HEALTHY LIVING

Governments increasingly recognize that a strategic approach to chemicals is necessary for human and environmental health. Chemicals are part of modern life. From the products we use to the food we eat, chemicals are involved. The global chemical industry accounts for 3.75 per cent of the global gross domestic product of $40 trillion, with approximately 70,000 chemicals available on the market today and around 1,000 new ones being introduced each year. Many of these chemicals, if improperly used or disposed of, pose a grave risk to the health of people, wildlife and the environment.

UNEP's chemicals programme is the main catalytic force in the UN system to ensure the sound management of hazardous chemicals. UNEP Chemicals works to promote chemical safety by supporting global actions to address chemical issues of international concern, providing countries with access to information on toxic chemicals and building countries' capacity to manage risks posed by chemicals throughout their life-cycle. September 2005 saw the penultimate meeting in a process to formulate a Strategic Approach to Chemicals Management (SAICM), which will be adopted at an International Conference on Chemicals Management, just prior to the meeting of the ninth Special Session of the UNEP Governing Council in February 2006. The SAICM process was mandated by the UNEP Governing Council in 2002 and subsequently endorsed by the World Summit on Sustainable Development (WSSD). It was also supported by the 2005 World Summit. SAICM will provide a global policy framework for achieving the Johannesburg Plan of Implementation's goal that, by 2020, chemicals are produced and used in ways that minimize significant adverse impacts on the environment and human health. The SAICM development process has been convened by UNEP, the Intergovernmental Forum on Chemical Safety and the Inter-Organization Programme for the Sound Management of Chemicals. UNEP Chemicals provides the SAICM secretariat and collaborates with all partners.

SAICM will focus on promoting capacity building, technology transfer and improved chemicals management. One of its key benefits will be the improved implementation of treaties that deal with chemicals issues. Governments have adopted more than 50 regional and international agreements on chemicals and waste management. The key global treaties include the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, the 1989 Basel Convention on the Transboundary Movement of Hazardous and Other Wastes, the 1998 Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, and the 2001 Stockholm Convention on Persistent Organic Pollutants (POPs).

UNEP Chemicals Director John Buccini with SAICM President Viveka Bohn and Matthew Gubb, SAICM Secretariat, at the third preparatory meeting to formulate a Strategic Approach to Chemicals Management (SAICM), which will be adopted at an International Conference on Chemicals Management, just prior to the meeting of the ninth Special Session of the UNEP Governing Council in February 2006.

An environment department worker tests residential water samples on 25 November, 2005, in Harbin, northeast China, following an explosion at the Jilin Petrochemical plant and subsequent pollution of the Songhua River. A UNEP team visited China in December at the invitation of the Chinese State Environmental Protection Administration to discuss the incident with local and national Chinese officials. © China Photos/Getty Images

PERSISTENT ORGANIC POLLUTANTS

The first meeting of the Conference of the Parties to the Stockholm Convention on Persistent Organic Pollutants (POPs), which entered into force in May 2004, was held in Punta del Este, Uruguay, 2–6 May 2005. The Convention is a global treaty to protect human health and the environment from POPs through measures designed to reduce and eliminate their release. These chemicals can damage human nervous and immune systems, cause cancer and reproductive disorders and interfere with normal infant and child development. POPs have similar effects on wildlife. While the risk level varies from POP to POP, they all share four properties: they are highly toxic; they are stable and persistent, lasting for years or decades before degrading into less dangerous forms; they evaporate and travel long distances through the air and through water; and they accumulate in the fatty tissue of humans and wildlife. Under the Convention, Parties are required to take action on an initial 12 specified POPs. UNEP provides the secretariat to the Convention and implements actions to support it.

At the Punta del Este meeting, the Parties agreed on 25 decisions. A process was agreed for requesting extensions to specific temporary exemptions to the complete elimination of certain POPs, and a conclusion was reached that countries currently using DDT for disease vector control may need to continue such use until locally appropriate and cost-effective alternatives are available for a sustainable transition away from DDT. Guidance to the Convention's financial mechanism and a memorandum of understanding with the Council of the Global Environment Facility were also

This Inuit statue representing a mother with a baby in her arms sits on the dais at every POPs meeting to remind participants of the health effects of persistent organic pollutants and the importance of work to eliminate them from the environment. POPs accumulate in the food chain and pose a particular threat to nursing mothers, especially those whose diet consists largely of marine mammals and fish. At the first Meeting of Parties to the Stockholm Convention on POPs, in Punta del Este, Uruguay, 2-6 May 2005, delegates adopted a broad range of decisions required to set the Convention's implementation in motion. They also unanimously agreed to locate the Secretariat in Geneva.

agreed, and arrangements on how to evaluate the Convention's progress in reducing levels of POPs in the environment were initiated.

The meeting also established three subsidiary bodies: a POPs Review Committee, responsible for evaluating chemicals that may need to be added to the POPs list; an Expert Group on best available techniques and best environmental practices that will further develop guidance for reducing releases of unintentionally produced POPs into the environment; and the Open-ended Ad hoc Working Group on Non-compliance, which will develop procedures for determining non-compliance to the Convention. In November 2005 the POPs Review Committee met for the first time and agreed that five new candidates proposed for the listing under the Convention met screening criteria and should be further evaluated.

PRIOR INFORMED CONSENT

The Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, which entered into force on 24 February 2004, was negotiated under the auspices of UNEP and the UN Food and Agriculture Organisation (FAO), who jointly provide the Secretariat. The function of the Rotterdam Convention is to enable member countries to alert each other to possible risks from chemicals, and to ensure transparency in trade. At the heart of the Convention is the legally binding PIC procedure. A chemical can be included in the PIC procedure if two or more countries from at least two regions have taken action to ban or restrict it for health or environmental reasons.

The second meeting of the Conference of the Parties to the Rotterdam Convention was held in Rome, Italy, in September 2005. A number of issues were discussed, including a possible financial mechanism for the Convention, opportunities for synergies with other multilateral environment agreements, and several issues that were referred by the Chemical Review Committee. The UNEP/FAO Secretariat also convened several workshops for countries and subregional groups to support national implementation of the Convention's procedures.

CAPACITY BUILDING

Capacity building is a core UNEP Chemicals activity. Support was given to governments in 2005 to address priority chemicals management issues through numerous workshops and conferences. A wide range of guidance and information products were issued to assist countries and others in the environmentally sound management of chemicals, including identifying their sources and quantifying releases, reducing and/or eliminating the use of POPs and other hazardous substances, and in developing national implementation plans.

One example is the Chemical Information Exchange Network (CIEN), a partnership formed by UNEP and the US Environmental Protection Agency to strengthen the capacity

of countries to access and exchange chemicals-related information for decision making, including providing training to government officials responsible for the management of chemicals. To date, 39 African and eight Central American countries have been covered.

To improve access to information on environmental management and environmentally sound technologies, a server for an Environmentally Sound Technologies Information System (ESTIS) was installed in Benin for African countries. The server will strengthen CIEN national activities and improve each country's capacity to disseminate chemical management information. It will also enhance countries' capacity to create national and sub-regional networks.

Another important tool for the sound management of chemicals are Pollutant Release and Transfer Registers (PRTRs). PRTRs have been promoted and encouraged by all major environmental forums. In 2005, the focus has been on developing a national pilot project in the Asia-Pacific region. Also in 2005, UNEP released a software toolkit for inventorying and assessing the risks of a group of hazardous chemicals known as PCBs. The toolkit was developed by the Secretariat of the Basel Convention on Hazardous Wastes, which is administered by UNEP. As well as falling under the scope of the Basel Convention, PCBs are scheduled for phase-out under the Stockholm Convention on POPs by 2025.

HEAVY METALS

2005 marked a step forward in global efforts to address health and environmental risks from mercury, a heavy metal linked with a wide range of medical problems. In 2003, following consideration of the UNEP Global Mercury Assessment, the UNEP Governing Council agreed that there was sufficient evidence of significant global adverse impacts from mercury to warrant further international action to reduce the risks to

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One of the growing areas of concern regarding hazardous waste is the issue of so-called e-waste. The growing use of electronic products, such as mobile phones and computers, has given rise to a new environmental challenge. In Asia and the Pacific, e-waste is one of the fastest growing segments of the waste stream. Despite initiatives in some countries, agencies responsible for waste management in the region have inadequate knowledge of e-waste composition and its proper management. In addition, the status of e-waste in most countries of the region is unknown and the region lacks standardized methodologies and guidelines to conduct such an assessment. UNEP is promoting e-waste management in Asia and the Pacific by initiating regional-level capacity building. An expert consultation was organized in November 2005 to review the proposed regional initiative.

Representatives of the International Labour Organization (ILO), the International Maritime Organization (IMO) and the Basel Convention held the second meeting of the Joint Working Group on Ship Scrapping in December to ensure that their respective ship-scrapping regimes are mutually supportive. The drive to address occupational health, safety and environmental issues related to ship scrapping has been given a new sense of urgency by the entry into force of an IMO amendment bringing forward the phase-out schedule for single-hull tankers and prohibiting such tankers from carrying heavy-grade oil. This is expected to increase the number of vessels destined for recycling in the near future. Ships sold for scrapping may contain environmentally hazardous substances such as asbestos, heavy metals, hydrocarbons and ozone-depleting substances. Concerns have also been raised about the working and environmental conditions at many of the world's ship-scrapping locations. The Working Group will consider the respective work programmes of the three partners as they relate to ship scrapping in order to avoid the duplication of work or overlaps in responsibilities. It will also aim to identify further needs, undertake a comprehensive initial examination of the three organizations' relevant ship-scrapping guidelines, identify any possible gaps or overlaps and consider mechanisms to promote their joint implementation. © F. Ardito/ UNEP

human health and the environment. and decided that national, regional and global actions, both immediate and long-term, should be initiated as soon as possible.

In response, UNEP established a mercury programme to support governmental efforts to reduce or eliminate the use and release of mercury. At the UNEP Governing Council in February 2005, governments approved an expansion of the programme to study 'commodity mercury'—the amounts of mercury being traded and supplied around the world. They also agreed to promote "best available techniques" for reducing mercury emissions and improve communication about risks from mercury to vulnerable groups, such as pregnant and breast-feeding mothers who eat contaminated fish or marine mammals.

The immediate objective of the UNEP mercury programme is to initiate technical assistance and capacity building activities to support the efforts of countries to take action on mercury pollution. For 2005 and 2006, the programme's focus is on developing a report summarizing supply, trade and demand information for mercury, facilitating the development of partnerships among governments, intergovernmental and non-governmental organizations and the private sector, and promoting the mobilization of technical and financial resources to support national, regional and global efforts and capacity building. With regard to other heavy metals, UNEP has initiated a review of scientific information on lead and cadmium, focusing especially on long-range environmental transport, to inform future discussions on the need for global action.

A HEALTHY ENVIRONMENT

It is now well-established that environmental risks are among the major causes of global death and disease, and a constraint on economic development, especially in the poorest countries. However, despite a wealth of scientific knowledge and numerous examples of cost-effective interventions, there has been only limited progress in protecting ecosystems, and the goods and services that they provide to human populations. The link between human and environmental health was further emphasised in 2005, both in the UNEP *GEO Year Book*, which highlighted the challenge of emerging and re-emerging diseases due to environmental change, and also in the Millennium Ecosystem Assessment report *Ecosystems and Human Well-being: Health Synthesis*.

To address this problem, the Canadian Government launched The Health and Environment Linkages Initiative (HELI) in September 2002 at WSSD. An international steering committee, which included UNEP and the World Health Organisation (WHO) was established, and funding was given to WHO and UNEP to implement the first phase of the initiative between November 2003 and March 2005. The ultimate goal of HELI is to implement the WSSD resolutions to promote sustainable development and reduce adverse environmental impacts on human health. The initiative focuses on improving the decision making process. It established multisectoral teams to apply the HELI approach to key environment and health issues, such as integrated water management and efficiency measures in Jordan, agrochemical and livestock management in Uganda and use of agricultural chemicals in Thailand. The next stage of the project will consolidate and build on these efforts for wider, more effective and sustained country-level implementation beyond the initial pilot projects. In Asia-Pacific, WHO and UNEP also organized a high-level meeting on health and environment in Southeast and East Asian Countries, in Bangkok in December 2005, in preparation for a regional Ministerial Meeting on Health and Environment in 2006.

UNEP is also associated with the secretariat of the UN Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), based in Vienna, Austria. UNSCEAR assesses global and regional exposures to ionizing radiation from nuclear power production, military, industrial and research activities, accidents, natural radiation, and medical diagnostic and therapeutic procedures. It also reviews advances in scientific understanding of the mechanisms by which radiation-induced health effects can occur. The Committee's assessments provide the scientific basis for relevant UN agencies to formulate radiation protection standards. UNSCEAR is working to provide better understanding of the impact of the Chernobyl accident in the Ukraine. In 2005, it participated in the Chernobyl Forum, whose mission includes the review of radiation-induced health effects from the accident.

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