

**UNITED NATIONS ENVIRONMENT PROGRAMME**



**UNEP**

**DIVISION OF TECHNOLOGY, INDUSTRY AND ECONOMICS  
1999 ACTIVITY REPORT**

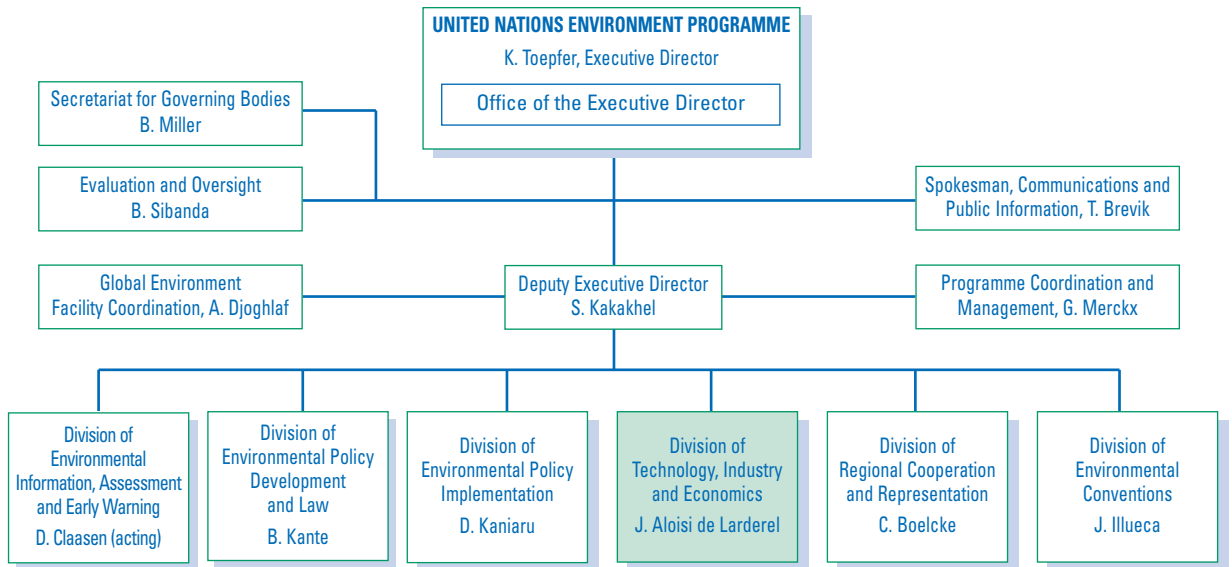
## UNEP AND ITS DIVISION OF TECHNOLOGY, INDUSTRY AND ECONOMICS

UNEP's priorities, as adopted by the fifth special session of the Governing Council, are: environmental monitoring, assessment, information and research including early warning; enhanced coordination of environmental conventions and development of environment policy instruments; freshwater; technology transfer and industry; and support to Africa. In liaison with other UNEP Divisions, the Division of Technology, Industry and Economics (DTIE) has developed its approach and focused its activities on these priorities.

- **The mission of UNEP DTIE**  
is to encourage decision makers in government, industry and business to develop and adopt policies, strategies and

practices that are cleaner and safer, use natural resources more efficiently, and reduce pollution risks to human beings and the environment.

- **The UNEP DTIE approach**  
is to raise awareness, to build international consensus on policies, codes of practice and economic instruments, to strengthen capabilities, to exchange information and to initiate demonstration projects.
- **The UNEP DTIE strategy**  
is to work as a catalyst. UNEP DTIE develops and promotes partnerships through voluntary initiatives. It focuses on facilitating the effective and integrated



implementation of existing conventions and multilateral environmental programmes. It also promotes the adoption and transfer of environmentally sound technologies and management practices by the industrial sector in developing countries and countries with economies in transition. It focuses on key industry sectors, including chemicals, mining, oil and petroleum, tourism, and trade and finance.

### The structure of UNEP DTIE

The Division, with the Division Office in Paris, consists of one Centre and four Units, located in Paris, Geneva and Osaka.

#### International Environmental Technology Centre

Promotes the adoption and use of environmentally sound technologies with a focus on the environmental

management of cities and freshwater basins, in developing countries and countries in transition.

#### Production and Consumption Unit

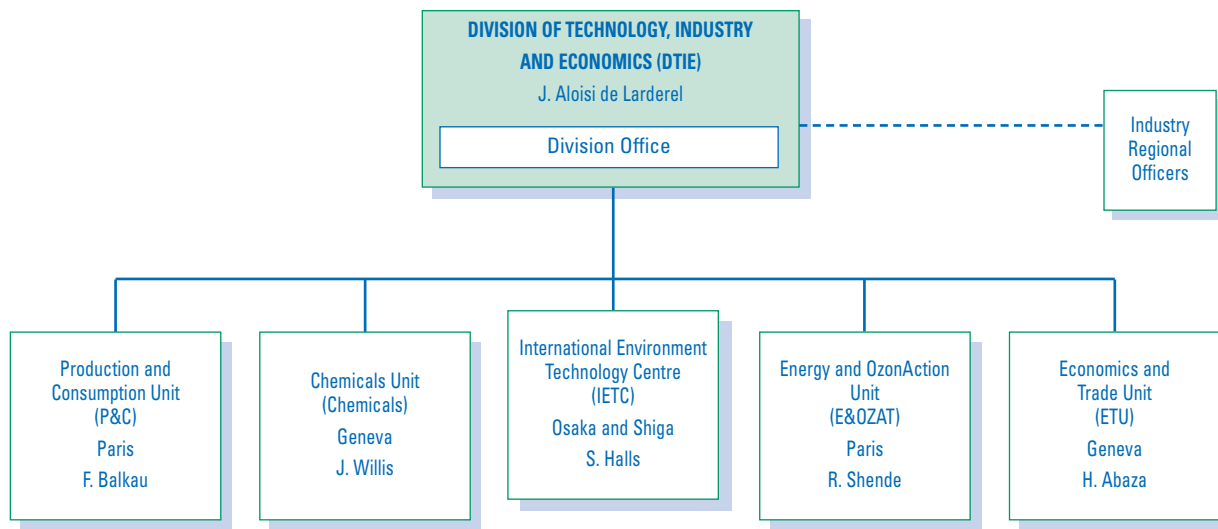
Fosters the development of cleaner and safer production and consumption patterns that lead to increased efficiency in the use of natural resources and pollution prevention.

#### Chemicals Unit

Promotes sustainable development by catalysing global actions and building national capacities for the sound management of chemicals and the improvement of chemical safety worldwide, with a priority on Persistent Organic Pollutants (POPs) and Prior Informed Consent (PIC, jointly with FAO).

#### Energy and OzonAction Unit

Supports the phase out of ozone-depleting substances in



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*'Let us take adequate steps to stop the careless exploitation and destruction of the environment by making the necessary changes in our own lives, in our own attitudes and in our own behaviour. We don't have another thousand years.'*

Klaus Toepfer  
UNEP Executive Director  
World Environment Day 1999

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developing countries and countries with economies in transition to ensure the implementation of the Montreal Protocol; and promotes good management practices, the use of renewable energy technologies and energy efficiency. The UNEP/Risø Collaborating Centre on Energy and Environment supports the work.

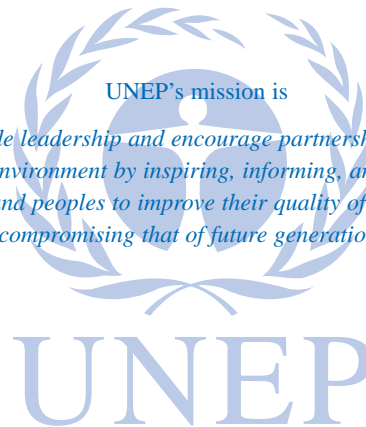
### **Economics and Trade Unit**

Promotes the use and application of assessment and incentive tools for environmental policy and helps improve the understanding of linkages between trade and environment and the role of financial institutions in promoting sustainable development.

### **Division Office**

- coordinates UNEP DTIE activities and ensures liaison with headquarters and other UNEP Divisions;
- promotes Outreach activities; and
- coordinates regional delivery of UNEP DTIE activities.

There are industry officers in the six UNEP Regional Offices: Africa (ROA), Europe (ROE), Latin America and the Caribbean (ROLAC), North America (RONA), South-East Asia and the Pacific (ROAP), and West Asia (ROWA).



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## OUTREACH

### The Global Compact

UNEP, together with the UN Office of the High Commissioner for Human Rights and the International Labour Organization, supports UN Secretary-General Kofi Annan's Global Compact, launched in January 1999. It calls on business worldwide to promote nine basic principles in relation to human rights, labour standards and environmental protection. The environmental principles are that businesses should:

- support a precautionary approach to environmental challenges;
- undertake initiatives to promote greater environmental responsibility; and
- encourage the development and diffusion of environmentally-friendly technologies.

UNEP developed the environment components of the Global Compact's new web site ([www.unglobalcompact.org](http://www.unglobalcompact.org)) and participated in a meeting with business leaders in December to discuss future plans.

### The Global Reporting Initiative

UNEP, together with the Coalition for Environmentally Responsible Economies (CERES), the World Business Council for Sustainable Development (WBCSD), the Association of Chartered Certified Accountants, the Stockholm Environment Institute and Imperial College London, launched the 'exposure draft' of the *Sustainability Reporting Guidelines* prepared by the Global Reporting Initiative (GRI) at an international conference held in London in March. More than 350 representatives from governments, business and industry, NGOs and international organizations took part.

The goal of the GRI is to establish a common framework for corporate sustainability reporting that will result in credible, consistent and comparable information. It also seeks to elevate enterprise-level sustainable development reporting to the level of financial reporting, and to develop and advocate greater stakeholder awareness and use of such reports.

UNEP serves on the GRI Steering Committee and supports the GRI interim secretariat currently hosted by CERES with the help of a grant from the United Nations Foundation. The draft *Sustainability Reporting Guidelines* is now being pilot

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*'Specifically, I call on you — individually through your firms, and collectively through your business*



*associations — to embrace, support and enact a set of core values in the areas of human rights, labour standards, and environmental practices.'*

Kofi Annan  
UN Secretary-General  
1999 World Economic Forum

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### **Industry and Environment review**

The 1999 *Industry and Environment* review featured *Financial services and sustainability* (Vol. 22, No. 1), *Sustainability and the agri-food industry* (Vol. 22, No. 2-3) and *Changing consumption patterns* (Vol. 22, No. 4).



## OUTREACH

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tested. More than 120 stakeholders participated in a GRI meeting held in Paris in September to review progress in the testing programme and address issues such as verification and the involvement of small to enterprises (SMEs). Further information on the GRI is available at <http://www.globalreporting.org>.

### Environmental reporting

Three new publications in the UNEP/SustainAbility's Engaging Stakeholders series, designed to promote company reporting of environmental performance and achievements on sustainability issues, were released: *The Social Reporting Report*, *The Internet Reporting Report* and *The Oil Sector Report*.

### Industry/Trade Associations discuss environmental strategies

In September in Paris, UNEP convened the 16th annual consultative meeting of industry and trade associations. Senior UN officials and representatives of 55 international and national trade associations reviewed progress in implementing environmental management tools, exchanged information, discussed critical production and consumption issues, and assessed the state of implementation of *Agenda 21*.

### ISO 14001 Guide

UNEP, the International Chamber of Commerce (ICC) and the International Federation of Consulting Engineers (FIDIC) published *The Guide to ISO 14001 Certification/Registration*, a new tool to help in implementing an environmental management systems (EMS) to a level enabling certification to ISO 14001.

The Guide is a complementary volume to the UNEP/ICC/FIDIC *Environmental Management Systems Training Resource Kit*, first published in 1995, which was designed to give trainers and managers the tools necessary to conduct EMS training courses. The Kit has now sold thousands of copies, and is available in more than 16 languages, with Arabic and Icelandic being added in 1999.

The new *Guide* provides an overview of ISO 14001, a comparison between ISO 14001 and the EMS Training Resource Kit, an outline of EMAS and the linkages to ISO 14001, and guidance on the ISO 14001 certification process.



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## INTERNATIONAL ENVIRONMENTAL TECHNOLOGY CENTRE (IETC)

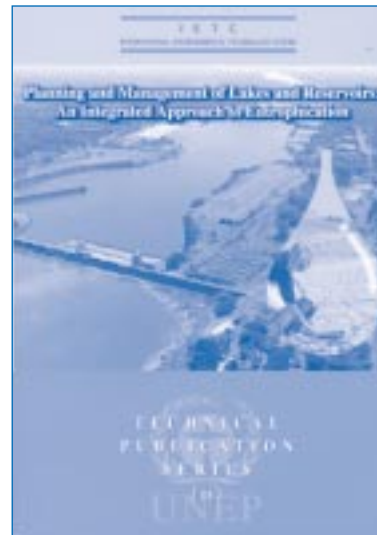
The International Environmental Technology Centre (IETC) is supported by the Global Environment Centre in Osaka, Japan, and by the International Lake Environment Committee Foundation (ILEC) in Shiga, Japan. With offices in both Osaka and Shiga, IETC assists developing countries and countries with economies in transition to use environmentally sound technologies (ESTs) to address urban environment and freshwater management issues. Current areas of focus are water resource management, including groundwater and water use efficiency, sewage, solid waste, wastewater and storm water, and air quality management.

The management of freshwater basins is of prime concern. The availability of freshwater resources has become critical, with more than one billion people worldwide lacking access to adequate water supplies and close to two billion suffering the consequences of poor sanitation. Since 99.5 per cent of all surface freshwater is locked away in continental ice, lakes are one of the planet's most important freshwater resources. They provide water for domestic, agricultural and industrial uses for much of the world's population.

IETC's strategy is to generate awareness of the value and benefits of applying ESTs. It is result-oriented and demand-driven. Based primarily on *Agenda 21*, it revolves around improving access to quality information on ESTs, and capacity building to improve the ability of decision makers to use that information.

IETC's results for 1999 include:

- enriching the knowledge base by undertaking overviews of ESTs in priority sectors, and implementing partnership arrangements with key EST information providers;
- making information accessible by developing and maintaining an EST information system (maESTro) that meets priority needs reflected in Governing Council meetings, environmental conventions and those identified by governments, particularly in the least developed countries and small island developing states; and
- strengthening and improving the capacity of national and local decision makers and urban managers in developing countries and countries with economies in



transition to adopt and use ESTs in the areas of freshwater and urban environmental management.

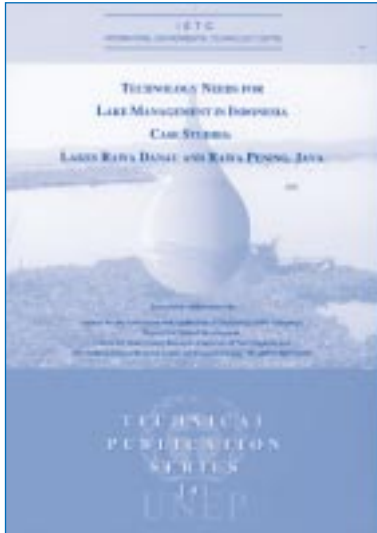
### **Improving access to information on environmentally sound technologies on urban environment and freshwater management**

MaESTro, the Centre's information platform for databases on ESTs, was improved during 1999. It is now available in two more languages, with a new translation service that enables users to view data in French or Spanish by clicking on a translation button on the 'search results' page. The original data are still in English, and the new language services are provided by machine translation. In addition, maESTro CD-ROM Version 2.0 was completed. It carries nearly 2 000 data entries, has a new search interface and a new design. It is Y2K compliant and incorporates new electronic help. A new booklet on maESTro is available from the Centre.

A major event in 1999 was the International Symposium on Efficient Water Use in Cities — Innovative Ways of Finding Water for Cities, held 8–10 June in Kobe, Japan. Co-organized with the Environment Agency of Japan and ILEC in Shiga, the event was attended by some 150 delegates from 45 countries. Keynote addresses stressed the importance of urban water to health, the water crisis in Africa and Japanese approaches to the problem. Technology options discussed included rainwater harvesting, water recycling, aquifer recharge, leakage control, better management and integrated approaches to improving efficiency in water use. Eight case studies were presented by experts from Barbados, India, Israel, Japan, Maldives, Mexico, Singapore and South Africa.

In addition:

- IETC's Newsletter *INSIGHT* was published in May, September and December;
- work started on an IETC introductory video;
- the IETC Information Bulletin was published in Japanese in August, October and December;
- an Expert Meeting was held to revise *Planning and Management of Lakes and Reservoirs: a Compilation of Sound Management Practices*, 24–26 March, Santa Barbara, United States;
- an Expert Meeting was held to discuss the *Source Book on Alternative*



*Technologies for Freshwater Augmentation in West Asia*, 18–20 April, Damascus, Syria;

- the *Workbook for Training in Adopting, Applying and Operating Environmentally Sound Technologies* (IETC Report Series No. 6, Proceedings of the Murdoch Workshop) was published in March;
- work was begun on a monograph of endogenous technologies and on the compilation of an *International Source Book on Sustainable Air Quality Management*;
- a *Directory of Environmentally Sound Technologies for Integrated Waste Management Appropriate for Small Island Developing States* was prepared jointly with UNEP's Division of Environmental Policy Development and Law.

### Fostering technology cooperation, partnerships and transfer

A series of consultations was begun on environmental technology verification (ETV). The ETV project is designed, among other things, to identify criteria to assess the environmental performance of technology.

Other highlights in 1999:

- a round table on Trenchless Technologies, 8–9 November 1999, Katowice, Poland, was held in collaboration with the Sustainable Katowice Agglomeration Programme 2;
- a video on the Sustainable Wuhan and Shenyang Projects was prepared in collaboration with the Sustainable Cities Programme (SCP) of the UNCHS (Habitat) and the Shenyang/Wuhan Sustainable Projects;
- a study of the involvement of the private sector in waste management in Kenyan cities was prepared and a request from Djibouti is under consideration; and
- an *EnTA (Environmental Technology Assessment) Primer* is being prepared in collaboration with the Production and Consumption Unit.

### Trenchless technologies

Digging up roads to replace pipes can be costly and disruptive but an environmentally sound technology can be used instead: trenchless technology systems can be used both to install or renew underground pipes where personnel entry is not possible.

Several methods can be used to install new pipelines, including horizontal drilling and microtunneling. Where pipes have to be renewed, rigid replacements can often be pushed through an existing pipe. Sometimes the old pipe can be burst open and its fragments removed; the tunnel it occupied can even be enlarged with an expanding device. Rehabilitation can be carried out by lining an old pipe with a smaller one (sliplining, see diagram)



or injecting pipe liners or folded pipes which are then made to assume a rigid shape through the passage of hot water or steam.

A round table on trenchless technologies was held in Poland in November (see text).

## Capacity building on urban environment and freshwater management

An International Environmental Management Training course was held 22 March –2 April in Manila and Puerto Princesa, Philippines, in collaboration with the Technical Cooperation Council of the Philippines. The course was attended by 25 participants from Cambodia, Côte d’Ivoire, Cuba, Myanmar, the Philippines and Romania. Some 23 local and international environmental experts shared their knowledge of environmental policy, legislation, and managements tools and technologies. Participants then re-examined their own notions of development and the contributions they could make to human and ecological security.

The introduction of environmental management systems to Central and Eastern Europe was brought a stage nearer with the Regional Workshop on the Application of Environmental Management System Principles to Urban Management, 6–9 July, Szentendre, Hungary. The workshop was held in collaboration with the Regional Environment Centre for Central and Eastern Europe in Hungary. The participants included vice-mayors and experts from municipalities in Slovakia and Bulgaria that were expected to obtain ISO 14001 certification during 1999. The 34 participants from 19 countries were presented with a training kit in both printed and CR-ROM versions.

Other highlights of 1999:

- an Inter-regional Workshop on Technologies for Sustainable Waste Management, 13–15 July, Alexandria, Egypt, was held in collaboration with the Centre for Environment and Development in the Arab Region and Europe (CEDARE) in Cairo;
- preparations were begun for two Pilot Regional Workshops: one on Planning and Management of Lakes and Reservoirs with Eutrophication, to be held 17–21 January 2000 in Naivasha, Kenya; and the other on Promoting Sustainable Management of Urban Wastewater and Stormwater, to be held in March 2000, Brazil; and
- *Environmental Management Tools* was prepared for publication in collaboration with the Development Academy of the Philippines.



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## PRODUCTION AND CONSUMPTION

### Cleaner and Safer Production

Cleaner Production and APELL were combined under the umbrella of Cleaner and Safer Production in recognition of the fact that industry managers often have to manage pollution and safety issues side by side, using similar management systems.

The International Declaration on Cleaner Production was strongly promoted. A high-level ceremony at the Commission of Sustainable Development (CSD 7) gave the Declaration a high profile, with a further 14 ministerial and industry signatures. A further 10 signing events took place in Bahrain, Canada, China, Czech Republic, Hongkong, Hungary, Morocco, Tunisia, United States and Viet Nam. The Secretary-General of the Asia Productivity Organization (APO) signed the Declaration at a special event in Paris in November.

Under the joint UNEP/UNIDO (United Nations Industrial Development Organization) umbrella, new National Cleaner Production Centres began operation in Guatemala and Morocco, bringing the total number to 16, and additional centres were announced for Croatia, Ethiopia, Kenya, Macedonia and Mozambique. Several centres achieved financial independence, and support was given to creating centres (Republic of Korea) and strengthening other centres operating independently of the United Nations. UNEP contributed to a number of international and regional roundtables and symposia on cleaner production. Information systems were upgraded, and ICPIC is now available on CD-ROM and the web.

The Government of Canada offered to host the Sixth High-level Seminar on Cleaner Production (CP6) to take place in Montreal 16–17 October 2000, to be organized in association with an international Pollution Prevention Summit. Canada chaired the high-level panel discussion on cleaner production at the Conference of the Parties of the Basel Convention on Hazardous Waste on 8 December — cleaner production is the strategy that will help achieve the waste minimization goals of the Basel Convention.

Many enterprises find difficulty in obtaining financing for Cleaner Production investments. To respond to that problem, the major project *Strategies and Mechanisms for Promoting Cleaner Production in Developing Countries* supported

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### International Declaration on Cleaner Production: national signatories in 1999

Australia	Mongolia
Austria	Morocco
Bahrain	Netherlands
Canada	Philippines
China	Poland
Colombia	Portugal
Costa Rica	Russian Federation
Czech Republic	Slovak Republic
Denmark	Sweden
Estonia	Switzerland
Finland	Tanzania, United Republic of
Georgia	Thailand
Hungary	Tunisia
Indonesia	United Kingdom
Ireland	Uzbekistan
Kazakhstan	Viet Nam
Korea, Republic of	Zimbabwe
Mexico	
Moldova, Republic of	

## PRODUCTION AND CONSUMPTION

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*‘Consumers are increasingly interested in the “world that lies behind” the product they buy. Apart from price and quality, they want to know how and where and by whom the product has been produced. This increasing awareness about environmental and social issues is a sign of hope. Governments and industry must build on that.’*

Klaus Toepfer  
UNEP Executive Director

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by a Norwegian Trust Fund has now developed an extensive programme of surveys, consultation, research and capacity building. The project will take three years to come to fruition, and during this time is expected to make a major contribution to the implementation of cleaner production, especially in small and medium-sized enterprises (SME).

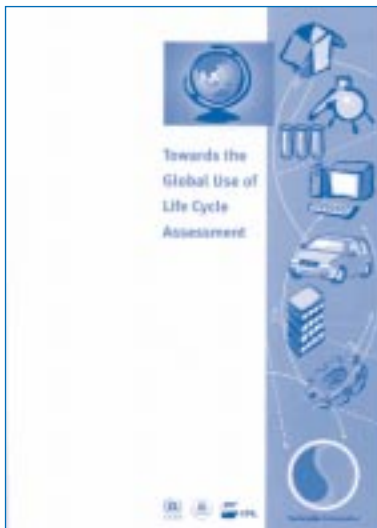
The APELL (Awareness and Preparedness for Emergencies at Local Level) process was launched in Africa at a regional seminar and workshop in Durban in October. A new partnership was established for APELL in South Africa, and an implementation plan was developed. APELL was also introduced alongside cleaner production in seminars in Shenyang (China) and in Bahrain. APELL for Transport, TransAPELL, was introduced at a national seminar in Tunis. Network links were strengthened in Argentina, Brazil, Colombia, Madagascar, Thailand, Tunisia and Turkey, and a formal agreement was signed with the Asian Disaster Preparedness Centre in Bangkok. A special seminar was held in London on the contribution the insurance industry could make to improving safety at mine sites. The proceedings of a conference on Emergency Response and Contingency Planning at Mine Sites were published jointly with the International Council on Metals and the Environment.

### Sustainable Consumption

Sustainable Consumption includes work with youth, the advertising industry and other businesses that could benefit from the increasing awareness of consumers about the ‘world that lies behind the product they buy’. An initiative on *Youth and Sustainable Consumption* was launched following the request of UNEP’s 20th Governing Council. Extensive links have been forged with partner organizations in the lead-up to the Youth Summit in 2000 and a research project is being carried out to identify major trends in young people’s perception of their consumption patterns. An expert meeting with the advertising industry resulted in a number of recommendations on how to involve this sector in future work. An international business forum organized in Berlin in October, jointly with the Carl Duisberg Gesellschaft, identified information and training needs. It attracted more than 100 decision makers from some 30 countries.

The report *Towards a Global Use of Life Cycle Assessment (LCA)* synthesizes the experience on several earlier workshops and studies. The report complements an earlier UNEP report on LCA methodology.

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## Tourism

The ‘Tour Operators’ Initiative for Sustainable Tourism Development’ was presented in New York in April during the 7th Session of the Commission on Sustainable Development (CSD7). Thirty-two tour operators have signed a statement of support and have been helping elaborate the Initiative, which will be officially launched in March 2000. Developed in cooperation with the World Tourism Organization (WTO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), it will help promote change in this important segment of the tourism industry by raising awareness and facilitating the exchange of experience. Tour operators will commit themselves to a statement and to a work programme listing principles and activities for sustainability in the tour operator sector.

UNEP, in cooperation with WTO and the Foundation for Environmental Education in Europe, is facilitating the transfer of the Blue Flag scheme — the environmental award for beaches and marinas — to non-European countries. Two workshops on Blue Flag Feasibility were organized, one in Asia and one in the Caribbean.

*Principles for Implementation of Sustainable Tourism* were presented to CSD7 in New York. Consultation with tourism stakeholders will take place in the year 2000.

## Industrial Pollution Management

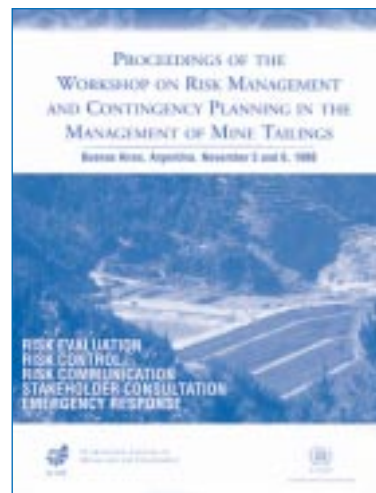
A project on Environmental Management of Industrial Estates was launched, with the government of China, at a workshop in Jiansu province, China. Five major industrial zones will participate in this initiative which will provide zone managers with practical ways of improving environmental performance. Discussions began with APO on the organization of an international environmental conference in Asia in 2000 for managers and promoters of industrial estates.

Considerable work has been directed at sustainable mining. An international conference in October in Perth, Australia, brought together 30 directors of mining institutions from all regions. The conference was intended to help bring environment and sustainable development more systematically into the formal training curricula of universities and schools of mines. Fifty senior delegates participated in an International Roundtable on Mining and Development in Berlin in November. The Roundtable reviewed draft environmental guidelines for mining,

### Principles for Implementation of Sustainable Tourism

The Principles were presented to the Commission on Sustainable Development in April. They include four sets of Principles covering:

- the integration of tourism into overall policy for sustainable development;
- the development of sustainable tourism;
- the management of tourism; and
- conditions for success.



## PRODUCTION AND CONSUMPTION

### 1999 publications

- *Cleaner Production Newsletter*, 15 and 16
- *Cleaner Production Information Sources* (1999 edition, and regional updates in Europe, India and Latin America)
- *Cleaner Production in the Mediterranean Region. Second Regional Report*
- ICPIC CD-ROM
- *Fertilizer Industry* (with IFA)
- *Fertilizer Industry and World Food Supplies and the Environment* (with IFA)
- *Mineral Fertilizer Use and the Environment* (with IFA)
- *Recyclage des batteries plomb-acide et environnement*
- *Proceedings of the Workshop on Risk Management and Contingency Planning in the Management of Mine Tailings* (with ICME)
- *Towards the Global Use of Life Cycle Assessment*
- *APELL Newsletter*, 18

and recommended follow-up action on capacity building. Preparations were made for two regional workshops in Africa and Asia on the application of Environmental Technology assessment (EnTA) in the mining sector, focussing on technologies in gold mining and lead recycling respectively.

The Minerals Resources Forum ([www.natural-resources.org/environment](http://www.natural-resources.org/environment)) was further expanded. The related site ([www.natural-resources.org/offshore](http://www.natural-resources.org/offshore)) dealing with the offshore oil and gas sector also expanded its operation. New publications included a review of technologies and management options for lead-acid battery recycling.

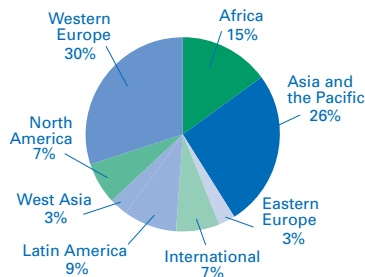
Work continued in the fertilizer and food sector, with several new publications issued jointly with the International Fertilizer Association dealing with the environmental aspects of the fertilizer cycle.

The Unit began activities in the agri-food sector. Thirty experts met in Paris to examine major environmental issues and good practices in agri-food production. Examples of case studies and good practices will be published in *Industry and Environment* as input to CSD8 discussions in 2000.

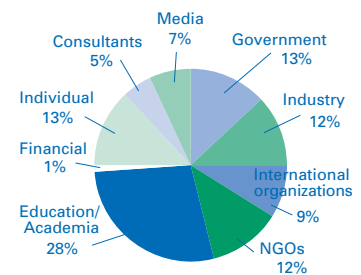
### Query Response service

In 1999, Production and Consumption responded to nearly 2000 queries, one-third of which involved substantial information searches and tailor-made responses.

#### 1999 queries by region



#### 1999 queries by type of enquirer



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## CHEMICALS

UNEP Chemicals is the focus for all activities undertaken by UNEP to ensure the sound global management of hazardous chemicals. Its main goals are to catalyse action to promote chemical safety by providing countries with information on hazardous chemicals; by helping countries build up the capacity to produce, use and dispose of chemicals safely; and by supporting actions that reduce or eliminate chemicals risks. To achieve these goals, UNEP Chemicals works closely with governments, UN bodies, intergovernmental organizations, academia and NGOs.

During 1999, progress was made in five areas:

- operating the interim secretariat of the Rotterdam Convention jointly with the Food and Agriculture Organization (FAO) and convening the sixth session of the Intergovernmental Negotiating Committee (PIC-INC6);
- convening the second and third rounds (INC2 and INC3) of negotiations of a legally binding international instrument on persistent organic pollutants (POPs) and continuing steps to reduce or eliminate the release of POPs;
- helping governments address and reduce risks from toxic chemicals;
- promoting the worldwide exchange of information on toxic chemicals; and
- training and capacity building in the sound management of chemicals.

### Rotterdam Convention

The Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, negotiated under the joint auspices of UNEP and FAO, was adopted in Rotterdam, the Netherlands, in September 1998. The signature period closed on 10 September 1999 with a total of 73 signatures.

The Convention is based on the PIC procedure which 155 countries have been implementing voluntarily since 1989. This procedure prevents export of certain harmful pesticides and industrial chemicals that have been banned or severely restricted or can cause problems when used in developing countries, unless the importing country agrees to accept them. Furthermore, when a country exports a chemical subject to a ban or severe restriction in its own territory, it must inform

### UNEP Chemicals objectives

- provide the interim secretariat for the Rotterdam Convention, jointly with FAO, ensuring that the voluntary PIC procedure operates according to the requirements of the Convention, promoting understanding and training in its implementation, and facilitating a smooth transition to the operation of the Convention when it enters into force;
- facilitate the negotiations of a legally binding international instrument on POPs, including convening sessions of the Intergovernmental Negotiating Committee and helping countries to participate actively;
- promote the early reduction and elimination of releases of POPs into the environment through information exchange and capacity building programmes;
- help protect human health and the environment from the adverse effects of toxic chemicals at national, sub-regional, and regional levels through capacity building and information exchange programmes;
- assess the exposure of persons and environments globally and regionally by researching the levels, uses, releases, transport mechanisms and other factors relevant to POPs and other chemicals.

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## CHEMICALS

## CHEMICALS

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### UNEP Chemicals Online

Information on environmentally sound management of chemicals is available on the following web sites:

UNEP Chemicals:  
[www.chem.unep.ch/chemicals/](http://www.chem.unep.ch/chemicals/)

Rotterdam Convention:  
[www.pic.int](http://www.pic.int)

Persistent Organic Pollutants:  
[www.chem.unep.ch/pops/](http://www.chem.unep.ch/pops/)  
(with reports from negotiations and information on alternatives as well as other relevant information)

Code of Ethics on the International Trade in Chemicals:  
[www.chem.unep.ch/ethics](http://www.chem.unep.ch/ethics)

Pollutant Release and Transfer Register:  
[www.chem.unep.ch/prtr](http://www.chem.unep.ch/prtr)



the importing country before the first shipment, and then annually.

During 1999, UNEP Chemicals, jointly with FAO, promoted the Convention by:

- operating the Interim Secretariat of the Convention;
- continuing the implementation of the PIC procedure on a voluntary basis;
- promoting understanding, training, ratification and facilitating a smooth transition to the implementation of the Convention when it enters into force;
- convening the sixth session of the Intergovernmental Negotiating Committee (PIC/INC6), held in Rome, Italy, July 1999;
- preparing for the meeting of the Interim Chemical Review Committee to be held in Geneva, February 2000
- preparing for PIC/INC7 to be held in late 2000.

The sixth session of the INC, attended by 122 governments in Rome, agreed to add binapacryl and toxaphene to the interim procedure and established an Interim Chemical Review Committee to make recommendations on the inclusion of other chemicals in the PIC procedure.

### Persistent Organic Pollutants (POPs)

POPs are chemicals that persist, bioaccumulate in plants and animals, are transported long distances in the environment and are toxic to people. A number of such substances are still in use and are released to the environment. Because of the long-range transport of these substances to regions where they have not been used or produced, and consequent threats to the global environment and human health, the international community called for urgent global action to reduce and/or eliminate releases of POPs, starting with an initial list of 12 — aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, mirex, toxaphene, hexachlorobenzene, PCBs (polychlorinated biphenyls), dioxins and furans.

The UNEP Governing Council mandate is to reach agreement on a POPs treaty by the year 2000 and to establish scientific criteria for identifying other POPs for possible inclusion. During 1999, UNEP Chemicals moved the negotiations closer to a global POPs treaty by:

- organizing and convening the second and third sessions of the Intergovernmental
-

Negotiating Committee (INC2 and 3) for the development of an international legally binding agreement to reduce and/or eliminate releases of POPs into the environment, in Nairobi, January 1999, and Geneva, September 1999;

- organizing and convening the second session of the Criteria Expert Group to develop a process and science-based criteria for identifying additional POPs (Vienna, June 1999);
- undertaking measures to help countries reduce and/or eliminate the release of POPs — including promoting the exchange of information and expertise on POPs among governments; providing guidance on alternatives to POPs; helping countries identify the sources of and adequate destruction sites for PCBs; helping countries identify sources of dioxin and furan release; and continuing to clarify the extent of the global POPs problem;
- building up national capacities to replace and reduce/eliminate releases of POPs through awareness training and pilot projects;
- helping countries manage POPs problems by supporting Global Environment Facility (GEF) projects on regionally based assessment of persistent toxic substances and on addressing country needs;
- promoting global awareness of POPs through extensive communication and outreach efforts; and
- establishing databases and an information clearinghouse on POPs (<http://www.chem.unep.ch./pops/>).

### Information access and building national capacities

Improving access to information and information tools is an important way of helping countries develop the capacity with which to assess and manage chemical risks and meet their obligations under global agreements, such as the Rotterdam Convention, and the negotiations on the POPs treaty.

During 1999, a wide range of information products was made available, often with partner organizations such as the Inter-Organization Programme for the Sound Management of Chemicals and the International Programme on Chemicals Safety. These materials included:

- producing and disseminating management-related information publications

### The POPs Club

Launched in October 1998 by UNEP as a way of generating resources to support the negotiating process on POPs, the POPs Club is an innovative financial mechanism that has helped raised donations and pledges of some US\$2.6 million.

The POPs Club invites contributions from governments, NGOs and others, thus enabling a range of donors to share responsibility for making the envisioned convention a reality.

The overall goal is to generate the US\$3.5 million needed to accomplish the work to be done during 1999 and 2000.

Donation and pledges have been received from: Australia, Austria, Canada, Denmark, Finland, Germany, Madagascar, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom, the United States and the International POPs Elimination Network.

All donors to the POPs Club receive a certificate signed by the UNEP Executive Director for each year of contribution. More information from the POPs web site: <http://www.chem.unep.ch/pops>

### 1999 Publications

Booklet containing the Rotterdam Convention on PIC and its Annexes

*Dioxin and Furan Inventories - National and Regional Emissions of PCDD/PCDF*

*Guidelines for Identification of PCBs and Materials containing PCBs*

*International Activities Related to Chemicals*

*Inventory of Worldwide PCBs Destruction Capacity*, reprint

*Joint UNEP/OECD Workshop Report on Notification and Assessment of New Industrial Chemicals for Countries of Central and South America*, English and Spanish

*Lead at the Pump — Global Opportunities for Reducing Use of Leaded Gasoline*, reprint

*Proceedings of Regional Workshop on the Management of POPs*, 16–19 March 1999, Hanoi

*Proceeding of the Sub-regional Awareness Raising Workshop on the Rotterdam Convention*, Bangkok, Thailand

*Regionally Based Assessment of Persistent Toxic Substances — Workshop Reports from a Global Environment Facility Project*

*Report of the Second and Third Sessions of the POPs INC* (Arabic, Chinese, English, French, Russian and Spanish)

*Report of the Second Session of the Criteria Expert Group for the Development of Science based Criteria for Identifying Additional POPs* (Arabic, Chinese, English, French, Russian and Spanish)

*Report of the Sixth Session of the INC for Implementation of the Rotterdam Convention on PIC*, English, French and Spanish

*Updated Inventory of Information Sources on Chemicals: POPs*

*UNEP Chemicals/IPCS Chemicals Risk Assessment — Training Module No. 3*

especially on POPs, PIC, GEF (Global Environment Facility) projects, and chemical safety and management;

- issuing inventories of information sources on international chemical data sources;
- maintaining and updating a clearinghouse and providing web pages on POPs, PIC and UNEP Chemicals as well as GEF projects implemented by UNEP Chemicals;
- chemical hazards and information on Pollutant Release and Transfer Registers (jointly with OECD and the United Nations Institute for Training and Research);
- screening information datasets on high-volume chemicals (jointly with the Organization for Economic Cooperation and Development) and other databases on chemical hazards, legal information and alternatives to POPs;
- workshop reports and chemical management support documents on raising awareness of POPs, the global destruction capacity for PCBs, inventories of dioxins and furans, and chemical risk management;
- 10 sub-regional and regional workshops to train government experts in such topics as risk assessment, development of national information systems, chemical legislation, operation of the PIC procedure, and awareness of the extent of the global POPs problem; and
- responding to more than 400 queries from governments and others through the Query-Response Service.

### Databases maintained during 1999

- IRPTC Database, PC version 2.0 (1996), 10 diskettes and Instruction Manual (100 000 records on safety data on more than 9000 chemicals);
- POPs Alternatives Reference Database Expert System (Internet version, May 1998; Windows version, December 1998);
- Internet Database of Country-Specific POP Data (Survey Results), October 1998;
- Internet Database of National POPs Action Plans, June 1998;
- Internet-based IRPTC Legal File (1998/99).

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## ENERGY AND OZONACTION OZONE

UNEP DTIE's OzonAction Programme supports the phase out of ozone-depleting substances (ODSs) in developing countries through its information clearinghouse and capacity-building services. The programme is funded mainly by the Multilateral Fund for the Implementation of the Montreal Protocol; it also receives funding from the Global Environment Facility, the Government of Sweden and the Government of Finland.

### Information exchange

Information exchange helps build awareness and assists with identifying, sourcing, selecting and implementing alternative equipment and services. It also helps in understanding and designing policy instruments to control ODS use and importation. In 1999 the programme outputs included:

- four issues of the quarterly OzonAction newsletter and Special Supplements distributed to more than 15 000 readers in five languages (English, French, Spanish, Chinese and Arabic);
- the OzonAction Home Page (500 000 requests received to date from a minimum of 20 000 users), including on-line versions of the OzonAction Newsletter in French, English and Spanish;
- a CD-ROM database reference tool for National Ozone Units, the OzonAction Strategic Information System (OASIS);
- *Maintaining Military Readiness by Managing Ozone Depleting Substances*, a guide outlining steps that the military in developing countries can take to meet Montreal Protocol requirements;
- *Eliminating Dependency on Halons*, a Self-Help Guide and Case Studies for low-volume halon-consuming countries;
- *Handbook on Data Reporting under the Montreal Protocol*, a guide to help NOUs improve data reporting to the Multilateral Fund and Ozone Secretariat;
- a booklet *Non-HCFC Alternatives in Refrigeration and Air Conditioning*;
- videos: *Back to the Future: Using Hydrocarbons Safely* and *Safe Spray, Healthy Harvest, Alternatives to Methyl Bromide* (both in English, French and Spanish);

### Training programmes in 1999

- Training courses on Good Practices in Refrigeration in Côte d'Ivoire
- National Training Programmes on Refrigeration in St Kitts and Antigua
- Pilot Training project on good practices in refrigeration, Argentina
- Train-the-Trainer workshops on Good Practices in Refrigeration in Jamaica and St Vincent and the Grenadines.
- Consultative Workshop on Developing a Strategic Framework to Control Methyl Bromide in China, Beijing
- Methyl Bromide workshops in Lilongwe, Malawi, and Guatemala City

### OzonAction training tools, 1999

- Resource Module on Promoting Compliance with the Trade and Licensing Systems of the Montreal Protocol in CEIT countries
- Guidelines for Recovery and Recycling Systems

### ODS Networks

- Southeast Asia and the Pacific (10 countries, with assistance from the Government of Sweden and participation by Australia and Sweden)
- Latin America-South (10 countries, including participation by the United States and Canada)
- Latin America-Central (9 countries, including participation by the United States and Canada)
- French-speaking Africa (21 countries, with participation by France and Switzerland)
- English-speaking Africa (22 countries, with participation by Germany)
- West Asia (10 countries, with participation by France and Germany)
- South Asia (11 countries, with participation by United Kingdom)

- on-going development of a strategic framework to control methyl bromide growth in China in conjunction with the Chinese government;
- publications to assist developing countries phase out methyl bromide including: *Inventory of Technical and Institutional Resources for Promoting Methyl Bromide Alternatives*; *Methyl Bromide — Getting Ready for the Phase Out*, a general awareness brochure; *Methyl Bromide Phase-Out Strategies – A Global Compilation of Laws and Regulations*; *Towards Methyl Bromide Phase Out: A Handbook for NOUs*, Volume 6 (Methyl Bromide) of the UNEP Protecting Ozone Layer series; and
- the setting up of RUMBA, an e-mail information service for the phase out of methyl bromide.

### Refrigerant Management Plans (RMPs)

RMPs are aimed at assisting low-volume consuming countries (LVCs) to phase out the use of ODS through a sectoral approach. UNEP is helping 16 countries formulate and 31 countries implement their RMPs. UNEP is also implementing RMPs and other regional and global projects in cooperation with UNDP, Environment Canada, Finland, France and Japan.

### Networking

Networking provides a platform for the exchange of experiences, development of skills, and the sharing of expertise between peers and other experts in the ozone community. The Programme currently operates seven regional and sub-regional Networks of ODS Officers (see box), comprising more than 105 countries:

With support from the Government of Finland, UNEP launched the Baltic Network of Ozone and Climate Change Officers.

### Country Programmes and Institutional-strengthening Projects

Country Programmes and Institutional-strengthening Projects are conducted to strengthen national capacities to coordinate and monitor phase-out activities. At the end of 1999, the Programme had a portfolio of 85 UNEP-assisted Country Programmes for LVCs, and was implementing 68 institutional-strengthening projects.

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## Assistance to Countries with Economies in Transition (CEITs)

UNEP is assisting 20 CEITs as part of a regional initiative to help CEITs comply with the trade and licensing provisions of the Montreal Protocol and prevent illegal trade in ODSs. This initiative consists of development and translation of a training module and other information, and four regional training workshops on the establishment and enforcement of import and export licensing systems for ODSs.

The short-term objective is to help national ozone focal points to design and implement phase-out policies to decrease the incidence of illegal ODS trade. The long-term objective is the elimination of the use of ODSs and compliance with the trade and licensing provisions of the Montreal Protocol.

Country Programmes and Institutional-strengthening Projects are conducted to strengthen national capacities in the CEITs. At the end of 1999, the UNEP OzonAction Programme was assisting three countries in the preparation of Country Programmes and seven countries in the implementation of Institutional-strengthening Projects in the CEITs. In addition, 11 National Training projects, which include training for customs officers and technicians, are being implemented in the CEITs.

## ENERGY

UNEP DTIE Energy, launched in 1996 to address the environmental impact of increasing global energy consumption, has three main objectives:

- to increase global use of renewable and non-carbon energy resources;
- to increase end-use efficiency; and
- to improve the overall management of energy systems.

These goals are pursued in close cooperation with other UNEP units, UN and other government agencies, non-governmental organizations and private partners. The work is implemented jointly with the UNEP Collaborating Centre on Energy and the Environment (UCCEE) at the Risø National Laboratory in Denmark.

In May, UNEP DTIE Energy, with support from the Global Environment Facility (GEF), established the Renewable Energy Technology/Energy Efficiency (RET/EE) Investment Advisory Facility which is helping financial institutions

## Methyl bromide project

Work began under GEF in 1999 on the project 'Initiating Early Phase Out of Methyl Bromide in CEITs through Awareness Raising, Policy Development and Demonstration/ Training Activities'. The objectives are to phase out the use of methyl bromide, and identify and promote alternative pest management practices that are safe and environmentally sustainable.

The project includes:

- surveys on methyl bromide use and alternatives for CEITs;
- methyl bromide publications and materials to support awareness-raising activities;
- two regional workshops to provide policy assistance;
- a regional demonstration project to identify alternatives for horticultural crops;
- two regional training courses to develop training strategies for implementation of alternatives and to train extension workers on promoting alternatives; and
- a policy mentor programme and follow-up with CEITs to ensure effective implementation and enforcement of established policies and training programmes.



Publications in 1999 included a new brochure on UNEP Energy,

make informed investment decisions on renewable energy and energy efficiency projects in developing countries.

Work was begun with UNEP's Regional Office for Africa on the African Rural Energy Enterprise Development (AREED) Initiative designed to help set up private energy sector companies in selected African countries. Partners include UCCEE, E&Co — a non-profit organization that has already helped set up 50 renewable energy businesses in 24 developing countries — and African financial institutions and NGOs (see box on page 29).

UNEP DTIE Energy entered into an agreement with Natural Resources Canada to enhance its RETScreen renewable energy project analysis software. UNEP is contributing an environmental model that allows project analysts to estimate the reduction in greenhouse gas emissions coming from a renewable energy project.

Work also continued on the project to help set up Monitoring and Targeting energy service companies (ESCOs) in Central and Eastern Europe. Such companies are designed to help businesses make more efficient use of energy; they make no charge for their services but are repaid a share of the energy savings secured.

UCCEE has continued to develop strategies for limiting greenhouse gas emissions economically. All eight national surveys carried out as part of the joint UNEP/GEF project on the Economics of Greenhouse Gas Limitation have now been published. Thirty African climate change experts met at UNEP headquarters in Nairobi, 15–17 March, to initiate a process whereby African researchers, policy makers and analysts can discuss and develop positions on the Clean Development Mechanism. A follow-up consultation took place in Nairobi, Kenya, 8–9 October, to prepare for the 5th Conference of the Parties. Attended by representatives from 12 African countries, the meeting also discussed prototype projects in the energy, transport and forestry sectors. The two meetings are part of a larger regional programme on 'Sustainable development and CC finance' which also includes national pilot studies in Gambia, Ghana, Uganda and Zimbabwe.

New initiatives to promote sustainable energy development in small island developing states have been launched with pilot projects in the Caribbean and Pacific regions. A three-country African pilot project on implementation conditions for Renewable Energy Technologies is being implemented.



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## ECONOMICS AND TRADE

UNEP's aim in the field of economics, trade and the environment is to encourage countries' public and private sector decision-makers to integrate environmental considerations into their development planning, macroeconomic policies, trade and financial services. The Economics and Trade Unit also works to raise the level of awareness across sectors, fostering the consideration of the environment and sustainable development in all trade and investment credit decisions.

The Unit develops assessment tools in economics, trade and financial services. It also sponsors research, produces training materials and organizes meetings of expert groups. The aims of the Unit are to:

- provide technical and policy advice on the design and application of market-based initiatives to increase policy efficiency and cost effectiveness;
- advise and assist in the preparation of training and educational materials to enable governments to include environmental impact assessment, environmental valuation, and environmental and natural resource accounting in their economic analyses and policy development activities;
- enhance bilateral and international cooperation to meet regional and global environmental challenges;
- analyse the linkages between national trade and environment policies, international trade and environment agreements, and trade and market regulations in order to maximize the coherence and coordination of international environmental agreements;
- promote awareness and understanding of environmental considerations and ensure these are integrated into both public and private investment and lending policies;
- assist developing countries and countries with economies in transition in the assessment of the suitability of environmental risk tools to their financial institutions and the promotion of their use; and
- facilitate environmentally sound investments within the financial services sector.

### 1999 publications

*Managing Environmental Risks in Project Finance.* UNEP Financial Institutions Initiative, Fact Sheet No. 1

*ISO 14001.* UNEP Financial Institutions Initiative, Fact Sheet No. 2

*The Environment and Credit Risk.* UNEP Financial Institutions Initiative, Fact Sheet No. 3

*2nd Annual General Meeting of the Financial Institutions Initiative.* Chicago, United States, 8 September 1999

*The Kyoto Protocol and Beyond: Potential Implications for the Insurance Industry.* UNEP Insurance Industry Initiative for the Environment

*Financial Services and the Environment - Questions and Answers.* UNEP FSI Secretariat/ UNEP ROE Geneva

*UNEP Financial Institutions Initiative 1998 Survey.* PricewaterhouseCoopers/UNEP FSI Secretariat

*UNEP's Programme on Economics and Trade — Status of Implementation Report 1999*

### Country studies published

UNEP has worked closely with Bangladesh, Chile, India, the Philippines, Romania and Uganda on projects to identify the impacts of trade liberalization on national environmental resources and the use of economic instruments to manage these impacts sustainably. All six country studies, and a summary synthesis report (see page 25), have now been published.

The projects were conceived, designed and conducted by national teams of practitioners with UNEP's technical assistance. Project studies have included new action-oriented research on trade-related environmental problems, and their social and economic implications in such sectors as forestry, mining, fisheries, manufacturing and water.

Each study concludes by recommending a set of measures designed to halt trade-related environmental degradation while ensuring that the country's trade remains robust yet sustainable over the long term. The final component of each project is a pilot implementation of proposed measures undertaken by national authorities in collaboration with each project's national team and with technical assistance from UNEP.

## Economic tools and incentive measures

### Economic instruments

UNEP has worked closely with six countries on projects aimed at identifying and managing the impacts of trade liberalization on national environmental resources (see box left). In December, UNEP convened an expert group meeting to present and discuss the case studies, and to begin a further set of case studies.

### Environmental impact assessment (EIA)

The annual UNEP EIA Working Group meeting, held in Glasgow in June, discussed developments related to revisions of the *EIA Training Manual* and the *EIA: Issues, Trends and Practice* document. The *Training Manual* identifies criteria for integrated environmental, social and economic assessments of trade policies and agreements. It will help build local capacity to develop EIA procedures and legislation, to conduct EIAs, and to monitor and evaluate EIA implementation. The manual will be reviewed by relevant institutions and experts before its completion in 2000. The main objective of *EIA: Issues, Trends and Practice* is to enhance the capacity of countries, particularly developing countries and countries in economic transition, to devise country-specific EIA guidelines and to address emerging issues in the use of EIA for sustainable development.

### Environmental and natural resource accounting (ERA)

In August, UNEP published jointly with the United Nations Statistical Department (UNSD) an operational ERA Manual. It is based on the third review of the UNEP-established international Working Group on resource accounting (in partnership with UNSD, World Bank, the United Nations Development Programme, Eurostat and WWF International). The manual focuses on existing ERA techniques; the use of ERA in development planning; the financial, human and technical requirements; and the identification of agencies applying ERA.

## Trade

### Awareness raising

Work continued on the preparation of publications and documents to enhance awareness and understanding of the linkages between environment and trade, including:

- a Handbook on Environment and Trade;
- a guide on the Criteria for the Environmental Impact Assessment of Trade Agreements;
- papers on Globalization and the Environment, the Precautionary Principle/Approach for Trade and Sustainable Development, Perverse Subsidies, and TRIPs and the Environment (*TRIPs–WTO’s Agreement on Trade-Related Aspects of Intellectual Property Rights*).

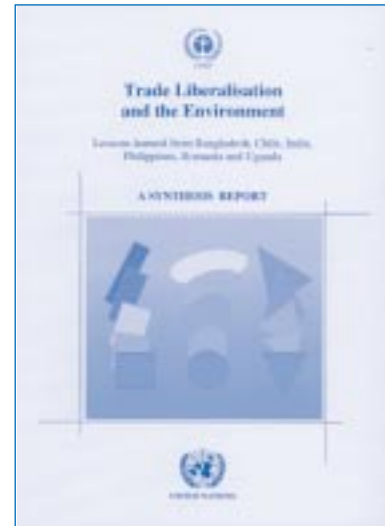
Consultations and dialogue sessions aimed at communicating UNEP’s strategy and building consensus among major stakeholders were held with the Permanent Missions in Geneva and Nairobi.

### Capacity building

Support was provided to enhance the capacities of countries, in particular the capacities of developing countries and countries with economies in transition, in integrating environmental considerations in development planning and macroeconomic policies. The first set of projects for Bangladesh, Chile, India, the Philippines, Romania and Uganda on ‘Capacity-building for Integrating Environmental Considerations into Development Planning and Decision-making’ was concluded, and all case studies and a synthesis report were published.

### Partnership building

Partnerships and cooperation with relevant United Nations (UN) organizations, non-UN organizations and civil society were further strengthened by developing, negotiating and concluding a framework of cooperation with the World Trade Organization (WTO) and participating in the third WTO Ministerial meeting; initiating a joint Task Force with the United Nations Conference on Trade and



### Expert meetings and workshops in 1999

- a workshop on Multilateral Environment Agreements (MEAs) and the WTO (28 June);
- an expert meeting on the Precautionary Principle/Approach (1 July) and on Case Studies and the Criteria for Environmental Assessment of Trade Agreements (15–16 December); and
- brainstorming meetings on TRIPs and the Environment (11 October) and on Perverse Subsidies (21 October).

Development (UNCTAD); convening a briefing session with non-governmental organizations; and participating in capacity-building seminars with the International Centre for Trade and Sustainable Development (ICTSD), UNCTAD and WTO, among others.

### Financial services

Policy makers and UNEP partners in the financial community were provided with information to help them integrate environmental considerations into all decision making and business operations — internal as well as external. In particular, the Unit:

- continued to promote the UNEP Statement by Financial Institutions on the Environment and Sustainable Development (more than 164 signatories to date) and the Statement of Environmental Commitment by the Insurance Industry (more than 87 signatories);
- organized and convened in Oslo, Norway, the 4th International Conference of the UNEP Insurance Industry Initiative, in June, called ‘Natural Capital at Risk’;
- held the 5th UNEP Roundtable of the Financial Institutions Initiative on the environmental challenges facing the financial sector, ‘New roles for Finance in the Race to Sustainability’, at Northwestern University, Chicago, in September;
- convened outreach meetings with banks and insurance companies in South Africa, Israel and Italy, and sponsored and conducted a special side-event meeting, during the 5th Conference of the Parties to the UN Framework Convention on Climate Change (COP5) in Bonn, Germany, in October, in which banks and insurance companies presented their vision of how to implement the market mechanisms of the Kyoto Protocol;
- developed a set of practical guidelines and fact sheets for the financial sector, published the document *The Kyoto Protocol and Beyond: Potential Implications for the Insurance Industry* and reviewed and up-dated the paper *Creating a Standard for a Corporate CO<sub>2</sub> Indicator*;
- prepared and distributed a number of reports and four issues of the Financial Services Newsletter *The Bottom Line*.



## ACTIVITIES IN THE REGIONS

DTIE activities are delivered in the regions through the Regional Offices which also help identify specific needs in the regions in order to design future programmes. What follows is a description of the main activities in each of the Regional Offices.

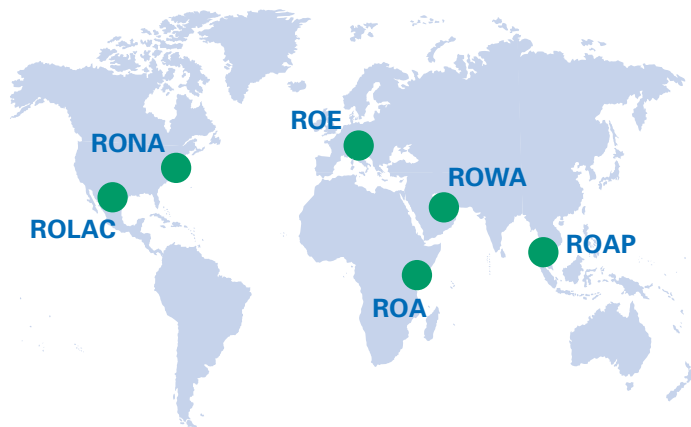
### Africa

- cleaner production was promoted by encouraging countries to sign the International Declaration on Cleaner Production, providing support to cleaner production centres in South Africa, Tanzania and Zimbabwe, and helping Kenya prepare for its cleaner production centre;
- support was given to 43 African countries in the implementation of their country programmes under the Montreal Protocol through the ODS Officers Network;
- work was begun on the African Rural Energy Enterprise Development (AREED) Initiative (see box on page 29);
- three meetings of ODS Officers were held in Lesotho, Togo and Seychelles; and
- a paper was produced on sustainable production and consumption in Africa.

### Asia and the Pacific

- the Asia-Pacific Blue Flag Feasibility Evaluation Workshop was held in Bangkok,

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## ACTIVITIES IN THE REGIONS

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Thailand, (24–25 August) as a first step to establishing an award scheme for good environmental quality at tourist beaches;

- the Green Leaf environmental auditing scheme for hotels was officially launched in Thailand;
- the UNEP/UNIDO Vietnam Cleaner Production Centre was officially opened in Hanoi, Viet Nam;
- the NIEM Phase III project was concluded, which demonstrated the environmental and economic benefits of cleaner production in 36 mills in the pulp and paper industry;
- the Second Asia-Pacific Roundtable on Cleaner Production was held 21–24 April in Brisbane, Australia;
- work on Training and Research on Environmental Management (TREM) continued with support from the Danish Cooperation for Environmental and Development (DANCED), and in close cooperation with the governments and universities of Malaysia and Thailand; and
- four meetings of ODS Officers were held in Bangkok, Thailand, Kathmandu, Nepal, and Sydney, Australia.



Cover illustration by Justyna Harasim, 14 years old, Szkoła Podstawowa, Wisniówie Elcki, Poland, used for the WHO Charter on Transport, Health and Environment.

## Europe

- the draft document *Sustainable Consumption: strategies and opportunities* (SCOPS) was completed;
  - a preliminary form of the resource guide on sustainable consumption, including a database of resources and organizations, was completed and will be mounted as a searchable database on the Internet;
  - support was given to the promotion of cleaner production in Europe, particularly in Eastern and Central Europe;
  - a draft UNEP European Transport strategy was prepared; and
-

- a number of contributions were made to the WHO *Charter on Transport, Health and Environment*.

### Latin America and the Caribbean

- a regional programme on cleaner production in hospitals and health centres was promoted, starting with a pilot project in Mexico, begun in March 1999;
- ROLAC participated in the GEF Regionally-based Assessment of Persistent Toxic Substances Fifth Workshop, Geneva, May 17–20; in the First Sub-regional Workshop for Latin America and the Caribbean of the Network for Training and Technology Transfer in Hazardous Wastes under the Basel Convention, July 5–9, El Salvador; and in a meeting of Government Experts on Climate Change, Quito, Ecuador, 11–12 October;
- the Meeting of Ad-hoc Group of Experts on Climate Change, Rio de Janeiro, Brazil, 4–5 September, was organized with UNDP;
- assistance was given to help establish UNIDO/UNEP National Cleaner Production Centres in Brazil, Costa Rica, El Salvador and Mexico;
- support was provided to UNEP OzonAction to fulfil the 1999 Work Programme, and to monitor compliance with the Montreal Protocol and its reporting requirements by countries in the region; and
- four meetings of ODS Officers Networks were held in Mexico and the Bahamas.

### North America

On 22 February CEOs and senior officials from the North American telecommunication industry signed the Environmental Charter for the North American Telecommunication Industry. The charter was developed under the guidance of the Center for Resources Management, with inputs from environmental and academic groups as well as industry representatives. The charter outlines environmental principles in the areas of management, technology, service and product innovation, facilities and operation, and external relations and communication (see also <http://www.rona.unep.org>).

On 26 October, the WILD Foundation and UNEP presented the WILD Awards to four companies and their advertising firms. The awards are intended to enhance corporate consciousness, promote responsible use of wildlife and wilderness in

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### The African Renewable Energy Enterprise Development Initiative (AREED)

Supported by the UN Foundation, AREED aims to foster energy companies that use clean and renewable technologies to meet the energy needs of under-served populations. The initiative will help seed new ventures that replicate innovative energy service approaches, using successful technologies and best practice in successful, on-the-ground operations.

AREED offers:

- partnerships with non-governmental organizations involved in rural energy development;
- training and tools to help entrepreneurs develop and start energy businesses;
- seed capital for early stage project development; and
- enterprise start-up support in areas such as business planning, structuring and financing.

Contact: <http://www.areed.org>

## ACTIVITIES IN THE REGIONS

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advertising, and encourage corporate philanthropy to support wildlife conservation and sustainability. The winners of the awards were: Mutual of Omaha and its advertising agency Bozell Worldwide — the lifetime achievement award; Nedbank South Africa with agencies Ogilvy and Mather and the Hardy Boys — award for international excellence; Canon USA, Inc. and its in-house agency — award for national excellence; and Georgia Power and the firm Pollack, Levin & Nel — award for regional excellence.

### West Asia

- workshops were organized on Environmental Managements Systems and ISO 14000 in Amman, Jordan, 21–26 April, and in Muscat, Oman, 30 April–7 May;
- a workshop on Environmental Management and Industry was held in Abu Dhabi, United Arab Emirates, 14–19 May;
- a workshop on Trade and Environment was held in cooperation with the League of Arab States in Cairo, Egypt, 14–19 May;
- a regional workshop on Tourism and the Environment was organized in cooperation with the League of Arab States in Luxor, Egypt, 23–25 November;
- a regional workshop on cleaner production was organized in cooperation with ICCL in Bahrein, 29 November–1 December;
- the *Source Book on Alternative Technologies for Freshwater Augmentation in West Asia* was published, with funding from IETC; and
- two meetings of ODS Officers were held in Amman, Jordan, and Abu Dhabi, United Arab Emirates.

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## WEB SITES

### UNEP DTIE

<http://www.uneptie.org>  
Yellow Pages: <http://www.uneptie.org/enta/yellow/download.html>

### IETC

<http://www.unep.or.jp>  
*INSIGHT* Newsletter  
<http://www.unep.or.jp/ietc/Publications/INSIGHT>  
maESTRro  
<http://www.unep.or.jp/ietc/ESTdir/maestro>

### Production and Consumption

[http://www.uneptie.org/hp\\_pc.html](http://www.uneptie.org/hp_pc.html)  
APELL  
<http://www.uneptie.org/apell/home.html>  
Cleaner Production  
<http://www.uneptie.org/cp/home.html>  
<http://www.uneptie.org/icpic/icpic.html>  
Sustainable Consumption  
<http://www.uneptie.org/sustain/home.html>  
Tourism  
<http://www.uneptie.org/tourism/home.html>

### Chemicals (see page 15)

### Energy and OzonAction

<http://www.uneptie.org/ozonaction.html>  
OzonAction Newsletter  
<http://www.uneptie.org/ozat/oan/main.html>

### Economics and Trade

<http://www.unep.ch/etu>

