for disaster management. Its functions can be broken into three connected areas: disaster relief mobilization and co-ordination; promotion of disaster mitigation; and emergency information management support. It is also leading the development of ReliefNet – a strategic, global communication network funded, directed and operated by a consortium of humanitarian assistance organisations and governments.

Joint UNEP/DHA Environment Unit

In July 1994, a joint UNEP/DHA Environment Unit was established in the DHA Relief Co-ordination Branch to improve international response to the environmental aspects of emergencies, including industrial accidents, when international assistance is not otherwise provided for under existing specialised conventions or programmes. It is the successor organisation to the UN Centre for Urgent Environmental Assistance, established by UNEP in 1991 on an experimental basis to help co-ordinate response to environmental emergencies.

As a joint project, the Unit consolidates the environmental expertise of UNEP with the existing 24-hour duty system operated by the DHA Relief Co-ordination Branch. In particular, the Environment Unit acts as a broker to facilitate quick direct links between focal points in requesting countries and providers of expertise and specialised equipment and, if necessary, to help with practical modalities of delivering the assistance. It also serves as an information clearing-house to provide rapid access to existing national and international sources of information and advice on response and facilitates initial assessment and/or post-emergency analysis, either remote or on-site, by brokerage between requesting countries and designated experts from other countries or other international bodies.

The Unit operates in a practical way to provide the following services to the international community:

- Notification – When disaster strikes, the Unit can promptly alert the international community and issue Information and Situation Reports to an extensive list of worldwide contacts.

- Brokerage – The Unit can quickly put the affected country in direct contact with donor governments around the world who are ready and willing to assist.

- Information Clearing House – The Unit can serve as a focal point to ensure available information on chemicals, maps and satellite images from donor sources and institutions is channelled directly to the relevant authority in the affected country.

- Backstop – When bilateral options fail for whatever reason, the Unit can provide a backstop to facilitate the provision of assistance.

- Assessment – The Unit can arrange the urgent dispatch of international experts to assess the impacts of an emergency and make impartial and independent recommendations about response, clean-up and rehabilitation.

As part of its current and planned activities, the Unit has reviewed existing DHA emergency systems and mechanisms and incorporated environmental considerations into response procedures. It is also in the process of elaborating a roster of national focal points consistent with existing focal points for the DHA and UN/ECE. In addition, the Unit is undertaking the development of a UN contingency plan for environmental emergencies, as well as the development of guidelines for a model national environmental contingency plan (in co-operation with UNEP IE) and guidelines for rapid environmental assessment in case of environmental emergencies.

From an administrative perspective, the Unit has established an Advisory Group on Environmental Emergencies, comprising interested countries, which first met in Geneva in January 1995. An Intersecretariat Co-ordinating Committee is being established between UNEP and DHA. The Unit works closely with other organisations such as IAEA, IMO and other UN agencies, and the European Commission, which can provide assistance in specific emergencies. The Unit also co-operates with related UNEP partners such as the UNEP Industry and Environment centre (responsible for the APELL programme), the Secretariat for the Basle Convention, IRPTC, GRID, the Ocean and Coastal Areas Programme Activity Centre and Earthwatch.

Interface procedures have been established with IAEA, UN/ECE and several UNEP units. Information materials on the work of the Unit and an Environmental Emergency Notification/Request for Assistance form have been distributed to UNDP Resident Representatives and relevant national authorities around the world.

The Unit provided information and brokerage in connection with several emergencies with environmental consequences, including the major terrestrial oil spill in Arctic Russia. Acting as a broker and information clearing-house, the Unit notified countries and international organisations of the accident as soon as official information was received from the Russian authorities. Similarly, information and materials provided by countries were passed on to the Russian lead agency. This included detailed environment maps and information from the World Conservation Monitoring Centre in the UK and

satellite images and technical guides and publications about oil spills in arctic conditions from Environment Canada.

The Unit also provided relatively simple but useful information clearing-house services with regard to an acute transboundary water pollution emergency between Lithuania and Latvia, and a chemical accident in Romania in the border area with the former Yugoslavia. The Unit provided inputs to an industrial accident simulation exercise held in September 1994 at Astrakhan in the Russian Federation in the Framework of the Military, Civil Protection and Civil Defense Assets project of DHA.

As part of the DHA Programme of Disaster Mitigation Activities in existence for Colombia since 1985, an information centre on the safety of chemical products was created. In addition, a national advisory group on industrial risks was established with representatives of major chemical plants, emergency services agencies, the national health system, and major transport institutions in Colombia. Furthermore, "Guidelines for Dangerous Substances Accidents" were published and workshops and training courses were held. As part of this activity in Colombia, a joint initiative with UNEP IE and DHA was established which sought to increase community awareness of the possible hazards involved in the manufacture, handling and use of hazardous substances and to develop emergency response plans in local communities.

Selected publications of the Joint Unit include:

- *Environmental Emergencies: A Review of Emergencies and Disasters involving Hazardous Substances over the Last Ten Years* (2 volumes). Consultant report prepared for UNEP Governmental Advisory Meeting, Geneva, November 1993;

- *International Emergency Response Capacities: A Review of Existing Arrangements Both Within and Outside the UN System*. Consultant report prepared for UNEP Governmental Advisory Meeting, Geneva, November 1993;

- *Analysing the Needs of Countries for Assistance in the Event of an Emergency with Environmental Consequences*. Consultant report prepared for UNEP Governmental Advisory Meeting, Geneva, November 1993;

- *The Environmental Impacts of Hybrid Natural and Technological (Na-Tech) Disasters*. Background paper prepared for the IDNDR Topical Session No. 6 on "Inter-relationships between Natural and Technological Hazards," Yokohama, May 1994.

The Unit is also co-operating with OECD and UNEP IE to update the *International Directory of Emergency Response Centres*. Additional joint projects are being elaborated with UNEP IE.

C.12 UN ECONOMIC COMMISSION FOR EUROPE (UN/ECE)

Environment and Human Settlements Division
(relating to the Convention on the Transboundary Effects of Industrial Accidents):

Mr. Ivan NARKEVITCH or Ms. Elisabeth MESSERLI
United Nations Economic Commission for Europe
Environment and Human Settlements Division
Palais des Nations
CH-1211 Geneva 10
SWITZERLAND
TEL: (41-22) 917-2446
(41-22) 917-3151
FAX: (41-22) 907-0107

Subsidiary bodies dealing with the transport of dangerous goods:

Mr. Olivier KERVELLA
United Nations Economic Commission for Europe
Transport Division
Palais des Nations
CH-1211 Geneva 10
SWITZERLAND
TEL: (41-22) 917-2456
FAX: (41-22) 917-0039

According to its Terms of Reference, the Commission initiates and participates in measures for facilitating concerted action for the economic reconstruction of Europe, for raising the level of European economic activity, and for maintaining and strengthening the economic relations of the European countries both among themselves and with other countries in the world.

UN/ECE has accumulated expertise and experience in drawing up and implementing regional policies and strategies, recommendations and regional conventions, especially in the field of environment and transport. At present, the Commission promotes international co-operation among all countries in the region in the field of economic analysis, human settlements and environmental protection, trade, statistics, transport, industry and technology, as well as actively participating in drawing up and implementing new regulations, standards, norms and regional legal instruments.

In the space of four years (1991-1994) the membership of the Commission rose from 34 to 55, including the Newly Independent States of the former USSR. This change provides a new challenge to the Commission to respond rapidly to the needs of new members, in particular to assist those in transition from centrally planned to market economies.

Environment and Human Settlements Division

Work related to chemical accidents is based on the Convention on the Transboundary Effects of Industrial Accidents. Following the outcome of the 1989 Meeting on the Protection of the Environment in Sofia (Bulgaria), convened by the Conference on Security and Cooperation in Europe (CSCE), the UN/ECE Convention on the Transboundary Effects of Industrial Accidents was drawn up under the auspices of the Senior Advisers to ECE Governments on Environmental and Water Problems (now renamed the ECE Committee on Environmental Policy). The Convention is open to ECE member states and European States which are not members of the UN which have consultative status with ECE, as well as to regional economic integration organisations constituted by sovereign State members of ECE.

The Convention was signed by 26 ECE countries and the European Union in Helsinki, Finland, in March 1992. According to Article 30, the Convention will enter into force on the ninetieth day after the date of deposit of the sixteenth instrument. Pursuant to Article 20, the Executive Secretary of the ECE carries out the secretariat functions under the Convention.

The Convention aims at building national capacity and strengthening international co-operation in the field of prevention of, preparedness for, and response to industrial accidents capable of causing transboundary effects through, *inter alia*, mutual assistance, bilateral and multilateral agreements, and research and development, as well as the exchange of information, development of safety management and safety technology, and provision of measures and procedures for conflict prevention and resolution.

In order to comply with the provisions of the Convention, the Parties are obliged, *inter alia*, to develop and implement policies and strategies for reducing the risk of industrial accidents and take appropriate legislative, regulatory, administrative and financial measures to prevent, prepare for, and respond to industrial accidents. It is expected that considerable improvement of overall industrial safety, especially at hazardous activities in the ECE region, will be achieved through the Convention.

The Convention gives particular emphasis to more active public participation in decision-making processes concerning hazardous activities. It contains provisions on the information to be given to the public in the area capable of being affected by an industrial accident arising out of hazardous activities, and provides the rights for the public to participate in relevant decisions. The public of all possible affected Parties should be provided information containing, *inter alia*: an explanation of the hazardous activities and the risks, including health risks; the nature of possible industrial accidents; ways and means of communication in the event of an accident; action and behaviour of the affected population; liaison with rescue services; and off-site contingency plans.

Pursuant to a decision of the Senior Advisors to ECE Governments on Environmental and Water Problems, the Signatories to the Convention convened six meetings in 1992-1997 which have made significant progress in the implementation of the Convention, including the development and implementation of measures to strengthen the ability of future Parties, in particular countries in transition, to comply with obligations under the Convention. A proposal for a concise and action-oriented programme to assist these countries to prevent, prepare for and respond to industrial accidents has been developed, including:

- accident-related training and exercises for those involved in preparedness for and response to industrial accidents, including health aspects;

- industrial safety management and the prevention of industrial accidents;

- co-operative projects with other relevant international organisations, including the UNEP APELL Programme.

Based on the outcome of the activities carried out so far within the Convention and taking into account the needs and priorities of countries in transition, the Third Meeting of the Signatories established two regional co-ordinating centres: the Regional Coordinating Centre for Industrial Accident Training and Exercises in Warsaw, Poland, and the Regional Coordinating Centre for the Prevention of Industrial Accidents in Budapest, Hungary. The main objective of the Centres is to enhance capacity building to prevent, prepare for, and respond to industrial accidents in the ECE region, with special emphasis on countries in transition. Further description of the Centres (objectives and activities) is set out below.

At the same time the Meeting of the Signatories also established a Steering Group, made up of representatives of the two Centres and up to seven other member countries, in order to co-ordinate and oversee the activities of the two Centres, consolidate the Centres' work programmes, assist in attracting resources to support the activities of the Centres, and review the use of resources and report to the Meeting of the Signatories.

Pursuant to the Convention, work has been undertaken to implement the UN/ECE Accident Notification System. According to Article 10, Parties are obliged to establish and operate compatible and efficient industrial accident notification systems to be used for communication between points of contact for purposes of industrial accident notification and mutual assistance in the event of an accident. In the course of the development of the draft UN/ECE Accident Notification System, the experience gained in the function of the similar systems under international agreements on industrial accidents was taken into account, in particular the system for Warning and Requests for Assistance adopted under the Nordic Agreement concerning co-operation in measures to deal with pollution of the sea by oil and the International Warning and Alarm System for the Rhine.

The Notification System is divided into three main steps: (a) early warning report in the event of an industrial accident or the imminent threat thereof; (b) information report giving detailed supplementary information on an accident once the situation has been assessed; and (c) assistance request report dealing with matters related to the provision of mutual assistance in order to mitigate consequences of the accident, including its transboundary effects. It was recommended that the UN/ECE Notification System could also by used in non-ECE countries which are members of the UN.

The Meetings of the Signatories have established a list of points of contact for the purposes of industrial accident notification and mutual assistance and tested the efficiency of their functions during the exercises conducted in 1994 in the Russian Federation.

Work has also begun on the development of the UN/ECE reporting system for past industrial accidents. Gathering and analysis of information on past industrial accidents assist in understanding the national approaches used for emergency planning, in particular for the development of on-site and off-site contingency plans. Recognising the importance of such information, the Meeting of the Signatories established a Coordinating Centre for Past Industrial Accidents in Lyon, France, at the Bureau for Risk and Industrial Pollution Analysis (BARPI). BARPI is also undertaking to collect and analyse accident case histories on behalf of OECD.

In order to promptly report on the progress made and the results achieved in the implementation of the Convention, the Meeting of Signatories has prepared a loose-leaf industrial accident manual containing information concerning the status of the Convention, points of contact for notification and mutual assistance, national policies and legislation, national institutional frameworks, bilateral and

multilateral agreements and assistance arrangements, experience gained from past industrial accidents, and focal points for the Convention, as well as activities of other UN bodies and international institutions in the field of industrial accidents. The manual is practical and regularly updated, for use by those who are involved in the prevention of, preparedness for, and response to industrial accidents as well as for international and national institutions dealing with industrial safety, risk assessment and reductions, and development and implementation of preparedness and response measures, including legislation and regulations.

In order to co-ordinate and improve the efficiency of the activities dealing with prevention of, preparedness for, and response to industrial accidents, and efforts made at international level, the Meeting of the Signatories is regularly informed of the ongoing activities of other UN bodies as well as those of other international organisations and institutions. Furthermore, joint activities are being carried out, in particular in co-operation with the OECD (e.g., the Divonne Workshop and the Workshop on Risk Assessment and Risk Communication in the context of Accident Prevention, Preparedness and Response (Paris, July 1995; report of the Workshop published by the OECD in 1997).

The ECE Secretariat maintains close contact with UNEP and the UNEP/DHA Joint Unit. During the consultation on points of contact for the purpose of accident notification and mutual assistance, DHA and UN/ECE organised simulation exercises held in the Russian Federation in 1994 and tested the UN/ECE Accident Notification System. In addition, there is regular exchange of information with respect to chemical accidents between the ECE Secretariat and the secretariats of the IAEA, IMO, WHO, ILO, IPCS and European Commission.

According to Article 18, the first meeting of the Conference of the Parties shall be convened not later than one year after the date of entry into force of the Convention. On the basis of activities being carried out for the implementation of the Convention, the Conference of the Parties may wish to take decisions related to: rules of procedures for its meetings; the UN/ECE Accident Notification System and points of contact for the purposes of notification and mutual assistance; two Regional Coordinating Centres (e.g., terms of reference and financial support); the UN/ECE Accident Evaluation Forms; the development of a procedure to create more favourable conditions for the exchange of safety technology; guidelines and criteria to facilitate the identification of hazardous activities; subsidiary bodies to carry out activities between meetings of the Conference; and financial mechanisms for the implementation of the Convention.

Inter-sectoral co-operation on the implementation of the environmental conventions is taking place within the ECE Secretariat. A joint training course on the application of ECE environmental conventions by industry in countries in transition is being organised by the Environment and Human Settlements Division and the Industry and Technology Division. The meeting of the Signatories to the Convention and the Working Party on the Chemical Industry are planning to convene jointly a workshop on Industrial Safety aiming at active involvement of the industry in the implementation of the Convention.

Regional Co-ordinating Centre for Industrial Accident Training and Exercises in Warsaw (Poland)

The Centre was established to provide assistance to the countries in the ECE region to further the implementation of the Convention, in particular with respect to preparedness for and response to industrial accidents, including the mitigation of adverse effects on humans and the environment. The Centre is a combined effort of the Polish Ministry of Environmental Protection, Natural Resources and Forestry (State Inspectorate of Environmental Protection) and the State Fire Service Headquarters. It is housed in the Polish Institute for Environmental Protection, and its activities are carried out by employees of the interested governmental organisations.

To meet its objectives, a work programme has been developed in order to:

- further the development of national institutional training and education capabilities, especially in countries in transition;
- promote a networking of national training and exercises centres in the ECE region;
- provide guidance for the establishment of national education and training structures;
- provide training and education for various target groups, dealing with preparedness and response to industrial accidents;
- establish a clearinghouse of information of interest to those responsible for emergency preparedness and response; and
- promote the use of the UNEP APELL programme as an instrument for involving industry and establishing co-operation at the local level.

Specific projects proposed for the period 1995-1999 address: preparation of a strategy document for accident-related training and education; co-operation among rescue services and the points of contact for accident notification and mutual assistance; emergency planning; and safety for rescue operations in the transportation of hazardous materials. The Centre also expects to be involved in the preparation of simulation exercises. In addition, more extensive training activities may be undertaken if resources become available, including training of trainers for emergency response personnel and for senior government officials, local administrators and rescue operators on the principles of emergency response. The Centre will also establish a network of interested agencies and institutions in member countries and serve as a source of information/expertise which can be called upon for advice. In addition, a Clearinghouse and Information Service is being implemented to provide information that is not readily available from other resources in the region, or to identify sources that can fulfil information or assistance needs. A periodic newsletter will be distributed describing relevant developments in the region.

Regional Co-ordinating Centre for the Prevention of Industrial Accidents in Budapest (Hungary)

The Budapest Centre, a non-profit organisation, is planned as a mixed private/pubic activity established jointly by a government agency (the Ministry of Interior – National Headquarters for Fire and Civil Defence (TPVOP) along with a private entity, the Institute for Economic and Environmental Development in Central and Eastern Europe (KKGKI).

According to its mandate, the Centre will undertake to facilitate:

- the implementation of provisions of the Convention related to the prevention of industrial accidents;
- the exchange of information and experience in this field;
- the development of professional and institutional capacities in recipient countries; and
- the provision of information and assistance to countries in the region.

The Budapest Centre is also expected to promote common or harmonized methodologies, standards, terminology and definitions and provide guidance for the development and implementation of legislation and regulations. In addition, it will establish a network of interested agencies and institutions in member countries and serve as a source of information/expertise which can be called upon for advice. In addition, a Clearinghouse and Information Service is being implemented to provide information that is not readily available from other resources in the region, or to identify sources that can fulfil information or assistance needs. A periodic newsletter will be distributed describing relevant developments in the region.

The Centre will promote the use of the UNEP APELL programme as an instrument for involving industry and establishing co-operation at the local level.

Subsidiary bodies dealing with the transport of dangerous goods

These bodies are subsidiary bodies of the Inland Transport Committee and, therefore, they are concerned only with inland transport, i.e., road, rail and inland waterways. These bodies are:

- the Working Party on the Transport of Dangerous Goods (WP 15), which is responsible for the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) and the European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN); and

- the Joint Meeting of the Working Party on the Transport of Dangerous Goods and the RID Safety Committee, also called the RID/ADR Joint Meeting.

The RID/ADR Joint Meeting is serviced jointly by the ECE Secretariat and the Secretariat of the Intergovernmental Organization for International Carriage by Rail (OTIF). It is responsible for ensuring harmonization between ADR and RID (Regulations concerning the international carriage of dangerous goods by rail).

ADR

ADR is based on the UN Recommendations on the Transport of Dangerous Goods as regards the listing and classification of dangerous goods, and their marking and labelling and packaging standards, but it also contains much more detailed provisions as regards:

- the types of packaging which may be used;

- the consignment procedures;

- transport equipment (vehicle to be used, vehicle construction and equipment);

- transport operation (training of drivers, supervision, emergency procedures, loading and unloading, placarding of vehicles).

The ADR is intended primarily to increase the safety of international transport by road, but it is also an important trade facilitation instrument. Except for dangerous goods which are totally prohibited for carriage, and except when carriage is regulated or prohibited for reasons other than safety, the international carriage of dangerous goods by road is authorized by ADR on the territory of Contracting Parties provided that the conditions laid down in annexes A and B are complied with.

There are at present 32 Contracting Parties to ADR, as follows: Austria; Belarus; Belgium; Bosnia and Herzegovina; Bulgaria; Croatia; Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Italy; Latvia; Liechtenstein; Lithuania; Luxembourg; Netherlands; Norway; Poland; Portugal; Romania; Russian Federation; Slovak Republic; Slovenia; Spain; Sweden; Switzerland; United Kingdom; and Yugoslavia.

It should be noted that the requirements of Annexes A and B of ADR have been annexed to the European Union Council Directive 94/55/EC on the approximation of the laws of the Member States with regard to the transport of dangerous goods, and therefore these requirements should have become applicable not only to international transport of dangerous goods but also to domestic traffic in all countries of the European Union as from 1 January 1997.

ADN

The status of the European Provisions for the International Carriage of Dangerous Goods by Inland Waterways is different from that of the ADR, as ADN is only a recommendation directed to governments for their national regulations and to river commissions for regulating the international carriage of dangerous goods on specific inland waterways under their responsibility. One well known example of such regulations is the "Regulations for the Carriage of Dangerous Substances on the Rhine (ADNR)" developed by the Central Commission for the Navigation of the Rhine (CCNR).

A draft European agreement concerning the international carriage of dangerous goods by inland waterways ("ADN" agreement) is under preparation under the joint auspices of the UN/ECE and the CCNR.

C.13 UN ENVIRONMENT PROGRAMME (UNEP)

UNEP Industry and Environment centre (UNEP IE)
Tour Mirabeau
39-43 quai André-Citroen
75739 Paris Cedex 15
FRANCE
TEL: (33-1) 44.37.14.50
FAX: (33-1) 44.37.14.74
e-mail: unepie@unep.fr

Ms. Jacqueline ALOISI DE LARDEREL
Director

Ms. Janet STEVENS
APELL Programme Co-ordinator

UNEP Chemicals (IRPTC)
UNEP
Case Postale 356
CH-1219 Chatelaine/GE
SWITZERLAND
TEL: (41-22) 979.91.83
FAX: (41-22) 797.34.60
email: irptc@unep.ch

Mr. Jim WILLIS
Director

Ms. Fatoumata OUANE
Scientific Affairs Officer

UNEP Industry and Environment centre (UNEP IE)

The UNEP Industry and Environment centre (UNEP IE) has primary responsibility within UNEP for activities related to chemical accident prevention and preparedness.

In 1988, UNEP IE launched the Awareness and Preparedness for Emergencies at Local Level ("APELL") programme. The main goal of APELL, undertaken in co-operation with industry and governments, is to prevent technological accidents and their impacts. This is achieved by assisting decision-makers and technical personnel to increase community awareness of hazardous installations and to prepare response plans in case unexpected events at these installations endanger life, property or the environment. More than 80 APELL focal points have been designated to foster the implementation of APELL-like processes in their countries. In 1992, the UN Conference on Environment and Development (UNCED) endorsed APELL and recommended that it be strengthened and implemented in all parts of the world.

As part of the APELL Programme, UNEP has published the *APELL Handbook*, designed to create and/or increase public awareness of possible hazards within a community and to stimulate the development of co-operative plans to respond to any emergency that might occur. It is now available in 20 languages including, *inter alia*, Croatian, Czech, Estonian, Hungarian, Latvian, Lithuanian, Polish and Russian.

To aid in the implementation of the APELL process, UNEP organises seminar/workshops at regional, national and local levels. For example, regional seminar/workshops were held in Moscow in 1991 and, for the Baltic States, in Riga in 1994. National seminar/workshops were held in Hungary and the former Czechoslovakia in 1992, and a local one was held in Tula, Russia in 1994. UNEP IE plans to continue to promote the introduction of the APELL process in more regions and countries and, where appropriate, to extend its application beyond fixed installations. There will also be efforts to strengthen the follow-up and implementation of APELL in countries where it has already been introduced.

UNEP IE, with the support of its network of international experts, also provides technical expertise at the request of governments to help launch concrete local APELL activities.

A number of supplementary materials have been published by UNEP IE to help implement the APELL process. These include:

- Technical Guides on *Storage of Hazardous Materials* and on *Hazard Identification and Evaluation in a Local Community* (the latter prepared with help from the Swedish government);

- The *International Directory of Emergency Response Centres*, published jointly with OECD (currently being updated as a co-operative effort of UNEP IE, OECD and the Joint UNEP/DHA Unit);

- An *Annotated APELL Bibliography*, prepared with the support of the Canadian government;

- *APELL for Port Areas*, published jointly with IMO in 1996. It highlights the unique nature of ports, with specific guidance on applying APELL methodology for building a preparedness and response infrastructure; and

- *APELL Worldwide*, national overviews of APELL implementation in twelve countries, including the Czech Republic, Hungary, Latvia and the Russian Federation.

In addition, the US Environmental Protection Agency, Chemical Emergency Preparedness and Prevention Office, has modified EPA's CAMEO ("Computer Aided Management for Emergency Operations") programme for international APELL applications.

UNEP IE also publishes the *APELL Newsletter* twice a year, providing information concerning ongoing APELL-related activities, as well as national and regional programmes and major events. Two special issues of UNEP IE's quarterly review, *Industry and Environment*, have dealt specifically with the chemical industry and accident prevention.

UNEP IE co-operates closely with other international organisations in this field. For example, UNEP IE:

- is one of the co-operating organisations in the inter-agency programme related to risk assessment described in the entry for IAEA;

- works closely with OECD and, in this regard, has agreed to assist in the worldwide distribution of the OECD Guiding Principles and other OECD publications concerning chemical accident prevention, preparation and response. In addition, it was a co-sponsor, along with IPCS and WHO-ECEH, of the 1995 OECD Workshop on Risk Assessment and Risk Communication.

- was a co-sponsor, along with OECD and IMO, of the Workshop on Chemical Safety in Port Areas and is working with REMPEC to use APELL as a tool for improving accident prevention and preparedness in Mediterranean ports; and

- has worked on health aspects of chemical accidents, together with IPCS, OECD and WHO-ECEH, both as co-sponsor of the Utrecht Workshop (see **C.9**) and in the preparation of the related guidance material.

UNEP IE will continue to organize APELL seminar/workshops and plans to continue synthesizing and disseminating aids and tools to assist APELL users. Several publications are being planned including *Health, Safety and Environmental Management Systems* and *APELL for Transport* (with the assistance of the Swedish National Rescue Services Agency). An "APELL Starter Kit" is being developed to help countries continue to implement the APELL process.

UNEP Chemicals (IRPTC)

UNEP Chemicals is the focus for all activities undertaken by UNEP to ensure the global sound management of hazardous chemicals. UNEP Chemicals is located in Geneva, Switzerland, and is built upon the solid technical foundation of the International Register of Potentially Toxic Chemicals (IRPTC). Its staff of professionals catalyzes actions to promote chemical safety by providing countries with access to information on toxic chemicals, by assisting countries in building their capacities to produce, use, and dispose of chemicals safely, and by facilitating global actions that may be needed to reduce or eliminate chemical risks.

Catalyzing global action

The most important UNEP actions to catalyze global action for the sound management of chemicals are:

- Facilitating development of a legally binding instrument for the application of the Prior Informed Consent (PIC) procedure. Negotiations have begun, convened by UNEP jointly with FAO, and are expected to conclude by mid 1998. The existing voluntary PIC programme implemented by UNEP and FAO under the London Guidelines and the FAO Code of Conduct will continue pending development of the legally binding instrument.

- Convening an intergovernmental negotiating committee for the development of a legally binding instrument to implement international action on persistent organic pollutants (POPs). In addition to supporting governments by convening and otherwise facilitating the development of a global POPs convention, UNEP is undertaking immediate action on a number of measures to address these toxic chemicals. These measures include promoting the exchange of information and expertise among governments on POPs; providing guidance on alternatives to POPs; assisting countries in the identification of polychlorinated biphenyls (PCBs) - in use, in stockpiles, and in waste - as well as helping to identify where PCBs can be destroyed safely; assisting countries in identifying sources of dioxin and furan releases; and continuing to better characterize the full extent of the global POPs problem.

Building national capacities

The heart of UNEP Chemicals is its capacity building work, which is implemented in two key areas:

- Promoting information access through the delivery of information and information tools for countries to use in assessing and managing the risks of chemicals. Delivery in this area includes: IRPTC's databank, which is available in a personal computer version and contains extensive safety data on over 8,000 chemicals; Internet and hard-copy information clearinghouses on chemical hazards, pollutant release and transfer registers (PRTRs), POPs, and PIC; published inventories of information sources covering international data sources on chemicals, critical reviews of chemicals, and extensive publications in the field of chemical safety (OECD Screening Information Data Sets and the Russian and English versions of the "Scientific Reviews of chemicals literature published in Russian language").

- Direct work with countries in building capacities, including awareness raising, training, capacity building exercises, and "Hotline" support for governments. UNEP actively sponsors or participates in over 20 capacity building workshops on chemicals management each year. These take place on the regional, sub-regional, and national level, and cover such diverse topics as risk assessment, development of national information systems, chemicals legislation, and operation of the PIC procedure.

Providing access to information on toxic chemicals: query-response service

In addition to assisting countries to develop their capacity to manage risks posed by chemicals and to adopt risk reduction policies, UNEP Chemicals also maintains a service aimed at answering to their concerns on chemicals hazards and risks for routine activities and in case of emergency. Through this activity, UNEP provides to countries or helps them identify the needed information and expertise to respond to their questions in cases of pollution or chemical accidents.

UNEP is one of the co-operating organizations in the IPCS (see **C.7**) and is also one of the participating organizations in the Inter-Organization Programme for the Sound Management of Chemicals (IOMC) established by UNEP, ILO, FAO, WHO, UNIDO and OECD following recommendations made by the 1992 UN Conference on Environment and Development to strengthen co-operation and increase international co-ordination in the field of chemical safety (see **D.3**).

C.14 UN INDUSTRIAL DEVELOPMENT ORGANIZATION (UNIDO)

P.O. Box 300
Vienna International Centre
A-1400 Vienna
AUSTRIA

The mandate of UNIDO is to assist developing countries in industrial development with emphasis on "Ecologically Sustainable Industrial Development". Key elements of UNIDO's technical assistance programme include, among other things, promotion of safety through industrial policies in chemical production, storage, transportation, distribution, consumption and disposal.

The work of UNIDO's Chemical Industries Branch covers practically all chemical and allied industries, including: petrochemical; polymer and plastics; dyes and intermediates; pharmaceuticals; agrochemicals; pulp and paper; metal extraction and metal processing; biotechnology-oriented products; food processing; and leather tanning.

Even though UNIDO is not involved in providing assistance immediately after an accident, it does undertake activities to assist with accident prevention, risk reduction and emergency response in case of any accident. UNIDO's programme includes work related to environmental impact assessment of new plants, existing plants, and any major modifications to existing plants. It also addresses technology assessment, hazan/hazop studies, start-up of chemical plants, and promotion of integrated safety measures covering plant/process safety, health and environmental aspects.

Following the Bhopal accident, UNIDO set up a task force on industrial safety and conducted a number of workshops, seminars and international conferences on cleaner/safer technologies, risk assessment/reduction, recycling, waste minimisation, and preventive maintenance. Emphasis was given to individual industry subsectors. These have now led to establishment of cleaner production centres in collaboration with UNEP.

UNIDO activities in this field have been limited due to budget constraints.

One of UNIDO's major programmes is related to risk reduction in the pesticide sector. UNIDO has prepared a document entitled "Integrated International Safety Guidelines in Pesticide Formulation in Developing Countries" (also called the "Brussels Guidelines") covering safety, health and environmental aspects which will promote risk reduction in pesticide development. The guidelines also include an accident reporting procedure.

As an extension of the work on safety aspects in the pesticide industry, UNIDO is setting up a Global Network for Safety in Chemical Production ("GLONESA in CP"). As a start, UNIDO, in collaboration with UNESCO and IUPAC, is providing training for safety and environmental protection in chemical, pharmaceutical and bio-technological research and production.

UNIDO is one of co-operating organisations in the inter-agency programme related to risk assessment described in the entry for IAEA. Recently, UNIDO has joined the expanded IPCS for promoting chemical safety in accordance with Chapter 19 of UNCED Agenda 21. UNIDO is also one of the IOMC’s Participating Organisations.

C.15 WORLD BANK/INTERNATIONAL FINANCE CORPORATION (IFC)

World Bank
Environmental Assessments and Programs Division
Environment Department
1818 H Street, N.W.
Washington, D.C. 20433
TEL: (1-202) 477-1234
FAX: (1-202) 477-0968

International Finance Corp.
1850 “I” Street, N.W.
Washington, D.C. 20433
TEL: (1-202) 477-1234
FAX: (1-202) 676-0365

World Bank

The World Bank lends funds for the development of economic facilities, in a manner consistent with its main objectives: reducing poverty and promoting sustainable development. In so doing, the Bank makes sure that any facilities which it funds meet environmental standards. These standards include the consideration of whether the facilities will be designed and operated safely. The Bank is also undertaking to help governments build environmental concerns into policymaking at all levels. In addition, it makes disaster relief loans available when appropriate.

The World Bank works with individual countries in the development of national environmental and industrial programmes and policies, which may include a component related to chemical accident prevention, preparedness and response. For example, the Bank is assisting the government of India in this field and Canada and the World Bank have a joint project to assist the petroleum sector in Romania to implement environmental protection programmes. One element of the Romania project is to develop a basic spill response and clean-up capacity, starting with essential equipment acquisition and training.

With respect to the review of proposals, the World Bank has published "Guidelines for Identifying, Analyzing and Controlling Major Hazard Installations in Developing Countries," which is used for the projects funded by the Bank. It provides a framework by which a developer can supply evidence and justification for the safe operation of an industrial activity. A manual of industrial hazards assessment techniques has also been published. An integrated risk management approach is being developed for application in World Bank lending operations.

More generally, the World Bank is in the process of revising its series of environmental guidelines, which will include occupational health and safety issues. In the series are two types of guidelines: the first addresses specific industries (e.g., pesticide manufacture, petroleum refining); and the second deals with cross-industry environmental issues (e.g., disposal of industrial wastes, noise). The revised guidelines, being prepared in 1996, should include a chapter on chemical accident prevention, preparedness and response. In addition, the relevant industry-specific guidelines should include references, as appropriate, to the need for taking steps to minimise the risks of accidents and to improve response, should an accident occur.

The Bank will consider, as part of its project on investments, loan requests related to hazardous installations, including those which involve the upgrading of an existing installation. For example, in the countries of the former Soviet Union loans have been provided for energy facilities, which required the Bank to take into account the funds needed for appropriate actions for accident prevention, preparedness and response.

At the end of the 1980s, the World Bank co-sponsored several meetings related to improving chemical accident prevention, preparedness and response. These included an International Symposium on Preventing Major Chemical Accidents and two Workshops on Management/Organizations/ Institutional Factors in Major Accidents.

With respect to the countries in transition, the Bank has prepared background environmental studies for several countries. These studies have included information on the risks of industrial accidents and occupational health and safety issues.

International Finance Corporation

The mandate of the IFC is to foster economic growth in developing countries by promoting private sector investment. The IFC, a member of the World Bank Group, is the largest source of direct project financing for private investment in developing member countries. The IFC helps companies access the international financial markets and provides a wide range of advisory services to assist clients in determining what is needed for environmentally responsible business enterprises. This could include technical and financial advice to client companies to help them formulate business plans and debt-reduction strategies, adopt modern accounting practices, and restructure physical operations.

The IFC recognizes that there is a direct linkage between economic development and environmental protection. From an environmental perspective, the IFC's role is to:

- provide financing for projects which are environmentally sound and sustainable;
- assist project sponsors to improve project design by integrating environmental goals during the planning process to improve a project's overall performance and efficiency;
- offer technical and managerial expertise to project sponsors and financial intermediaries to identify and develop environmentally sound and sustainable projects; and
- support the development of an environmental goods and services industry by financing commercially viable investment in environmental technologies, infrastructure projects and environmental services.

All potential IFC projects are subject to an environmental review process. This review process involves consideration of a number of issues, including the use of dangerous substances, major hazard assessment, occupational health and safety, and fire and life safety. IFC will not consider any proposal for a loan, for example for modernizing facilities, unless it is satisfied that the environmental issues have been addressed.

In one case, IFC provided a long-term loan to privatise and modernise a manufacturing facility in Central Europe. In that case, the plan which was approved by IFC called for investments in modern

technology, for an extensive technical assistance programme, for significant expenditures on environmental control equipment, for management information systems and for training activities.

It should be noted that IFC financing is available to private sector enterprises only. Consequently, IFC does not provide financing for facilities which are government owned and operated, but will loan to joint ventures with some government ownership as long as they contribute to private sector development and are operated on a commercial basis.

As part of its environmental activities, IFC has conducted nine country studies, which included two of the countries in transition (Hungary and Poland), to determine market potential and identify opportunities for private sector investment in environmental goods and services. The analyses focused on waste management, industrial pollution control technology, and related services.

C.16 WORLD HEALTH ORGANIZATION (WHO)

WHO Headquarters
20 Avenue Appia
CH-1211 Geneva 27
SWITZERLAND

Dr. W. KRIESEL
Executive Director
TEL: (41-22) 791-3582
FAX: (41-22) 791-4849

Dr. F.S.M. BASSANI
Director, Division of Emergency and Humanitarian Action
TEL: (41-22) 791-2572
FAX: (41-22) 791-0746

WHO Regional Office for Europe (WHO/EURO)
8 Scherfigsvej
DK-2100 Copenhagen O
DENMARK

Dr. J.E. ASVALL
Regional Director
TEL: (45-39) 17 13 71
FAX: (45-39) 17 88 88

Dr. Gunter KLEIN
Director, Environment and Health
TEL: (45-39) 17 13 46
FAX: (45-39) 17 18 78

WHO European Centre for Environment and Health (WHO-ECEH)
Bilthoven Division
A. van Leeuwenhoeklaan 9, Bilthoven
P.O. Box 10
NL-3730 AA De Bilt
THE NETHERLANDS

Dr. Kees VAN DER HEIJDEN
Director

Dr. F.X. Rolaf van LEEUWEN
Manager, Chemical Safety Europe

Dr. Alexander KUCHUK
Manager, Environment and Health Information Systems

TEL: (31-30) 2295 305/307
FAX: (31-30) 2295 252/120
email: eceh@who.nl

The objective of WHO is to protect and promote human health through national, community, family and personal measures for the prevention and control of conditions and factors in the environment that adversely affect health. The WHO Global Strategy for Health and Environment, approved by the World Health Assembly in May 1993, is an organisation-wide strategy prepared in response to UNCED Agenda 21 which details WHO's work in the area of health and environment. The related Action Plan guides the work of WHO at all its levels – global, regional and country – and includes its work on chemical emergencies.

The work of WHO is carried out at its Headquarters in Geneva, Switzerland, and in six Regional Offices: WHO Regional Office for Africa (AFRO) in Brazzaville, Congo; WHO Regional Office for the Americas (AMRO) and the Panamerican Health Organization (PAHO) in Washington, D.C.; WHO Regional Office for the Eastern Mediterranean (EMRO) in Alexandria, Egypt; WHO Regional Office for Europe (EURO) in Copenhagen, Denmark; WHO Regional Office for South-East Asia (SEARO) in New Delhi, India; and WHO Regional Office for the Western Pacific (WPRO) in Manila, Philippines.

WHO Headquarters

At Headquarters, WHO undertakes a number of activities directed towards health aspects of industrial, transport and other types of accidents, notably through its Programmes for the Promotion of Environmental Health, for the Promotion of Chemical Safety, and on Workers' Health. In addition, it is one of the co-operating organisations in the inter-agency programme related to risk assessment, described in the entry for IAEA. WHO's main activities in relation to chemical accidents are carried out in collaboration with ILO and UNEP, through the International Programme on Chemical Safety undertaken by WHO's Programme for the Promotion of Chemical Safety. WHO is also one of the IOMC's Participating Organisations.

WHO Headquarters and each of its Regional Offices have Programmes for Emergency and Humanitarian Action directed towards preparedness and response to all types of disasters, including technological. Centres for emergency preparedness have been set up in different regions of the world. In relation to chemical accidents, the WHO European Centre for Environment and Health (ECEH) and the Regional Office for Europe (EURO) have a number of relevant projects, as described below. Relevant activities, particularly in relation to human resource development, are also undertaken through the WHO Regional Office for the Americas (including PAHO), for the Eastern Mediterranean, and for the Western Pacific.

WHO/EURO

Since 1980, a special programme on emergency response to chemical accidents has been carried out by the WHO Regional Office for Europe (WHO/EURO). It has prepared and issued "Administrative Guidelines on Planning Emergency Response Systems for Chemical Accidents" and a "Guide for Public Officials on Rehabilitation Following Chemical Accidents". It co-sponsored the 1987 "World Conference on Chemical Accidents" held in Rome. Through the European Regional Office, WHO has established a

task force of assessors who can be sent, on request, to help when major accidents have occurred. The task force includes experts in such fields as general management, environmental health, and toxicology.

WHO-ECEH

The 1989 European Charter on Environment and Health, adopted by the Ministers of Environment and Health of the Member States of the European Region of WHO, indicated that a priority issue is "contingency planning for and response to accidents and disasters." As a follow-up, the WHO European Centre for Environment and Health (WHO-ECEH) was established. The Bilthoven Division of the Centre was one of the organisations, along with IPCS, UNEP and OECD, which organised the Workshop on Health Aspects of Chemical Accidents (Utrecht, the Netherlands, April 1993). Three guidance documents, based on Workshop materials, were prepared jointly by the four organisations and published in one volume by the OECD on behalf of the co-operating organisations (see **C.9**).

WHO-ECEH is organising subregional training workshops, including simulation exercises. A workshop is planned for 1997 which will be held in Warsaw, Poland, with the involvement of IPCS. The aim of these activities is to provide training to those responding to chemical accidents on subjects concerning health aspects of, preparedness for, and response to such emergencies.

Another activity of WHO-ECEH is the preparation of a guidance document on "Epidemiological Approaches to Assessment of Health Consequences of Accidents and Disasters" which is in press. It provides a systematic overview of accumulated experience and gives recommendations for standardised epidemiological approaches to be implemented in case of future accidents.

A WHO Collaborating Centre on health aspects of chemical accidents has been established at the Utrecht University Hospital (Netherlands) to deal with the preparation of guidance on health aspects of chemical accidents, the elaboration of programmes and conducting of training seminars in this field, the provision of assistance in particular to countries of Central and Eastern Europe, the exchange of data on chemical accidents, including those causing transboundary effects, and the development of procedures for integrating human toxicity data into the methodology of chemical risk assessment. These activities are carried out in close co-operation with the Bilthoven Division and with the IPCS.

Emergency planning in some countries has undoubtedly been hampered by the overlapping nature of the responsibilities for health among different government departments. In some countries, particularly those which are in transition, there exists an urgent need to become fully incorporated into the training and practice activities by establishing a national centre for chemical emergencies. WHO-ECEH views its mandate in this context to co-operate in contingency planning for, and response to, accidents and disasters within the framework of the Environmental Health Action Plan for Europe. Development of guidance documents on health aspects of chemical accidents which will be used in the Centre's work in the area of technical co-operation with Member Countries, in particular with countries from Central and Eastern Europe, is planned.

WHO-ECEH is also developing a European health and environment information system. This system will be designed to monitor the environmental health in Europe, as a follow-up to a study prepared entitled "Concerns for Europe Tomorrow".

D. INTERNATIONAL CO-ORDINATING MECHANISMS

D.1 EUROPEAN ENVIRONMENT AND HEALTH COMMITTEE (EEHC)

EEHC Secretariat
Environment and Health Department
WHO Regional Office for Europe
Scherfigvej 8
DK-2100 Copenhagen
DENMARK

Dr. Bent FENGER
TEL: (45-39) 17 12 89
FAX: (45-39) 17 18 90
e-mail: BFE@who.dk

The EEHC became operational on 1 January 1995, based on a decision of the Second Ministerial Conference on Environment and Health, meeting in Finland in June 1994, to establish the Committee in order to, *inter alia*: co-ordinate and evaluate the implementation of the Environmental Health Action Plan for Europe (EHAPE) which had been endorsed by the Conference; assist in the identification of emerging environmental health issues that require collaborative action or further study; and foster information exchange and dissemination. The EEHC has been established for an initial period of five years, when an evaluation of its achievements and its future potential will be submitted to the Third Ministerial Conference.

The EEHC consists of four representatives designated by the WHO Regional Committee for Europe, four representatives selected by the UN/ECE Committee on Environmental Policy and representatives designated by UN/ECE, UNEP, WHO, the European Commission, EEA, the OECD and the World Bank.

Among the issues considered at the first meeting was disaster preparedness. The EEHC recognised the number of international initiatives already underway. As a result, the Committee requested that UN/ECE and the OECD should prepare a report on ongoing activities in relation to chemical accidents based on the report prepared for the Divonne workshop. In addition, WHO/EURO was tasked to prepare a report on contingency planning for environmental health aspects for natural disasters and nuclear accidents. The reports were to be considered by the second meeting of the Committee, as background for decisions on any additional common actions which should be taken related to environmental health aspects of accidents. Several members suggested that attention should be focused on the health impact of water pollution from chemical accidents, particularly in relation to transfrontier rivers.

The secretariat of the Committee is provided by the WHO Regional Office for Europe, in co-operation with other organisations.

D.2 INTERGOVERNMENTAL FORUM ON CHEMICAL SAFETY (IFCS)

c/o World Health Organization
20 Avenue Appia
CH-1211
Geneva 27
SWITZERLAND

Dr. M. MERCIER
Executive Secretary
TEL: (41-22) 791-3588
FAX: (41-22) 791-4875
e-mail: ifcs@who.ch

The IFCS is a mechanism for co-operation among governments for promotion of chemical risk assessment and environmentally sound management of chemicals. It is a non-institutional arrangement whereby representatives of governments meet to consider and provide advice and, where appropriate, make recommendations to governments, international organisations, intergovernmental bodies and non-governmental organisations involved in chemical aspects of chemical risk assessment and environmentally sound management of chemicals. Relevant UN bodies and specialised agencies and intergovernmental and non-governmental organisations participate without the right to vote. The Secretariat for the IFCS is located at WHO, the administering organisation.

The IFCS was established following the April 1994 International Conference on Chemical Safety convened by the Executive Heads of UNEP, ILO and WHO, which was held at the invitation of the government of Sweden, in response to the invitation of UNCED to further consider the establishment of an intergovernmental forum on chemical safety. Representatives from more than 100 countries, together with those from UN bodies, other intergovernmental organisations, and non-governmental organisations, took part in the Conference. The Conference decided to establish the IFCS, adopted its Terms of Reference, adopted a Resolution with detailed recommendations on priorities for action, and took steps to provide for necessary administrative and financial arrangements.

The functions of the IFCS are consultative and advisory. It will seek to, *inter alia,* identify priorities for co-operative action on chemical safety; recommend concerted international strategies for hazard identification and risk assessment of chemicals and for environmentally sound management of chemicals; assist in securing the collaboration of national, regional and international bodies active in the field; advise governments; and promote the strengthening of national co-ordinating mechanisms and of national capacities for chemicals management.

While Agenda 21 gives the overall objectives of the six programme areas of Chapter 19, and suggestions for their implementation, the recommendations adopted by the IFCS indicate priorities for immediate actions and goals to be achieved in the longer term. Agenda 21 states that its successful implementation is first and foremost the responsibility of governments. Accordingly, the given recommendations are first of all dealing with priorities for action by governments, but several of them regard work by which international bodies may develop effective tools for use by governments.

The IFCS statement on priorities for action notes that sources of information useful to responding to chemical emergencies should be established and access to these sources should be readily and rapidly available. In addition, as part of programme area (e), it states that, by 1997, not less than 25 more countries should have implemented systems for prevention of major industrial accidents in accordance with international principles such as those contained in the ILO and UN/ECE Convention and by 1997 not less than 50 more countries should have introduced national systems for emergency preparedness and response, including a strategy for education and training of personnel with the aid of, *inter alia*, the APELL Programme and the ILO Code of Practice. Furthermore, by 1997 not less than 40 countries should have established poison control centers. Finally, the statement says that attention should be paid to ensuring that all countries introduce appropriate legislation to implement UN Recommendations on the Transport of Dangerous Goods.

To support the implementation of the recommendations of the IFCS, a project was initiated by WHO, ILO and UNEP with the support of the National Institute for Health Sciences, Japan, to establish a "Global Information Network for Chemicals" (GINC). Support for the project now includes other IOMC participating organisations. Using existing information technologies and infrastructure, the GINC project will foster the sharing of chemical information between developed and developing countries for the promotion of sound chemical management. A computerized network will facilitate access to major sources of chemical information. The pilot phase covering Asia and the Pacific will, as a first step, provide access to selected sources of chemical information using Internet and e-mail.

D.3 INTER-ORGANIZATION PROGRAMME FOR THE SOUND MANAGEMENT OF CHEMICALS (IOMC)

c/o World Health Organization
20 Avenue Appia
CH-1211
Geneva 27
SWITZERLAND

Dr. M. MERCIER
Head of Secretariat
TEL: (41-22) 791-3588
FAX: (41-22) 791-4848
e-mail: mercierm@who.ch

The IOMC was established in response to recommendations in Agenda 21 of UNCED. It is designed to serve as a mechanism for co-ordinating policies and activities pursued by the Participating Organisations, jointly and separately, related to the assessment and management of chemicals (as a companion to the IFCS (see above), which is the new mechanism for co-operation among governments). The IOMC is designed to be a co-operative undertaking among seven intergovernmental organisations that work together, within the framework of their own respective constitutional mandates, as partners to promote international work in the environmentally sound management of chemicals. The seven Participating Organisations are the three co-operating organisations of the IPCS (WHO, UNEP and ILO) as well as FAO, UNIDO, UNITAR and OECD. Other intergovernmental organisations may also become Participating Organisations, with the unanimous consent of the existing Participating Organisations.

The Secretariat of the IOMC is located at WHO, the administering organisation. It is functionally distinct from the Secretariat of the IFCS, although both are located at WHO. The participating organisations share in the costs of the secretariat, through voluntary and in-kind contributions and secondment of staff.

An Inter-Organization Coordination Committee (IOCC), composed of representatives of the participating organisations of the IOMC, has been established to co-ordinate and foster joint planning of relevant activities of the organisation. Such co-ordination should ensure full consultation among all those involved, with the aim of ensuring effective implementation without duplication. The IOCC normally meets twice a year and may invite observers to attend its meetings.

Scientific and technical work of the IOMC will be carried out through the existing structures of the participating organisations, either individually or jointly.

According to the memorandum of understanding among the participating organisations, the areas in which co-ordination is sought include the six programme areas of Agenda 21, Chapter 19: international assessment of chemical risks; harmonization of classification and labelling of chemicals; information exchange on chemicals and chemical risks; establishment of risk reduction programmes; strengthening of national capabilities and capacities for management of chemicals; and prevention of illegal international traffic in toxic and dangerous products. Additionally, other areas may be addressed, as agreed by all participating organisations.

The IOMC has created an inventory of chemical safety activities of the Participating Organizations which support the objectives and programmes of Agenda 21, Chapter 19. The IOMC Inventory also includes the activities of UNITAR which are undertaken in close collaboration with one or more of the IOMC Participating Organizations. The first edition of the IOMC Inventory of Activities, Summary Report was published in 1996. Information in the Inventory will be updated on a regular basis.

The IOMC also published a Calendar of Meetings and Events to inform governments, intergovernmental organisations and non-governmental organisations about forthcoming events of the Participating Organizations in the area of chemical safety.

D.4 CO-ORDINATION IN THE FIELD OF TRANSPORT OF DANGEROUS GOODS

Activities related to the transport of dangerous goods regulations are co-ordinated on the basis of the work of the UN Committee of Experts on the Transport of Dangerous Goods (see **C.10**).

E. REGIONAL AND BILATERAL ACTIVITIES

E.1 CANADA

Environmental Emergencies Branch
Environmental Protection Service
Environment Canada
Ottawa, Ontario KIA 0H3
CANADA
TEL: (819) 997-2981
FAX: (819) 997-5029

With respect to chemical accident prevention, preparedness and response, Canada has focussed its international participation in organisations such as OECD, UNEP, UN/ECE and ILO, with a view to developing commonly agreed principles and practices to assist all countries.

Canadian experts have participated in all workshops sponsored by the OECD the past six years as well as co-hosting two workshops with the U.S. EPA (Boston, 1990 and Toronto, 1994). Canada has also been actively involved in UNEP's APELL Programme, participating in several regional/country workshops including helping to sponsor a workshop in Monterrey, Mexico, in 1993 with the World Environment Center. Canada has also collaborated in the preparation of several technical documents to support APELL, most notably the Annotated Bibliography.

Canada's bilateral efforts have focussed mainly on the Canada-Russia Mixed Environment Commission, which included three country-hosted meetings and the hosting of two Russian experts for various periods during 1990-1994. The main areas of collaboration included provision of information on legislative systems, computer-aided emergency management systems, remote sensing, dispersion modelling, and first responder operations/training. Unfortunately, from a Canadian perspective, contacts in the Russian Federation have not been able to be maintained and the programme is on hold until new contacts can be established or further expressions of interest are received.

Canada believes that dialogue with certain Central and Eastern European countries, such as Poland and Hungary, may lead to future associations in the field of chemical accident prevention and response.

In a related activity, Canada sponsored a seminar on Civil Emergency Preparedness, in co-operation with NATO. The seminar, held in November 1992 in Germany, included 20-25 delegates from Central and Eastern Europe, among which were officials from federal, provincial and municipal governments with civil emergency preparedness and response responsibilities. The seminar provided a forum for the exchange of ideas on civil emergency preparedness in a democratic industrial society. Using the Canadian, German and U.S. experiences as models, the objectives of the seminar were to: expose delegates to examples of well-developed national civil emergency preparedness programmes and to the example of civil-military co-operation in the context of NATO; stimulate discussion on the feasibility and utility of the examples in the context of Central and Eastern Europe; provide delegations with an opportunity to share national experiences that might be of interest to other participants; and establish a basis for future liaison between participants.

Canada and the World Bank developed a joint project, through the Ministry of Industry in Romania, to assist their petroleum sector to implement environmental protection programmes. One element of the project is to develop a basic spill response and clean-up capability, starting with essential equipment acquisition and training.

E.2 CZECH REPUBLIC

Contact and Registration Centre for Collection and Reporting
of Information on Accidents with International Effects
Head Office of the Civil Defence
Nam. Svobody 471
160 01 Praha 6
CZECH REPUBLIC
TEL: (42-2) 33-04-31-20
FAX: (42-2) 311-97-76 (continuous operation)

Operational and Information Centre
Head Office, Fire Protection Unit
Ministry of Interior Affairs
Na Perstyne 11
110 00 Prague 1
CZECH REPUBLIC
TEL: (42-2) 24-23-22-20
(42-2) 24-23-22-55
FAX: (42-2) 24-23-23-21 (continuous operation)

The Czech Republic takes responsibility for protection of the public against disasters, natural catastrophes, and other large scale hazardous phenomena. This activity can be divided into three relatively independent subsystems.

The first is legislative support for the creation of the emergency preparedness system. The Act on Prevention and Remedy of Disasters is in preparation. The proposal concerns mainly industrial disasters, the majority of which are chemical. The proposal defines terms, obligations of operators of risk activities at the stage of both prevention and remedy of the disaster, and the establishment of an integrated rescue system. A system of informing the authorities, organisations and the public at the time of disaster is established. The proposal also deals with problems of liability for damages, costs and sanctions.

The following international documents have been implemented:

- Directive 82/501/EEC on the control of the risk sources of serious disasters (with amendments);
- Recommendation and Convention on Prevention of Serious Industrial Accidents (ILO, 1993);
- Convention on the Transboundary Effects of Industrial Accidents (UN/ECE);
- Recommendation on Chemical Accident Prevention, Preparedness and Response (OECD);
- Proposal of the Convention of the European Council on liabilities for damages to the environment caused by hazardous activities.

The Czech Republic is also prepared to sign and ratify the Agreement on Border-Crossing Effects of Industrial Disasters and the Agreement on Access to the European Convention on Coordination and Help in Disasters (UN/UNDRO).

The second subsystem is the disaster information system. The system provides basic data on the prevention and remedy of disasters. It contains information on the origin, course and effects of disasters. A file of basic data sources is shown on a digitalized map, on a scale of 1:200,000 to 1:25,000. The system contains data on co-ordinates of all settlements in the Czech Republic. Text data reference potential sources of large-scale disasters within buildings (production halls, stores) and at transport junctions. Data on 2100 hazardous substances are provided, with relevant physical, chemical, toxicological, medical, fire-extinguishing, packaging and identifying data properties. The system also includes methods of modelling spills of heavy and light toxic gases and liquids. The system can produce maps of contamination and provide scenarios for the provision of rescue teams and equipment to an affected territory.

The third subsystem is the Integrated Rescue System (IRS). This system will be legally established by the Act on Prevention and Remedy of Disasters, but is already operational in regions with large chemical and engineering factories. The IRS provides fire protection, police, and medical rescue services. Mining, water management, and air rescue services are part of the IRS. A method for including the army in rescue action or remedial works is being considered.

The IRS emergency system operates automatically on the basis of prepared emergency plans, which are at the disposal of every operational and information centre of the IRS. The report of an accident activates assistance from IRS and supplies selected information from the centre's database. These centres also provide notification of authorities and the public in the area surrounding the risk activity.

On the regional level, in the border counties of the Czech Republic, bilateral agreements have been made between fire protection units of the border municipalities. These agreements are in compliance with the Act on Municipalities and Country Offices. According to these bilateral agreements, appointed fire protection units mutually help each other in case of accidents and are allowed free crossing of the border in such cases.

E.3 FRANCE

Ministère de l'environnement
Directorate for Risk and Pollution Prevention
20, Avenue de Ségur
75302 Paris 07SP
FRANCE
FAX: (33-1) 42.19.14.67

The French Ministry of Environment (Directorate for Risk and Pollution Prevention and its Bureau for Risk and Pollution Analysis – BARPI) is undertaking a number of bilateral activities to assist European countries in transition with respect to chemical accident prevention, preparedness and response ,generally carried out by the Institut national de l'environnement industriel et des risques (INERIS). Many of these activities address risk and hazard assessments and include audits of industrial facilities. For example:

- In co-operation with the Ministries of the Environment of the Czech and Slovakia, BARPI developed a methodological guide, translated into Czech and Slovak, for hazard analysis based on French experience. As part of this activity, a site audit, as well as a presentation conference, was conducted with the support of the French Inspectorate for the Environment and INERIS. The methodology for hazard analysis was applied at a chemical plant, providing an opportunity for on-site training.

- With the Czech Republic and Slovakia, BARPI and INERIS along with other agencies conducted audits of three hazardous industrial sites. The results of the audits, including recommendations for improving the safety of the installations, were presented both to the management of the sites and to the public authorities.

- With regional authorities in the Czech Republic, INERIS undertook a project related to a risk assessment of an ammonia plant, along with an evaluation of risk assessment methodologies and a training course in France. In addition, INERIS conducted an assessment of a coke plant, providing recommendations for clean-up and proposals for technology for site remediation.

- Recognising that agricultural and food products in the form of dust were at the origin of a number of large accidents, INERIS undertook a project with Polish and Czech Republic research institutes, as part of the Copernicus Programme of the European Commission. A two-year programme was begun in January 1994 to develop a guide for fire and explosion protection in the agricultural and food industries. This involved review of experience in the three countries involved, including experience from accident investigations and problems associated with storage and protection systems. The results will include a comparison of the regulations and standards used (including consideration of European Directives and standards), the drafting of a guide, and the presentation of the results of the work to representatives of industry and public authorities.

E.4 GERMANY

Federal Ministry for Environment
Schiffbauerdamm 15
D-10117 Berlin
GERMANY
FAX: (49-30) 285-504-375

The German Ministry for Environment has supported a number of bilateral and regional workshops/seminars related to industrial accident prevention. These have included:

- the German-Polish seminar on the safety of industrial installations, held in Warsaw in July 1994. The seminar provided an opportunity for participants to exchange information and promoted the establishment of transboundary contact points, especially for the implementation of the UN/ECE Convention;

- the German-Ukrainian workshop on safety of industrial installations, held in Kiev in October 1994. This workshop, *inter alia*, provided support to the Ukrainian Ministry for Environment to develop appropriate national legal and administrative frameworks for the implementation of the Convention;

- the International Workshop on the Estimation of the Potentially Harmful Effects of Industrial Activities, held in Budapest in November 1994 and organised by the Regional Co-ordinating Centre in Budapest. The Workshop addressed the development of criteria and practice related to the identification and estimation of the potentially harmful effects of industrial activities and the identification of the types of installations and substances covered by Annex I of the UN/ECE Convention. The Workshop also considered the determination of risk zones posed by hazardous activities;

- the International Workshop on the Identification of Hazardous Activities, organised pursuant to the UN/ECE Convention, held in September 1995 in Freiburg, Germany. The objective of the workshop was to draw up elements for the development of guidelines and criteria to facilitate the identification of hazardous activities under the Convention; and

- the Workshop on Transboundary Hazard Management, organised by the governments of Germany and Poland, with financial support from the EC and the co-operation and assistance of the Chemical Works of Police, Poland. This was an activity of the Regional Co-ordinating Centre in Warsaw. The main objective of the Workshop was to exchange and share information and experience concerning transboundary co-operation for the management of hazards between neighbouring countries and, in particular, the example of co-operation between the governments of Germany and Poland.

The German Ministry of Interior has an activity to improve Bilateral Co-operation in the Field of Civil Protection and Disaster Management. A Conference on the subject was convened in September 1992, with representatives from Central, East and Southeast European countries, at which information was provided on the German hazard control system, the rescue service, the disaster control system, and civil protection.

At the Conference, the German authorities proposed the establishment of civil protection and disaster relief agreements with the Central, East and Southeast European countries similar to those which Germany has with its Western European neighbours. Such agreements facilitate co-operation among the authorities responsible for civil protection and disaster control when a disaster strikes, allowing direct communication without going through diplomatic channels. The German authorities also recommended increased co-operation, through regular meetings of experts, and mutual exchanges of experts to attend national disaster control exercises, meetings or symposiums.

The countries attending the Conference reached agreement on a number of points, as set out in the "Magdeburg Declaration", including that they would:

- further intensify transborder co-operation in the field of civil protection and disaster management;

- hold similar conferences, in the framework of the Central, East and Southeast European States that are open to other interested states;

- accept the invitation to hold the next conference in Moscow in 1993 (a draft of a multilateral agreement, to facilitate the transit of relief teams through third countries, was available for discussion at the Moscow conference);

- continue the process aimed at preparing and supporting the conclusion of bilateral assistance agreements on the basis of the draft model agreement submitted at the conference; and

- work towards the conclusion of a multilateral agreement that shall be open to all interested states, aimed at improving the co-ordination of mutual assistance in the field of civil protection and disaster management.

In addition, the Ministries of Interior of Germany and of the *Land* of Saxony-Anhalt organised three information seminars concerning civil defence and protection of the population for participants from Eastern and Southeastern European countries.

E.5 HUNGARY

SEE ENTRY C.12 FOR A DESCRIPTION OF THE UN/ECE REGIONAL CO-ORDINATION CENTRE FOR THE PREVENTION OF INDUSTRIAL ACCIDENTS IN BUDAPEST, HUNGARY.

E.6 JAPAN

Japan International Cooperation Agency (JAICA)
Sinjuku Mitsui Bldg.
2-1-1 Nisi-Sinjuku, Sinjuku-ku
Tokyo
JAPAN
TEL: (81-3) 3346-5311

The High Pressure Gas Safety Institute of Japan (KHK)
Mr. Koji Nishikawa, Information Service and Research Dept.
Sumitomo Shintoranomon Bldg.
3 - 9, Toranomon 4 - chome
Minato-ku
Tokyo
JAPAN

JAICA

With a view to promoting international co-operation for the social and economic development of the developing world, the government of Japan established the Japan International Co-operation Agency (JAICA) on August 1, 1974 under the Japan International Co-operation Agency Law.

JAICA is the official agency of Japan whose main function is to extend technical co-operation to developing countries based upon agreements reached between the Japanese government and the governments of these countries. Such technical co-operation is designed to help developing countries in their economic and social development. For this purpose, JAICA:

- invites people from developing countries for technical training in Japan;
- dispatches Japanese experts and Japan Overseas Co-operation Volunteers members;
- dispatches survey teams to help in formulating development plans and projects;
- recruits and trains Japanese experts to be dispatched abroad; and
- supplies necessary equipment for technical co-operation.

Combining into a development project the "acceptance of trainees", the "dispatch of experts", and the "grant of equipment", JAICA extends integrated co-operation (known as “project-type technical co-operation”). JAICA also extends capital grant assistance to developing countries for building schools, hospitals, and other facilities related to technical co-operation. Under certain conditions, JAICA provides financial assistance to Japanese private enterprises to help them in their development co-operation. For Japanese people wishing to participate, JAICA serves as an information centre, as well as a source of assistance for those who have gone to these countries to work as experts.

The major objective of the Expert Dispatch Program is to transfer and disseminate the technical knowledge and skills that are most suited to the needs of developing countries. This Program is the most basic form of technical co-operation that is intended to contribute to the development of technical and administrative personnel needed to foster economic and social development. The Program is also basic in the sense that direct contact on the part of experts with people in developing countries should help promote mutual friendship and goodwill.

There are two categories of experts: individual experts and project-based experts. Individual experts are individually assigned to various organisations of the recipient country, whereas project experts are referred to as those sent under the Project-type Technical Co-operation Program. The Individual Experts Program is administered by the Experts Assignment Department of JAICA.

The Project-type Technical Co-operation Program integrates three components of technical co-operation: dispatch of experts, supply of equipment and materials, and acceptance of trainees. It is provided under four program headings: (a) Technical Co-operation Centre Program, administered by the Social Development Co-operation Department; (b) Health and Medical Co-operation Program and Population and Family Planning Co-operation Program, by the Medical Co-operation Department; (c) Agriculture, Forestry and Fisheries Co-operation Program, by the Agricultural Development Co-operation Department and Forestry and Fisheries Development Co-operation Department, and (d) Industrial Development Co-operation Program, by the Agricultural Development Co-operation Department and Mining and Industrial Development Co-operation Department.

KHK

The High Pressure Gas Safety Institute of Japan (KHK), a non-profit technical organisation, was established by the Ministry of International Trade and Industry for the express purpose of preventing high pressure gas related accidents. It promotes greater voluntary safety by the private sector, and its mandate states that it is to complement government agencies. The work of KHK may be broken down into the following four categories, which are interlinked: preparation of standards; inspection and certification; training and education; and research and development. KHK is governed by a board of directors, and has eight divisions and seven branch offices.

The KHK is undertaking a number of activities to assist countries in transition in Asia, notably Indonesia, Singapore, Malaysia, Thailand, China, Taiwan (Republic of China) and Korea. These include:

- giving technical training courses or sending lecturers concerning the safety of high pressure gas in response to country requests;

- conducting inspections for high pressure gas apparatus, including apparatus to be exported to a country in transition; and

- contacting the users of apparatus in transition countries.

KHK also provides accident reports to companies and agencies in foreign countries, including: *Outline of the Investigation Report on the Fuji Oil Sodegaura Refinery Accident* (1993), *Analysis of the Explosive Failure of a Cold Evaporator for Liquified Nitrogen* (1993) and *Current Aspect of High Pressure Gas Accidents 1994*.

In the future the KHK plans, *inter alia*, to clarify purposes and details of the technical interchanges, promote co-operation with private companies, consider the profit of co-operating companies, and promote the practical use of manpower from private companies for long-term training.

E.7 NETHERLANDS

The Fire Service Inspectorate
Ministry of Home Affairs
Advisory Team Hazardous Materials (OGS-team)
Postbox 20011
NL-2500 EA The Hague
NETHERLANDS
TEL: (3170) 302-7367
emergencies: (3170) 393-0000

FAX: (3170) 302-6786
emergencies: (3170) 361-4464

National Institute of Public Health and Environmental Hygiene
P.O. Box 1
NL-3720 BA Bilthoven
NETHERLANDS
TEL: (3130) 749-111
(3130) 742-998
emergencies: (3130) 749-111
medical response: (3130) 748-888
FAX: (3130) 742-971
emergencies: (3130) 250-440
medical response: (3130) 541-511

The Netherlands is involved in a number of bilateral activities in order to assist countries in transition to improve risk management. These activities result from either direct agreements between the responsible ministries (for example, with Latvia, the Russian Federation, China and the Czech Republic) or as part of international activities such as those carried out under the auspices of the UN/ECE or the UN interagency activity on risk management, described in the entry for the IAEA. In the latter case, the Netherlands has worked with Croatia, India, the Russian Federation, Romania, Egypt, Israel and Latvia.

The Netherlands has utilised its experience with risk management in these activities, with a view to achieving a common policy in dealing with risks. Officials have also found that the experience of assisting other countries has been beneficial in their national activities.

In its assistance activities, the Netherlands has utilised the "rapid risk assessment manual" developed as part of the UN interagency activity. The manual facilitates the prioritising of principle risks (installations and transport routes). Several computer programs are also available to assist with detailed risk analyses. In addition, a method has been developed to identify the risks of accidents, combining various existing methods.

Reports of the results of several of the projects are available.

The Fire Services Inspectorate provides information on the physical and chemical properties of chemicals (e.g., flammability, explosivity, and oxidizing properties), environmental (acute) and health effects,

distribution modes for air releases and river spills, emergency medical responses (first aid), evacuation approaches, decontamination and clean-up, as well as services for on-site assistance, emergency preparedness, risk evaluation and communication, equipment development and training. It also gives advice to other centres and prepares case studies. It operates 24 hours a day. Its working languages are Dutch, English, French and German. The procedure is as follows: call the emergency telephone number and give your telephone number and general information. Within a few minutes the operational officer of the advisory team will phone you back.

The National Institute of Public Health and Environmental Hygiene provides information on environmental and health effects, distribution modes for air releases and river, ocean and soil spills, emergency and medical responses (first aid), as well as services for on-site assistance, emergency preparedness and risk evaluation. It gives advice to other centres and prepares case studies. It operates 24 hours a day. Its working languages are Dutch, English and German.

E.8 NORWAY

The Norwegian Directorate for Fire and Explosion Prevention
Nedre Langgt. 20
3101 Tonsberg
NORWAY
FAX: (47-33) 39-89-43

Norway is engaged in a number of co-operative activities with countries in transition. On the basis of the Norwegian Government's Action Programme for Eastern Europe, and of the bilateral agreements on environmental co-operation between Norway and specific countries in Central and Eastern Europe, applications are invited for financial support of environment-related projects in those countries. The Norwegian Ministry of Environment has established a Secretariat at the State Pollution Control Authority with responsibility for the assessment of project proposals in the environmental field. Applications for support should be made in accordance with special guidelines issued in this regard.

Many of the activities relate to environmental subjects and pollution control in general, and are not particularly directed towards accidents involving hazardous substances. Due to the number of parties involved, both in the private and public sectors, it is difficult to provide a comprehensive and detailed listing and description of these activities.

The following highlights a few of the projects and activities which are of the greatest interest to the field of chemical accidents.

Russian/Norwegian co-operation in the area of safety and reliability

A protocol has been signed between Norway and the Russian Federation regarding co-operation in the area of safety and reliability. The co-operation involves public authorities as well as the private sector. The following four main areas for co-operation have been identified:

- technical co-operation on legislative development in the petroleum sector (on-shore and off-shore);
- probabilistic safety analysis of the Kola Nuclear Power Plant;
- certification scheme for NDT operators in the Russian Federation; and
- education and research in safety management.

Two joint seminars administered by the Norwegian Academy of Technological Sciences and the Russian Academy of Sciences have been launched. The first was of a general nature, exploring possible areas for co-operation. The second seminar related to Safety and Reliability of Complex Technical Systems. A copy of the report in English can be obtained as NTVA-Report 3-1994, NTVA, Lerchendal Gard, N-7034 Trondheim, Norway. The main practical contributors on the Norwegian side are the Norwegian Academy of Technological Sciences, Det norske Veritas, the Petroleum Directorate, and the Norwegian Institute of Technology. The Norwegian Ministry of Foreign Affairs supported the projects extensively.

Polish/Norwegian co-operation relating to safety management in Polish industry

The project aims at establishing a system for safety management and risk assessment in Polish industry. A pilot project was carried out in 1994 together with the Polish Industrial Chemical Research Institute in Warsaw. The main contributor on the Norwegian side is the Norwegian Institute of Technology, with further funding expected through the Ministry of Foreign Affairs.

Polish/Norwegian co-operation relating to an emergency response network for Eastern Europe

The Industrial Research Institute for Automation and Measurements (PIAP) in Warsaw and the Norwegian private company Euro Traffic AS have for some years been engaged in a joint venture to develop and commercialise software and communications technologies needed in Eastern Europe for Emergency Response Centres in connection with chemical accidents. A test study supported by the Norwegian Government suggested that technology should be developed and adapted for an emergency response system that would engage local experts, one or several national emergency response centres, and an international support network. The GENIE (Global Environmental Network for Industry Emergencies) concept is based on satellite communication between these levels. The systems were tested by Polish partners, authorities and industry.

Civil defence co-operation between Estonia and Norway

The Norwegian Directorate for Civil Defense is engaged in a project aimed at supporting the Estonian Civil Defense Organisation. The project involves the supply of various specialized vehicles as well as equipment for fire-fighting, first aid, and other rescue activities. Future activities will involve practical education in the use of the equipment.

Nordic co-operation with the Baltics and the Russian Federation dedicated to Awareness and Preparedness for Emergencies at Local Level

Norwegian authorities and representatives of Norwegian industry were engaged in the two Baltic/Nordic APELL workshops conducted in Latvia (1994) and Estonia (1995), as well as in the APELL seminar in north-western Russia. The Nordic Council of Ministers granted substantial monetary support for these activities, co-ordinated by the Nordic Council of Ministers' Steering Group on research and development related to chemical accidents.

E.9 POLAND

SEE ENTRY C.12 FOR A DESCRIPTION OF THE UN/ECE REGIONAL COORDINATION CENTRE FOR INDUSTRIAL ACCIDENT TRAINING AND EXERCISES IN WARSAW, POLAND.

E.10 SWEDEN

Mr. Ulf BJURMAN
Deputy Assistant Undersecretary
Ministry of Defence
S - 103 33 Stockholm
SWEDEN
TEL: (46-8) 405-1000 (switchboard)
(46-8) 405-2611 (direct)
FAX: (46-8) 204-483

Mr. Niels Olof SANDBERG
Deputy Director-General
Swedish Rescue Services Agency (SRSA)
Karolinen
S - 651 Karlstad
SWEDEN
TEL: (46-54) 104-000 (switchboard)
(46-54) 104-300 (direct)
FAX: (46-54) 102-889

OPERATIONAL CONTACT POINT (24 hours)
Swedish Rescue Services Agency
Karolinen
S - 651 Karlstad
SWEDEN
TEL: (46-8) 90000 (ask for officer on duty)
FAX: (46-54) 102.889 (office hours)
(46-8) 641-7846 (outside office hours)

Sweden carries out a number of activities in conjunction with UN and other international organisations as described below. Examples of activities from the 1994-1995 period are described below.

UN/ECE: In co-operation other Swedish authorities, the SRSA has projects in Poland related to training and preparedness, for example for decontamination in case of chemical accidents. The projects are based on two conventions: Protection and Use of Transboundary Water Areas and International Lakes, and Transboundary Effects of Industrial Accidents. The contact for this work is: Enrico Lundin, SRSA.

Sweden has not yet ratified the conventions. The conventions work on a voluntary basis and are important to increase the capacity and the co-operation among the countries concerned. The main task – from the Swedish perspective – is to start a network of risk centres in Central and Eastern Europe.

UNEP: Sweden has been involved with two APELL-related activities. In the first activity SRSA, in co-operation with UNEP IE, is developing the Handbook on Planning for Transport Emergencies involving Hazardous Materials (Dangerous Goods). It will be based on practical experience from projects

in Duagavpils, Latvia, and Krinstinehamn, Sweden. Emergency plans in both towns have been updated and exercises and workshops have been held. The contact for this work is: Thomas Gell, SRSA.

With respect to the second activity, a conference was held in May 1995 in Laulasmaa, Estonia, within the framework of APELL and in co-operation with the Nordic Council of Ministers. The contacts for this work are: Thomas Gell or Anneli Anderson, SRSA.

UNEP/DHA Joint Unit: Sweden undertakes bilateral activities with the Russian Federation and the Baltic States in the context of the Joint Unit. The SRSA is a National Focal Point, which means they provide stand-by capacity with experts available in case of emergency/chemical accident. The contact for this work is: Sven Eric Berg, SRSA.

IMO: With respect to the OPRC Convention, SRSA participates in workshops, in co-operation with other Swedish authorities. The contact for this work is: Gustav Torling, SRSA.

European Commission: Sweden co-operates with the EC, DG XI (Civil Protection) in the case of major accidents. They have listed resources in Member States in the so-called "Vademecum Manual". A network of experts are available for deciding on the requirements in case of an emergency. The contact for this work is: Nils Olof Sandberg, SRSA.

Nordic Council of Ministers: The work involves a research and development project concerning chemical accidents on land and at sea. In addition, support is provided to the Baltic States and the Russian Federation with respect to APELL. The contact for this work is: Enrico Lundin, SRSA.

Committee on the Challenges of Modern Society (NATO): There are on-going projects with respect to translation of ADR documents and training in the Baltic States. This will contribute to a uniform system for transporting dangerous goods in these countries. The contact for this work is: Roland Nilsson, SRSA.

In addition to the work with international organisations, the Swedish Government has undertaken a number of activities related to sovereignty support to the Baltic States. The Swedish Government has considered it important to assist the Baltic States in building and strengthening their sovereignty, internal security and stability. Within this framework, co-operation has been established in such areas as education in foreign and security policy and the work of the police, customs and coastguard. It is the Government's opinion that the rescue services are also an important area for this form of co-operation.

In October 1992, the Swedish Government commissioned the SRSA to support the Estonian Rescue Services in organising and building up their rescue services. In 1993, the Government made the corresponding decision concerning the Latvian and Lithuanian Rescue Services. The contact for this work is: Anneli Andersson, SRSA.

The co-operation programme comprises:

- provision of introductory fire and rescue services training at an SRSA Rescue Services College in Sweden, for two weeks for 25 senior fire officers every year from each state, in order to give guidance for the development of the local fire and rescue services;

- deliveries of basic equipment for fire-fighting, in order to increase standards of equipment in small cities and communities gradually;

- provision of qualified training in the Baltic States for approximately 60 fire officers every year from each state, and deliveries of qualified equipment for fire-fighting and response to chemical accidents in order to increase the response capacity in the regions and in cities with high risks in a short term;

- provision of training programmes in Sweden for senior officers, teachers and specialists, and also the translation and printing of curricula, textbooks and manuals in the field of fire and rescue services, in order to support the training centres in the Baltic States;

- support in realisation and introduction of good examples of local risk analysis, as a basis for planning and organisation of the fire and rescue services; and

- establishment of special co-operation projects in the field of response to chemical accidents, transport of dangerous goods, and combating oil spills.

Two disaster exercises were undertaken in 1996 (one in Ventspils, Latvia, and the other in Rakvere, Estonia) in co-operation with the rescue services authorities in Latvia, Estonia and Finland. The exercises are so-called "total exercises" with rescue staff and other participants out in the field, and are estimated to last for one day. They have the dimension that international rescue operation is required. Sweden will participate with a unit for rapid international rescue operations in the Ventspils exercise, which involves a major chemical accident. The contact for this work is: Lars Johansson, SRSA.

In addition, there are several Nordic and Arctic organisations working within the field of environmental protection, risk analyses, and methods and techniques in case of chemical accidents, for example in cold areas. In some projects the Ministry of Defence is responsible for one part (for example, dealing with hazardous materials and civil protection). Co-operation with other ministries, authorities and organisations varies among projects.

E.11 UNITED KINGDOM

Mr. Gordon MacDONALD
Health and Safety Executive
Hazardous Installations Policy Unit
Room 218 Magdalen House
Stanley Precinct
Bootle
Merseyside L20 3QZ
UNITED KINGDOM
TEL: (44-151) 951-3203
FAX: (44-151) 951-3418

Since 1990, the UK has undertaken numerous bilateral assistance activities with health and safety organisations in Central and Eastern Europe.

These activities have involved:

- experts from countries in Central and Eastern Europe coming to the UK to meet with Health and Safety Executive (HSE) officials to learn from UK experience relating to, *inter alia*, health and safety legislation, inspections, field operations, training of inspectors, and the control of major hazards and the implementation of related EU Directives;

- HSE officials going to other countries to help with specific training and assistance projects, including participation in seminars and workshops;

- assistance for development of submissions under the European Commission's programme of Scientific and Technical Co-operation with Central and Eastern Europe;

- provision of guidance materials and databases;

- assistance in the organisation of labour inspections; and

- secondment of inspectors.

Co-operative activities have been undertaken with a number of countries, including Albania, Belarus, Bulgaria, Croatia, the Czech Republic, Hungary, Kazakhstan, Poland, Romania, the Russian Federation, Slovakia, Slovenia and Ukraine. Some of these activities are summarised in the table below.

Furthermore, the UK was involved in meetings of international organisations, such as workshops organised by the ILO, and the HSE hosted the ILO information conference, which was attended by delegates from Central and Eastern Europe as well as from the EU, Asia, Africa and America. HSE also arranged for a number of senior Central European delegates to attend the Conference on Enforcement of Health and Safety Legislation in Europe, which was held in November 1992.

In addition, an International Group of Directors of Occupational Safety and Health Research Institutes was established. It has 18 members from 15 countries including Poland, Hungary and the Russian Federation. The Group exchanges information on the institutes' current and planned research programmes and other outputs of interest and identifies possibilities for direct co-operation.

Country/Organisation to which Assistance Was Given	**Description of Assistance**
Albanian Ministry of Labour	Visit by HSE to explain the organisation/function of HSE (1992)
Bulgarian Nuclear Safety Authority (BNSA)	Under an EC emergency aid programme, a 4-nation consortium was set up to assist BNSA and the following activities have been undertaken: • visit to Sofia by a team of Western regulators to advise on BNSA regulatory restructuring (1992); • HSE hosted a visit by a group of BNSA regulators to gain insight into UK regulatory practices and exchange experiences on on-site inspection (1992); • HSE inspectors visited Bulgarian nuclear site to discuss training needs of BNSA regulators; • further exchanges between UK and Bulgaria included a visit by HSE to co-ordinate the provision of equipment to a nuclear emergency response centre in Sofia; • visits were paid by HSE in 1993 and 1994 to monitor improvements in BNSA's effectiveness.
Czech Republic and Slovakia	• 10 inspectors from Czech and Slovak Labour Inspectorate visited HSE to learn about UK practice of inspection (1991); • 7 officials from the Czech Office of Occupational Safety visited the UK to study the UK approach to the control of major hazards; • 3 HSE inspectors presented seminars on the management of health and safety in small firms, attended by Czech and Slovak officials and representatives of the Czech Occupational Safety Research Institute (1992); • visits from the Czech Nuclear Research Institute visited HSE for discussions on decommissioning nuclear reactors and radioactive waste management (1993); • HSE inspector spent 6 months in the Czech and Slovak Occupational Safety Offices advising on inspection strategies; • HSE representative visited the Czech Republic to advise on the UK approach to major hazard control and identify future training needs (1995). This will be followed by visits by Czech inspectors to the UK and further detailed training by the UK in Prague; • 2 HSE officials met with counsellor in Czech Embassy to advise on packaging and labelling of chemicals (1994); • copies of HSE video introducing practical application of risk assessment translated into Czech and supplied to Czech Occupational Safety Office (1995). Most of the above were funded under the KHF or PHARE programmes.

Hungary	• 2 Hungarian inspectors visited the UK; visited chemical factories (1991); • representative of HSE visited Hungary as part of UNIDO's project to undertake technical assessments of chlorine installations (1993); • HSE officials visited Hungarian Labour Inspectorate to discuss future assistance projects under the KHF (1995).
Poland	• 5 inspectors from Polish National Labour Inspectorate visited HSE to look at organisation and management of inspection (1990); • 3 inspectors from Polish Central Institute for Labour Protection visited HSE's occupational health laboratory to examine the UK approach to the control and monitoring of chemical hazards (1991); • 2 officials from Polish National Labour Inspectorate visited the UK to look at the control of major hazards (1993); • representative of Polish Institute of Occupational Medicine visited HSE to discuss policy on notification of chemical substances and risk assessment (1993); • HSE ran seminars for the Polish National Labour Inspectorate on the control of major accident hazards (1994); • 2 consultants from UK's AEA Technology gave seminars to the Polish Inspectorate in risk assessment, safety management and safety reports (1995); • seminars by representatives of HSE and UK employers' and employees' organisations in Poland on the process of implementing the law into national legislation (1995). Most of these initiatives were funded by KHF.
The Russian Federation	• Russian inspectors visited HSE to discuss oil/gas pipeline construction (1991); • HSE agreed with the regulators of the new Russian Federation to continue arrangements for exchanges of inspectors to compare regulatory practices in the nuclear field (1992). Since then there have been many projects in which HSE has assisted the Russian Federation in the regulation and control of nuclear installations; • HSE attended an ILO Seminar on prevention of major industrial accidents (1993); • HSE met with a delegation from Moscow authorities to discuss occupational health issues in chemical factories (1994).
Ukraine	• HSE took part in major EC missions aimed at identifying how the nuclear regulatory body could be more effective (1992 and 1993); • HSE participated on OECD training seminar on nuclear law in Kiev (1992); • HSE agreed on a format for information exchange arrangement with the Ukrainian State Committee on Nuclear and Radiation Safety (1993); • As part of an EC assistance programme, HSE representatives visited Kiev to discuss UK legislation on nuclear power production (1994).
Croatia	• Croatia Labour Inspector visited HSE to find out about UK approach to control of major hazards (1995).

E.12 UNITED STATES

Chemical Emergency Prevention and Preparedness Office
Environmental Protection Agency
401 M St., S.W.
Washington, D.C. 20460
TEL: (1-202) 260-8600
FAX: (1-202) 260-0927

The United States has undertaken numerous activities to assist countries in transition, both through bilateral activities and through support to international organisations. Examples are described below.

The U.S. Environmental Protection Agency (EPA) has developed a training course on **Chemical Emergency Preparedness and Prevention** for use both domestically and internationally in countries in transition. The purpose of the course is to introduce the three major components of a comprehensive chemical safety programme: emergency preparedness; accident prevention; and, to a lesser extent, emergency response. It sets out the three components in an interrelated process called the "safety continuum".

The training course was given in 1995 in Bulgaria, the Czech Republic and Poland. These courses train trainers who can teach the course in other areas of their country and encourage all participants to further implement the programmes in their local communities.

In Bulgaria, there was a follow-up training course on chemical emergency response and a second training course on chemical emergency preparedness and prevention. The government of the Czech Republic has developed a strategy for providing further chemical emergency preparedness and prevention training throughout the country using training from the first session.

With respect to assistance to relevant international organisations, the U.S., for example, provides support and speakers for APELL seminar/workshops including those that have been held in Karzinbarcika, Hungary, in Sec in the former Czechoslovakia, and in the Russian Federation. It is expected that the U.S. will also participate in future APELL seminar/workshops in the region.

The US has also modified and made available its CAMEO – Computer Aided Management for Emergency Operations – programme for international APELL application.

Several ILO activities in the region, including the 1991 Workshops on Safety in the Manufacture and Use of Chemicals held in Sec and in Wroclaw, Poland, were held under the auspices of the U.S., co-sponsored by the Regional Environmental Centre (REC). Representatives from the EPA, Occupational Health and Safety Administration, industry and labour unions participated in these Workshops.

In addition, the U.S. co-sponsored with Hungary the Workshop on Chemical Emergency Preparedness, Response and Prevention held in Veszprem, Hungary, in 1990. The Workshop brought together 132 delegates from Eastern and Central European countries, the United States, Western Europe and several international organisations to discuss issues and share experiences in these areas. The

workshop was the first project funded under the U.S.-Hungary Joint Science and Technology Board and was the first event affiliated with the REC.

Utilizing core funds from USAID's Office of Foreign Disaster Assistance, the World Environment Center (WEC) (see **F.6**) has established prototype prevention and mitigation programmes for environmental and man-made disasters and emergencies in high-risk urban centers – the "Local Accident Mitigation and Prevention" (LAMP) programme. The purpose of this programme is to reduce the incidence and impact of major industrial hazardous materials transport or other technological accidents and disasters in selected localities in various countries.

Initially, the programme focussed on four countries: India, Mexico, Thailand and Indonesia. It is anticipated that the LAMP programme will expand into some countries in Eastern Europe and will help to further implement UNEP's APELL Programme in each country by addressing the specific implementation needs of those countries.

In addition, the U.S. periodically hosts visitors from Eastern European countries who come to the U.S. to learn about chemical accident prevention, preparedness and response programmes.

E.13 EUROPEAN UNION (EU) (including PHARE/TACIS)

European Commission
DG XI.E.1 - BU 9 - 2/201
rue de la Roi 200
B-1049 Brussels
BELGIUM
FAX: (32-2) 299-0313

Many of the European countries in transition are working towards harmonizing their laws and programmes with those of the European Union. The activities of the European Union related to industrial accidents were carried out under Council Directive 82/501/EEC on major-accident hazards of certain industrial activities, the so-called SEVESO Directive, as amended. On 9 December 1996 a new Directive on the control of major accident hazards involving dangerous substances was adopted by Council (Council Directive 96/82/EC), the so-called SEVESO II Directive. The Directives aim at preventing, preparing for, and responding to major industrial accidents and limiting their consequences for workers, the population and the environment. From February 1999, the SEVESO II Directive will replace the old SEVESO Directive which will be repealed.

DG XI of the European Commission (EC) is charged with the administration of the Directive. DG XI also provides assistance to countries in transition to meet the obligations of the above mentioned legislation. For example, they supported related activities of the UN/ECE Regional Coordinating Centre in Poland.

The European Commission is assisted in its administration of the legislation by the Major Accident Hazards Bureau (MAHB), established at Joint Research Centre in Ispra, Italy. MAHB manages the Major Accident Reporting System (MARS) and the Community Documentation Centre on Industrial Risk (CDCIR) and thus facilitates the exchange of information between Member States on the control of industrial activities presenting major hazards.

MARS has been established within the framework of the implementation of the Seveso Directive. Based on reports submitted by the Member States, accidents are analysed in order to identify their causes and to assist in the development of preventive measures. The CDCIR publishes reviews on accidents and studies on lessons learned from accidents involving hazardous substances. A bulletin containing summaries of the new documents in CDCIR is issued twice a year. In addition, a number of reviews and studies have been published on subjects related to industrial accidents (e.g., "Empirical Evaluation of Public Information on Industrial Accidents Hazards" and "Comparison of Selected LPG Related Codes and Standards").

The PHARE Programme, adopted in July 1989 as the "Poland and Hungary Action for Restructuring of the Economy," is the European Union's effort to support the process of economic reconstruction in the countries of Central and Eastern Europe. It has been expanded so that the following countries are also eligible for PHARE aid: Albania, Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Romania, the Slovak Republic and Slovenia.

PHARE provides financial and technical support for the beneficiary governments' actions to create the conditions for a market-oriented economy, based upon private ownership and initiative. The PHARE programme does not deal directly with individual business projects or ventures, but provides funds from

which the beneficiary governments finance their own programmes of reconstruction. The funds are made available as non-reimbursable grants.

Procedurally, PHARE programmes have to be initiated by the beneficiary countries and presented to the Commission through the designated official co-ordinators. An annual programme is agreed with each country, defining the objectives and priorities of assistance as well as a broad sectoral allocation of funds.

With respect to the environment, the PHARE programme will provide assistance for: strengthening and expanding institutional, policy and regulatory frameworks; studies; technical assistance; pilot projects; transfer of technology; information; and public awareness. The areas of co-operation generally cover all environmental sectors, although emphasis is on prevention of industrial pollution.

As an example, one country – Poland – indicated that it has two projects funded by PHARE which are of particular interest to chemical accident prevention, preparedness and response. These are a country-wide plan of toxic waste management and a country-wide system for prevention of extraordinary threats.

PHARE has also established multi-country regional programmes, which in the environmental field generally concentrate on: funding the central management and co-ordination body which is addressing a regional problem; the development of critical strategies and masterplans; support for the establishment and operation of pollution monitoring systems; and limited capital projects which demand a regional approach and which cannot be undertaken on a national level. Implementation of regional programmes requires extensive consultation, co-ordination and management between several national governments.

The PHARE regional programme has established a number of priority areas for funding. These include projects directed to harmonization with EU and international standards.

A separate Technical Assistance Programme, known as the **TACIS Programme**, has been established to provide funding for the Russian Federation and the other countries in the Commonwealth of Independent States as well as Mongolia, in a manner similar to the PHARE programme.

E.14 REGIONAL MARINE POLLUTION EMERGENCY RESPONSE CENTRE FOR THE MEDITERRANEAN SEA (REMPEC)

J.C. SAINLOS
Director
REMPEC
Manoel Island, GZR 03
MALTA
TEL: (356) 33.72.96
(356) 33.72.97 or
(356) 33.72.98
emergencies: (356) 99.79.78
FAX: (356) 33.99.51

Communication with REMPEC in case of emergency (reporting accidents, requesting assistance, etc.):

a) Send a detailed message prepared in conformity with the IMO's recommended Pollution Reporting System (POLREP) either by telex to 1464 UNROCC MW or 1396 UNROCC MW, or by telefax to (356) 33.99.51;

b) Contact the Officer-on-Duty on telephone number (356) 99.79.78, which is in operation 24 hours a day.

The Conference of Plenipotentiaries of the Coastal States of the Mediterranean Region, convened in Barcelona, Spain, in 1976, adopted the Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention) as well as two Protocols, one of which concerns Co-operation in Combatting Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency (Emergency Protocol). In order to assist the Mediterranean coastal States strengthen their response capabilities, and to facilitate international co-operation in the field of combatting accidental marine pollution, the same Conference also decided to create a Regional Centre. This Centre, REMPEC, operates within the framework of the Mediterranean Action Plan, which is one of UNEP's Regional Seas Programmes and is administered and technically back-stopped by the International Maritime Organization (IMO).

The objectives of REMPEC's assistance programmes are as follows:

- to strengthen the capacities of the coastal States in the Mediterranean and to facilitate co-operation among them in case of a major marine pollution accident;

- to assist coastal States of the Mediterranean region, which so request, in the development of their own capabilities for response to accidents;

- to facilitate information exchange, technological co-operation, and training;

- to provide a framework for the exchange of information on operational, technical, scientific, legal and financial matters.

REMPEC has developed its activities along four major axes:

i) Advisory Services on Preparedness and Response Issues concerning Accidental Marine Pollution. Provides advisory services and consultation to the Coastal States utilizing a regularly updated Regional Information System which consists of:

   - legal provisions (including recommendations, principles and guidelines);
   - lists and inventories;
   - databanks, simulation models, and a decision support system;
   - operational guides and technical documents.

ii) Establishment of Systems for Preparedness and Response: Assists countries in the preparation of contingency plans, including:

   - the preparation and/or adaptation of national contingency plans;
   - the preparation and development of operational bilateral or multilateral agreements involving neighbouring countries.

iii) Training. Organises training courses of a generalised and specialised nature at the regional level as well as providing to countries, which so request, assistance in organising their own national training courses.

iv) Co-operation and Mutual Assistance in Cases of Emergency. At the preparedness level, develops and updates a regional communications network which is tested regularly through communication exercises organised periodically. At the response level, and if so requested by coastal States, provides advice and technical expertise as well as other relevant information the States would need. Activates the Mediterranean Assistance Unit to assist an affected State(s). Assists in obtaining and co-ordinating international assistance irrespective of whether these means originate from governments or the private sector.

In conjunction with UNEP IE, REMPEC has begun to identify pilot projects in order to improve emergency planning in port areas.

A Focal Points' Meeting is held every two years, and REMPEC periodically organises seminars and workshops, as well as regional and national training courses.

REMPEC has issued numerous publications such as proceedings of workshops and seminars, reports of meetings, and occasional papers, as well as technical publications dealing with specific aspects of preparedness for and response to accidental marine pollution.

F. NON-GOVERNMENTAL ORGANISATIONS

F.1 EUROPEAN CHEMICAL INDUSTRY COUNCIL (CEFIC)

Mr. Filip JONCKHEERE
CEFIC
Avenue E Can Nieuwenhuyse 4
B-1160 Brussels
BELGIUM
TEL: (32-2) 676-7266
FAX: (32-2) 676-7332

CEFIC is a European organisation which represents 21 national chemical federations and 47 major chemical companies in Europe. Its mission is to provide a forum for discussion of supra-national issues affecting chemical companies operating in Europe and to represent effectively the position of the chemical industry on such issues.

CEFIC has a number of activities designed to assist its members in the prevention of, preparedness for, and response to chemical accidents. For example, it has prepared numerous publications including: "A Guide to Safe Warehousing for the European Chemical Industry," "Views on the Quantitative Assessment of Risks from Installations in the Chemical Industry," "Communications between the Chemical Industry and the Community on Emergency Response Organisation," and a "Checklist for On-site Emergency Plans." CEFIC has played an active role in the preparation of the European Union legislation on the control of major accident hazards and of the OECD Guiding Principles, is an active participant in the UNEP APELL Programme, and has assisted in the drafting of the ILO Guidelines and Convention. All of these have been, and continue to be, imparted to Central and Eastern European countries by means of seminars and similar activities with CEFIC participation.

A CEFIC programme of particular interest to many of the countries in transition is the "ICE" – International Chemical Environment – programme. This is a co-operative programme under CEFIC's "Responsible Care" initiative to prevent chemical transport accidents in Western Europe and to provide effective assistance to the authorities when these accidents occur. It harnesses the combined expertise of the European chemical companies in case of chemical transport accidents. ICE aims to build upon the best existing prevention practices, preserve proven emergency schemes, extend the best emergency schemes to countries where none exist, and co-ordinate standards and training. CEFIC intends to extend its ICE programme to Central and Eastern Europe through its associate member federations in the area and is part of the PEER initiative described below.

The "Partnership for Environmental Emergency Response in the Chemical Industry of Central and Eastern Europe" (PEER) is a joint initiative of CEFIC, WBCSD (formerly WICE), Green Cross International (GCI) and UNEP (see entries for each of these organisations).

In order to avoid duplication of efforts among CEFIC's ICE programme and the GENIE project of WBCSD, as well as the GCI activities, the secretariats of CEFIC, WBSCD and GCI created a working group which met for the first time in November 1993. In March 1994, UNEP IE joined the working group in light of its APELL programme. The purpose of the working group was to explore how the various

efforts could be combined, and how an extended ICE initiative would encourage the prevention and effective response to environmental incidents in Central and Eastern Europe.

The group concluded that an initiative should be developed with the goal of contributing to the improvement of environmental emergency response to chemical transport accidents in Central and Eastern Europe, recognising that accidents during the transport of chemical goods pose a major environmental threat in this area and that there is a need for improving know-how, mainly in the field of effective response. It was therefore suggested that this co-operative initiative should aim at:

- reducing the chance for minor and major incidents through better prevention and raising awareness;

- improving the quality of response in case of accidents through technology, training, planning and communication;

- reducing the impact of major accidents through quick international emergency response, if necessary.

The PEER project will work towards creating and sustaining national schemes, linked to an international expert network which can help prevent, prepare for, and respond to chemical transport emergencies. It will focus its efforts on road and rail transport incidents in selected countries in which earlier contacts have been established. An eventual expansion of the programme to other countries of the region may occur in the mid-term. It will also focus on initial competence building of a small group of local experts in organisations that can serve as the core for a larger industrial emergency network.

A PEER Training Seminar was held in March 1995 by chemical industry experts in Basel and Ludwigshafen for representatives from industry and authorities from Hungary, Slovakia, the Czech Republic, Poland, Slovenia, Estonia and the Russian Federation. The large in-kind contribution from several West European chemical companies was complemented by financial support from the Swiss Government.

The objective of the Seminar was to improve the general knowledge of the participants in the field of transport safety and to demonstrate how an ICE scheme and Centre, backed by the local chemical industry, could be set up in their country. During the Seminar, each country was allocated one co-ordinator from the organising partners in order to facilitate discussion.

The next step of the programme consists of a visit by the co-ordinator to his allocated country, in order to assist locally with the implementation of a national centre for the organisation of local awareness sessions.

F.2 INTERNATIONAL FEDERATION OF CHEMICAL, ENERGY, MINE AND GENERAL WORKERS' UNIONS (ICEM)

109, avenue Emile de Beco
B-1050 Brussels
BELGIUM
TEL: (32-2) 626-2020
FAX: (32-2) 648-4316
e-mail: icem@geo2.poptel.org.uk

The ICEM represents some 20 million workers worldwide. The ICEM is a rapidly growing industry-based world labour federation dedicated to practical international solidarity. Its main focuses are:

- solidarity and campaigning support for member unions during industrial disputes;
- union-building programmes in countries where unions are weak or non-existent;
- provision of information and expertise on topics ranging from collective bargaining to health and safety standards;
- skills training and development work with trade union cadres and rank-and-file union members.

The ICEM was created by the fusion of two previous International Trade Secretariats: the International Federation of Chemical, Energy and General Workers' Unions (ICEF) and the Miners' International Federation (MIF). The ICEM was officially created on 1 January 1995.

The ICEM comprises a wide range of industries:

- **Energy**: Exploration, production, generation, refining and distribution of all types of primary and secondary energy (including oil, electricity and gas).
- **Coal Mining**: Exploration, extraction and processing of hard coal and lignite.
- **Other Mining and Quarrying**: Exploration, extraction and processing of metallic and non-metallic minerals, other than coal and lignite.
- **Chemicals and Bioscience**: Research, production and refining of chemical elements, compounds and products, pharmaceuticals, chemo-technical products, petrochemical products, agro-chemicals, plastics, plastic products and composites and artificial fibres. Research and manufacture of products and materials resulting from biotechnical methods or genetic engineering techniques.
- **Pulp and Paper**: Research, production and conversion of pulp, paper, board, kraft, paper packaging and other paper and board products.

- **Rubber**: Research and production of synthetic rubber and composites and fabrication of both natural and synthetic rubber products.

- **Glass**: Research, production and fabrication of flat glass, container glass, glass fibres, household glass, technical glass and all other glass products.

- **Ceramics**: Research, production and fabrication of all types of pottery, clay and ceramic materials, composites and products.

- **Cement**: Research, production and fabrication of cement, non-metallic minerals, composites and products.

- **Environmental Services**: Waste disposal and recovery, pollution control, recycling, cleaning and maintenance, laundry, dry cleaning and hygiene services, porterage and security, and associated activities.

- **Services and Miscellaneous**: Service and miscellaneous industries not falling within the scope of the trade unions' other International Trade Secretariats (ITS).

The ICEM has a Health, Safety and Environment Office based at its Brussels headquarters. It provides advice, information and assistance to its affiliates on all aspects of health, safety and environmental protection. The ICEM holds regular meetings, seminars and workshops on occupational health and safety and the environment and produces a twice-yearly health, safety and environment publication "ICEM Global". The ICEM has also produced a range of health, safety and environment publications addressing specific issues such as threshold limit values, solvents, electricity hazards, asbestos hazards, etc.

In addition, the ICEM holds every four years a World Conference on Health, Safety and the Environment. The ICEM philosophy is that the best way of supporting its members is by ensuring that they are able to work in safe and sustainable employment. The ICEM works with a wide range of organisations sharing the same goals. The ICEM actively promotes the development of broadly applicable best standards and practices based on joint union/management co-operation and commitment at the industrial level.

F.3 GREEN CROSS INTERNATIONAL (GCI)

Ms. Monica SOMMARUGA
Green Cross International
Route de Florissant 160a
CH-1231 Conches-Geneva
SWITZERLAND
TEL: (41-22) 789-1662
FAX: (41-22) 789-1695

GCI is an international non-governmental organisation initiated by Mikhail Gorbachev following UNCED to establish a focal point to facilitate: responses to present and impending man-made environmental disasters; and changes in the values, behaviours, processes of decision-making, and policies needed to effect a transition to more sustainable forms of development. It was planned as an independent, not-for-profit, voluntary, non-governmental organisation, with the expectation of collaborating with existing governmental and non-governmental organisations and citizens groups.

The GCI proposed establishing, within the framework of its statutory goal to promote awareness and facilitate activities in the field of disaster prevention and relief, an international Industry Council that would help prevent chemical catastrophes and take an initiative to create a network and provide emergency assistance in case of an accident. This proposal focussed primarily on Central and Eastern Europe and the CIS.

The GCI is one of the co-operating organisations in the PEER project which is described in the CEFIC entry.

F.4 REGIONAL ENVIRONMENTAL CENTER FOR CENTRAL AND EASTERN EUROPE (REC)

Miklos ter 1
1035 Budapest
HUNGARY

The REC is an independent, non-governmental, not-for-profit organisation, established in 1990, which seeks to address the environmental challenges common to Central and Eastern Europe by promoting ecologically sustainable development and increasing environmental awareness in the Central/East European region. It focuses its efforts specifically on the development of a civic society in the environmental field, primarily by supporting non-governmental organisations. It also co-operates with national governments and local authorities and maintains dialogue with the scientific community and the private sector.

One of the major activities of the REC is the provision of grants, mostly to non-governmental organisations, to assist them in carrying out their projects. The grant programme has four priority areas: pollution prevention, education and training, public participation, and environmental health.

A number of projects funded by REC are related to chemical safety. For example, the REC has given a two-year grant entitled "Emergency Environmental Protection: Safeguarding Public Health in Eastern Europe." The purpose of the project is to fund the implementation of episode warning systems in Bratislava, Budapest and Cracow in co-operation with local NGOs in training, education and informing the public and the elaboration of guidelines for establishment of similar systems throughout Central and Eastern Europe. In addition, grants have been provided related to the methodology of implementation of environmental regulations and to public participation in environmental decisions.

Other major projects of REC include a clearinghouse/information service and an outreach programme with offices in a number of Central and Eastern European cities. In addition, the REC has special programmes. This has included the Legislative Task Force, a group of Eastern and Western NGO and government representatives who meet with legislators to discuss topics such as the environmental impacts of privatisation and public participation.

In addition, the REC co-sponsored a number of workshops related to chemical accidents. These have included the "Chemical Emergency Preparedness, Response and Prevention Conference" held in Veszprem, Hungary, described in the entry for the United States and the three ILO workshops on "Safety in the Manufacture and Use of Chemicals" described in the entry for the ILO.

F.5 WORLD BUSINESS COUNCIL FOR SUSTAINABLE DEVELOPMENT (WBCSD)

160, route de Florissant
CH-1231 Conches-Geneva
SWITZERLAND
TEL: (41-22) 839-3100
FAX: (41-22) 839-3131
e-mail: Compuserve 100277,2732

The World Industry Council for the Environment (WICE) and the Business Council for Sustainable Development (BCSD) merged into WBCSD effective from 1 January 1995.

GENIE (Global Environmental Network for Industrial Emergencies) is a project on emergency response assistance for the chemical industry in Poland, which was initiated in 1991 by what was then the International Environmental Bureau of the International Chamber of Commerce. GENIE, sponsored by the Norwegian Government, was established to demonstrate the feasibility of reducing the risk of major accidents in the transportation of chemicals through improving the access to industry-based competence.

The objective of the GENIE project is to help build up an environmental response capability by providing the technical infrastructure that allows such an integration of routine tracking systems with emergency response capabilities, in order to ensure security in both national and transborder shipment of chemicals. It would also strengthen the networking among various national response centers. It is expected to cover all hazardous chemicals within the geographic borders of the network and will attempt to bridge the gap between industry and the public sector. It was planned that a European GENIE network will build on the work undertaken in the GENIE pilot project in Poland.

As a consequence of this work, WBCSD is one of the co-operating organisations in the PEER project which is now a prerequisite for the continuation of the work on GENIE. PEER is described in the CEFIC entry.

F.6 WORLD ENVIRONMENT CENTER (WEC)

Headquarters:
419 Park Avenue South
Suite 1800
New York, N.Y. 10016
USA
TEL: (1-212) 683-4700
FAX: (1-212) 683-5053

The WEC, established in 1974, is an independent, non-advocacy organisation contributing to sustainable development by strengthening industrial and urban environmental, health and safety policies and practices worldwide. WEC establishes and promotes partnerships and acts as a bridge linking industry and government and non-governmental organisations.

Through three programmes – the International and Environment Development Service (IEDS), the International Environment Forum (IEF) and the WEC Gold Medal for International Corporate Environmental Achievement – WEC offers opportunities for sharing technical information between the private and public sectors and between countries. IEDS has provided the services of volunteer experts demonstrating that economic benefits are derived from environmentally sound management. IEDS projects include: assistance in preparing industrial environmental, health and safety reviews; support for strengthening of environmental institutions and the drafting of environmental laws and regulations; organisation of workshops, training programmes and conferences; and study tours and on-the-job-internships for officials from industry and government.

In 1992, WEC organised four workshops, one each in Hungary, Poland, the Czech Republic and Slovakia, on "How to Conduct and Successfully Implement an Environmental Assessment" which was attended by representatives from research institutes and chemical, petroleum, pharmaceutical, aluminum and other plants.

WEC is also very active in advancing waste minimisation practices throughout Central and Eastern Europe, through a systematic analysis of factory operations to identify point sources of pollution, helping create a safer environment for workers and resulting in economic benefits to the company.

For an IEF workshop on Emergency Planning and Management held in Washington, D.C., WEC sponsored the participation, and extended visit, of a Polish expert.

The WEC signed a co-operative agreement with the U.S. Agency for International Development, Office of Foreign Disaster Assistance to implement a five-year programme related to chemical accidents. Known as LAMP – the Local Accident Mitigation and Prevention Program – this project is working to build local prevention, mitigation, management and training capabilities. While the initial target countries did not include any in Central or Eastern Europe, it is expected to be expanded into this region in the future.

ANNEX: ACRONYMS

ADN:	European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterways (see entry for UN/ECE)
ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road (see entry for UN/ECE)
APELL:	Awareness and Preparedness for Emergencies at Local Level (an initiative of UNEP IE)
BIAC:	Business and Industry Advisory Committee to the OECD
CCEET:	Centre for European Economies in Transition (OECD)
CCMS:	Committee on the Challenges of Modern Society (NATO)
CDCIR:	Community Documentation Centre on Industrial Risk (European Union)
CEFIC:	European Chemical Industry Council
CEP:	Civil Emergency Planning (NATO)
CIS:	International Occupational Safety and Health Information Centre (ILO)
DHA:	UN Department of Humanitarian Affairs
EAPC:	Euro-Atlantic Partnership Council (NATO)
EBRD:	European Bank for Reconstruction and Development
GCI:	Green Cross International
GENIE:	Global Environmental Network for Industrial Emergencies (industry initiative)
GINC:	Global Information Network for Chemicals (project of ILO, UNEP and WHO with support from Japan)
IAEA:	International Atomic Energy Agency
ICDO:	International Civil Defense Organisation
ICE:	International Chemical Environment (CEFIC programme to prevent and respond to transport accidents)
ICFTU:	International Confederation of Free Trade Unions

IFC:	International Finance Corporation (member of the World Bank Group)
IFCS:	Intergovernmental Forum on Chemical Safety
ILO:	International Labour Office (or Organisation)
IMO:	International Maritime Organization
IOMC:	Inter-Organization Programme on the Sound Management of Chemicals
IPCS:	International Programme on Chemical Safety
IRPTC:	International Register of Potentially Toxic Chemicals (UNEP)
MAHB:	Major Accident Hazards Bureau (European Union)
MARS:	Major Accident Reporting System (European Union)
NACC:	North Atlantic Cooperation Council (NATO)
NATO:	North Atlantic Treaty Organization
NGO:	Non-governmental organisation
OECD:	Organisation for Economic Co-operation and Development
OPRC:	International Convention on Oil Pollution Preparedness, Response and Co-operation (1990)
PEER:	Partnership for Environmental Emergency Response in the Chemical Industry of Central Europe (joint initiative of CEFIC, WBCSD, GCI and UNEP)
PHARE:	Poland and Hungary Action for Restructuring of the Economy (European Union)
REC:	Regional Environmental Center for Central and Eastern Europe
REMPEC:	Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea
SCOPE:	Scientific Committee on Problems of the Environment
SGOMSEC:	Scientific Group on Methodologies for the Safety Evaluation of Chemicals (joint activity of IPCS and SCOPE)
TUAC:	Trade Union Advisory Committee to the OECD
UNCED:	UN Conference on Environment and Development
UN/ECE:	UN Economic Commission for Europe

UNEP:	UN Environment Programme
UNEP IE:	UNEP Industry and Environment centre
UNIDO:	UN Industrial Development Organization
UNITAR:	UN Institute for Training and Research
WBCSD:	World Business Council for Sustainable Development
WEC:	World Environment Center
WHA:	World Health Assembly
WHO:	World Health Organization
WHO-ECEH:	WHO European Centre for Environment and Health
WHO/EURO:	WHO Regional Office for Europe