



UNEP 2004
ANNUAL REPORT



United Nations Environment Programme

The Mission of the United Nations Environment Programme is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations.

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Cover: Landsat image of the Sundarbans, an area of mangrove forests straddling the India-Bangladesh border, famed as a refuge for the Sundarban tiger. Throughout the tropics, mangroves are threatened by human activity such as aquaculture developments and charcoal production, often with considerable consequences for human health and livelihoods. As well as providing nurseries for inshore fisheries, mangroves offer considerable coastal protection. They reduce erosion, trap sediments and dissipate the energy of breaking waves, a value which was tragically highlighted during the Asian earthquake and tsunami of 26 December 2004, which devastated the region.

Landsat imagery provided by UNFP/GRID - Sioux Falls, USGS EROS Data Center

All \$ referred to in this report are US\$

The term 'one billion' in this report refers to one thousand million

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GREEN CITIES
PLAN FOR THE PLANET!

WORLD ENVIRONMENT DAY

5 JUNE 2005

UNEP Governing Structure

The UNEP Governing Council was established in accordance with UN General Assembly resolution 2997 (XXVII) of 15 December 1972 (Institutional and financial arrangements for international environmental cooperation). The Governing Council reports to the General Assembly through the Economic and Social Council. Its 58 members are elected by the General Assembly for four-year terms, taking into account the principle of equitable regional representation. Full information on the composition, functions and responsibilities of the UNEP Governing Council and the Committee of Permanent Representatives, formally established and strengthened as a subsidiary organ to the Governing Council by decision 19/32 of 4 April 1997, is available at www.unep.org/governingbodies.

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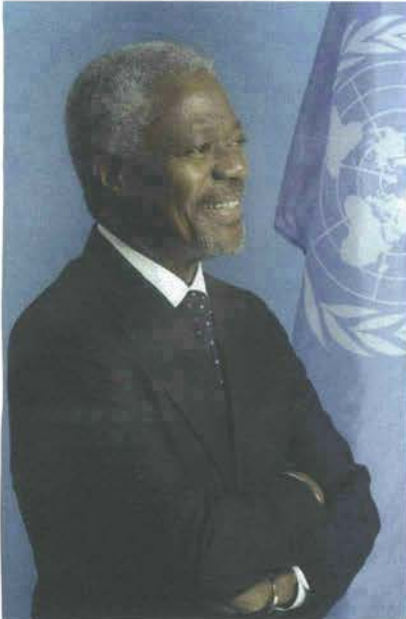
Member States of the Governing Council of the United Nations Environment Programme (2004 - 2007)

Antigua and Barbuda *	Ghana **	Republic of Korea *
Argentina *	Greece *	Romania *
Bahamas **	Hungary **	Russian Federation *
Bangladesh **	India **	Saudi Arabia **
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Chad *	Mexico **	Tuvalu **
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* Members whose terms expire on 31 December 2005

** Members whose terms expire on 31 December 2007

Message from the United Nations Secretary-General



© UNIDPI / Sergey Bermeniev

Kofi Annan
United Nations Secretary-General

The tsunami that devastated so many coastal communities around the Indian Ocean at the end of December 2004 illustrated in the most tragic and graphic manner humankind's vulnerability to the natural forces that shape our planet. As we continue to wrestle with the challenges of reconstruction, society's dependence on the environment is also clear. Across the battered region, survivors face an uncertain struggle against disease, while farmers and fishermen must contend with the damage to the natural resources on which they depend.

Too often we take the bounty and benevolence of the Earth for granted. Yet the evidence is growing that we are abusing its hospitality. The tsunami was not the only natural disaster of 2004. The year once again broke records in terms of lives and livelihoods lost to natural calamities. Once again it was the poorest people of the least developed countries who bore the brunt of these costs.

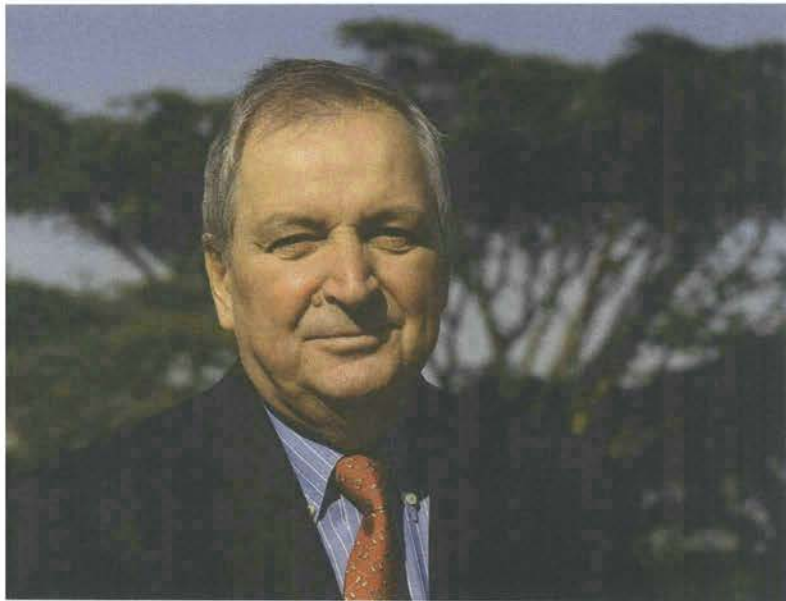
The majority of these disasters were extreme weather events. In almost all cases, their impact could have been mitigated with more environmental foresight and care. Unfortunately, the environment continues to be neglected throughout the world. Atmospheric levels of carbon dioxide are at record levels, and the signs of climate change are plain to see. Seas, oceans, freshwater resources and forests are in decline. These issues should be high on the agenda when the world's governments meet in September 2005 to review progress towards the Millennium Development Goals.

The international community must also pay more attention to the link between the environment and security. Often, the most politically unstable countries also have serious environmental problems. Our efforts to do better at preventing and resolving conflict would surely benefit from a better understanding of the connections between peace, development and responsible stewardship of the environment.

This report reflects the broad range of activities carried out by the UN Environment Programme as it carries out its mandate to provide the leadership we need to protect the environmental basis of sustainable development. As we seek to accelerate efforts to reach the Millennium Development Goals, UNEP's assessments, policy development, capacity building and outreach remain as relevant as ever.

The year of the environment

by Klaus Toepfer
Executive Director of UNEP



I remember that day in October 2004 very clearly. I was travelling from Washington DC, where I had attended a Global Environment Facility Council meeting, and was en-route to discuss a major conference on climate change in Europe.

My phone rang with the message that my good friend Wangari Maathai, Kenya's Assistant Minister for Environment, and an ardent and lifelong environmental campaigner, had been awarded the Nobel Peace Prize.

Of course, I was delighted. The Nobel Peace Prize is probably the most prominent and closely watched of all the global awards. Each year, the jury thinks deeply, not just about whom to award, but what political message it wants to send.

When the Prize was announced, I remember that some were asking why the Nobel Peace Prize Committee had chosen to reward an African woman known chiefly for her environmental activism. The simple reason is this: security and

sustainable development are inextricably linked. Poverty, disease, environmental degradation and conflict feed each other in a deadly cycle.

This understanding also underlies the Millennium Development Goals and is embodied in the Plan of Implementation of the World Summit on Sustainable Development (WSSD). It was emphasized in the 2004 report of the UN Secretary-General's High-Level Panel on Threats Challenges and Change, and it was obviously at the forefront of the minds of the Nobel Peace Prize Committee.

UNEP has a growing role to play in fostering understanding of the links between environment and security. The UNEP 2004 Annual Report highlights some of the organization's achievements in this area during the year, including our Initiative on Environment and Conflict Prevention, the Environment and Security Initiative in Europe, and the work of our Post-Conflict Assessment Unit.

As well as making explicit the link between environment and security, the Nobel Peace Prize also highlighted the front-line role of women in sustainable development. This year, UNEP continued to focus on incorporating gender issues into all our work, as well as forging stronger links with all the major groups of civil society—essential partners in the quest for sustainable development.

Partnerships are a constant theme throughout UNEP's programme of work, as this Annual Report shows. In fulfilling its mandate to inspire, inform and enable the nations of the world to care for and wisely use the Earth's environment and natural resources, UNEP works closely with governments, UN agencies, international organizations and private sector institutions.

Among the stand-out environmental events of 2004 was the historic hand-over on 18 November of the Russian Federation's ratification papers to the Kyoto Protocol on Climate Change to the UN Secretary-General, Kofi Annan, at UNEP's headquarters in Nairobi.

This legally binding treaty is now entering into force, enabling its mechanisms for reducing greenhouse gas emissions to come into effect and, perhaps even more importantly, spurring governments to focus on what comes next.

The Kyoto Protocol is a step in the right direction, but only a step. The combination of data related to the growing concentration of greenhouse gases in the atmosphere, accelerating ice-melt in the polar regions, and the increasing frequency, severity and cost of extreme weather events is adding much-needed urgency to the search for solutions to this man-made problem that, in the worst case scenario, could spell doom for human society as we know it.

That urgency is increasingly shared by governments, by their citizens and by businesses and industry. Even those governments that have not signed up to Kyoto are clear in their commitment to promoting alternative and cleaner energy sources and addressing the environmental ills that plague this planet.

Those ills are many, but there are definitely signs that, even though the global environment is in decline, the will to do something about it is ascendant. The year saw a number of global meetings on the environment that highlighted both the complexity of the issues and the commitment to work together to address them.

Two environmental conventions administered by UNEP came into force in 2004. The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and the Stockholm Convention on Persistent Organic Pollutants will both contribute greatly to protecting human health and the environment.

The Montreal Protocol on Substances that Deplete the Ozone Layer, rightly held up as a model among multilateral environmental agreements, had an active and somewhat turbulent year in 2004, dominated by difficult and protracted negotiations over the phase-out of the ozone-depleting chemical methyl bromide. Despite the failure to conclusively resolve the issue, the spirit of compromise and engagement evident in the negotiations showed that the Montreal Protocol has lost none of its efficacy or relevance.

Elsewhere, the UNEP-administered biodiversity-related conventions all had busy years. The Convention on Migratory Species celebrated its 25th anniversary, while the Convention on Biological Diversity and the Convention on International Trade in Endangered Species of Wild Fauna and Flora both held conferences of their Parties to strengthen initiatives to meet the targets adopted at WSSD to reverse the decline in biodiversity.

That decline is evident worldwide, and is just one of the symptoms of an environmental malaise that must be tackled if humanity is to secure a sustainable future. The evidence of climate change is beyond dispute, the productivity of land and sea is under increasing strain, and habitats everywhere are suffering under the pressure of pollution, over-use and careless management.

If there is a silver lining to this cloudy outlook, it is that the world does appear to be waking up and taking notice. The 2004 Nobel Peace Prize is but one example. People, businesses and governments everywhere are beginning to understand that the environment matters.

The massive and unhesitating response to the tsunami that killed nearly a quarter of a million people at the end of 2004 illustrated that we can come together as a global community to work for a common cause. Let us hope that we can preserve that spirit of togetherness and truly generate an age of partnership to restore the environment on which we all depend.



A close-up, high-angle photograph of Wangari Maathai's face, looking down and to the right. Her hair is blonde and slightly messy. She is wearing a small, round, light-colored earring. The lighting is bright and natural, creating strong highlights and shadows on her skin. The background is a soft-focus green, suggesting an outdoor setting with foliage.

The age of partnership

Kenyan Nobel Peace Prize winner, Professor Wangari Maathai, with Lena Sommestad, Sweden's Minister for the Environment, at the Women as the Voice for the Environment conference, Nairobi, 13 October 2004. Sustainable development needs the committed partnership of all sectors of society—governments, international organizations, the private sector and the major groups of civil society—with the important contribution of women being recognized and incorporated at all levels. © International Institute for Sustainable Development

RESPONDING TO ENVIRONMENTAL EMERGENCIES

THE ASIAN TSUNAMI

The 26 December 2004 earthquake and subsequent devastating tsunami in the Indian Ocean demonstrated once again in the most graphic and tragic way how vulnerable human societies are to natural calamities. As part of the massive global response to the disaster, UNEP mobilized its own team of experts specializing in environmental emergencies to respond to the requests of affected governments for assistance in assessing and addressing the tsunami's impacts on the environment and on human health. The UNEP South Asian Disaster Task Force, which is working in full cooperation with other UN organizations involved in the crisis, is coordinated from UNEP's Post Conflict Assessment Unit in Geneva.

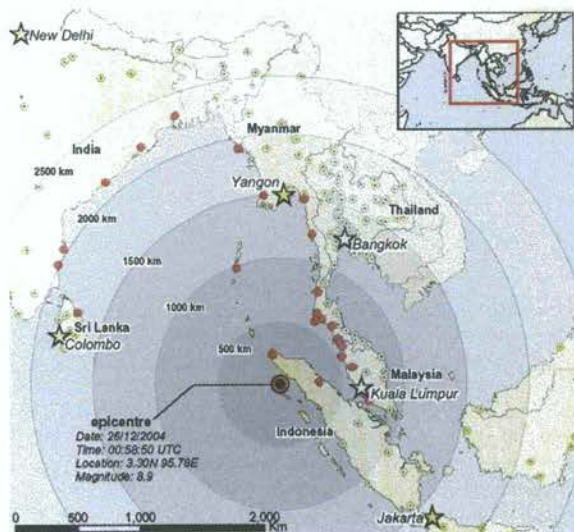
UNEP is contributing environmental expertise to the UN humanitarian and development system's emergency planning, and giving advice on immediate tasks, such as waste management. UNEP is also ensuring that environmental assistance needs are integrated into the Humanitarian Flash Appeal and subsequent calls for financial assistance. Over the longer term, UNEP will conduct environmental assessments in the affected regions to identify the recovery needs, in close association with national authorities and in cooperation with selected partner organisations.

Commenting on the organization's role, UNEP Executive Director Klaus Toepfer said: "Although the immediate focus of the international response is to save lives and fight diseases, it is also important to address underlying risks." Freshwater shortages caused by seawater contamination of underground and surface sources present an immediate threat. Wells and irrigation systems, fishponds and vegetable gardens have been heavily salinated. Impact on local agriculture is also evident. In some coastal areas, farmers as far as five kilometres inland are likely to find their crops destroyed by salt water. Mud and sand are covering many of the affected areas, and expeditious removal of the massive amount of waste and debris is crucial to prevent further environmental pollution, especially the contamination of water supplies.

Revitalizing local communities and their livelihoods will also require rehabilitating and protecting vital natural ecosystems, in particular mangrove forests and coral reefs. Tourist resorts, in particular, may find that the natural environment on which they depend has been damaged. An emerging issue of great concern also relates to the presence of industrial installations in the stricken areas, including chemical storage sites, electrical facilities, oil refineries and ports. In the initial assessment phase, UNEP's Division of Early Warning and Assessment is focusing much of its remote sensing and Geographical Information Systems (GIS) capability on this issue.

EARLY WARNING AND EFFECTIVE RESPONSE

Worldwide, environmental emergencies are increasing in frequency and severity, affecting growing numbers of people, especially in the less developed countries. There are many reasons for this, including human population growth, increased urbanization and industrialization, changing climatic conditions and environmental





Banda Aceh, Indonesia. An Acehese man walks through the debris left behind by the 26 December 2004 tsunami that killed more than 220,000 people and devastated communities around the Indian Ocean. The tsunami was triggered by an earthquake off the coast of Sumatra, Indonesia, that measured 9 on the Richter scale. UNEP's Tsunami Task Force is working with other UN agencies to assess the environmental impact and advise on rehabilitation. © Reuters/Yusuf Ahmad. Map produced by ReliefWeb Map Centre/UNOCHA

mismanagement of important ecosystems such as forested watersheds, wetlands, coral reefs and mangroves that would normally mitigate the worst consequences of natural disasters. As a result, UNEP is increasingly called upon to respond to environmental emergencies—ranging from industrial accidents to major natural calamities.

UNEP works closely with the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) to ensure an integrated United Nations emergency response that incorporates environmental considerations into all UN Disaster Assessment and Coordination (UNDAC) activities. During 2004, UNEP continued to provide training in environmental emergencies as a component of UNDAC induction and refresher courses, and helped to develop a set of guidelines for rapid environmental impact assessment with the Benfield Hazard Research Centre of University College London. The Guidelines are a practical tool for relief workers, who do not necessarily have a strong background in environmental issues, to undertake a rapid assessment of the environmental impacts of a disaster.

NATURAL DISASTERS THREATEN THE VERY BASIS OF DEVELOPMENT. THEY EXACERBATE POVERTY AND HUNGER, AND DESTROY ECOSYSTEMS...

UNEP and OCHA also developed a National Risk and Disaster Development Strategy for the Seychelles in March 2004 and, at the request of the Government of the Democratic Republic of Congo, led an inter-agency mission to assess the impact of a partial collapse of the Shinkolobwe Uranium Mine between October and November 2004. UNEP and the International Strategy for Disaster Reduction (ISDR) have also developed *A Community Leader's Guide on Environmental Protection and Disaster Risk Reduction*, with information on how environmental protection can help to reduce the vulnerability of human settlements and enterprises and the natural environment to hazards, and increase their capacity to absorb the impacts of disasters.

ENVIRONMENT FOR A SECURE FUTURE

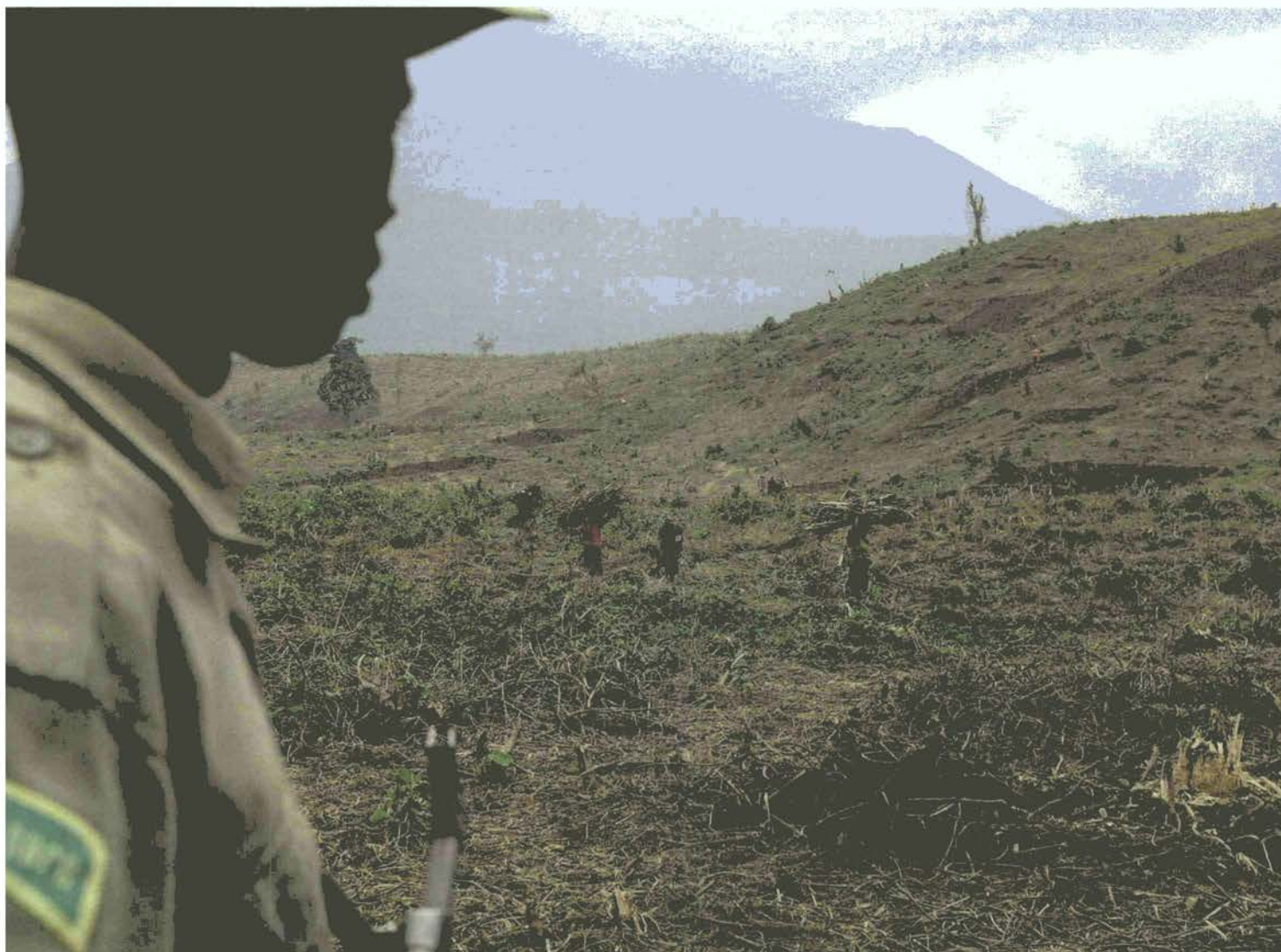
CONFLICT AND COOPERATION

Environmental problems related to human activities—such as climate change, water scarcity and land degradation—are among the most powerful and least understood challenges for sustainable development. There is a growing consensus that these issues can also be flashpoints for confrontation between communities and even nations. Exploring the connections between environment and human security is the focus of UNEP's Initiative on Environment and Conflict Prevention. One of the first outputs of the Initiative was launched in September 2004 at a conference in the United Kingdom on

Environment, Development and Sustainable Peace: Finding Paths to Environmental Peacemaking. The report, *Understanding Environment, Conflict and Cooperation*, produced in collaboration with the Woodrow Wilson Center for Scholars, in Washington DC, USA, analyses the relationship between environment and peace and identifies areas where we need to gain a clearer understanding.

POVERTY, INFECTIOUS DISEASE, ENVIRONMENTAL DEGRADATION AND WAR FEED EACH OTHER IN A DEADLY CYCLE...

A Congolese park guard watches on 22 July 2004 as villagers carry firewood from a destroyed section of Virunga National Park in the eastern Democratic Republic of Congo. Thousands of Rwandans poured across the border in May and June and slashed and burned 15 square kilometres of forest. The Virunga volcanoes, which straddle the borders of Rwanda, the Democratic Republic of Congo and Uganda, are home to just over half the world's mountain gorillas, of which less than 700 remain. UNEP has contributed \$50,000 to help build a wall to stop encroachment into this strategically important transboundary conservation area. © Reuters/Finbarr O'Reilly



The Initiative on Environment and Conflict Prevention also contributed to incorporating environmental issues into the four themes of the declaration of the International Conference on the Great Lakes of Africa, signed by Heads of State in November 2004, in Dar es Salaam, Tanzania. The themes were: Peace and Security; Democracy and Good Governance; Economic Development and Regional Integration; and Humanitarian and Social Issues. Research on the links between environment and the four themes of the International Conference, and the preliminary phase of a case study on the Great Lakes of Africa were also carried out. In addition, the Initiative set up a Group of Experts on environment and conflict prevention, from all regions of the world, to assist in the further development of the Initiative and to lead case studies in their respective regions. The Expert Group will meet next in March 2005.

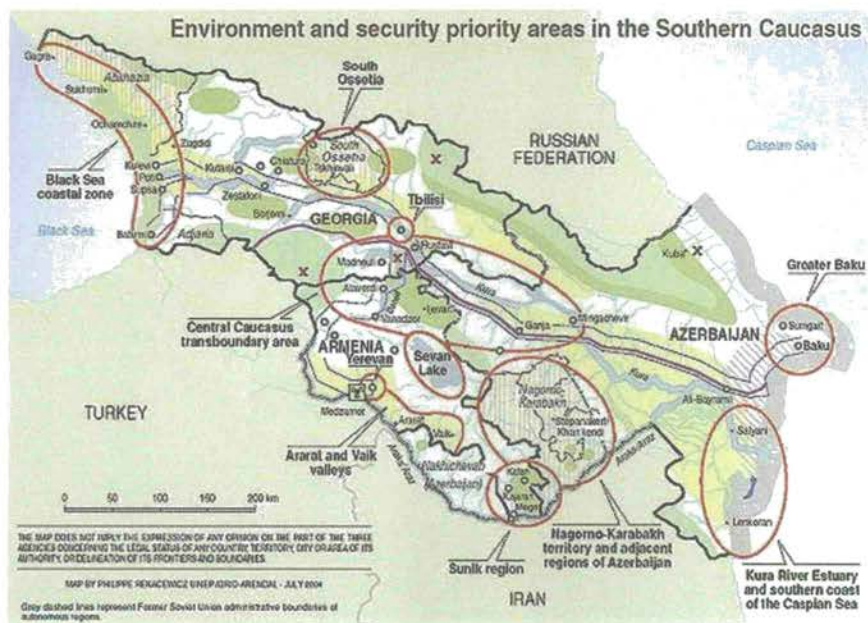
CENTRAL AND EASTERN EUROPE

The same challenges are also the subject of the Environment and Security Initiative (ENVSEC), which is assessing and monitoring the negative impacts of conflict and the opportunities for cooperation presented by environmental issues in the southern Caucasus region of Europe. The initiative, managed jointly by UNEP, the UN Development Programme (UNDP) and the Organisation for Security and Cooperation in Europe (OSCE), is supporting capacity building and institutional development in the countries of southeastern Europe and Central Asia for the integration of environmental and security

concerns into international and national policy making. An ENVSEC assessment of the environment and security risks facing the countries of Armenia, Azerbaijan and Georgia entitled *Environment and Security: Transforming Risks into Cooperation* was launched in October 2004. The report warned that environmental degradation and issues of access to natural resources could increase tensions in areas of existing conflicts in Abkhazia, South Ossetia, Nagorno-Karabakh and adjacent regions of Azerbaijan. It also noted that the militarized situation was hampering waste management and disposal, the maintenance of irrigation and hydroelectric dams and constraining economic growth.

The current emphasis of the ENVSEC Initiative, which entered its second phase in 2004, is to strengthen its scientific base and deepen knowledge of already identified environment and security risks in order to propose solutions, inform negotiations and mitigate risks. Those goals were advanced during 2004 with the addition of NATO as partner. Current ENVSEC activities include identifying environment and security risks in Central Asia’s Ferghana Valley, shared between Kyrgyzstan, Tajikistan and Uzbekistan, and establishing a monitoring and early warning system for responding to emergencies. In southeastern Europe the Initiative is monitoring environmental hotspots, especially related to past and ongoing mining practices and supporting the search for solutions to friction related to shared natural resources, particularly trans-boundary rivers and lakes.

UNEP is helping to assess and monitor the negative impacts of conflict and the opportunities for cooperation presented by environmental issues in the southern Caucasus region of Europe. *Environment and Security: Transforming Risks into Cooperation*, launched in October 2004, warned that environmental degradation and issues of access to natural resources could increase tensions in areas of existing conflicts in Abkhazia, South Ossetia, Nagorno-Karabakh and adjacent regions of Azerbaijan.



CARPATHIAN MOUNTAINS

UNEP is also working to promote the sustainable development and protection of the Carpathians. The Carpathians are one of the largest mountain chains in Europe, and are shared between seven Central and Eastern European countries. They provide natural resources and livelihoods for 18 million people and are a haven for a considerable breadth of biological diversity, including endangered animals such as the brown bear, wolf and lynx, and nearly 4,000 species of partly endangered plant species. July 2004 marked the opening in Vienna of a UNEP office to house the Interim Secretariat of the Framework Convention of the Sustainable Development and Protection of the Carpathians, which was signed and adopted by eight European countries in 2003. The opening of the office will ensure the full integration of the Carpathian Convention into the International partnership on Sustainable Development of Mountain Regions, which is hosted by FAO to promote international cooperation and the exchange of best practices between mountains regions around the world.

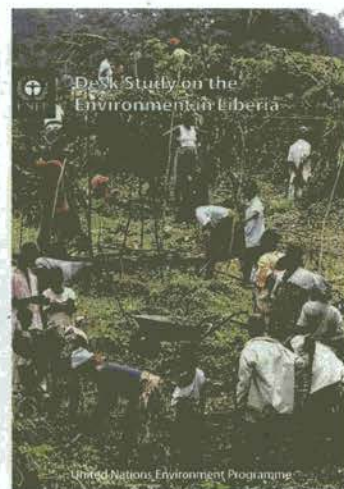
UNEP has also launched a process to prepare a *Carpathians Environment Outlook* report in the style of the global GEO integrated environment assessments, with all seven countries from the Carpathian region participating. In the same region, UNEP released a report in 2004 entitled *Rapid Environmental Assessment of the Tisza River Basin*. The report, which was presented to the first ministerial meeting of the Danube River Protection Convention in December 2004, looks

at the aftermath of a cyanide spill from a gold mine in northern Romania which polluted the Tisza river as it travelled through Hungary on its way to meet the Danube. Noting that the river basin ecosystem is regenerating, the report recommends an integrated sustainable development strategy to address environmental threats in the river's entire catchment area, which includes Romania, Ukraine, Slovakia, Hungary, and Serbia and Montenegro.

POST CONFLICT ASSESSMENT

UNEP is being increasingly called upon to assess and advise on the environmental impact of armed conflict. During 2004, UNEP's Post-Conflict Assessment Unit conducted activities in Afghanistan, Iraq, the Occupied Palestinian Territories, Liberia, and Haiti, with funding provided primarily by the Governments of Germany, Finland, Japan, the United Kingdom and the European Commission. In addition, UNEP monitored the worsening situation in Sudan and made preparations for a future possible involvement in Africa's Great Lakes region.

In Afghanistan, UNEP established a two-year Capacity and Institution Building Programme for Environmental Management to develop Afghan-based solutions for Afghan problems and ensure national ownership of all laws and policies. The programme is providing computer skills and equipment, technical, language and management training, and developing community-based resource management and restoration projects. During the first year of the programme,



The UNEP Desk Study on the Environment in Liberia highlights the damage done by 15 years of conflict.

significant progress has been achieved in reforming the institutional structure of the Department of Environment, developing a draft environmental protection act and establishing environmental impact assessment procedures and guidelines. In terms of multilateral environmental agreements, two Global Environment Facility projects—a National Capacity Self Assessment and a National Adaptation Programme of Action—are under way, and a National Ozone Unit has been established.

REBUILDING IRAQ

In Iraq, a different capacity building approach has been developed due to the security situation. A UNEP project office has been established in Amman to coordinate the training of Iraqi experts to conduct field-based assessments of key contaminated sites in Iraq. During 2004, UNEP's Post Conflict Assessment Unit held four workshops for Iraqi experts on Environmental Emergencies and Disaster Management, Environmental Inspections and Environmental Laboratory Analyses, Environmental Impact Assessment and Environmental Site Assessment. Equipment, including digital cameras, global positioning systems, laptop computers and health and safety equipment has been donated, and additional field monitoring, sampling and analytical equipment will be handed over in early 2005. UNEP is also developing a contaminated sites database that will support environmental assessments and land-use planning.

UNEP is also spearheading a multi-million dollar project, funded principally by the Government of Japan, and implemented by the UNEP International Environmental Technology Centre, to restore the environment and provide clean drinking water in the marshlands of the Tigris/Euphrates Delta. The marshlands were extensively damaged in recent decades by deliberate drainage under the previous regime and due to dam construction on the Tigris and Euphrates rivers. The project will support the sustainable development and restoration of the Iraqi marshlands through the application of environmentally sound technologies. Drinking water and sanitation systems will be installed in key communities, and wetland restoration programmes will be undertaken for the benefit of people and wildlife.

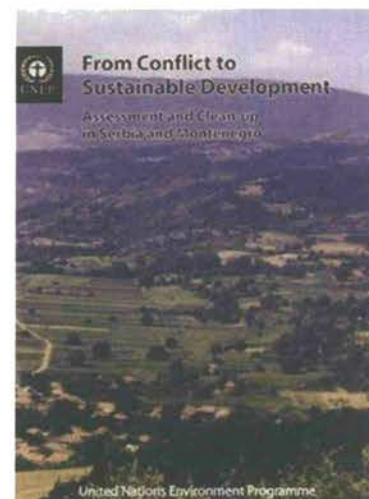
FROM CONFLICT TO SUSTAINABLE DEVELOPMENT

Other UNEP post-conflict activities in 2004 included a series of capacity building training seminars for the Occupied Palestinian Territories. Involving both Palestinian and Israeli delegations, the seminars focused on communications and the environment, wastewater and air pollution, environmental policy making and laboratory analysis. Elsewhere, UNEP participated in UN Development Group (UNDG) needs assessments in Liberia, Haiti and Sudan. UNEP's role was to identify environmental issues that must be integrated into the reconstruction process.

In the case of Liberia, where 15 years of conflict have seriously damaged the country's environment and infrastructure, UNEP also produced a *Desk Study on the Environment in Liberia* as a supplement to the UNDG Needs Assessment. Subsequently, the National Transitional Government of Liberia asked UNEP to provide additional technical assistance in the areas of environmental policy, law and assessment. UNEP is developing a proposal to strengthen the national and local environmental administration in Liberia by providing capacity building, technical advice and basic equipment.

Finally, 2004 saw the publication of *From Conflict to Sustainable Development: Assessment and Clean-up in Serbia and Montenegro*, marking the completion of UNEP's programme to conduct 16 high-priority remediation projects at four environmental hot-spots in Serbia. The clean-up programme has provided institutional strengthening, improved the environment and significantly reduced risks to human health.

From Conflict to Sustainable Development: Assessment and Clean-up in Serbia and Montenegro, marks the completion of UNEP's programme of remediation projects at four environmental hot-spots in Serbia.



WOMEN, HEALTH AND ENVIRONMENT

HEALTH AND ENVIRONMENT

Women, Health and the Environment was the focus of the September 2004 edition of UNEP's quarterly magazine, *Our Planet*. Published with the support of the UN Foundation to coincide with the tenth anniversary celebrations of the International Conference on Population and Development, *Our Planet: Women, Health and the Environment*, examined women's vulnerability to environmental change alongside related issues, such as the implications of the rapid spread of HIV/AIDS among women and the growing danger to young mothers and their babies from toxic chemicals. It also looked frankly at the UN's progress in tackling poverty reduction and women's rights.

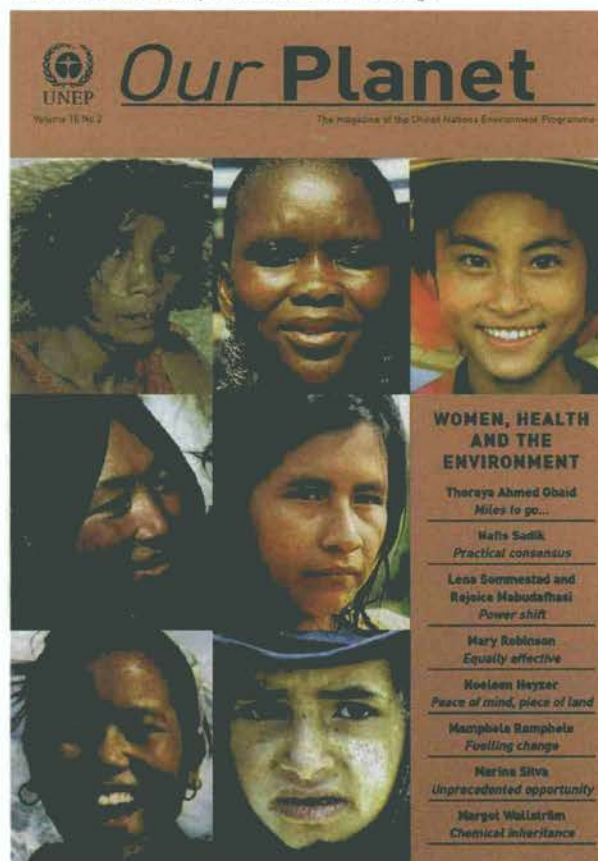
It is well established that environmental hazards are among the major causes of global death and disease, and that the burden falls disproportionately on women and young children, especially in less developed countries. Much UNEP work addresses this issue, for example by promoting environmentally sound technologies for freshwater and sanitation provision, clean energy solutions to combat indoor and outdoor air pollution, or through its wide-ranging programmes to mitigate chemical and hazardous waste pollution.

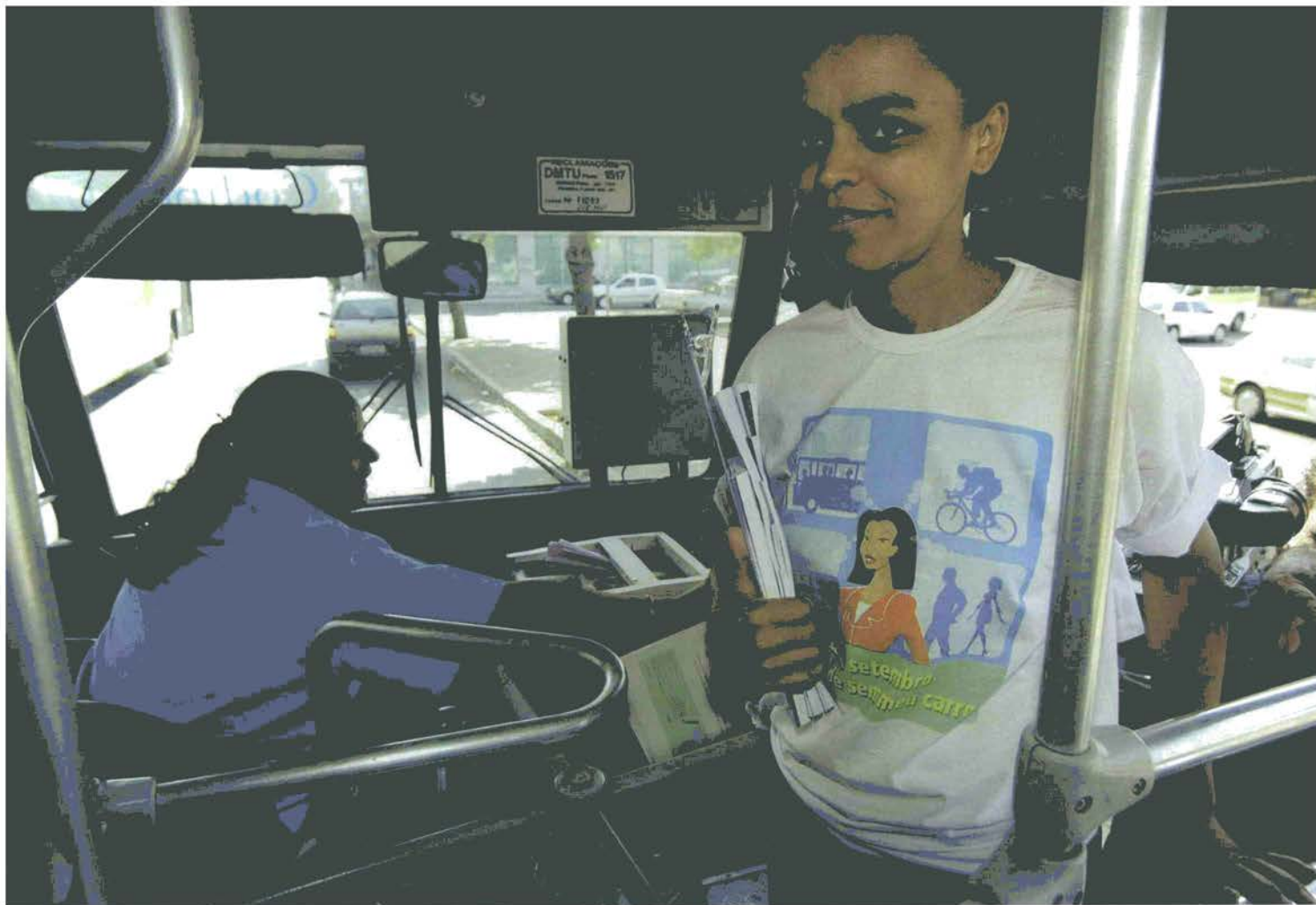
UNEP is also working with the Canadian Government and the World Health Organization (WHO) on the Health and Environment Linkages Initiative (HELI) to improve decision making related to protecting ecosystems and the goods and services they provide to society. The Initiative emphasizes that protecting environmental health must be integrated with sustaining economic growth and improving livelihoods in developing countries. During 2004, multi-sectoral teams were established 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 the use of agricultural chemicals in

Thailand. A related project, funded by the UN Foundation is looking at improved health outcomes through community-based ecosystem management in nine countries in Africa, West Asia and Latin America and the Caribbean

Biodiversity and its importance to human health is the focus a project, being implemented in collaboration with WHO, the UN Development Programme (UNDP) and the Harvard Medical School Center for Public health. More than 60 scientists from industrialized and developing countries have spent several years compiling information that will be published in 2005 in a report entitled *Sustaining Life: How Human Health Depends on Biodiversity*. An interim executive summary has been widely distributed and was presented at the seventh Conference of Parties to the Convention on Biological Diversity in Kuala Lumpur in February 2004.

Our Planet: Women, Health and the Environment, examines women's vulnerability to environmental change.





Brazilian Environment Minister Marina Silva rides a public bus to work to celebrate National 'Without My Car in the City' Day, in Brasilia, 22 September 2004. UNEP opened a new office there in April 2004. © Reuters/Adriano Machado

WOMEN AS THE VOICE FOR THE ENVIRONMENT

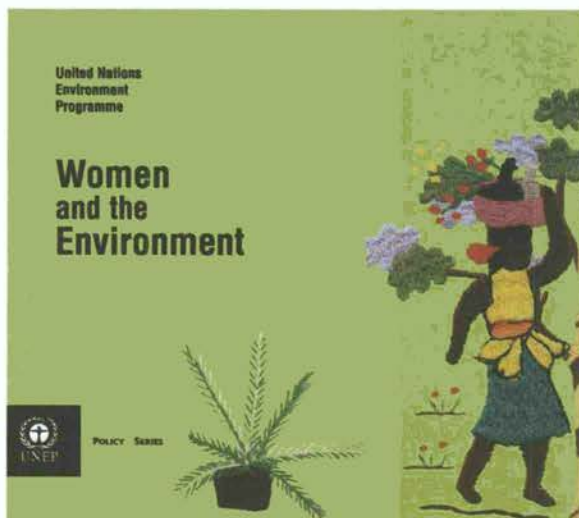
Women as the Voice for the Environment (WAVE) was the theme chosen for the first Global Women's Assembly on the Environment, held at UNEP headquarters in October 2004. The conference, co-organized by the network of Women Ministers for Environment, was attended by 140 women from 60 countries, including five women environment ministers and the newly announced Nobel Peace Prize Laureate, Wangari Maathai. According to the conference co-chair, Sweden's Environment Minister Lena Sommerstad: "Having Wangari here was a wonderful boost for the work we are doing. It helped underscore the crucial links between environment and peace, and the vital, but all-too-often ignored role women have in these areas."

The WAVE conference marked the culmination of a landmark year in UNEP's growing programme to highlight the front-line role that women play in sustainable development. UNEP recognizes

WOMEN LIVE AND WORK ON THE FRONT LINE OF THE BATTLE FOR SUSTAINABLE DEVELOPMENT...

gender as a cross-cutting priority, and its programme of work promotes women's participation in all environmental protection and sustainable development activities. Gender issues feature particularly in UNEP's policy development and analysis related to water, sanitation, waste, energy and sustainable production and consumption. UNEP is also helping to strengthen women's capacity to contribute to the development of environmental laws.

UNEP provides technical assistance to women's networks to develop and implement projects related to the outcomes of the World Summit on



Women and the Environment makes the often hidden link between women and the environment visible, with an explicit focus on the gender-related aspects of land, water and biodiversity conservation and management.

Sustainable Development (WSSD), including education and training materials based on women stakeholders' best practices and success stories. Many of these examples were highlighted by the UNEP publication *Women and the Environment*. The book, published with financial support from the United Nations Foundation and launched during the permanent Forum on Indigenous Issues in New York in May 2004, highlights women's major contribution to the well-being and sustainable development of their communities and nations, and to the maintenance of the earth's ecosystems, biodiversity and natural resources.

This focus on the contributions, needs and visions of women in the context of sustainable development was carried through to the October WAVE conference. The three-day conference focused on the UN General Assembly's forthcoming review of the Fourth World Conference on Women, which was held in Beijing in 1995, and on the five year-review of the Millennium Development Goals. At the conference's conclusion delegates issued a Manifesto (see box) and recommendations, including projects ideas, for consideration by the Global Ministerial Environment Forum and UNEP Governing Council in February 2005. A separate declaration by the Network of Women Ministers for the Environment was also drafted for presentation to the same body.

UNEP GLOBAL WOMEN'S ASSEMBLY ON ENVIRONMENT: WOMEN AS THE VOICE FOR THE ENVIRONMENT (WAVE), NAIROBI, 11–13 OCTOBER 2004

.....We call for urgent action from all stakeholders, in particular, the United Nations system, to achieve sustainable development, which requires harmony between economic policies, human rights, gender equality and environmental conservation and management.

It is our vision that, through our global partnership with its vital diversity, we will use and promote non-violent approaches, eliminate destructive practices and build a sustainable, just and valuable life for all present and future generations.

We, women, assembled in Nairobi, recommit ourselves:

- a) To continue the struggle for a peaceful, just and healthy planet for all, as set out in the 1992 and 2002 women's action agendas, in a spirit of full cooperation and global solidarity;
- b) To continue to work, develop and support activities that contribute to gender justice, a cleaner, safer environment and a better life for our communities through our advocacy, campaigning, research, education, implementation and lessons learned from one another;
- c) To the full advancement of the rights of indigenous women, local and traditional communities, and ethnic minorities, in recognition of the cultural diversity of people.

We recognize the deep connections between peace, poverty eradication, the full enjoyment of human rights for all, and a healthy environment.

We remain critical and responsible consumers and producers, and shall hold other stakeholders accountable for the promotion of sustainable production and consumption patterns.

As leaders and agents of change, we will continue to advocate for the full implementation of women's human rights, existing and new legislation, and policy and resource commitments, and shall continue its assessment and monitoring.

We are deeply concerned about:

- a) The massive and continuing degradation and pollution of our environment, with its far-reaching effects on the livelihoods of our communities, particularly of indigenous women and women living in poverty;

- b) The failure to implement more than 30 years of global environmental and social commitments;
 - c) The ever-widening gap between rich and poor at global, national and local levels;
 - d) The unsustainable levels of production and consumption, which contribute to that gap;
 - e) The culture of aggression, fear and threat, with its many conflicts and increasing levels of violence, oppression and militarization;
 - f) The widespread violation of women's human rights, including their access to and ownership of essential resources, such as clean sustainable energy, water, land and biodiversity, and the increasing threat to defenders of women's human and environmental rights, and the criminalization of active dissent;
 - g) The lack of gender equality and women's empowerment in environment and sustainable development, and the lack of gender-disaggregated analyses, data and information;
 - h) The inadequate participation by women in environment and sustainable development decision-making, and the marginalization of women from governance of environmental resources;
 - i) The negative impact of global forces, such as unchecked economic globalization and privatization, on environmental and human rights promotion and protection;
 - j) The increasing marginalization and loss of cultural diversity and traditional values, and indigenous languages;
 - k) The relentless appropriation of indigenous knowledge by outside actors, including researchers, multinational companies and Governments, and the persistent denial of the rights of indigenous peoples, especially indigenous women's rights.
- c) To report on a regular basis on the progress of UNEP and challenges in the field of gender equality and the environment;
 - d) To incorporate into its mandate, issues linking cultural diversity, the environment and sustainable development, and the development of mechanisms for addressing indigenous women's concerns and their practical and strategic needs within sustainable development processes;
 - e) To develop methods to value and demonstrate poor urban and rural women's knowledge and experiences, partner with poor women's organizations in sustaining the environment and strengthen their capacity;
 - f) To play an active role in the ten-year review of the Beijing Platform for Action, in the five-year review of implementation of the Millennium Development Goals and in the gender sensitive implementation of the World Summit on Sustainable Development and of multilateral environmental agreements;
 - g) To work towards the implementation of the Beijing Platform for Action, the Convention on the Elimination of All Forms of Discrimination against Women, and other relevant human rights instruments, in cooperation with other United Nations agencies, national Governments and civil society;
 - h) Development of Small Island Developing States which recognizes the importance of gender issues and identifies mechanisms in order to strengthen the resilience of women to redress the economic, social and ecological vulnerabilities faced by small island developing states;
 - i) To accord WAVE a prominent position in UNEP, and host a biannual WAVE assembly;
 - j) To take appropriate action to implement the recommendations and execute the project ideas developed by WAVE in 2004, and to initiate, promote and support concrete projects between women and their organizations from different parts of the world.

We urge UNEP and other international, regional and national organizations that deal with environment and sustainable development:

- a) To promote gender equality, including affirmative action, and to integrate a gender perspective and empower women throughout its organization, its programme of work, operational activities and budget-lines, by providing high-level and systematic support, adequate resources and capacity;
- b) To implement and popularize existing and future UNEP Governing Council decisions on gender and environment, and make gender and environment a central theme of future global and regional environmental forums and institutions;

We call upon all concerned to step up action. In order to achieve sustainable development and gender equality, strong alliances and systematic communication are needed across the world. Together, as agents of change, bound together by our commitment to justice, equality and peace, we can sustain our environment and our common future.

Nairobi, 13 October 2004

INVOLVING CIVIL SOCIETY

NATURAL ALLIES

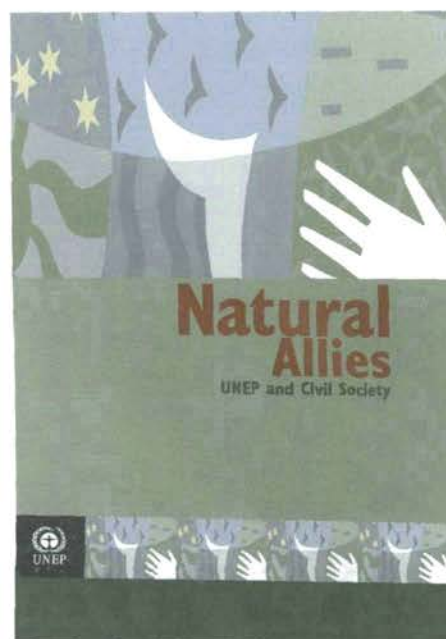
Civil society has a vital role to play in designing, implementing and reviewing sustainable development policies and strategies across the globe. This role is reflected in the Plan of Implementation of the World Summit on Sustainable Development, with its emphasis on implementation, rationalization and partnerships, and it is a core feature of UNEP's programme of work. During 2004, UNEP focused on strengthening its relations with non-governmental organizations, to facilitate their greater involvement in intergovernmental decision making and to improve UNEP's own effectiveness in fulfilling its mandate to provide leadership in the environmental field.

The existence of most multilateral environment agreements, indeed the existence of UNEP itself, owes a great debt to the activism of civil society organizations. With the current focus on the effective implementation of these agreements, it is appropriate that the major groups of civil society should retain an influence. To that end, UNEP organizes an annual Civil Society Forum that immediately precedes the meeting of its own Governing Council/Global Ministerial Environment Forum, in order that major civil society stakeholders can have their views included in its governing body's deliberations.

The fifth Global Civil Society Forum met in Jeju, Republic of Korea, on 27 and 28 March 2004, immediately prior to the eighth Special Session of the UNEP Governing Council. The meeting synthesized the outcomes of six regional gatherings facilitated by UNEP to set out civil society priorities in relation to the implementation of Agenda 21 and the Johannesburg Plan of Implementation, with specific focus on water, sanitation and human settlements. The Jeju Statement issued to the UNEP Governing Council reiterated agreed goals and targets, listed obstacles and challenges to achieving global commitments and offered specific action proposals and strategies.

During 2004, UNEP continued to strengthen its involvement with civil society. A publication, *Natural Allies*, was produced explaining how civil society organizations can participate in UNEP activities and engage the governments whose decisions guide UNEP's work. In November and December, UNEP's regional offices facilitated a further six regional conferences in preparation for the sixth Global Civil Society Forum, which will take place in February 2005 at UNEP headquarters immediately prior to the UNEP Governing Council. The theme of the meetings was international environmental governance, capacity building and strengthening UNEP's engagement with civil society. Civil society representatives also participated in the Intergovernmental Strategic Plan for Technology Support and Capacity Building framework. They emphasized that civil society groups can be providers as well as recipients of capacity building.

A GLOBAL PARTNERSHIP FOR THE ENVIRONMENT DEPENDS ON AN ACTIVE AND OPEN COLLABORATION WITH CIVIL SOCIETY...



Natural Allies, launched in October 2004, shows how civil society can work with UNEP to benefit from and strengthen UNEP's work.

CHILDREN AND YOUTH

UNEP's Tunza children and youth strategy continued to gain momentum during 2004. Tunza, which means "to care for with affection" in the Kiswahili language of Kenya, where UNEP is headquartered, is the identifying banner for all UNEP children and youth activities and publications. The principal Tunza event of 2004 was the International Children's Conference, held biannually in different locations around the world.

The 2004 Tunza International Children's Conference was held in New London, Connecticut, USA, attracting more than 450 children from 50 countries. The principal sponsor

was the Mashantucket Pequot Tribal Nation. During the conference, the children—all of whom are involved in environmental activities in their home countries—were able to share experiences, exchange ideas and learn from environmentalists young and old. A special guest was primatologist Jane Goodall, whose own Roots and Shoots programme is involving children round the globe in conserving the environment. Over the course of the 5-day event, children participated in a number of workshops and activities around the themes of resource extinction and biodiversity, indigenous people's healing ways, oceans, rivers and waterways, and energy. At the conclusion of the conference the children came up with a set of challenges and commitments for sharing with the

Junior delegates of the United Nations Environment Programme read their commitments on protecting the environment during the closing ceremony of the International Children's Environmental Conference, 23 July 2004, New London, Connecticut, USA. From left: Patrick Simpson, Canada; Manuella Jaramillo, Colombia; Christian Birky, USA; Lauren Kirk, Australia; Jenna Charles, USA. © Associated Press/Carol Phelps



Age of partnerships

UNEP Governing Council. The Conference also elected members of the Tunza Junior Board, which is helping to organize the Children's World Summit for the Environment in Japan in July 2005.

CARING FOR THE FUTURE

UNEP also produced a number of Tunza publications during 2004, including the first two in a series of six children's books on the environment. *Tessa and the Fishy Mystery* and *Theo and the Giant Plastic Ball* are vividly illustrated story books for younger readers that highlight environmental issues in an attractive and accessible manner. For older readers, UNEP has a quarterly *Tunza* magazine, published in English, French and Spanish, with Chinese and Korean versions being produced by local partners. Issues in 2004 focused on food and the environment, sport and the environment, indigenous peoples, and sustainable consumption. The magazine also features on the Internet, where it is viewed by more than 100,000 young people a month.

The Tunza programme has also been boosted by new-look web sites for both children and youth, and by a growing number of partner organizations and donors. A major new partnership was announced in June 2004 when the German chemicals and healthcare company Bayer AG, which has collaborated with UNEP on projects in the Asia-Pacific region for more than a decade, offered 1 million Euros a year to support the Tunza strategy. Among the targeted projects are the Tunza international conferences, *Tunza*

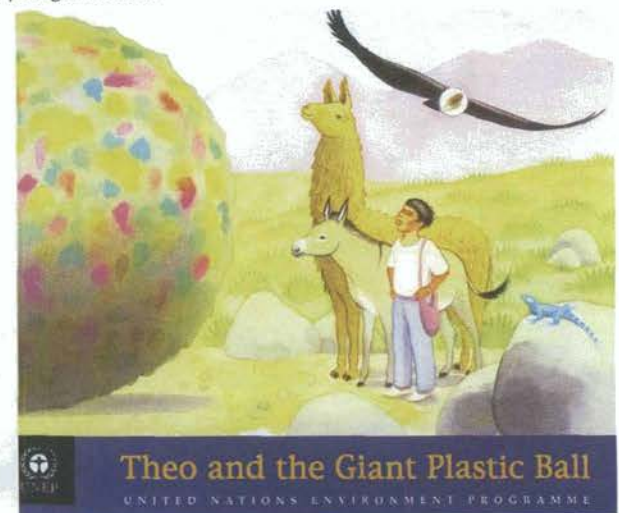
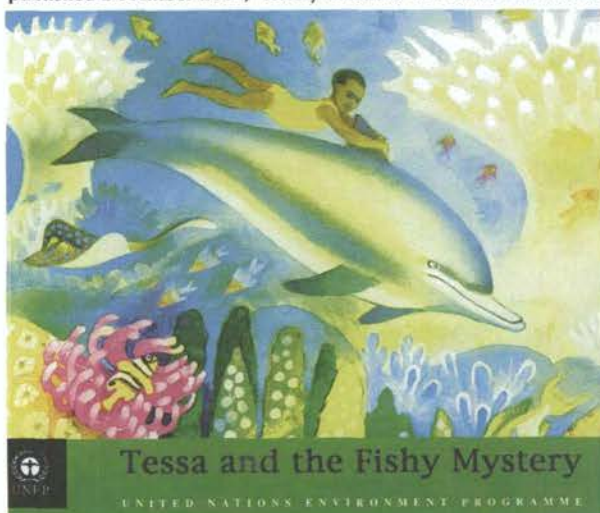
magazine, and the International Children's Painting Competition, which celebrated its 13th year in 2004, with an award ceremony in Barcelona, Spain, in conjunction with the World Environment Day celebrations. Each year the theme of the competition reflects the World Environment Day slogan, which in 2004 was: "Wanted! Seas and Oceans: Dead or Alive?"

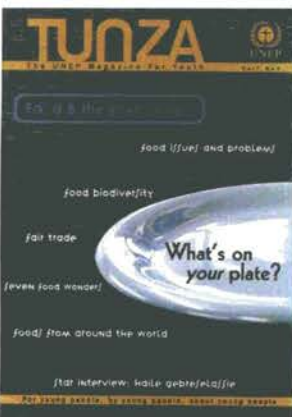
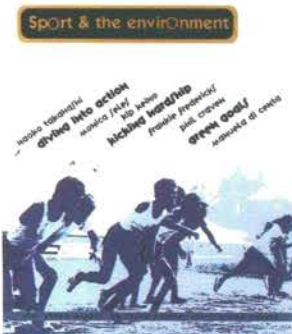
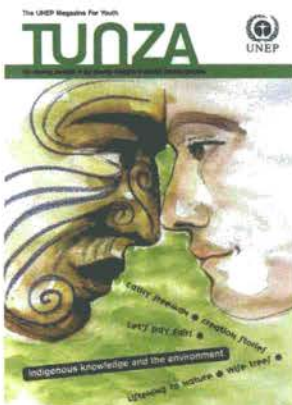
The deal with Bayer will also help to reinforce UNEP's Tunza network of children and youth organizations, especially in Asia-Pacific. The Tunza network, designed to facilitate information sharing among youth groups and between UNEP and its young constituency, continues to grow, numbering over 10,000 organizations in more than 100 countries, largely due to the enthusiastic involvement of UNEP's regional offices. In 2004 UNEP also strengthened its relations with the All China Youth Federation, which has galvanized more than 300 million young people in China to plant trees and tackle other environmental issues. UNEP's own children's tree planting campaign, Plant for the Planet, continued to gain momentum throughout the year. Since its launch, the campaign has planted well over 200,000 trees in Kenya. Other participating countries include Ghana, Uganda, Zambia and Bangladesh.

ENVIRONMENTAL EDUCATION

In preparation for the International Decade of Education for Sustainable Development, which begins in 2005, UNEP has developed a strategy to reenergize its environmental education programme and implement a number of education and training activities designed, among other

Tessa and the Fishy Mystery, published July 2004, and *Theo and the Giant Plastic Ball*, published December 2004, vividly illustrate environmental issues for younger readers.





For readers aged 15 and above, UNEP has a quarterly *Tunza* magazine, published in English, French, Spanish, Chinese and Korean. The magazine also features on the Internet at www.ourplanet.com/tunza.

things, to incorporate environmental education into the mainstream of higher education. Achievements in 2004 include the development of the Global Virtual University Global Environment and Development Studies masters course and an environmental action learning programme for Eastern and Southern Africa involving senior government participants from 14 countries to promote the integration of environmental learning in schools and communities.

In the Asia-Pacific region, the UNEP-Tongji Institute of Environment for Sustainable Development in Shanghai, China, offered its first leadership development programme in July. The new institute is intended as Asia-Pacific's premier environmental teaching and learning centre. The leadership course was designed by the UNEP-Tongji Institute staff and a faculty drawn from a dozen universities and educational institutes in the region. A masters course will be offered from 2005, closely tied to the UN Decade of Education for Sustainable Development.

The UNEP Environmental Training Network for Latin America and the Caribbean, which dates back to 1981, continued to support a wide range of activities, including two books about capacity building and a publication of Latin American Environmental Thought. Other highlights include a video: *Experiences from Farmer to Farmer: 35 Years of Agro-ecology*, and a monthly bulletin, *Recent News on Environmental Education*, providing information on opportunities for environmental education, including events, courses and publications.

WORLD ENVIRONMENT DAY

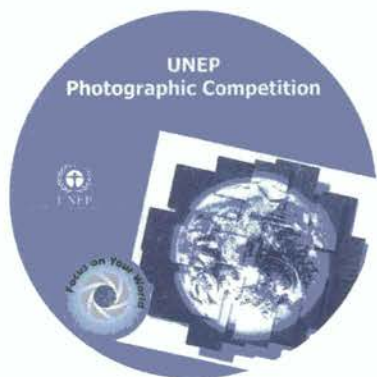
UNEP special events and awards generate considerable media interest worldwide and help galvanize environmental awareness and action. Foremost among them is World Environment Day, the UN system's flagship environmental event, celebrated each year on 5 June. The main international celebrations of World Environment Day 2004, under the theme *Wanted! Seas and Oceans: Dead or Alive?*, were held in Barcelona, Spain, in close collaboration with the Universal Forum of Cultures.

World Environment Day grows in popularity and interest each year. In 2004, the World Environment Day interactive web site, which for the first time was available in six languages, saw unprecedented traffic, with a total of over half a million hits between January and June, and UNEP received activity reports from a record 102 countries. Activities included clean-ups, tree planting, recycling and environmental awareness campaigns, art and essay competitions, conferences, concerts and sports events. They involved all sectors of society, including governments, non-governmental organizations, community and youth groups, business, industry, and schools. World Environment Day 2005 will be hosted by San Francisco, on the theme *Green Cities: Plan for the Planet!* The host city has already embarked on an extensive programme of fund and awareness raising.

UNEP has also strengthened its links with another global environmental campaign, Clean Up the World, which was established with UNEP seed money in 1993 and now mobilizes more than 40 million people around the world each year. This year's Clean Up the World campaign brought together a milestone 600 member communities from a record number of



UNEP maintains strong links with the global environmental campaign, Clean Up the World, which was established with UNEP seed money in 1993.



The fourth UNEP Focus on Your World photographic competition on the environment attracted over 30,000 entries.

115 nations. The core of UNEP's agreement with Clean Up the World revolves around mutual reinforcement of each organization's objectives through media outreach and other public relations initiatives. For example, the UNEP logo appears on all Clean Up the World publicity materials, fact sheets etc., and the UNEP Executive Director contributes a message to the globally distributed Clean Up the World Handbook.

World Environment Day 2004 also marked the launch of the fourth Focus on Your World photographic competition on the environment in Barcelona along with simultaneous launches in 20 cities worldwide. Once again sponsored by Canon Inc., the competition attracted nearly 30,000 entries. The Focus on Your World award ceremony will be held in the UN Pavilion at Expo 2005 in Japan. All the winning entries will be exhibited there, after which they will be exhibited globally.

UNEP SASAKAWA ENVIRONMENT PRIZE

In September 2004, the UNEP Sasakawa Environment Prize celebrated its 20th anniversary in Beijing, China. For two decades, the UNEP Sasakawa Environment Prize has recognized and rewarded important environmental leaders. To commemorate this important milestone, UNEP, in collaboration with the State Environmental Protection Administration (SEPA) of China, and sponsored

by the Nippon Foundation, organized a three-day event in September 2004 that brought together 10 of the 28 laureates and four of the six selection committee members, as well as noted environmentalists from the region to discuss some of the world's most important sustainable development issues under the overall theme *Environment and Development—The Last 20 Years: Progress Where?*



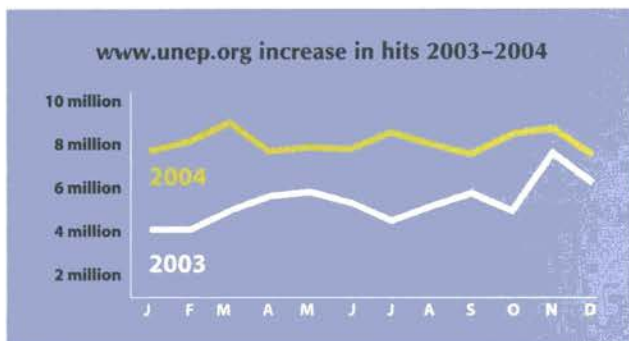
Panel discussion on energy at the 20th anniversary of the UNEP Sasakawa Environment Prize, Beijing, China 27-29 September 2004. From left: Adriana Hoffman, member of UNEP Sasakawa Environment Prize selection committee; Klaus Toepfer, UNEP Executive Director; translator; Zhu Guangyao, Vice Minister of China's State Environmental Protection Administration; and Wolfgang Burhenne, 1991 Prize Laureate.

REACHING OUT

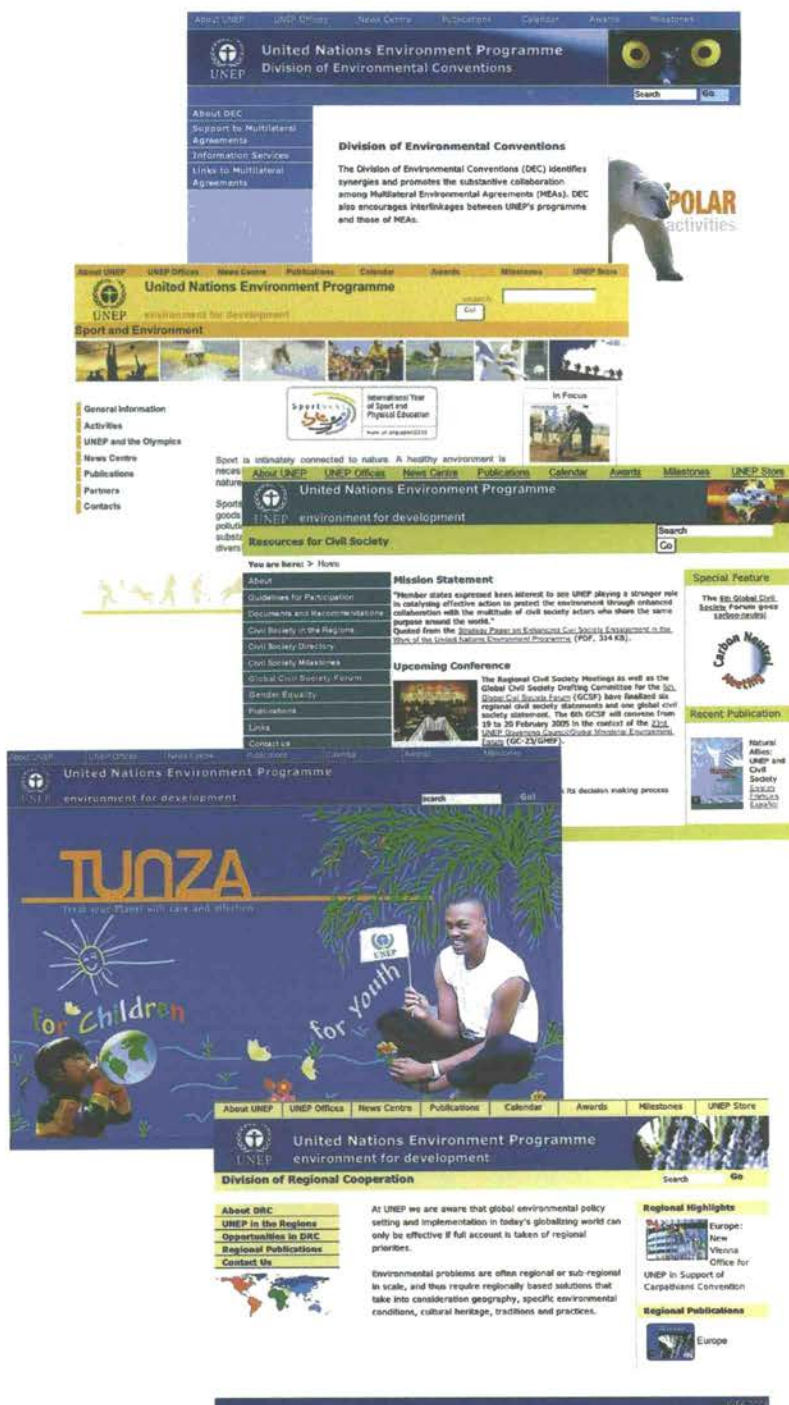
UNEP reaches millions of people annually through its proactive media liaison, its TV production partnerships, its publications and periodicals, and through its web site www.unep.org. The web site has undergone a thorough overhaul, and now offers a full two-language service (English and French) and vastly improved access speed. Hits have increased from 63.3 million in 2003 to nearly 100 million hits in 2004. Further analysis reveals that visitors to www.unep.org are also spending more than twice as much time on the site once they arrive.

In 2004, UNEP's magazine *Our Planet* focused on Women, Health and Environment, Hazardous Waste, Seas, Oceans and Small Island Developing States, and Water, Sanitation and People. The magazine has an annual print run of around 70,000 copies, with at least 50 per cent of the editions receiving considerable sponsorship from interested partners, such as the UN Foundation. The Internet editions are read by around 7 million people from 118 countries. Over the past 12 months Internet readership of *Our Planet* has almost doubled, with monthly readership now topping 400,000. *Our Planet* is printed in English, French and Spanish with Korean and Chinese language versions produced by local UNEP-linked committees.

UNEP continued its long-standing partnership with the editorially independent Television Trust for the Environment (TVE) during 2004. TVE's Earth Report bulletins on environment and development are broadcast on BBC World television to an estimated 750 million homes and hotels worldwide. TVE also collaborates with UNEP on the production of a range of video news releases, public service announcements and conference curtain raisers.



UNEP's web site www.unep.org has undergone a thorough overhaul, with a full two-language service (English and French) and vastly improved access speed. Hits increased from 63.3 million in 2003 to nearly 100 million in 2004.



SUSTAINABLE BUSINESS AND INDUSTRY

SUSTAINABLE CONSUMPTION

According to Agenda 21, unsustainable consumption and production, particularly in industrialized countries, is the major cause of the continued deterioration of the global environment. With the rapid growth of many countries in the less developed world, promoting sustainable production and consumption patterns is becoming ever more important. UNEP is helping decision makers in government, local authorities, and industry to develop and adopt policies and practices that are cleaner and safer, make efficient use of natural resources, incorporate environmental costs; and reduce pollution. Through its six Regional Offices, UNEP is also improving access to relevant environmental information, building capacity and demonstrating, through successful examples, how sustainable development practices can be implemented by business and consumers.

Along with the UN Department of Economic and Social Affairs (DESA), UNEP is the lead agency for developing and promoting a 10-year framework of programmes in support of regional and national initiatives to accelerate the shift towards sustainable consumption and production called for at the World Summit on Sustainable Development in 2002. The UNEP-UNDESA website on sustainable production and consumption was launched during the Commission on Sustainable Development meeting in New York, in April 2004. During the year, UNEP organized regional consultations on the framework for Africa, Europe and the Baltic States, and several meetings to look at individual thematic areas of production and consumption, such as advertising, youth, sustainable procurement and life-cycle management. UNEP also organized an Advisory Task Force to guide its own production and consumption strategy and work plan and, in December 2004, launched a new *Resource Kit on Sustainable Consumption and Production*.

In November 2004, at the eighth International High-Level Seminar on Sustainable Consumption and Production, a steering committee was organized to prepare for the second international review meeting on the 10-year framework, which will be held in Costa Rica in September 2005. The seminar, which focused on the two over-arching themes of meeting Basic Needs and Delivering Global Solutions, was attended by 250 participants from 60 countries. Participants agreed on a set of recommendations to guide future work.

UNSUSTAINABLE CONSUMPTION AND PRODUCTION, PARTICULARLY IN INDUSTRIALIZED COUNTRIES, IS THE MAJOR CAUSE OF THE CONTINUED DETERIORATION OF THE GLOBAL ENVIRONMENT...





California Governor Arnold Schwarzenegger fills up the first Hydrogen Hummer made as he joins with representatives from BP and PRAXAIR to dedicate the first retail-designed hydrogen fueling station for California at Los Angeles Airport on 22 October 2004. The main celebrations of World Environment Day 2005 will be hosted for the first time in North America, in the Californian city of San Francisco. © Associated Press/Ann Johansson



Resource Kit on Sustainable Consumption and Production

- ADVERTISING
- ECO-DESIGN
- ENERGIES
- FOOD
- HOUSING
- LEISURE
- LIFESTYLES
- MOBILITY
- NICT
- TEXTILES
- TOURISM
- WATER

The UNEP Resource Kit on Sustainable Consumption and Production, available in English and French, is composed of fact sheets on 12 different topics: advertising, eco-design, energies, food, housing, leisure, lifestyles, mobility, new information and communications technologies, textiles, tourism and water.

CLEANER AND SAFER PRODUCTION

During the year, the number of signatories to the International Declaration on Cleaner Production rose to more than 450. Over 30 Cleaner Production Centres worldwide benefited from training programmes on Facilitating the Implementation of Multilateral Environmental Agreements through Cleaner Production, Integrating Cleaner Production and Sustainable Consumption and Cleaner Production in Industrial Estates. UNEP also issued a CD-ROM, the *Cleaner Production Companion*, which includes more than 160 documents, training packages, customized presentations, technical manuals, video clips and other material.

Safer production was also enhanced during 2004. Follow-up advice was given on accident prevention in countries such as China, Iran, Korea and Peru that had experienced industrial or transport accidents, and several countries were assisted in implementing Awareness and Preparedness for Emergencies at Local Level (APELL) programmes.

In the last two decades UNEP's APELL programme has been introduced in more than 30 countries and 80 industrial communities worldwide, and has been expanded to an increasing number of sectors, for example transportation, port areas and mining. During 2004, UNEP also joined an international consortium to create a new web portal to advise on good environmental practices in mining. The web site <http://goodpracticemining.com> is a compilation of successful experiences, guidelines and case studies. UNEP is also working with the Offshore Oil and Gas Forum to improve understanding by governments and oil industry managers of environmental issues.

LIFE CYCLE THINKING

UNEP's Life Cycle Initiative is promoting life cycle thinking throughout the globe. Its task forces and experts produce information materials and establish forums for sharing best practices. Publications in production during 2004 include *Why Take a Life Cycle Approach?* and a technical report *Life Cycle of Metals*. UNEP is also active in promoting sustainable procurement. A *Training Package on Sustainable Procurement*, produced in conjunction with the World Bank, UNDP and IAPSO, was tested in Ghana in June 2004. UNEP has also started consultations with several UN organizations to promote sustainable procurement in UN operations and projects.

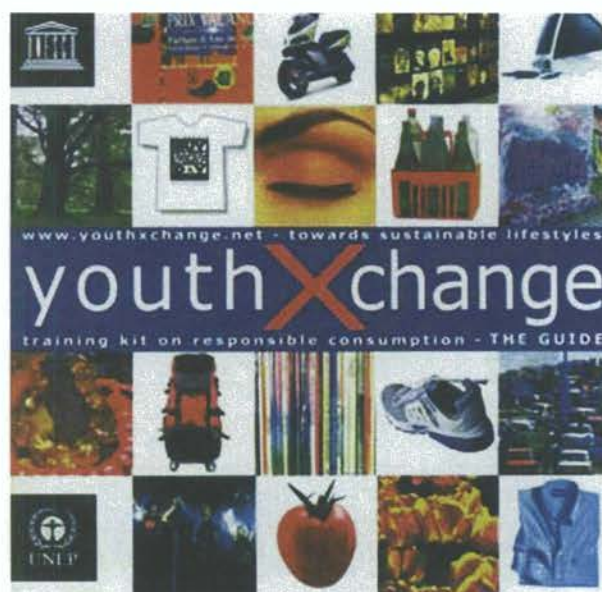
In the Asia-Pacific region, where consumption levels are growing most rapidly, UNEP launched a European Union-funded project, Sustainable Consumption Asia (SC.Asia). The goal of the project is to help to bring growing middle class consumerism in Asia more in tune with the environment. The region is characterized by wide disparities in wealth and spending power. While consumption needs to rise to reduce poverty and ensure basic needs are met, there is considerable potential for the rapidly growing economies of Asia to leap-frog some of the phases and mistakes

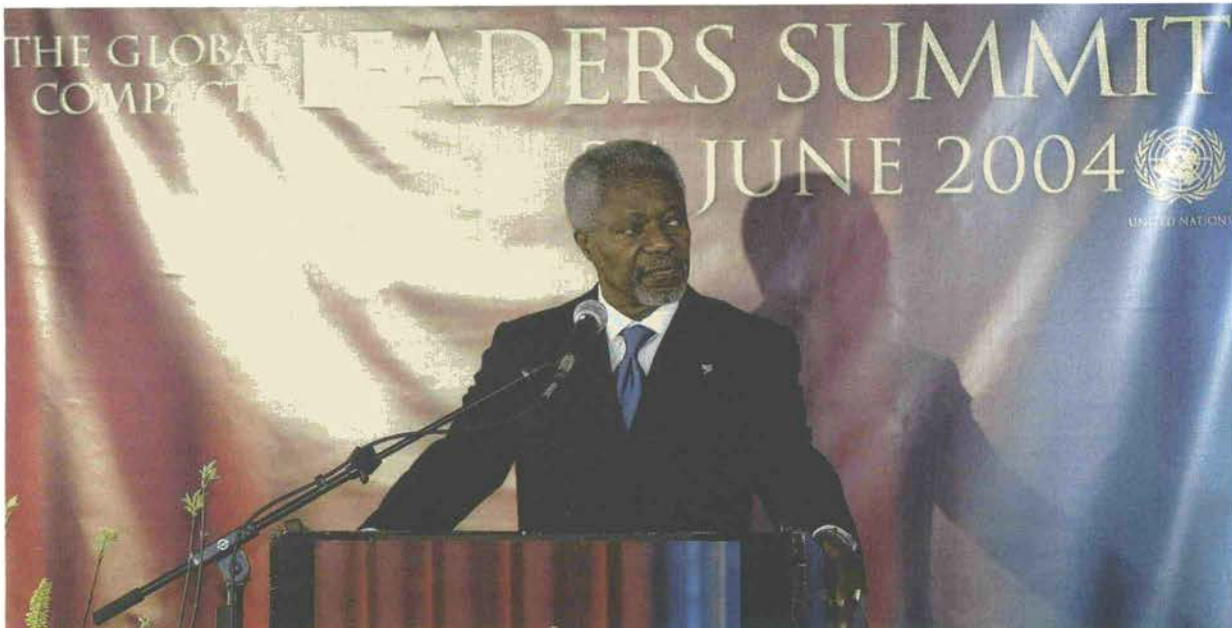
of western countries by adopting sustainable practices such as recycling programmes, public awareness campaigns, corporate accountability and environmental laws and economic incentives that promote cleaner production and sustainable consumption.

UNEP is also working closely with youth, a major consumer group whose habits and practices now will largely determine their future demands and their impact on the environment. The UNEP/UNESCO youthXchange project continued to expand in 2004, with 14 translations of the youthXchange guide and a web site <http://www.youthxchange.net> providing training materials and case studies for teaching sustainable consumption in schools ready for testing in UNESCO schools in the run-up to the UN Decade of Education for Sustainable Development.

UNEP also presented its concept of sustainable lifestyles in the exhibition *You Buy, You Decide*, at the Universal Forum of Cultures in Barcelona, Spain and, as part of the Buying for a Better World Initiative, supported the first French Fashion Catwalk on environment and fashion. The show highlighted the work of European, African and Asian designers working to produce clothes that respect the environment and people.

The UNEP/UNESCO YouthXchange programme is designed to give young people, NGOs, teachers, institutions, etc. the tools to think for themselves and tell others how to respect people and the environment in daily life.





United Nations Secretary-General Kofi Annan addressing the Global Compact Leaders Summit on 24 June 2004 at the United Nations in New York. UNEP contributes to the environmental component of the Global Compact. © Don Emmert/AFP/Getty Images

TRADE AND ENVIRONMENT

Economic development and trade-related considerations are intrinsic to the negotiation and implementation of multilateral environmental agreements (MEAs). At the same time, environmental considerations underpin all sustainable development strategies. Recognizing this, UNEP's policy on trade and environment is to work to integrate environmental issues into the mainstream of economic and development policies. UNEP achieves this by providing country- and regional-level technical assistance and training through workshops, targeted assessments and publications, and through its participation in the UNEP-UNCTAD Capacity Building Task Force on Trade, Environment and Development.

In March 2004, UNEP and the Korean Ministry of Environment organized a meeting on Capacity Building for Integrated Policy Design and Implementation for Sustainable Development. The meeting provided an opportunity for representatives from Governments of both developing and developed countries, international organizations, MEAs, regional institutions and other stakeholders to develop capacity building recommendations. The meeting focused on the development of mutually supportive trade and environment policies in the promotion of sustainable development and poverty alleviation. In April, UNEP convened the fifth Workshop on

Fishery Subsidies and Sustainable Fisheries Management. The workshop brought together more than 100 individuals from 37 national governments, as well as inter-governmental organizations, non-government organizations, regional fisheries management organizations and academic institutions to exchange views on the impacts of fishing subsidies and how to reform them. The global fisheries crisis was highlighted by UNEP's *GEO Year Book* in March 2004, and featured as one of the UN's top-10 under-reported stories for 2004.

CORPORATE ENVIRONMENTAL RESPONSIBILITY

UNEP contributes to the environmental component of the UN Global Compact, a voluntary initiative launched by the UN Secretary-General in 2000 to encourage business and industry to embrace and promote basic human rights, labour and environmental values. In April 2004, UNEP co-hosted the Global Compact Policy Dialogue on Sustainable Consumption: Marketing and Communications, in Paris. Later in the year, UNEP was represented at the Global Compact Leaders Summit. At the Summit, companies were encouraged to use Global Reporting Initiative (GRI) indicators when communicating on their progress in implementing Global Compact principles. UNEP is a member of the GRI, and is contributing to the general development of the reporting guidelines and to

Age of partnerships

specific sectoral supplements, such as for the public sector, chemicals sector and the logistics and transportation sector, all of which are currently under development.

Also at the Global Compact Leaders Summit, members of the UNEP Finance Initiative Asset Management Working Group, a group of 12 fund managers representing assets worth US \$1.6 trillion published a report calling on public and private sector leaders to embed sustainability and governance best practice at the heart of our markets. Subsequently, in July 2004, UNEP launched the Responsible Investment Initiative. The Initiative is developing responsible investment principles for the global institutional investment community, notably the pensions sector, in an effort to protect both the planet and the investments of shareholders. Major industries and investors are growing increasingly concerned about the financial implications of global environmental change, especially the growing cost of weather-related disasters.

SPORT AND ENVIRONMENT

There is a growing realization within the United Nations that sports and the sports industry have a major role to play in promoting sustainable development. The objective of UNEP's Sport and Environment Strategy is to use the popularity of sports to increase environmental awareness and to promote environmentally sound practices in sport, including the management of sporting events, the building of sports facilities and the manufacture of sporting goods.

UNEP worked closely with various partners to help boost environmental awareness during the summer Olympic Games in Athens Greece. © UNEP



Leaders of Pakistan's sporting goods industry, which manufactures more than 60 per cent of all soccer balls used worldwide, signed the Lahore/Sialkot Declaration on Corporate Environmental Responsibility at the third Global Forum for Sports and Environment. The Declaration pledges to raise the importance of sustainable development and the environment in work principles, reduce and improve the use of water and energy during the production of sporting goods, introduce cleaner technology, reduce the amount of toxic and chemical waste and other pollutants, raise environmental awareness and action among company workers, and promote and sponsor children and youth activities linking good health, sport and environment. © UNEP

The major sporting event of 2004 was the Athens Olympic Games. Since the inclusion of environmental sustainability as a principle of Olympism, all potential host cities are now including the environment as a factor in their bids. In June 2004, UNEP signed an agreement with the Athens Olympic Committee to help them boost environmental awareness during the summer Olympics. UNEP is also working closely on environmental issues with Torino, Italy, which will host the 2006 Winter Games, as well as Vancouver, host of the 2010 Winter Games, and it has established contact with all the cities bidding for the 2012 Games.

UNEP is also forging closer and wider links with the sporting goods industry. November 2004 marked the occasion of the third Global Forum for Sports and Environment, organized by UNEP in collaboration with the Global Sports Alliance, in Lahore and Sialkot, Pakistan. At the conference, leaders of Sialkot's sporting goods industry, which manufactures more than 60 per cent of all soccer balls used worldwide, signed the Lahore/Sialkot Declaration on Corporate Environmental Responsibility. Pakistan's sporting goods industry has already tackled the contentious issue of child labour, and has now turned its attention to improving working and environmental standards in line with the UN Global Compact.

SEED AWARDS

A new initiative, launched in January 2004 at the World Economic Forum by UNEP, the World Conservation Union, the UK-based Stakeholder Forum and UNDP, aims to support innovative partnerships that advance the achievement of the Millennium Development Goals. The SEED Initiative—Supporting Entrepreneurs in Environment and Development—is designed to recognize and support people and organizations that are working together to forge new strategies for the sustainable use of natural resources. Over 260 partnership proposals were submitted between April and August 2004, representing 66 countries and 1,200 organizations. Of these, 12 finalists were selected for presentation at the IUCN World Conservation Congress in November 2004. Five of the 12 will be selected to receive support for their innovative partnership proposals in 2005.



VitAngo - Vitamin A from Mangoes, Kenya
Reducing vitamin A deficiency and generate income by increasing production and solar drying of mangoes, improved marketing mechanisms and agroforestry education in schools and communities.



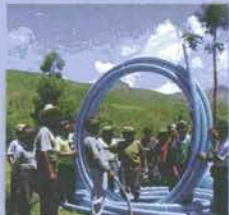
Cows to Kilowatts, Nigeria
Installing a biogas plant to reduce greenhouse gas emissions, produce affordable cooking gas and address waste management and water pollution caused by one of Nigeria's largest slaughterhouses. Potential for replication across Africa.



Creating New Markets for Biologically Diverse, High-Yielding Indigenous Rice, Cambodia, Madagascar & Sri Lanka
A programme to market indigenous varieties of rice to improve incomes, conserve rice biodiversity and promote human and environmental health. Tremendous potential to spread across multiple rice-growing regions.



Harvesting Seabuckthorn at the Top of the World, Nepal
Sustainable harvesting of wild seabuckthorn (highly nutritious and versatile berry), creation of seabuckthorn nurseries, and expansion of markets to safeguard knowledge of medicinal plants and biodiversity of Nepal.



Americas/Caribbean
Agua Para Todos/Water for all, Bolivia
A novel partnership model fully engaging the local population to provide access to low-cost potable water in peri-urban areas which could be replicated in similar circumstances worldwide.



The Maya Nut Programme, Nicaragua & Guatemala
Increasing knowledge, production, sales, and consumption of the highly nutritious Maya Nut to improve nutrition, food security and family health. Potential to spread across Central America.

INTERNATIONAL ENVIRONMENTAL GOVERNANCE

CAPACITY BUILDING AND TECHNOLOGY SUPPORT

Technology support and capacity building are key elements of sustainable development, featuring prominently in Agenda 21 and the Johannesburg Plan of Implementation. Capacity building has become an explicit priority for the UN system and is a core component of UNEP's mandate and work. In March 2004, at the eighth Special Session of UNEP's Governing Council/Global Ministerial Environment Forum, a High-level Open-ended Intergovernmental Working Group was established to prepare an intergovernmental strategic plan for capacity building and technology support. The Working Group met three times during 2004: in June, in New York; in September, in Nairobi, Kenya; and in December, in Bali, Indonesia, where it finalized its report to the UNEP Governing Council.

The objectives of the Bali Strategic Plan for Technology Support and Capacity Building are to:

- strengthen the capacity of governments of developing countries and of countries with economies in transition at all levels;
- provide systematic, targeted, long and short-term measures for technology support and capacity building;
- enable collaboration with all relevant stakeholders and provide a basis for a comprehensive approach to developing partnerships, including public-private partnerships;
- emphasize the identification and dissemination of best practices and fostering of entrepreneurship and partnerships;
- enhance delivery by UNEP of technology support and capacity building based on best practices from both within and outside UNEP;
- strengthen cooperation among UNEP, multilateral environmental agreements (MEAs), and other bodies engaged in environmental capacity building, including the UN Development Programme (UNDP), the Global Environment Facility (GEF) and other relevant stakeholders; and
- promote, facilitate and finance access to and support for environmentally sound technologies and corresponding know-how.



The Plan highlights the need to enable UNEP to strengthen its own technology support and capacity-building activities, including by reinforcing its role and building on those areas where it has demonstrated comparative advantage and expertise. It also calls for improved interagency cooperation. To that end UNEP is increasing collaboration and joint activities with UNDP in support of internationally agreed environment and sustainable development goals. UNEP and UNDP signed a Memorandum of Understanding at the end of 2004 to improve cooperation in environmental capacity development and to ensure that environmental considerations are incorporated in the mainstream of sustainable development policies and activities.



Eighth Special Session of the Governing Council / Global Ministerial Environment Forum

29-31 March 2004 Jeju, Republic of Korea



Delegates at the eighth Special Session of the UNEP Governing Council/Global Ministerial Environment Forum, 29-31 March 2004, Jeju, Republic of Korea. © Associated Press/Ahn Young-joon

Regarding implementation, the Bali Strategic Plan states that a bottom-up approach in identifying specific objectives, strategies and activities will be used to reflect the needs of countries and regions, based on inputs from governments and considering views of relevant organizations and stakeholders. It stresses the importance of national ownership, and the strengthening of UNEP regional offices to facilitate the Plan's implementation at national, regional and sub-regional levels. In support of the implementation of the Bali Strategic Plan, UNEP has developed an inventory of its capacity building and technology activities across all UNEP Divisions, including those undertaken directly by its Regional Offices. The database is arranged by category (Environmental Assessment, Biodiversity, Climate Change and Atmosphere, Energy, Environmental Law, Production and Consumption, Water, and Cross-cutting issues), and by geographical focus. An online public-

**GOOD GOVERNANCE,
WITHIN EACH COUNTRY
AND AT INTERNATIONAL
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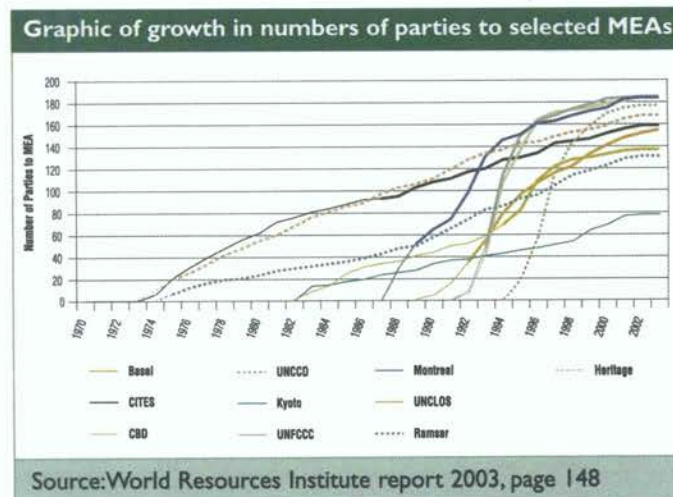
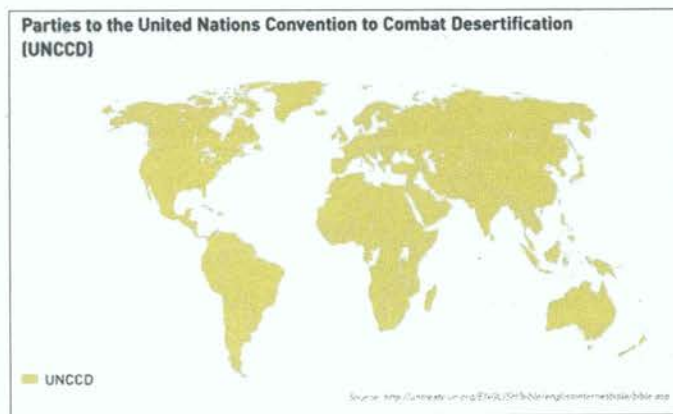
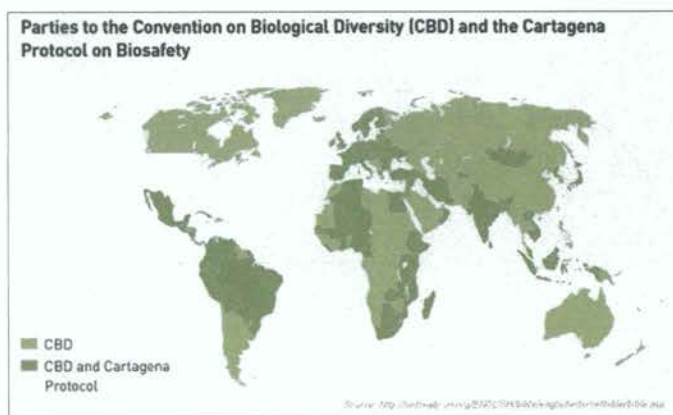
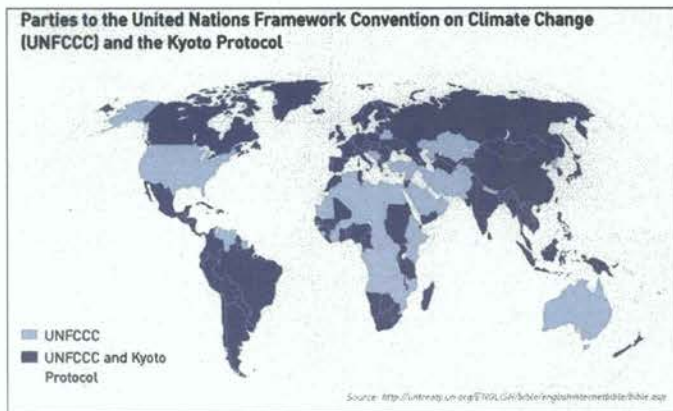
access version will be launched during the February 2005 UNEP Governing Council meeting, and a government portal will enable designated governments to channel official requests for assistance to relevant UNEP Divisions. The database will also help UNEP to report on its activities related to country requests and its implementation of the Bali Strategic Plan.

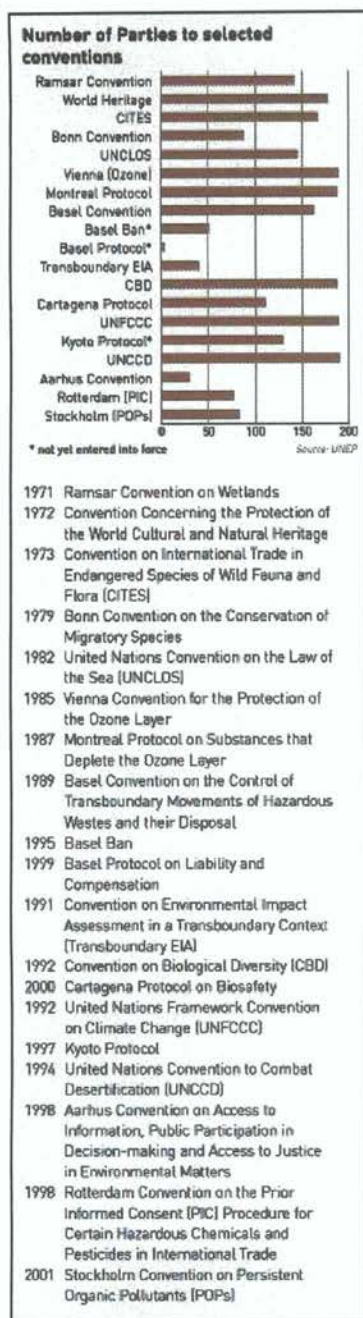
MULTILATERAL ENVIRONMENTAL AGREEMENTS

International cooperation is essential for sustainable development. Multilateral environmental agreements (MEAs) are a manifestation of that cooperation. There are more than 500 global, regional or bilateral environmental treaties that together demonstrate international commitment to environmental protection. However, there is a growing focus on the need to make these institutions, their policies and their legal frameworks work together more effectively and harmoniously. In March 2004, the tenth meeting of MEA secretariats was held at UNEP headquarters. Participants included all the UNEP-administered conventions, plus the UN Framework Convention on Climate Change, the UN Convention to Combat Desertification and the Ramsar Convention. Communication, coordination, coherence and capacity building were all high on the agenda.

Among the recommendations made at this meeting was one that related to the need for establishing systematic contact between UNEP and the MEA secretariats, synchronized with meetings of the Environmental Management Group (EMG) to further enhance synergies among international organizations involved in sustainable development. UNEP provides the secretariat for the EMG, which comprises the specialized agencies, funds and programmes of the UN system along with the MEA secretariats. The EMG's current focus is on the environmental aspects of fresh water, sanitation and human settlements, environment-related capacity building, and sustainable procurement for the UN system.

Another area of focus for the EMG is the harmonization of national reporting for the biodiversity-related conventions. Despite the fact that their governmental memberships are broadly the same, these instruments have all developed separately from each other. With their geographically diverse secretariats and often similar reporting demands they can collectively





There are more than 500 global, regional or bilateral environmental treaties that together demonstrate international commitment to environmental protection. During 2004, two environmental conventions came into force: the Stockholm Convention on Persistent Organic Pollutants and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. The Kyoto Protocol on Climate Change was ratified by the Russian Federation, bringing it into force on 16 February 2005, and the year also marked the 25th anniversary of the Convention on Migratory Species.

present an unnecessary burden on their members, especially less-developed countries. Addressing some of these issues was the focus of *Harmonization of Information Management and Reporting for Biodiversity-related Treaties*, published by the UNEP World Conservation Monitoring Centre in February 2004. The report, a summary of four country-based pilot projects, makes a number of recommendations for international follow-up, and sets out guidelines for national-level harmonization of reporting and related work.

UNEP also provides media and public information support to the MEA secretariats through its Information Unit for Conventions in Geneva. This unit seeks to make environmental treaties and the scientific, technical, and legal issues underlying them more easily understood by non-specialists, particularly policy-makers and the media. It supports the UNFCCC, the IPCC, the Convention on Biological Diversity, the Montreal Protocol on Substances that Deplete the Ozone Layer, CITES, and the Basel, Rotterdam and Stockholm Conventions. Recent products, produced jointly with the secretariats, include popular guides to the Stockholm and Rotterdam Conventions, a Spanish-language climate change information kit, a 12-page CITES press kit and a booklet on how to promote national level synergies among the Basel, Rotterdam and Stockholm Conventions.

ENVIRONMENTAL LAW

Legal capacity building has always been a major focus for UNEP. UNEP’s work to strengthen legal regimes that address global, regional and national environmental problems is governed by the Montevideo Programme for the Development and Periodic Review of Environmental Law, which is now in its third decade of implementation. UNEP’s Environmental Law Branch has reviewed the implementation of Montevideo III, which was adopted in 2001, and has drafted suggestions for the programme’s focus in coming years, which will be presented to the UNEP Governing Council in February 2005.

During 2004, UNEP continued to provide technical assistance and capacity building to developing countries and countries with economies in transition to develop or strengthen national environmental legislation and institutions. UNEP also organized global, regional and national training of legal experts. For example, the Regional Training Programme on Environmental Law and Policy, in Tianjin, China, in August 2004, focused on the implementation of environmental law and multilateral environmental agreements, with a special emphasis on compliance and enforcement. Another example is the UNEP Course on International Law Making and Diplomacy, at the University of Joensuu, Finland, which targets participants from developing and developed countries.

In Africa, UNEP is managing the Partnership for Development of Environmental Law and Institutions in Africa (PADELIA) project. PADELIA, which is funded by Belgium, Luxembourg, Germany, Norway, the Netherlands and Switzerland, cover 13 African countries and three sub-regions, namely the Sahel, the Southern African Development Community (SADC), and East Africa. PADELIA highlights from 2004 include an Experts Meeting for Review of Draft Guidelines on Framework Environmental Law in Africa and a Symposium of Environmental Law Lecturers from African Universities, which decided to establish an Association of African Environmental Law Academics to help to develop teaching materials and an African environmental law journal. PADELIA also published a *Compendium of Environmental Laws of African Countries, Volume 1: Framework Laws and Environmental Impact Assessment Regulations*.

Among UNEP's most significant environmental law programmes is its Global Judges Programme. The judiciary has a central role to play in implementing and advancing environmental law. Over the past two years UNEP has organized regional and sub-regional needs assessments across the globe and is now engaged in national-level capacity building in developing countries and countries with economies in transition.

UNEP also launched a new technically and substantively improved environmental law web site during 2004. The site contains information on UNEP's environmental law activities and on environmental law issues. It also offers direct access to Ecolex, a comprehensive global environmental law database and information service run by UNEP, the World Conservation Organization (IUCN) and the UN Food and Agriculture Organization (FAO).

SUPPORTING REGIONAL GOVERNANCE

Because of Africa's special development needs it remains a priority for UNEP and the UN system as a whole. UNEP, through the Global Environment Facility (GEF), has been instrumental in helping African countries draft the environmental action plan of the New Partnership for Africa's Development (NEPAD). It is also supporting a major capacity building programme to enable African countries to implement it. A key component is the development of five sub-regional action plans. In September 2004 the first of a series of training workshops was convened for this purpose at UNEP headquarters involving more than 60 participants representing African governments, African regional economic communities, the African Union and the UN Economic Commission for Africa.

UNEP is aware that global environmental policy setting and implementation in today's globalizing world can only be effective if full account is taken of regional priorities. Environmental problems are often regional or sub-regional in scale, and thus require regionally based solutions that take into consideration geography, specific environmental conditions, cultural heritage, traditions and practices.



UNEP also provides the secretariat for the African Ministerial Conference on the Environment (AMCEN). The tenth AMCEN meeting took place in Sirte, Libya, the birthplace of the African Union, in June 2004, with its main focus on the implementation of the NEPAD environment initiative. Highlighting the importance of capacity building, the assembled ministers issued the Sirte Declaration on the Environment for Development.

In Latin America and the Caribbean, where UNEP provides the secretariat for the Forum of Ministers of the Environment, UNEP opened a new office in the Brazilian capital, Brasilia, as part of its commitment to strengthening its programme delivery at regional and sub-regional levels. In the previous year UNEP opened a similar office in Beijing, China. These offices complement and add to the work of UNEP's six regional offices, and reflect the importance of these two nations to sustainable development. Brazil is one of the world's most biologically diverse nations and its Amazon rainforest is a globally important ecosystem. Among the office's roles will be supporting the development of sustainable energy—Brazil is already a world leader in biomass-based renewable energy—and helping identify and support projects that respond to national priorities such as climate change, biodiversity, land degradation, transboundary water and chemicals management issues.

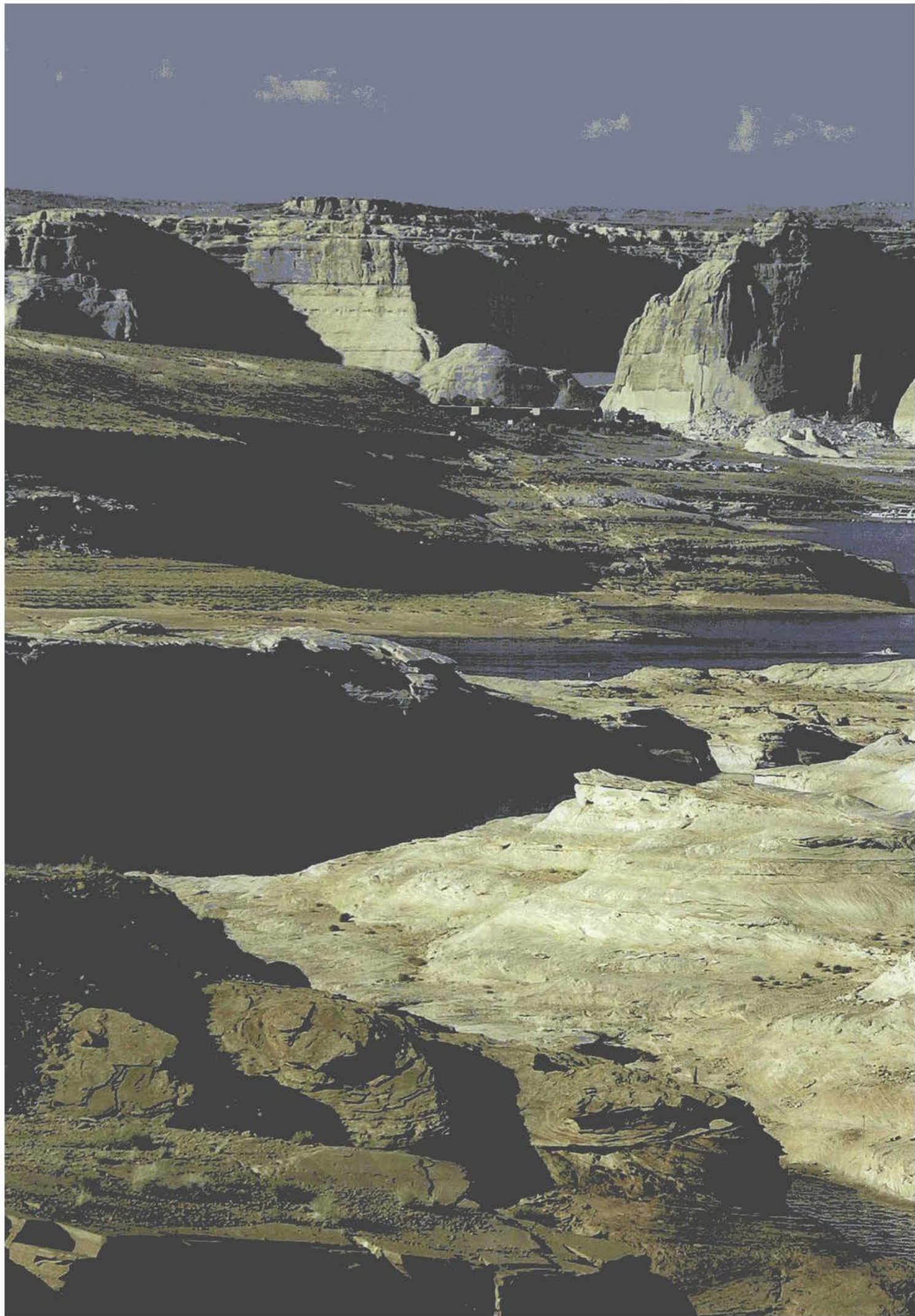
In Central Asia, UNEP signed an agreement with the Economic Cooperation Organization (ECO) to strengthen environmental management in the sub-region. ECO is an intergovernmental organization established by Iran, Pakistan and Turkey, that now also includes Afghanistan, Azerbaijan, Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan. The agreement identifies the potential for joint activities to increase the use of renewable energy, through UNEP's Solar and Wind Energy Resource Assessment project, to strengthen environmental law making, enhance environmental education and training programmes, catalyze more eco-friendly tourism development and improve environmental monitoring and assessment.

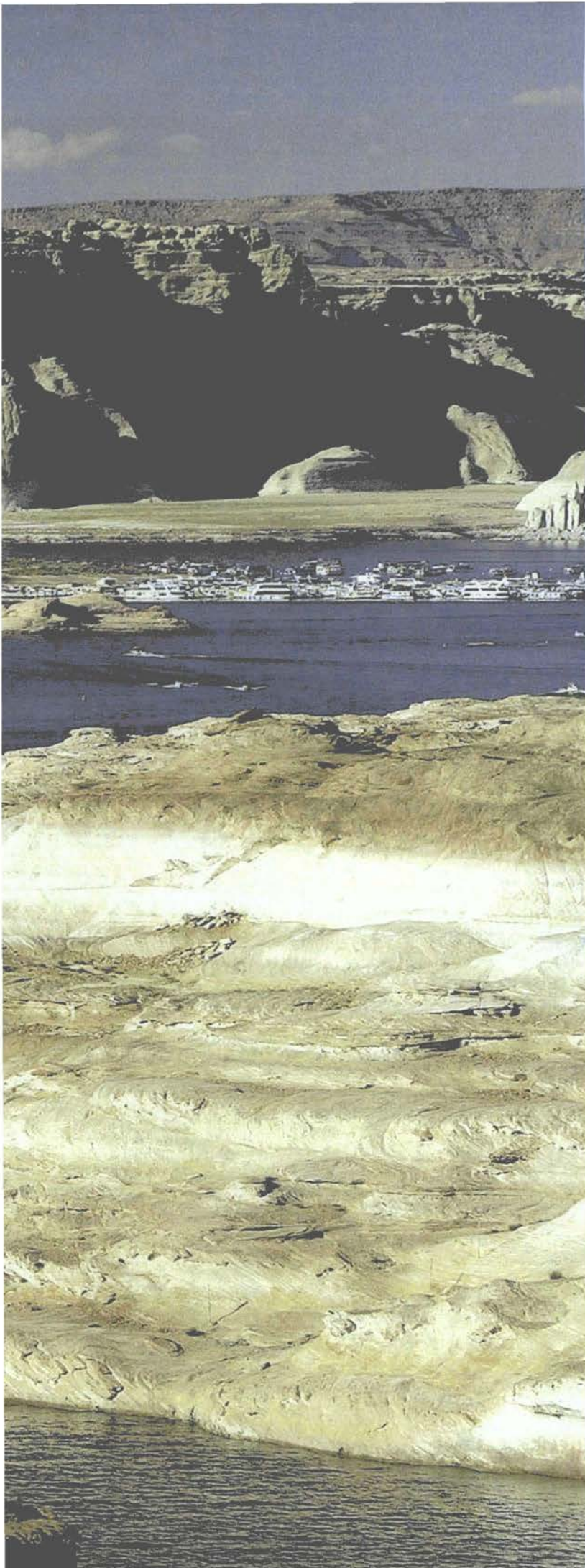
UNEP AND THE GLOBAL ENVIRONMENT FACILITY

UNEP is one of three implementing agencies of the Global Environment Facility (GEF), alongside the World Bank and the UN Development Programme (UNDP). The GEF helps developing countries and those with economies in transition to meet the agreed incremental costs of measures designed to achieve global environmental benefits in six focal areas: biological diversity, climate change, international waters, ozone layer depletion, land degradation and persistent organic pollutants.

UNEP provides support and the secretariat to the Scientific and Technical Advisory Panel (STAP) of the GEF, corporate support to the GEF—for example in the development of policy—and supports the development and implementation of GEF-funded projects. GEF projects arise from the initiative of, and are carried out by, a variety of organizations, including government agencies, NGOs, universities and research institutes. As a GEF implementing agency, UNEP works with these organizations to develop their project ideas and to oversee the implementation of the work once it gets going, providing managerial, administrative and technical support to the project management staff on the ground. UNEP is supporting the implementation of over 500 projects in 152 countries spanning all regions of the world.

An important component of almost all UNEP/GEF projects is building capacity to manage the environment in a sound manner. To this end, UNEP also supports the implementation of national enabling activities—projects that strengthen the capacity of countries to meet their obligations under the global environmental conventions. For example, the UNEP/GEF global biosafety programme is building capacity in 138 countries to implement the Cartagena Protocol on Biosafety of the Convention on Biological Diversity.





Protecting the earth's resources

A white 'bathtub ring' of calcium carbonate in this 25 September 2004 picture of Lake Powell in the United States of America's Colorado Basin is testament to a five-year drought that has left this massive reservoir less than half full, threatening water and electricity supplies to 25 million people and millions of acres of farmland. Globally, human production and consumption patterns are putting environmental resources under increasing pressure. © David McNew/Getty Images

ASSESSING THE ENVIRONMENT

STRENGTHENING UNEP'S SCIENTIFIC BASE

One of UNEP's main functions is to keep the world's environmental situation under review to ensure that emerging environmental problems of wide international significance receive appropriate and adequate consideration by governments. UNEP's Global Environment Outlook (GEO) reports have shown that human-induced environmental change has accelerated over the last three decades, necessitating enhanced scientific assessment, monitoring and early warning capacity at all levels. For this reason the UNEP Governing Council established a consultative process to identify and address gaps and needs relating to the work of UNEP and other organizations in keeping our changing environment under review.

An intergovernmental consultation on strengthening the scientific base of UNEP took place in Nairobi in January 2004, with financial support from the Governments of Norway and the Netherlands. The consultation was attended by 157 participants representing 96 countries, with more than 50 observers from intergovernmental and non-governmental organizations (NGOs) and the scientific community. A scientific and technical meeting attended by about 40 representatives of scientific organizations and NGOs worldwide was held prior to the intergovernmental consultation. In addition, 15 intergovernmental organizations met immediately after the consultations to consider their outcome. The conclusions and recommendations of the intergovernmental consultation were presented at the eighth Special Session of the UNEP Governing Council/Global Ministerial Environment Forum, held in Jeju, Republic of Korea, 29–31 March 2004, which called for an evaluation report of the conclusions and recommendations to be considered at its next session.

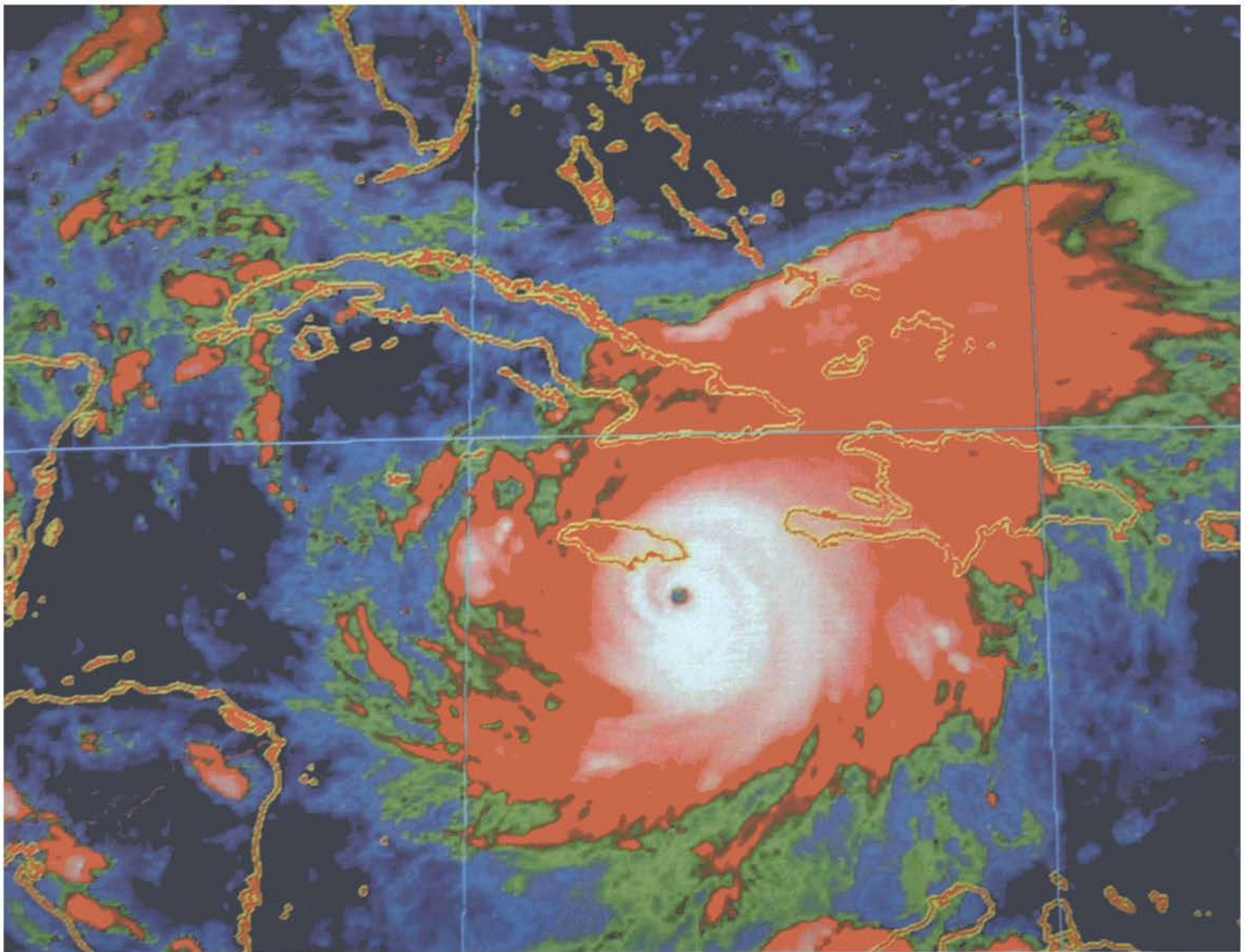
Among the key recommendations was the need to reinforce the Global Environment Outlook (GEO) process and expand UNEP's capacity building activities in environmental assessment at all levels, especially in developing countries. GEO is

a participatory environmental assessment process, involving a worldwide network of collaborating centres and partners. Involving all stakeholders from the outset increases ownership and gives GEO assessments legitimacy. However, not all countries or institutions have equal capacity to contribute. Therefore, capacity building and strengthening the Collaborating Centre network is a core element of the GEO process. During 2004, a number of activities were undertaken to strengthen integrated environmental assessment capacity in Africa, Asia and the Pacific, Europe, Latin America and the Caribbean, and West Asia.

Another key conclusion from the consultation was the reiteration of the central role of the UNEP Governing Council/Global Ministerial Environment Forum in determining priorities for assessments within the context of development goals, possibly in the form of a coherent environmental assessment partnership framework. The UNEP Executive Director has proposed to the 23rd UNEP Governing Council/Global Ministerial Environment Forum that such a framework, tentatively called Environment Watch, should comprise an operational component, consisting of functions needed to keep the environment under review, and a modular component, consisting of modules defined by their thematic and geographic coverage. Such a two-tiered approach would further strengthen international cooperation for meeting the growing demand for more and better data, information and knowledge for environmental early warning and decision making.

GLOBAL ENVIRONMENT OUTLOOK

The GEO process facilitates the interaction between science and policy making. Its outputs include: a global environmental assessment, now being published on a five-year cycle, with *GEO-4* scheduled for 2007; an annual *GEO Year Book* highlighting important emerging issues, as well the significant environmental events and achievements of the year; and a growing number of regional, national and sectoral assessments. During 2004, as part of the planning and design of



Infrared satellite image of Hurricane Ivan, 10 September 2004, about 40 miles south-southeast of Kingston, Jamaica. The Category 4 hurricane ripped through Grenada, damaging an estimated 90 per cent of the homes on the island. Continuing north, it battered Jamaica and the Cayman Islands, bringing storm surges and major flooding. A total of 66 people died. © AP/NOAA/National Hurricane Center

GEO-4, regional multi-stakeholder consultations were held to improve the science-policy interface and strengthen credibility, legitimacy and ownership, and a global *GEO-4* design meeting was organized to define a clear implementation plan for the report. Also during 2004, the *GEO Data Portal* was relaunched to offer a full service in English and French. The *GEO Data Portal* offers the *GEO* user community easy access to harmonized data and information for analysis and report preparation. Regional versions of the Portal have also been initiated in Africa and Latin America and the Caribbean.

March 2004 marked the launch of the first *GEO Year Book* at the UNEP Governing Council meeting in Jeju. A main purpose of the annual publication is to present a clear and timely overview of global and regional environmental issues and developments that have featured during the year and may continue to be major factors in coming years. The *GEO Year Book* included a feature focus on freshwater and its relation to internationally agreed development targets such as the

HUMAN-INDUCED ENVIRONMENTAL CHANGE HAS ACCELERATED IN THE PAST THREE DECADES...

Millennium Development Goals. It also looked at some new findings on emerging challenges, including the rising number of de-oxygenated coastal 'dead zones' linked to an excess of nutrients, mainly nitrogen compounds, that originate from agricultural fertilizers, vehicle and factory emissions and wastes. Another highlighted issue was the crisis in marine fisheries, while a section entitled 'GEO Indicators' presented a core set of indicators selected to give a consistent and harmonized overview of key global and regional trends and major environmental changes, thereby facilitating the tracking of major environmental issues over the years.

ASSESSMENT IN THE REGIONS

March 2004 saw the launch of *GEO Latin America and the Caribbean 2003*. This, the second of the *GEO LAC* series, presents a holistic view of the state of environment in the region, highlighting both priority and emerging environmental issues. It also points out the urgent need to find a new way forward for development in the region. UNEP has also selected 38 indicators to monitor the progress of the implementation of the Latin American and Caribbean Initiative for Sustainable Development (ILAC). A methodological sheet for each indicator was defined by an expert group under the coordination of the Government of Costa Rica and UNEP and the first set of ILAC indicators was published.

Also, during 2004, four national *GEOs* were published for El Salvador, Guatemala, Nicaragua and Panama, while *GEO Cities* reports were made available for Havana (Cuba), Montevideo (Uruguay), Santiago (Chile) and Sao Paulo (Brazil). The year also saw the *GEO Cities Manual* published in English, and the implementation of a joint UNEP/UN-HABITAT strategy to support urban environmental management in Brazil, Cuba and Peru. Projects that build capacity among youth to carry out environmental assessments were initiated in Argentina and Peru using the *GEO for Youth Manual* as base.

UNEP Executive Director, Klaus Toepfer, with North Korean Environment Diplomat Ri Hung Sik (left) and South Korean Ambassador to Kenya, Suk Jo Lee, at the launch of the first *Report on the State of the Environment in the Democratic People's Republic of Korea*, 27 August 2004. © Bernard Wahihia/UNEP



In the Asia-Pacific region, UNEP released a set of indicators to assist countries to measure their progress towards sustainable development goals. Published in simple graphic form, they allow policy makers to use benchmarks and assess trends in 30 different economic, social and environmental areas. Overall the indicators show progress in economic performance, poverty reduction and human health across the Asia-Pacific region, but declines in the quality of land, air, water and biodiversity resources. Reports have been published for each of Asia-Pacific's five sub-regions. UNEP, in collaboration with the Asian Development Bank, also published the first *Atlas of the Greater Mekong Sub-region*. The Atlas provides comprehensive environmental information, the lack of which has been a major constraint in sustainable development planning and decision making in the sub-region, home to 250 million people. UNEP also published the first *Report on the State of the Environment in the Democratic People's Republic of Korea*. The report lists the country's environmental challenges and provides recommendations for tackling them.

WEST ASIA AND AFRICA

In West Asia, UNEP continued to provide capacity building, with a focus on national and regional training in integrated environmental assessment and developing frameworks for national state of environment reports. UNEP also supported the Abu Dhabi Global Environmental Data initiative, which included the preparation of a regional study on experiences and best practices on the development and management of environmental data. The study integrated 15 reports prepared by national institutions and selected regional organizations. Other work in the region included the development of a regional strategy for capacity building, including a database of training institutions, and guidelines on the development and use of priority environmental indicators. West Asia also saw the publication of a progress report on the State of the Environment in the Arab Region.

In Africa, UNEP published an Africa Environment Outlook (AEO) case studies report on human vulnerability to environmental change, launched during the 10th session of the African Ministerial Conference on the Environment (AMCEN), in Sirte, Libya, in June 2004. The AEO process is one of the main programme activities of AMCEN,

and is a central tool for monitoring the implementation of AMCEN’s programme and the environment initiative of the New Partnership for Africa’s Development (NEPAD). The AEO process and the NEPAD environment initiative will also benefit from the development of the Africa Environment Information Network, whose goal is to enhance countries’ access to reliable environmental data and information. Thirteen countries are involved in the Network’s pilot phase, and UNEP is conducting capacity building throughout the region using the tools developed through the pilot phase, including the dissemination of *National Environment Outlook* reporting guidelines and *AEO Policy Analysis* guidelines, developed in collaboration with the UN Development Programme.

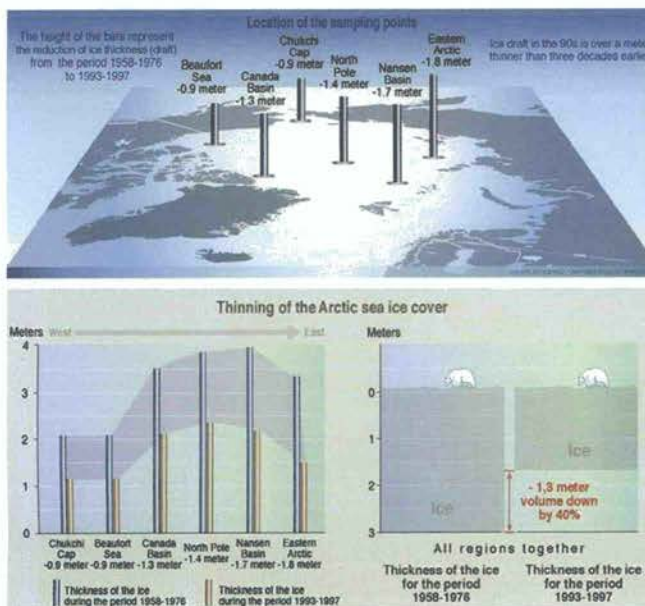
ARCTIC ASSESSMENT

The Arctic ecosystem is increasingly seen as a barometer of global environmental change. March 2004 saw the launch of UNEP’s *Vital Arctic Graphics* web site at the Global Ministerial Environment Forum held in conjunction with UNEP’s Governing Council in Jeju, Republic of Korea. *Vital Arctic Graphics* illustrates the major environmental and

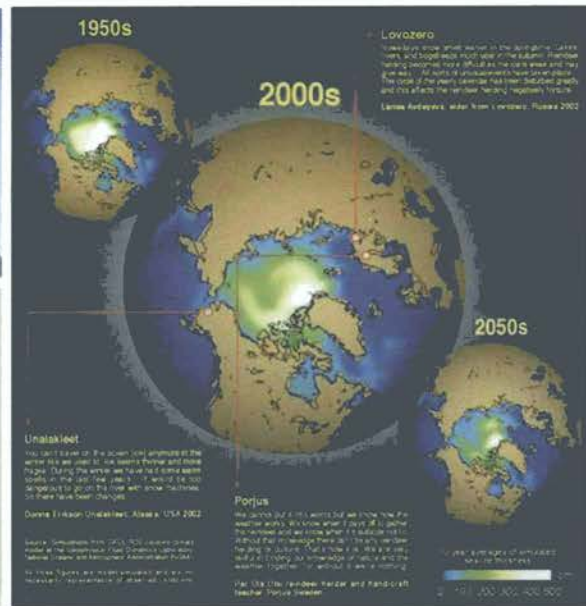
sustainable development issues in the Arctic. These include worrying levels of persistent organic and heavy metal pollutants, the rapid pace of climate change in the region, and the impacts of unsustainable resource development. In cooperation with the SnowChange project, *Vital Arctic Graphics* also highlights the perspectives of indigenous peoples who have lived in the Arctic for thousands of years, and who are now faced with massive environmental change. The growing threat to the Arctic’s unique environment and its indigenous peoples was also the focus of *Arctic Environment: European Perspectives*, jointly published by UNEP and the European Environment Agency. The report warns that the northern polar region faces a diverse range of threats from industrial activities, the fragmentation of wild habitats, unsustainable logging and the over-harvesting of once-abundant fish stocks. Another UNEP report, an *Environmental Assessment of the Barents Sea*, prepared with the Global International Waters Assessment, also highlights over-fishing, especially of cod and haddock, the invasion of the Red King crab and a projected six-fold increase in oil and gas transportation as some of the issues threatening the unique Barents Sea Arctic ecosystem.

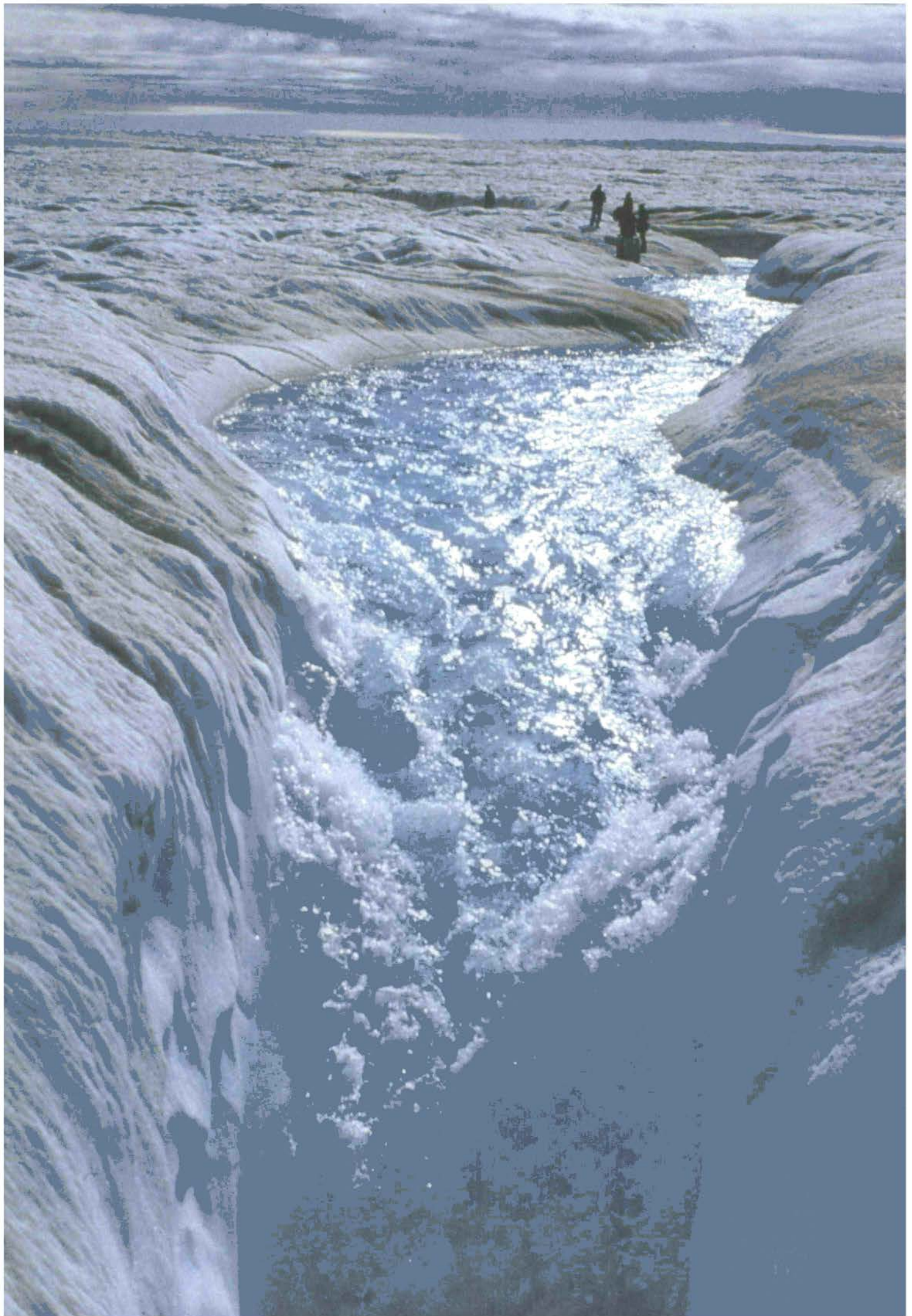
Vital Arctic Graphics illustrates the major environmental and sustainable development issues in the Arctic. These include worrying levels of persistent organic and heavy metal pollutants, the rapid pace of climate change in the region, and the impacts of unsustainable resource development.

Thinning of the arctic ice cover



How much sea ice will be left in 2050?





COMBATING CLIMATE CHANGE

KYOTO PROTOCOL

UNEP's headquarters in Nairobi, Kenya, provided the location for the long-anticipated ratification by the Russian Federation of the Kyoto Protocol in the 10th anniversary year of the UN Framework Convention on Climate Change (UNFCCC). The ratification papers were presented to the UN Secretary-General, Kofi Annan, by Russia's Permanent Representative to the UN, Ambassador Andrey Denisov, in the presence UNEP Executive Director Klaus Toepfer and the 2004 Nobel Peace Prize laureate Wangari Maathai.

Commenting on Russia's ratification, Mr. Annan said: "This is a historic step forward in the world's efforts to combat a truly global threat. Most important, it ends a long period of uncertainty. Those countries that have ratified the Protocol, and which have been trying to reduce emissions of greenhouse gases even before its entry into force, now have a legally binding obligation to do so. Businesses that have been exploring the realm of green technology now have a strong signal about the market viability of their products and services. And the financial community and insurance industry, which have been trying to 'put a price' on the risks associated with climate change, now have a stronger basis for their decision making on incentives and corporate performance."

CLIMATE CHANGE
THREATENS TO
UNDERMINE ALL
INTERNATIONAL
DEVELOPMENT GOALS...

UNEP continues to be a key player in ensuring the Kyoto Protocol's success, through assessment and capacity building activities, its energy programme, and its partnerships with the private sector. Under the Protocol, which comes into force on 16 February 2005, thirty industrialized countries will be legally bound to meet quantitative targets for reducing or limiting their greenhouse gas emissions, and the international carbon trading market, which enables industrialized countries to buy and sell emissions credits amongst themselves, will become a legal and practical reality. For developing countries, the Protocol's Adaptation Fund will start to help developing countries to cope with the negative effects of climate change. At the same time, the Protocol's Clean Development Mechanism (CDM) will move into top gear, encouraging investments in developing country projects that limit emissions while promoting sustainable development.

A stream of meltwater cascading off the vast arctic ice sheet that covers Greenland. The Arctic is seen as the Earth's climate early warning system. A 2004 environment assessment indicated that sea ice in the Arctic has declined by an average of 8 per cent a year over the past three decades. © Roger Braithwaite/Still Pictures

Protecting the earth's resources

UNEP and its UNEP Risoe Centre on Energy, Climate and Sustainable Development have been working since 2002 to help eleven developing countries prepare for the CDM in a project called Capacity Development for the CDM. A major project activity during 2004 was the CDM Investment Forum to help buyers meet sellers of CDM carbon credits and explore possible collaboration.

The North Africa and the Middle East Forum, organized with the Governments of Morocco, Egypt and the host Tunisia, took place in September at Jerba, Tunisia, and was the first time CDM host countries convened to market their potential CDM projects. Subsequently, the first Asian CDM Investment Forum was held in the Philippines in October 2004. UNEP and the UNEP Risoe Centre have also launched a new programme with the World Bank's Community Development Carbon Fund to develop CDM projects in a number of African countries. An assessment is currently under way to select three countries for the programme, which involves strengthening the capacity of local carbon experts, financiers and governmental authorities to engage in CDM projects.

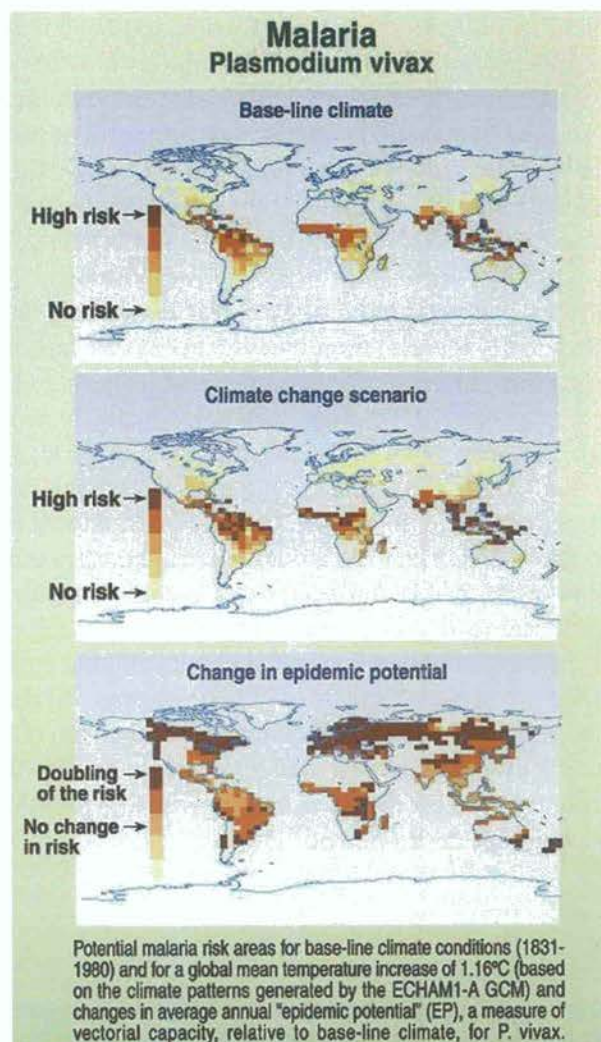
INFORMATION FOR DECISION MAKING

Reversing climate change, and mitigating or adapting to its effects, needs the active collaboration of governments, the private sector and civil society. Governments are directly responsible for only a small proportion of greenhouse gas emissions, therefore they must persuade businesses, communities and individuals to adjust their activities in order to limit emissions and promote adaptation. They have several tools at their disposal for achieving this. Policies can be used to raise the cost of activities that emit greenhouse gases or prevent adaptation and reduce the costs of activities that do not; regulations and standards can mandate changes in products and practices; taxes and subsidies can be adjusted to influence behaviour.

Such measures, however, can generate considerable opposition. Education, training and public awareness—the subject of Article 6 of the Climate Change Convention—is therefore vital for generating support for such policies. UNEP works closely with the Climate Change Convention and the Intergovernmental Panel on

Climate Change (IPCC) on climate outreach. The IPCC, established in 1988 by UNEP and the World Meteorological Organization (WMO), is the world's most authoritative scientific and technical source of climate change information. Its assessments provided an essential basis for the negotiation of the Climate Change Convention and the Kyoto Protocol. In early 2004, UNEP organized a workshop on Article 6 for Africa, in Banjul, the Gambia, and a workshop on the IPCC Third Assessment Report and Article 6 for the countries of the Commonwealth of Independent States (CIS), in Moscow, Russia.

In 2004, UNEP also embarked on a more ambitious and systematic climate change outreach programme in support of the UNFCCC New Delhi Work Programme on Article 6. The programme includes launching national campaigns in selected African and CIS countries, producing graphic materials on the implications of climate change globally and regionally, training



Source: Mariens, P. et al. (1995). Potential impacts of climate change on malaria risk. *Environment Health Perspectives*, 103(5), 456-464.



UN Secretary-General Kofi Annan receiving the Russian Federation's instrument of ratification for the 1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change from Andrey Denisov, Permanent Representative of the Russian Federation to the UN, at UNEP headquarters, 18 November 2004. "This is a historic step forward in the world's efforts to combat a truly global threat. Most important, it ends a long period of uncertainty," Mr. Annan said. "Those countries that have ratified the Protocol, and which have been trying to reduce emissions of greenhouse gases even before its entry into force, now have a legally binding obligation to do so. Businesses that have been exploring the realm of green technology now have a strong signal about the market viability of their products and services. And the financial community and insurance industry, which have been trying to "put a price" on the risks associated with climate change, now have a stronger basis for their decision-making on incentives and corporate performance." © Bernard Wahihia/UNEP

African journalists in climate change issues, and helping the UNFCCC to convene regional workshops on climate change.

Also, following the successful publication of *Vital Climate Graphics* and *Vital Climate Graphics for Africa* in 2001, UNEP's GRID-Arendal collaborating centre has updated the *Vital Climate Graphics* with data from the IPCC Third Assessment Report and produced *Vital Climate Graphics for Latin America*. *Vital Climate Graphics* presents scientific information on climate change in an accessible format, highlighting the main issues, indicating trends and

giving scenarios for coming decades. *Vital Climate Graphics for Latin America* gives an insight into the causes and implications of climate change in the region, concentrating on the contribution of Latin America to global warming, the evidence of climate change and projections, El Niño impacts, the melting of glaciers and their contribution to sea level rise, extreme weather events, potential impacts on ecosystems and food production, and the health impacts of climate change. UNEP's *Vital Graphics* products are widely disseminated to decision makers, the media, academia and other interested users throughout the world.

ADAPTING TO CLIMATE CHANGE

The latest data shows that greenhouse gas emissions continue to rise. Furthermore, concentrations of carbon dioxide in the atmosphere rose by a record amount in 2004—the third successive year that carbon dioxide levels have increased sharply. The countries most vulnerable to climate change are the least developed countries and Small Island Developing States. UNEP is engaged in a number of national-level activities to reduce these countries' vulnerability. Assessment of Impacts and Adaptation to Climate Change is a global UNEP/WMO/IPCC initiative funded by the Global Environment Facility (GEF), the US Agency for International Development, the Canadian International Development Agency and the US Environmental Protection Agency to advance scientific understanding of climate change vulnerabilities and adaptation options in developing countries. Twenty-four regional studies are investigating climate change impacts, adaptation and vulnerability in 46 developing countries, including threats to food security, water security, biodiversity, human health, and human livelihoods. Adaptations being evaluated range from coping strategies for individual households and farms, to community initiatives, sub-national projects and national policy measures.

Other projects include Integrating Vulnerability and Adaptation to Climate Change into Sustainable Development Planning in Southern and Eastern Africa, and one looking at Glacial Lake Outburst Floods. The latter project, covering Bhutan, China, India, Kyrgyzstan, Nepal, Pakistan and Tajikistan, has been developed in collaboration with the International Center for Integrated Mountain Development to monitor and develop early warning systems for glacial lake outburst floods. Another project in development is the Programme for Integrated Vulnerability Reduction and Adaptation Planning in Indian Ocean Island Countries. This project will strengthen data management capacity and technical expertise in the Comoros, Madagascar, the Maldives, Mauritius and the Seychelles, reducing the vulnerability of coastal zones to the impacts of climate change and contributing to long-term sustainable development objectives. UNEP is also assisting eligible countries to prepare their national communications to the UNFCCC. As of June 2004, UNEP had helped 24

countries to prepare their first national communications through GEF-funded enabling activities. UNEP is now helping 30 eligible countries to develop proposals to support the preparation of second national communications. It is also helping 13 countries to prepare National Adaptation Programmes of Action.

CLEAN AND RENEWABLE ENERGY

According to the UN Secretary-General's High-Level Panel on Threats, Challenges and Change, "modern economies need to reduce their dependence on hydrocarbons and should undertake a special effort to devise climate-friendly development strategies" to address problems of climate change. "States should provide incentives for the further development of renewable energy sources and begin to phase out environmentally harmful subsidies, especially for fossil fuel use and development.

UNEP's Energy Programme addresses the environmental consequences of energy production and use, such as global climate change and local air pollution. It has two areas of focus: promoting policies that place energy and transport within a broader sustainable development context, and steering project developers and the investment community toward greater support for renewable energy and energy efficiency projects. With its two collaborating centres—the UNEP Risoe Centre on Energy, Climate and Sustainable Development, and the Basel Agency for Sustainable Energy (BASE), UNEP is working with a wide range of stakeholders to diversify and increase the global share of renewable energy sources, improve access to environmentally sound energy resources and services, remove market distortions, provide access to energy markets, and accelerate the development and dissemination of better energy efficiency methods and technology.

One of the most significant energy events of the year was the International Conference on Renewable Energies 2004, held in June in Bonn, Germany. The Conference was one of the largest intergovernmental gatherings of its type, attracting more than 3,000 participants from 154 countries. UNEP hosted a number of side events, press conferences and an exhibition stand, as well as the two-day event, Financing Sustainable Energy: Creating the Climate for Change, as part of the new Sustainable Energy Finance Initiative.

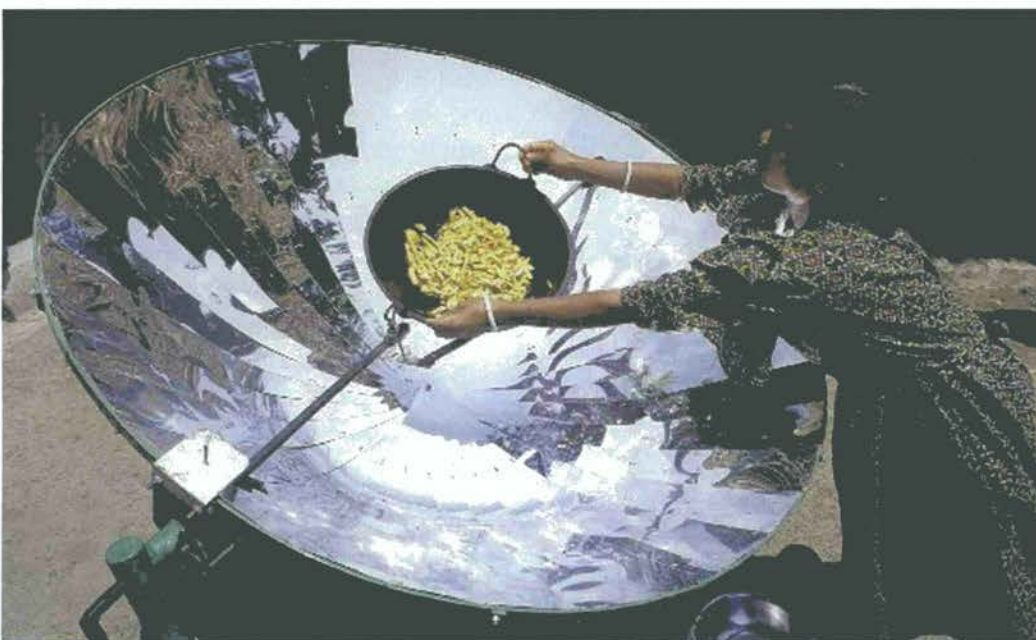
The event created a forum for 275 representatives from the finance, business and government sectors to discuss actions needed to increase investment in the renewable energy and energy efficiency sectors. The meeting featured sessions organized by leading financial institutions on topics such as venture capital, infrastructure, consumer and carbon finance, export credits and risk management. Also at the Bonn event, the fifth BASE International Investment Forum for Sustainable Energy presented a range of companies and investment vehicles raising capital for sustainable energy ventures.

SUSTAINABLE ENERGY SOLUTIONS

UNEP's Rural Energy Enterprise Development (REED) programme was also recognized during the Bonn Conference as a progressive model for sustainable development. The REED portfolio in Africa and Brazil continues to grow, with \$1 million currently invested in 24 enterprises, while the China REED Initiative became operational in April 2004. A major REED development during the year was the production of *The REED Toolkit*, a step-by-step guide for turning a clean energy business idea into a reality. The *Toolkit*, which is now available online, helps entrepreneurs gather the essential information needed for a business plan and compile it into a compelling form capable of attracting finance. It also guides the growth of the enterprise.

Another sustainable energy example is UNEP's Indian Solar Loan Programme. After its first year, the programme has disbursed almost 5,000 loans for photovoltaic-based Solar Home Systems, expanded to 1,800 participating bank branches, and remains on target to deliver clean electricity to up to 25,000 Indian families by 2006. It offers a credit facility with two of India's largest banks, Canara Bank and Syndicate Bank (and their Grameen Banks). The basis of the programme is a progressively decreasing interest rate subsidy over time that acts to lower the commercial lending rate from 12 per cent to 5 per cent. The programme, which has exceeded UNEP's initial benchmark, demonstrates the need for new finance products to develop renewable energy markets.

In North Africa, a partnership between UNEP, the Tunisian state utility, STEG, and the Agence Nationale pour la Maîtrise de l'Energie, has launched SOLdinars, a solar loan facility to help tens of thousands of Tunisian households acquire solar water heating. With funding from the Italian government and as part of the Mediterranean Renewable Energy Programme SOLdinars enhances credit through an interest rate subsidy on loans from local banks where repayments are made via STEG utility bills, reducing the credit risk for the banks and allowing them to further lower interest premiums to 4 per cent. Another finance programme is under development for solar water heating in 200 North African hotels.



Solar cooker, Assam, India. The sun's energy is focused on the cooking pot. Using clean, renewable energy prevents respiratory diseases caused by indoor use of fuelwood and crop residues, which are a major cause of illness and death in developing countries. © Mark Edwards / Still Pictures

RESTORING THE OZONE LAYER

MONTREAL PROTOCOL

The sixteenth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer took place in Prague, Czech Republic, in November 2004. The meeting was attended by more than 500 participants, representing 126 countries, as well as UN entities, intergovernmental and non-governmental organizations, and representatives from academia, industry and agriculture. UNEP provides the Secretariat for the Multilateral Fund of the Montreal Protocol, as well as for the Vienna Convention for the Protection of the Ozone Layer.

The most high-profile issue on the meeting's agenda was the issue of critical use exemptions for methyl bromide, a fumigant widely used in the agricultural industry. Limited exemptions of just over 12,150 tonnes had been granted to 11 developed countries at an Extraordinary Meeting of the Parties to the Montreal Protocol in March 2004. The November meeting agreed to a further exemption of just over 2,600 tonnes for 2005, and a further 11,700 tonnes in 2006. It also decided to hold another Extraordinary Meeting on the issue during 2005.

Methyl bromide, which has strong ozone-depleting properties, was due for phase-out by developed countries in 2005. However, some farmers claim that current alternatives are ineffective in some places and for certain crops, prompting their call for exemptions. One of UNEP's functions under the Montreal Protocol is to facilitate information provision, which it does through the online Regular Update on Methyl Bromide Alternatives and a bi-monthly e-newsletter. Another issue related to methyl bromide is the uncertainty about how much is used globally. While the quantities used by farmers to fumigate soils is known, the amount used to treat shipments of major crops such as rice and maize is not.

The November Montreal Protocol meeting agreed to a global survey of amounts used for quarantine and pre-shipment treatment, which was estimated

to be at least 18,000 tonnes in 2004. However, this number is likely an under-estimate as it is suspected many countries are not supplying full and accurate figures. The meeting also made other key decisions, including one to grant essential use exemptions for chlorofluorocarbons used in metered dose inhalers, which are used to alleviate the breathing problems of people afflicted with asthma.

GREEN CUSTOMS

Environmental crime is an increasingly lucrative business. Illegal international trade in environmentally sensitive commodities such as ozone depleting substances, toxic chemicals, hazardous wastes and endangered species of flora and fauna earns local and international crime syndicates between \$22 and \$31 billion annually. This illegal trade threatens human health and the environment and seriously undermines the effectiveness of multilateral environmental agreements (MEAs). Based on experience gained through its OzonAction Programme, UNEP recognized the potential to achieve synergies by developing a customs training approach that involves several MEAs.

The Green Customs initiative brings together UNEP, Interpol, the World Customs Organization and the secretariats of those MEAs with trade provisions: the Montreal Protocol; the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal; and the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES). Integrated training that encompasses several MEAs is being delivered to customs officers, providing more cost-effective and efficient capacity building than giving separate training on each individual agreement. With support from the Government of Norway in 2004, the initiative is being further developed to deliver fully-developed joint customs training and guidance, including codes of best practice, and expanded to encompass coordinated intelligence gathering and improved awareness about illegal trade related to the MEAs.



UNEP experts provided training for customs authorities in Kuwait in 2004 to help them to screen ozone depleting substances using gas identifiers supplied by UNEP, facilitating the seizure of several illegal shipments. © UNEP ROWA

OZONACTION

As well as providing the secretariats to the Vienna Convention and the Multilateral Fund of the Montreal Protocol, UNEP runs the global OzonAction programme. A key OzonAction role is supporting National Ozone Units in developing countries and countries with economies in transition to develop, implement and report on national strategies to comply with the Montreal Protocol. With OzonAction's assistance, countries can make informed decisions about alternative technologies and ozone-friendly policies. Capacity-building services to empower National Ozone Units include targeted training, an information clearinghouse and regional networking. Primarily funded by the Multilateral Fund, the programme also receives support from the Global Environment Facility and the Governments of Sweden and Finland.

**RESTORING THE EARTH'S
FRAGILE OZONE SHIELD
REMAINS A MAJOR
GLOBAL PRIORITY...**

Protecting the earth's resources

OzonAction assists countries with their strategies to phase-out ozone depleting substances by supporting Country Programmes, institutional strengthening projects and Refrigerant Management Plans. It develops and provides regional and national training programmes and training materials as part of a comprehensive phase-out strategy. Examples include regional workshops on the control and monitoring of ozone depleting substances, national policy development and drafting of ozone legislation, national training on good practices in refrigeration, recycling and recovery programmes and training for customs officers.

UNEP also facilitates the operation of ten regional and sub-regional networks that provide a regular, interactive forum for developing countries to exchange experiences, develop skills, and share knowledge and ideas with counterparts from developing and developed countries. The networks involve 147 developing countries and countries with economies in transition, as well as 14 developed countries and the European Commission. They help to ensure that National Ozone Units have the information, skills and contacts required for managing national phase-out activities. In 2004, timeliness and accuracy of data reporting has improved significantly in all networks. Four regions achieved 100 per cent 2002 data reporting, and three regions achieved 100 per cent 2003 data reporting by mid-October 2004.

In Europe and Central Asia, networking helped countries to team up in an efficient and cost-effective way to solve common problems, while in West Asia it helped to initiate the preparation of unified legislative guidelines on the control and monitoring of ozone depleting substances for members of the Gulf Cooperation Council. Also in West Asia, a Compliance Action

Programme team has delivered a number of capacity building workshops for customs officers and developed a strategy to focus on the special needs of Palestine and Iraq. In Africa, cooperation between the African Environmental Journalists Network and the African Ozone Network helped to promote ozone layer protection issues through the media, and in South Asia and the Pacific control and monitoring of trade in ozone depleting substances and equipment was enhanced by effective collaboration between National Ozone Units and customs authorities.

Ozzy Ozone is an ozone molecule who takes viewers on a voyage of discovery to find out what is attacking the Earth's protective ozone layer. The video has been broadcast by more than 62 governments in 18 languages, reaching millions of viewers worldwide. It explains how children can protect themselves from the harmful effects of ultraviolet radiation caused by ozone depletion.



INFORMATION EXCHANGE

UNEP produces a wide range of manuals, videos, posters, CD-ROMS and web sites to provide information on ozone-related issues to governments, industry and the general public. For the International Day for the Protection of the Ozone Layer, observed each year on 16 September, UNEP launched a new animated awareness video, *Ozzy Ozone*. The video, originally created by the Government of Barbados for its national awareness programme, features Ozzy Ozone, an ozone molecule who takes viewers on a voyage of discovery to find out what is attacking the Earth's protective ozone layer. The video, which was broadcast by more than 62 governments in 18 languages, reaching millions of viewers worldwide, explains how children can protect themselves from the harmful effects of ultraviolet radiation caused by ozone depletion.

Other information and learning tools produced in 2004 include three issues of the *OzonAction* newsletter in Arabic, Chinese, English, French, Russian and Spanish, and the publications *Leveraging the Expertise of Civil Society: NGOs Activities in Methyl Bromide* and *Lessons Learnt and Case Studies in Technology Transfer in African Countries*. OzonAction's documentation and query service disseminated over 35,000 documents in workshops and training sessions and responded to over 330 technical queries and external publication requests. OzonAction also participated in the 2004 International Children's Conference on the Environment, in New London, Connecticut, USA.

UNEP produces a wide range of manuals, videos, posters, CD-ROMS and web sites to provide information on ozone-related issues to governments, industry and the general public.



SAFE MANAGEMENT OF CHEMICALS

UNEP CHEMICALS

UNEP Chemicals is the main catalytic force in the UN system to ensure the sound management of hazardous chemicals. It promotes chemical safety by providing countries with access to information on toxic chemicals, helping to build countries' capacity to manage risks posed by chemicals throughout their life-cycle, and by supporting global actions that address chemical issues of international concern. Examples include the Stockholm Convention on Persistent Organic Pollutants (POPs), the Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, and the negotiations for a Strategic Approach to International Chemicals Management (SAICM).

The SAICM process was mandated by UNEP Governing Council in 2002 and subsequently endorsed by the World Summit on Sustainable Development. It is a consultative process with the goal of achieving, by 2020, the use and production of chemicals that minimizes significant adverse effects on human health and the environment. Facilitated by 11 intergovernmental organizations with an interest in chemical safety, SAICM will culminate in an international conference in early 2006 to agree an overarching policy strategy for chemicals, a global plan of action and a high-level declaration. UNEP Chemicals provides the SAICM secretariat and collaborates with all partners. The second session of the Preparatory Committee for Development of SAICM was held at UNEP headquarters in Nairobi, Kenya, in October 2004.

TOXIC PESTICIDES AND OTHER HAZARDOUS CHEMICALS KILL OR SERIOUSLY SICKEN THOUSANDS OF PEOPLE EVERY YEAR. THEY ALSO POISON THE NATURAL ENVIRONMENT...

PERSISTENT ORGANIC POLLUTANTS

The Stockholm Convention on Persistent Organic Pollutants (POPs) was negotiated under UNEP's auspices and adopted by a Conference of Plenipotentiaries in May 2001. It entered into force on 17 May 2004, and by 1 November 2004 had 82 Parties. The Stockholm Convention is a global treaty to protect human health and the environment from POPs through measures designed to reduce and eliminate their release. Currently Parties are required to take action on an initial 12 specified POPs. UNEP provides the secretariat to the Convention and implements actions to support its implementation including: creating awareness of the POPs issue, the Convention, its provisions and implementation actions; preparing guidelines for best available techniques and best environmental practices for unintentionally produced POPs; and establishing and maintaining databases and an information clearinghouse on POPs. UNEP is also organizing the first Conference of the Parties of the Convention, which will be held in Punta del Este, Uruguay, in May 2005.

POPs are among the world's most dangerous chemicals. They can persist in the environment for decades, circulating globally and being transported to regions far from the original source. They also bioaccumulate, reaching ever higher concentrations as they are absorbed up the food chain. As a result of these two processes, the indigenous people of the Arctic have particularly high levels of POPs in their bodies. POPs have been linked to cancer and damage to human nervous, reproductive and immune systems. Now that the POPs treaty has entered into force, governments can fast-track efforts to eliminate the production and use of these chemicals.

At a meeting in Geneva in June 2004, governments, donor agencies and industry representatives met to address the issue of polychlorinated biphenyls (PCBs). Although production of PCBs is now banned under the



Hundreds of farmers affected by the insecticide called Nemagon during the 1970s start a hunger strike in front the National Assembly in Managua, Nicaragua, 18 February 2004. More than 4,000 ex-workers of banana plantations who were affected by Nemagon marched some 130 kilometres to Managua to demand that the government request aid from foreign companies that used the banned chemical Nemagon in the banana fields of Nicaragua. Nemagon contains the pesticide dibromochloropropane. Repeated exposure has been shown to cause cancer and sterility in laboratory animals and an increased risk of cancer in humans. The United States government banned the pesticide in 1977. © Associated Press/Esteban Felix

Stockholm Convention, they still pose a major health risk due to the wide array of electrical equipment still in service that contains PCBs. Hundreds of thousands of tonnes of PCBs have been commercially manufactured in the past 75 years, and considerable quantities have been discharged into the environment or are contained in electrical and other waste throughout the globe.

One of the issues discussed at the meeting was the need for finance for PCB management and disposal. The Global Environment Facility (GEF), which serves as the interim financial mechanism for the Stockholm Convention, will be responsible for channelling much of the funding for finding and destroying PCBs.

PRIOR INFORMED CONSENT

The Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade was negotiated under the auspices of UNEP and the UN Food and Agriculture Organization (FAO) and adopted by a Conference of Plenipotentiaries in September 1998. The Convention entered into force on 24 February 2004 subsequent to its ratification by 50 countries. The PIC procedure requires exporters trading in listed hazardous substances to obtain the prior informed consent of importers before proceeding with trade. Between 1 and 5 million cases of pesticide poisoning occur each year, mostly in the developing world. Thousands of these cases are fatal. In developed

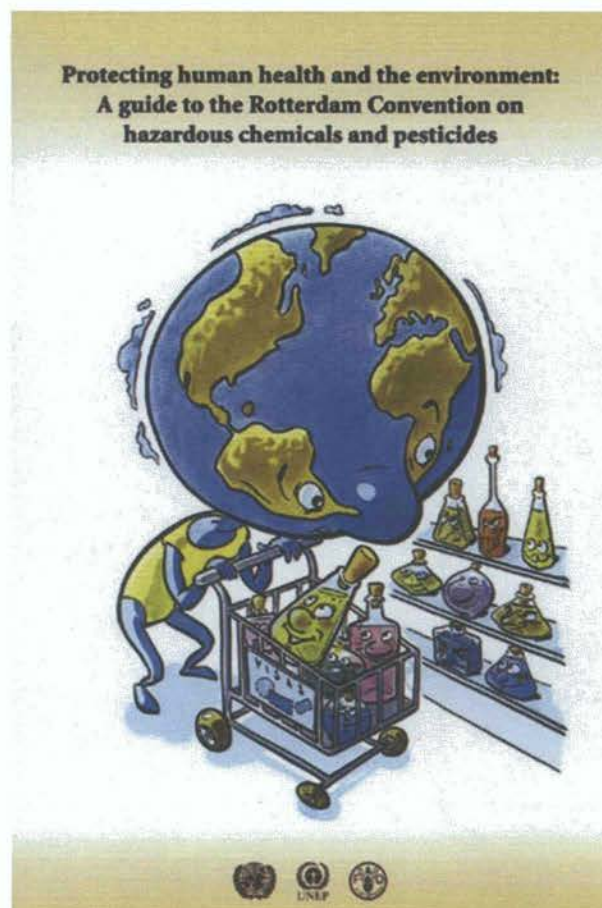
countries, the most hazardous pesticides are either banned or strictly controlled, and farm workers who use them wear protective clothing and equipment. In developing countries—which use only 25 per cent of global pesticide production but account for 99 per cent of deaths—such safeguards are less common.

As well as preventing shipment of listed hazardous chemicals without prior informed consent, the Rotterdam Convention enables Parties to alert each other about possible risks. Whenever a government bans or restricts a chemical for health or environmental reasons, this is reported to all Parties. UNEP provides the secretariat for the Rotterdam Convention jointly with FAO and organizes capacity building for the national implementation of the Convention's procedures. The Convention held its first Conference of the Parties in September 2004 in Geneva, Switzerland. At the meeting 14 new hazardous chemicals were added to an initial watch list of 27 substances.

SAFE MANAGEMENT OF CHEMICALS

The heart of UNEP Chemicals is capacity building and improving access to information to help countries develop the ability to assess and manage chemical risks. In 2004, UNEP Chemicals organized 45 workshops and conferences addressing priority issues in the management of chemicals. Regional and national projects addressed specific issues such as alternatives to DDT and other POPs and their reduction, elimination and management in the context of the Stockholm Convention, and establishing a Chemical Information Exchange Network.

This cooperative effort between UNEP Chemicals and the US Environmental Protection Agency is supporting access to and exchange of chemical information, thereby strengthening national capacity for the environmentally sound management of chemicals and participation in international activities and agreements. As of December 2004, the project had been implemented in 41 countries, 33 in Africa and 8 in Central America. Another important tool for the sound management of chemicals is Pollutant Release and Transfer Registers (PRTRs). UNEP organized PRTR conferences for the Americas and for ASEAN countries during 2004.



The Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade entered into force on 24 February 2004.

UNEP is also helping countries to develop National Implementation Plans under the Stockholm Convention. The Stockholm Convention requires Parties to develop National Implementation Plans within two years of the Convention's entry into force. The Plans outline the POPs situation in the country and the measures to be taken to implement the Party's obligations under the Convention, including cleaning up and disposing of the growing stockpile of unwanted and obsolete stockpiles of POPs and preventing the unwanted release of dioxins and furans that are produced as by-products of burning waste. By the end of 2004, more than 120 countries had received funding from the Global Environment Facility (GEF) to develop their Plans.

Also during 2004, UNEP organized seven regional workshops to help countries to identify and understand mercury problems in their countries and implement action to mitigate them. UNEP undertook a global assessment of the risks

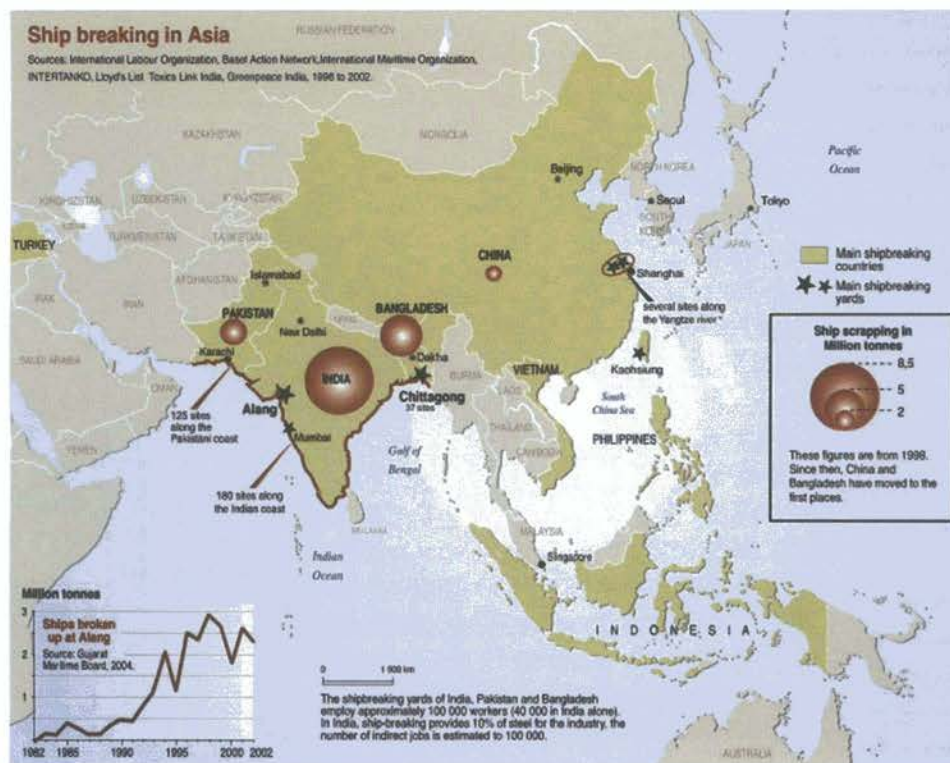
posed by mercury to health and the environment subsequent to a mandate given by the UNEP Governing Council in 2001. Following consideration of the Global Mercury Assessment in 2003, the UNEP Governing Council agreed that there was sufficient evidence of significant global adverse impacts from mercury to warrant further international action to reduce the risks to 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 Chemicals established a Mercury Programme.

HAZARDOUS WASTE

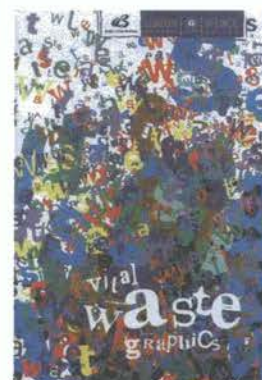
The world is generating ever-greater amounts of waste, much of it toxic, often disposed of in an unsafe or haphazard manner or recycled in poorly managed facilities with few environmental or health safeguards. In October 2004, UNEP launched *Vital Waste Graphics* in Geneva as part of the seventh Conference of the Parties to the Basel Convention on the Transboundary Movement of Hazardous Wastes and their Disposal. From dumped chemicals and pesticides in Africa to the e-wastes piling up in Asia, waste and the shipment of hazardous materials requires urgent action. *Vital Waste Graphics* gives an overview of waste-related issues, its causes and effects, and possible solutions. It is based on the

most recent data received by the Basel Convention secretariat and on extensive additional research undertaken by UNEP’s GRID-Arendal collaborating centre. *Vital Waste Graphics* provides facts and figures on the broad spectrum of issues relevant to waste today. These include definitions of waste, the generation of waste, including new problematic waste streams, the transport and trade of waste, and cross-cutting themes linked to sustainable development, such as climate change and poverty.

In the period 2002 to 2004, UNEP also organized a series of regional and sub-regional workshops to discuss how to improve synergies at the national level among the Basel, Rotterdam and Stockholm Conventions. The workshops were held in Latin America and the Caribbean; Eastern and Central Europe and the Caucasus; West Africa; Southern and Eastern Africa; and in the Middle East and Northern Africa. The Convention Focal Points who participated in the five regional workshops agreed that many of the tools, skills and human resources required for each of the three conventions are essentially the same. So too are the obstacles the conventions face and the strategies needed to overcome them. They also realized that there are many opportunities for working together which would reduce costs, boost effectiveness and eliminate the risk of gaps or overlaps.



The world is generating ever-greater amounts of waste, much of it toxic. *Vital Waste Graphics* gives an overview of waste-related issues, its causes and effects, and possible solutions.

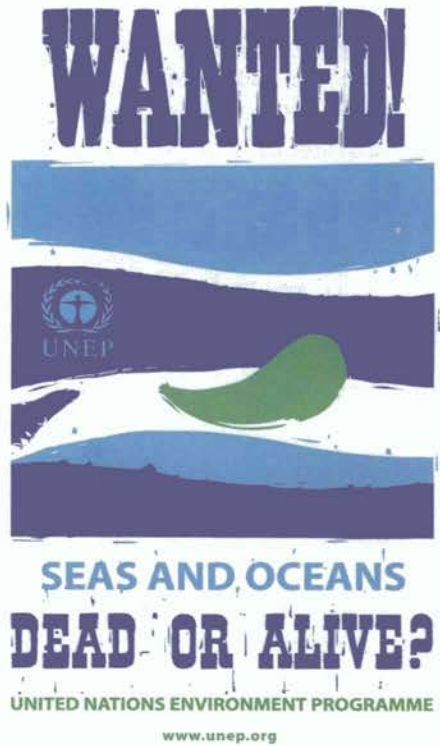


PROTECTING SEAS AND OCEANS

MARINE AND COASTAL ENVIRONMENT

The marine and coastal environment is facing challenges that, if not immediately and effectively addressed, will have profound implications for sustainable development. UNEP's theme for World Environment Day 2004—*Wanted! Seas and Oceans: Dead or Alive?*—highlights the stark choice that humankind faces. The extent of the crisis was also a feature of UNEP's *GEO Year Book*, published in March 2004 for the UNEP Governing Council meeting in Jeju, Republic of Korea. UNEP's annual update on the state of the environment brought much-needed focus onto the global decline of fisheries and the increasing damage being done to the marine environment by land-based sources of pollution.

WORLD ENVIRONMENT DAY - 5 JUNE 2004



海洋存亡，匹夫有责！ • AVIS DE RECHERCHE! MERS ET OCEANS - MORTS OU VIVANTS?

البحار والمحيطات مطروحة حياة أو موت؟ • I SE BUSCANI MARES Y OCEANOS ¿VIVOS O MUERTOS?

• НУЖНЫ МОРЯ И ОКЕАНЫ! ЖИВЫМИ, - А НЕ МЕРТВЫМИ •

Barcelona, Spain, 5 June 2004. A turtle is released into the Mediterranean Sea on World Environment Day (WED). This turtle, like countless others every year, was caught in a fisherman's net. It was saved through the efforts of a local organization. WED 2004 was celebrated globally under the theme: "Wanted! Seas and Oceans: Dead or Alive?" © Universal Forum of Cultures



More than 70 per cent of the world's marine fisheries are fished up to or beyond their sustainable limit. Illegal, unregulated or subsidized commercial fleets threaten the livelihoods of artisanal fishing communities across the globe. Destructive fishing practices kill hundreds of thousands of marine animals each year and help to destroy important undersea habitats. Pollution is another threat to marine life, as well as to human health and livelihoods. Eighty per cent of all pollution in the seas comes from land-based activities. Rivers that run into the sea carry silt, untreated sewage, industrial waste and the assorted rubbish of consumers from far inland. They also carry surplus agricultural fertilizers that are creating a growing number of coastal 'dead zones' where algal blooms regularly consume all the oxygen in the water.

GLOBAL PROGRAMME OF ACTION

One of the key instruments to address the degradation of the marine and coastal environment is the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA). The GPA is a non-binding agreement between 105 countries for whom UNEP provides the secretariat. Based in the Hague, the Netherlands, the GPA's mandate is to catalyze, facilitate and integrate best coastal and river basin management practices into national programmes, build technical capacity, and help to monitor and disseminate information about land-based activities that put the global marine ecosystem at risk.

In 2004 the GPA intensified its efforts to ensure that all its activities promote the development of innovative, affordable, sustainable and long-term financing for implementing the goals set out in the Millennium Declaration. At the national level, activities focused on helping countries to strengthen national capacity in environmental financing and to identify financing mechanisms and instruments, with an emphasis on mobilizing domestic resources. During 2004, there was an increased level of interest and demand on the part of governments in a number of areas. Programmes that were advanced include Physical Destruction and Alteration of Habitats, the Strategic Action Plan on Municipal Wastewater, National Programmes of Action, and Integrated Coastal Area and River Basin Management (ICARM).

WE CAN ACT NOW TO SAVE OUR MARINE RESOURCES, OR WATCH AS THE RICH DIVERSITY OF LIFE IN OUR SEAS AND OCEANS DECLINES BEYOND THE POINT OF RECOVERY...

ICARM is designed to promote closer cooperation at the management level between the freshwater, coastal, and ocean communities. In 2004, the GPA organized regional ICARM workshops in Southeast Asia and the southeast Pacific, developed public policy guidance documents and initiated cooperation pilot projects in South Africa and Mozambique, Germany and Poland, Thailand, Sri Lanka, Chile, Ecuador and Colombia. Together with the UN Food and Agriculture Organization (FAO), the GPA also developed the programme WAVE-30: Water and Environment—30 Years Vision for the Environment to address the environmental impact of future agricultural developments in river basins and on their coastal and marine zones.

SMALL ISLAND DEVELOPING STATES

During 2004, much of the GPA office's focus was on its contribution to the realization and success of the Mauritius International Meeting to review progress on the Barbados Plan of Action for SIDS, which was agreed in 1994. Many SIDS are among the most vulnerable and least developed countries on Earth. They face a plethora of challenges, including remoteness from global markets, environmental pressures exacerbated by poverty, and vulnerability to climate change and extreme weather events.

At UNEP's Governing Council meeting in Jeju, Republic of Korea, in March 2004, UNEP released data from a number of studies on SIDS produced in conjunction with the Global International Waters Assessment. The studies were prepared for presentation to ministers attending the January 2005 Barbados +10 conference in Mauritius. As well as issues such as water shortages, inadequate sanitation and over-fishing, the reports highlighted the growing problem in many SIDS of solid waste from industry, including tourism, and from households. The UNEP publication *Small Island Developing*

States: 1994–2004 and Future Perspectives estimates that the levels of plastic wastes alone in SIDS has increased five-fold since the early 1990s. UNEP, along with other UN partners, is working with many SIDS to prepare waste management plans, draw up directories of environmentally sound waste management technologies and promote cleaner production techniques that generate less pollution.

REGIONAL SEAS

The UNEP Regional Seas Programme continues to provide a comprehensive institutional framework for regional and global cooperation on issues relating to seas, oceans and coasts. The Programme, which marked its 30th anniversary in 2004, covers 17 regions, supported either through a regional convention or a regional action plan. One of those action plans—the Northwest Pacific Action Plan (NOWPAP)—celebrated its 10th anniversary in 2004, an event that was also marked in November by the inauguration of two Regional Coordinating Units acting as the joint NOWPAP secretariat, in Toyama, Japan, and Busan, Republic of Korea. NOWPAP serves the People's Republic of China, Japan, the Republic of Korea and the Russian Federation as an instrument for the sustainable management of their common and shared marine and coastal ecosystems. The NOWPAP member countries also marked the occasion by signing a Memorandum of Understanding for a Regional Oil Spill Contingency Plan

Earlier in the year, scientists from countries surrounding the South China Sea met to review progress on a \$32 million Global Environment Facility (GEF) project to reverse marine environmental degradation. The project—the largest in the GEF International Waters portfolio—has generated valuable data, identified agreed priority areas for management trials and established a platform for regional cooperation. In China, previously unknown seagrass beds have been mapped, while in Cambodia, the first monitoring of coral reefs has been initiated since that country's civil war. Another study in Thailand brought together information on wetlands drawn from 70 projects run by 23 agencies and combined it into a single database. The ultimate goal of the project is to put in place a scientifically based and self-funding programme that reverses current environmental decline.

July 2004 saw the first meeting of the signatories to the Framework Convention on the Protection of the Marine Environment of the Caspian Sea. The Convention, which was negotiated with UNEP assistance, was signed in late 2003 by the countries bordering the Caspian Sea, the world's largest enclosed body of water. In 2004 UNEP started implementation of the second phase of a GEF-funded project to help the signatories to the Convention determine priorities for action and move towards full ratification. At the meeting, the representatives of the Caspian States agreed to start work on protocols on biodiversity, land-based sources of pollution and environmental impact assessment in a transboundary context.

In the Western Indian Ocean, UNEP announced a multi-million dollar project aimed at cutting pollution at a meeting of environment ministers in Antananarivo, Madagascar. The three-year project, funded by the GEF and the Government of Norway will help eight countries—the Comoros, Kenya, Madagascar, Mauritius, the Seychelles, South Africa and Tanzania—to address land-based sources of pollution by helping to strengthen pollution laws and promote regional and nation cooperation. The Western Indian Ocean has important mangrove forests, seagrass beds and coral reefs. It is thought that up to 30 million people in the eight countries depend on the region's marine and coastal resources for food and livelihoods.

CORALS

Studies show that protecting critical marine habitats, such as warm- and cold-water coral reefs, seagrass beds and mangroves, can dramatically increase fish size and quantity, to the benefit of both artisanal and commercial fisheries. Tropical coral reefs are also economically important due to their ability to attract tourists. They border the shores of 109 countries, the majority of which are among the world's least developed. Unfortunately, significant reef degradation has been recorded in 93 of those countries. In July 2004, UNEP's World Conservation Monitoring Centre, based in Cambridge, UK, announced a new initiative called Earthdive to encourage professional and amateur divers and recreational snorkellers to record the health of the marine environment where they are diving. As well as contributing to building a scientific database on key indicator

species, Earthdive members will contribute to marine conservation projects through their subscription fees.

UNEP also launched a training programme in 2004 to help dive operators and hoteliers in Bali to protect coral reefs. The project, which is being implemented in association with the Worldwide Fund for Nature, is based around five communication tools developed by UNEP and the International Coral Reef Initiative to help the tourist industry explain the importance of coral reef ecosystems to clients. Indonesia's coral reefs support one of the largest fisheries in the world, but 82 per cent of them are deemed at risk from over-exploitation and climate change. Coral reef protection is also the subject of *People and Reefs: Successes and Challenges in the Management of Coral Reef Marine Protected Areas*. The publication details experiences from International Coral Reef Action Network field sites around the world, offering an opportunity to share the lessons learned by the many communities and individuals who share responsibility for the sustainable management of coral ecosystems.

Another UNEP report focused on the world's cold water coral reefs. Published in July 2004 as a contribution to the 10th International Coral Reef Symposium in Okinawa, Japan, *Cold Water Coral Reefs: Out of Sight—No Longer Out of Mind* revealed that these little-understood ecosystems are far more widespread than previously thought and under increasing pressure from destructive fishing practices such as deep-sea trawling. Cold water coral reefs harbour a wide range of often slow-maturing fish, such as the orange roughy, that are being increasingly targeted by commercial fisheries as traditional catches decline. The report presents comprehensive data on marine cold-water coral reefs from around the world, giving policy makers the information required to take concerted action to conserve and sustainably manage them.

MIGRATORY SPECIES

Destructive fishing practices are also the subject of the educational brochure *Catch Fish Not Turtles Using Longlines*, compiled by the Blue Ocean Institute of Hawaii in collaboration with UNEP. The publication highlights alternative methods that can be used by fisherman to avoid unnecessary deaths to turtles as well as boost



Cold water coral reefs are far more widespread than previously thought and under increasing pressure from destructive fishing practices such as deep-sea trawling.

catches. Turtle conservation was also boosted by the launch of the Marine Turtle IMaps—an online system to map several turtle species' nesting and migrating habits. Developed to support the Indian Ocean-Southeast Asian Marine Turtle Memorandum of Understanding under the Convention on Migratory Species (CMS), the interactive mapping system will allow researchers to share data worldwide. IMaps covers six turtle species: loggerheads, flatbacks, green turtles, hawksbills, olive ridleys and leatherbacks.

Turtles are among the world's greatest nomads. The fate of the globe's thousands of 'nomads of necessity' is the special focus of the Convention on Migratory Species, which celebrated its 25th anniversary in 2004. Ocean-going species such as turtles, cetaceans and albatrosses face a number of threats, such as longline fisheries, marine pollution and habitat destruction, which are addressed by a growing number of agreements under the Convention. February 2004 marked the entry into force of the Agreement on the Conservation of Albatrosses and Petrels in the Southern Hemisphere. The year also saw the publication of *Review of Small Cetaceans: Distribution, Behaviour, Migration and Threat*, produced by UNEP's Regional Seas Programme on collaboration with CMS.

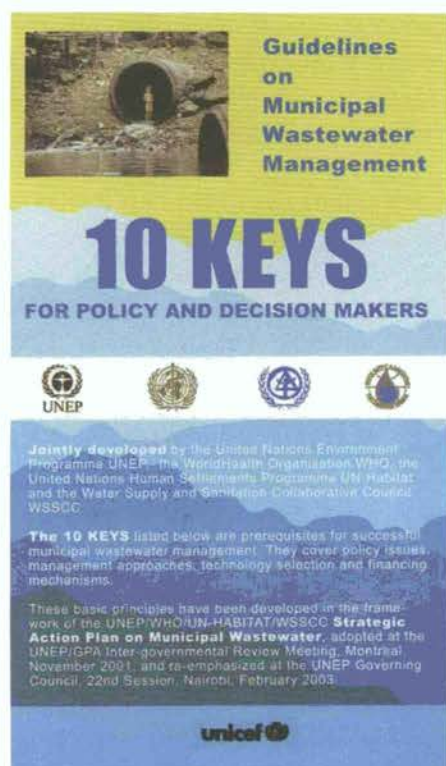
FRESHWATER AND SANITATION FOR ALL

FRESHWATER AND SANITATION

Ensuring the provision of safe drinking water and adequate sanitation are central priorities for sustainable development. At the Millennium Summit in 2000, world leaders pledged to halve, by 2015, the proportion of people unable to reach or afford safe drinking water and to stop the unsustainable exploitation of water resources by developing water management strategies that promote equitable access and adequate supplies. Furthermore, the Plan of Implementation of the World Summit on Sustainable Development (WSSD), calls for the world to reduce by half the proportion of people living without basic sanitation.

In recognition of these priorities, the UNEP Governing Council/Global Ministerial Environment Forum, meeting in Jeju, Republic of Korea, in March 2004, published the Jeju Initiative, a summary of ministerial discussions on

water, sanitation, poverty and human settlements, as an input to the 12th session of the Commission on Sustainable Development (CSD-12), held in New York, USA, in April 2004. The ministers shared examples of partnerships and best practices related to integrated water resources management, water and sanitation, and water and poverty, and observed that the examples presented, if replicated on a large scale in many countries, would make a substantive contribution to the realization of global targets on water, sanitation and human settlements. These targets were subject to their first substantive review since WSSD at CSD-12. At the conclusion of meeting, which was addressed by the UNEP Executive Director and the President of the Global Ministerial Environment Forum, the chairman of the Commission, the Norwegian Minister of the Environment, Borge Brende, noted that, although the targets remain achievable, "the international community is not on track and efforts must be scaled up."



UNEP is working to promote innovative approaches to achieving the Millennium Development Goals and the WSSD targets on water and sanitation.





Sebu City, Philippines, December 2004. These homes are built on stilts on land subject to continuous flooding. These families cannot afford to buy land in safe areas. A child fetches water using a submerged water pump which delivers relatively clean water. © Mark Edwards/Still Pictures

INTEGRATED WATER RESOURCES MANAGEMENT

The WSSD Plan of Implementation, the Jeju Initiative, and the outcomes of CSD-12, emphasize that achieving the water and sanitation targets of the Millennium Development Goals must be set within the broader context of integrated water resources management. In May 2004, the UNEP Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA) and the Water Supply and Sanitation Collaborative Council (WSSCC) launched a campaign at the H2O—From Hilltops to Oceans Global Conference, in Cairns, Australia, that will see the two organizations collaborating closely in support of integrated water resources management objectives. The WET-WASH campaign (Wastewater Emission Targets: Water, Sanitation and Hygiene for All) links the issues of health, environment and poverty alleviation.

AN ESTIMATED 1.1 BILLION PEOPLE LACK ACCESS TO SAFE DRINKING WATER, AND 2.4 BILLION LIVE WITHOUT ADEQUATE SANITATION. WATER-BORNE DISEASES, SUCH AS DIARRHOEA, CHOLERA AND TYPHOID, ARE ONE OF THE PRIME CAUSES OF MORTALITY OF CHILDREN UNDER FIVE...

Ensuring that people have access to basic sanitation and safe drinking water will require innovative alternatives to traditional large-scale investment projects. Examples include better use and management of natural sewage filtering systems, such as ponds, reedbeds and mangrove swamps, and appropriate technological solutions, such as rainwater harvesting. UNEP provides the secretariat for the Rainwater Partnership, which was established in October 2004 in the Hague, the Netherlands. The Partnership—a growing

Protecting the earth's resources

collaboration between international, intergovernmental and scientific organizations—promotes the mainstreaming of rainwater into integrated water resources management strategies and policies.

UNEP GPA also published *10 Keys for Local and National Action on Municipal Wastewater*, developed in consultation with the World Health Organization (WHO), UN-HABITAT and the WSSCC, to promote the adoption of innovative approaches to achieving the Millennium Development Goals and the WSSD targets on water and sanitation. Multi-stakeholder partnerships have been signed in Panama, Mexico and Tanzania to enhance implementation initiatives that address wastewater and sanitation.

In the Wider Caribbean Region, UNEP launched the White Water to Blue Water partnership initiative to promote greater coherence in the implementation of the GPA objectives of creating healthy, well-managed marine and coastal ecosystems through integrated watershed and marine ecosystem management. Integrated water resources management was also the focus of the Water Middle East 2004 Conference and Exhibition, in Bahrain, in September 2004, which was co-sponsored by UNEP. UNEP is working with a number of UN partners and the Economic and Social Commission for West Asia on capacity building to develop an integrated water strategy for the region. UNEP has also promised technical and institutional assistance to the Niger Basin Authority in West Africa to support the integrated development of water resources in the countries that share Africa's third longest river.

INTERNATIONAL WATERS

The UN GEMS/Water Programme, administered by UNEP, provides scientifically-sound data and information on the state and trends of global inland water quality, supporting global environmental assessments and decision making processes on the sustainable management of the world's freshwater. GEMS/Water collects and assesses water quality data from over 100 countries, including developing countries and countries with economies in transition. The programme emphasizes collaboration, partnerships and synergy among international water and science programmes and initiatives within the United Nations system.

On World Environment Day, 5 June 2004, GEMS/Water launched the Great Water Quality Data Drive. The Great Water Quality Data Drive is a call to all water authorities around the world for inland water quality data. The outcome of the Data Drive, which closed in December 2004, will be a strengthened scientific basis for global and regional water assessments and early warning. The results of the Data Drive will be reported to key UN forums in 2005, including the UNEP Governing Council, in February 2005, and the 13th session of the UN Commission on Sustainable Development, in May 2005.

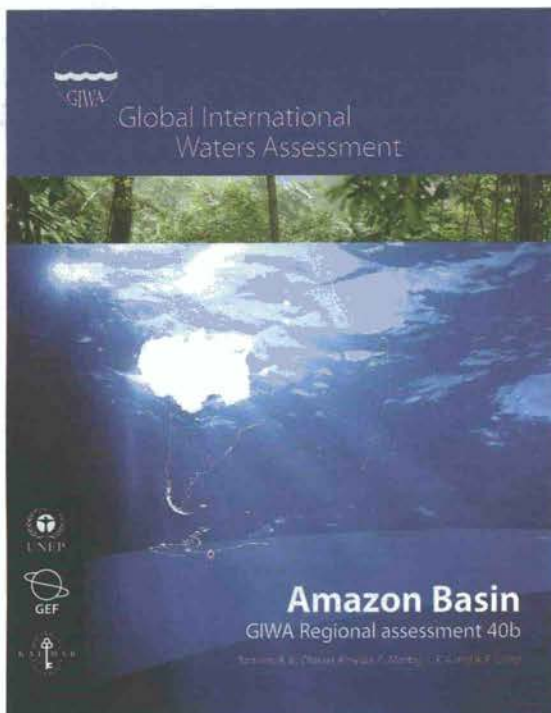
Other GEMS/Water achievements during 2004 include the complete overhaul of the hardware and software of the global Website, the launch of a global water quality database, and a new shareware software initiative for participating water authorities called GEMSoft. The

The United Nations GEMS/Water Programme provides scientifically-sound data and information on the state and trends of global inland water quality required as a basis for the sustainable management of the world's freshwater to support global environmental assessments and decision making processes.



programme also signed a memorandum of understanding with UNESCO's International Hydrology Programme to guide joint activities related to integrated water resource management and ecohydrology, and initiated a collaboration with the Convention on Biodiversity on inland water quality indicators. Strategic guidelines for monitoring are being developed with the UN Economic Commission for Europe, while GEMS/Water-Japan launched a capacity building initiative in the Mekong River region.

The UNEP-Global International Waters Assessment (GIWA), which is producing a comprehensive integrated global assessment of 66 marine and freshwater international water areas, published a number of regional assessment reports during 2004. These include reports on the environmental conditions of international waters in three regions of South America and a regional report on Lake Chad in Africa. GIWA reports also highlighted the problems of solid wastes in the islands of the Indian Ocean and the threats to the ecosystems of the Barents Sea and the Baltic Sea.



The UNEP-Global International Waters Assessment (GIWA) is producing a comprehensive integrated global assessment of 66 marine and freshwater international water areas.

DAMS AND DEVELOPMENT

The UNEP Dams and Development Project was established in 2001 to promote dialogue on improving decision making, planning and management of dams and their alternatives based on the core values and strategic priorities of the World Commission on Dams (WCD). The four main elements of the project's work programme include promoting global and national dialogue, information networking, disseminating WCD and project materials and facilitating the exchange of ideas on good practices. The ultimate goal of the project is to improve water and energy resource management so that decisions are acceptable to the public, the strategies chosen are sustainable, and technical, environmental, social and financial risks are minimized. During 2004, the UNEP Dams and Development Project continued to follow up national dialogue processes in Nepal, South Africa, Thailand and Vietnam, and facilitated national consultation workshops in Argentina, Kenya, Indonesia, Malawi, Namibia and Zambia. In addition, the project has been supporting a regional initiative in the Southern African Development Community to elaborate a regional position on dams and development.

At the global level, dialogue is channelled through the Dams and Development Forum and issue-based workshops. The third meeting of the Dams and Development Forum met in June 2004, bringing together participants from governments, civil society and industry to advance dialogue on the many conflicting issues involved in dam construction. Three issues-based workshops—on Financing Dams and Sustainable Development, Addressing Existing Dams, and Ensuring Compliance—were convened. They produced recommendations on key issues to be dealt with at national level, which will feed into national dialogues on improving decision making processes regarding dams and development.

SUSTAINABLE LAND USE

INTEGRATED LAND MANAGEMENT

Rarely a month passes without news of another flood or landslide devastating the fragile livelihoods of the world's poorest people. With the predicted increase in extreme weather events due to climate change, sustainable land management that protects essential ecosystem services, such as wetlands and forested watersheds becomes ever more essential.

In September 2004, UNEP announced a multi-million dollar project to reduce the likelihood and impact of flooding on the lower Limpopo River. Even in a world where natural disasters and loss of life are only too common, the images of the floods that inundated Mozambique in 2000 remain vivid. The UNEP/GEF project on

Sustainable Land Use Planning for Integrated Land and Water Management for Disaster Preparedness and Vulnerability Reduction in the Lower Limpopo Basin is being implemented jointly by UNEP and UN-HABITAT and funded by the Global Environment Facility (GEF) within the framework of the Environment Initiative of the New Partnership for Africa's Development (NEPAD). The two-year project aims to improve land management along the river and to boost the

**LAND RESOURCES ARE FINITE,
FRAGILE AND NON-RENEWABLE.
LAND DEGRADATION IS A THREAT TO
HUMAN HEALTH, FOOD SECURITY
AND GLOBAL BIODIVERSITY...**



capacity of the governments who share the river basin, as well as local authorities and communities, to respond better to flood events and to establish early warning systems. A key feature of the project will be to improve cooperation between Mozambique, South Africa and Zimbabwe, who share the lower Limpopo River basin, as well improve links in areas such as flood forecasting with countries with dams further upstream, such as Botswana. Planned activities include creating regional and national land management plans for the better protection of natural flood defences, such as wetlands that can absorb floodwaters. Studies will also pinpoint national and regional gaps in flood warning and awareness. Safe areas will also be surveyed, where rural and urban people can escape to when a flood alert is issued.

SUSTAINABLE AGRICULTURE

August 2004 saw the first Plenary Meeting of the International Assessment on Agricultural Science and Technology for Development (IAASTD), at UNEP headquarters, in Nairobi, Kenya. The meeting brought together 185 participants representing 45 governments, producer and consumer groups, agricultural research institutions, NGOs and the private sector, as well the co-sponsoring agencies FAO, UNDP, UNEP, UNESCO and the World Bank. The meeting agreed on the objectives and scope, institutional arrangements and governance structure, baseline budget and timetable for a global assessment and five sub-global assessments of agricultural knowledge, science and technology, including activities that the IAASTD would undertake.

Each assessment will have three sections: historical perspectives; plausible futures; and policy and institutional issues. The historical section will include an analysis of existing knowledge, while the plausible future scenarios section will anticipate the challenges that the world will face over the next 50 years and assess the demand for agricultural goods and services and the resulting impact on nutritional security, rural livelihoods, human health and food safety, the environment and natural

resources. These will then provide the framework for assessing policies and institutional arrangements relating to the assessment's broader objectives of reducing hunger and poverty, improving rural livelihoods and human health, and facilitating equitable, environmentally, socially and economically sustainable development through agricultural knowledge, science and technology.

In September 2004, UNEP also organized the third International Conference on Biodiversity and Organic Agriculture, in cooperation with the International Federation of Organic Agriculture Movements (IFOAM), the German Federal Agency for Nature Conservation (BfN) and the World Conservation Union (IUCN). The objectives of the conference, which was attended by 120 participants from 30 countries were to create a platform for international networking, cooperation and information exchange on the relationship between biodiversity and organic agriculture, with a focus on developing countries.

LANDSCAPE AND BIOLOGICAL DIVERSITY

Agriculture is the basis for human food security and sustainable development. It is also a major contributor to habitat change and, in the worst cases, environmental degradation. In many parts of the world, forests are being rapidly cleared for commercial crops such as oil palm or soya and by unsustainable slash-and-burn subsistence farming, inefficient irrigation is depleting water resources and turning the soil salty, and nitrogen-rich agricultural fertilizers are contributing to coastal 'dead zones'.

In Europe, where the landscape has been defined over centuries by agriculture, a UNEP report, *High Nature Value Farmland: Characteristics, Trends and Policy Challenges*, published jointly by UNEP and the European Environment Agency in April 2004, warns that the European Union (EU) will not reach its goal of halting the loss of biological diversity by 2010 if it does not do more to prevent the decline of its most nature-rich areas of farmland. High nature value farmland areas, which include habitats such as semi-natural

A Lebanese woman buys organic products at the Saturday Market in Beirut's Achrafiyeh neighborhood, 14 August 2004. A handful of Lebanese promoters of organic agricultural products, certified by Dutch experts, launched their own bio market every Saturday in a parking lot in east Beirut. In September 2004, UNEP organized the third International Conference on Biodiversity and Organic Agriculture, in cooperation with the International Federation of Organic Agriculture Movements, the German Federal Agency for Nature Conservation and the World Conservation Union (IUCN). © Anwar Amro/AFP/Getty Images

Protecting the earth's resources

grasslands, steppes, grazed uplands and alpine pastures and meadows, occupy between 15 and 25 per cent of the EU countryside. Threatened by two contrasting trends—increasing intensity of agriculture in some areas and abandonment of farming in others—their conservation depends largely on rural development measures.

Environment ministers from across Europe agreed in 2003 to identify all high nature value farmland by 2006. They also committed themselves to support its economic and ecological viability by covering a substantial proportion with rural development measures by 2008. However, the report says that current spending on less favoured areas bears no relation to how much high nature value farmland they have.

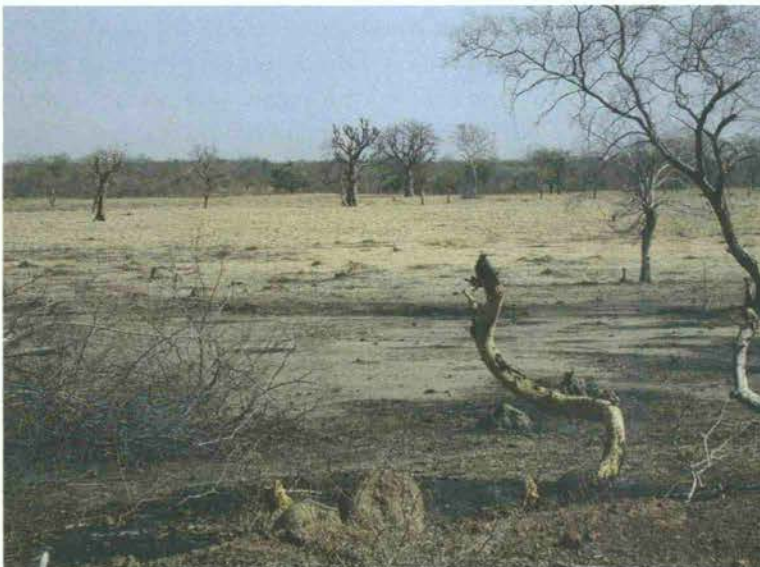
The EU has committed itself to halting the loss of biodiversity by 2010. The same target was adopted under the Environment for Europe process by environment ministers from across Europe at the fifth Environment for Europe Ministerial Conference, held in May 2003, in Kiev, Ukraine. The framework for addressing biodiversity concerns in the region covered by the Economic Commission for Europe is the Pan-European Biological and Landscape Diversity Strategy (PEBLDS), for which UNEP provides the joint secretariat along with the Council of Europe. In January 2004, the PEBLDS Council met to review its action plans for achieving the targets of the Kiev Biodiversity Resolution within the framework of the third Biodiversity in Europe Conference in Madrid, Spain. The Conference prepared the pan-European contribution to the seventh Conference of the Parties to the Convention on Biological Diversity (CBD) in the

areas of mountain biological diversity, protected areas and ecological networks, coastal and marine biological diversity, technology transfer and the follow up to the World Summit on Sustainable Development and the CBD Strategic Plan.

PROTECTING DRYLANDS

More than 1 billion rural poor depend on drylands for their livelihoods. For instance, in sub-Saharan Africa, nearly 40 per cent of people live in drylands. These people are among the poorest in the world. The degradation of dryland ecosystems is exacerbating poverty in many areas. An estimated 135 million people worldwide are at risk of being displaced as a consequence of desertification. UNEP's strategy for dryland environmental management involves working with governments and a wide array of stakeholders to implement, test and further develop an ecosystems approach to dryland environmental management.

The ecosystems approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Recognizing that people are part of ecosystems, the approach integrates social and economic information with environmental information about the ecosystem. The emerging UNEP strategy emphasizes helping dryland peoples to develop more resilient ecosystems and social systems by increasing their capacity for adaptive ecosystem management. UNEP is testing the ecosystem approach through the development of a drylands policy initiative, which aims to restore degraded drylands, prevent



Degradation of tree cover and soil quality in Mali. In sub-saharan Africa nearly 40 per cent of people live in drylands. The degradation of dryland ecosystems is exacerbating poverty in many areas. © Gemma Shepherd/UNEP

further desertification and promote sustainable land management as an integral part of intergovernmental and national development policies, strategies and plans.

A key objective of the Initiative is to build regional and national capacity in new science-based tools and technologies for monitoring land degradation and valuing environmental resources and services to help dryland nations integrate desertification and other environmental concerns into development policy processes. To kick-start the drylands policy initiative a project is being implemented on An Ecosystem Approach to Restoring West African Drylands and Improving Rural Livelihoods through Agroforestry-based Land Management Interventions. The three-year project is predominantly funded by the Government of Norway and being implemented in partnership with the World Agroforestry Centre, the University of Florida, and the Governments of Burkina Faso, Mali, Mauritania, Niger and Senegal. The project focuses on the Sahelian Parklands, which are integrated tree-crop-livestock systems whose sustainable use is vital for the future welfare of over 40 million people.

WORKING TO COMBAT DESERTIFICATION

UNEP is also working to support the implementation of the UN Convention to Combat Desertification (UNCCD). UNCCD dryland policies and project priorities continue to be guided by UNEP's global environmental assessments and evaluations of promising practices for desertification control. UNEP and the UN Food and Agriculture Organization (FAO) have embarked on a Global Land Cover Network cooperative programme and are developing a Land Degradation Assessment for Drylands to provide a policy tool for the implementation of UNCCD National and Sub-Regional Action Programmes.

UNEP also continues to implement and develop projects on land degradation for financing through the GEF. For example, UNEP and the Consultative Group for International Agricultural Research (CGIAR) successfully completed the first two-year phase of the Desert Margins Programme, which entered into its second phase in 2004. UNEP is also helping African countries to formulate regional, sub-regional and national action plans and develop environmental

legislation and institutions to combat desertification. For example, UNEP is helping semi-arid countries in West Africa to harmonize river basin management legislation in the Senegal, Niger and Volta basins. It is also supporting the implementation of the UNCCD in Kenya, Tanzania, Mozambique and Rwanda in harmony with poverty reduction strategies.

THE URBAN ENVIRONMENT

Almost all population growth in the next quarter-century will occur in cities, most of it in less developed countries. By 2030, more than 60 per cent of people will live in urban areas. Rapid urbanization presents profound challenges for society, and for the local and global environment. For example, towns and cities produce most of the greenhouse gases that are causing global climate change, something that UNEP's energy and sustainable transport programmes are addressing. UNEP is also working increasingly closely with the UN Human Settlements Programme, UN-HABITAT. The principal focus of the collaboration is the joint Sustainable Cities programme, which is helping 50 cities to plan and manage their environment and share the lessons with local and national governments worldwide. In 2004 UNEP also supported the development of UN-HABITAT's Environmental Impact Assessment Guidelines, and jointly organized the environment session of the second World Urban Forum in Barcelona, Spain, in September.

UNEP's work on urban issues is strongly backed by the Government of the Netherlands. One of the key projects is the Partnership for Clean Fuels and Vehicles, promoting better air quality in developing countries. May 2004 saw a major intergovernmental conference at UNEP headquarters in Nairobi to identify the remaining barriers to the full and final phase-out of leaded petrol in Africa by 2006. UNEP also promotes environmentally sound technologies for the sustainable management of cities through its International Technology Centre, based in Japan. IETC celebrated its 10th anniversary in 2004. During the year, IETC produced an introductory guide for decision makers, *Waste Management Planning—An Environmentally Sound Approach for Sustainable Urban Waste Management*, and had a programme of action on integrated waste management accepted by the Association of Southeast Asian Nations.

CONSERVING BIODIVERSITY

THE IMPORTANCE OF BIODIVERSITY

The importance of biological diversity to human society is hard to overstate. It is the source from which we derive our crops, clothing, building materials, traditional medicines and modern pharmaceuticals. An estimated 40 per cent of the global economy is based on biological products and processes. Poor people, especially those living in areas of low agricultural productivity, depend especially heavily on the genetic diversity of the environment. The effective use of biodiversity at all levels—genes, species and ecosystems—is therefore a precondition for sustainable development. However, human activities the world over are causing the progressive loss of species of plants and animals at a rate far higher than the natural background rate of extinction.

The Plan of Implementation of the World Summit on Sustainable Development calls for action to significantly reduce the rate of biodiversity loss by 2010. One of the instruments for achieving that target is the Convention on Biological Diversity (CBD), established at the 1992 Earth Summit in Rio de Janeiro, Brazil, for which UNEP provides the secretariat. The seventh meeting of the Conference of Parties to the Convention on Biodiversity was held in Kuala Lumpur, Malaysia, in February 2004. Over 2,300 participants attended, representing 161 governments, as well as UN agencies, non-governmental organizations, intergovernmental organizations, indigenous and local communities, academia and industry. Among the 33 decisions agreed at the Conference were commitments to conserve at least 10 per cent of each ecosystem, stabilize populations of certain declining species, and ensure that international trade does not endanger any species of wild flora and fauna.

The Conference of Parties to the convention that deals with that issue—the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)—also met in 2004, in October, in Bangkok, Thailand. Delegates at the Convention, which is also

administered by UNEP, agreed on a number of measures, including placing new restrictions on the trade in caviar to thwart illicit traders. The rules require that caviar must be exported in the same year that it is produced. Until now traders have been able to fraudulently declare that their product was caught during previous years to sidestep quotas already in place to protect this vulnerable species.

Other CITES decisions included giving more protection to white sharks and the humphead wrasse and banning all trade in the Irrawaddy dolphin. On African elephants, a traditional point of controversy and the focus of attention for many CITES observers, an action plan was agreed for tackling unregulated domestic markets in elephant ivory. The conference also strengthened trade rules for several species of medicinal plants and placed restrictions on the export of agarwood and ramin—a Southeast Asian tree that produces high-value timber—to enable range states to better manage their tree stocks and tackle illegal trade.

ASSESSING BIODIVERSITY

The measurable targets on ecosystem protection adopted at the February 2004 CBD meeting were introduced largely because of the difficulty of quantifying biodiversity. While 1.75 million different species of all kinds have been scientifically identified, some estimates say that the real total is as high as 14 million. UNEP has a number of activities designed to provide more knowledge about individual species and the ecosystems in which they live.

In February 2004, as an input to the CBD meeting, UNEP released *Protected Areas and Biodiversity: An Overview of Key Issues*. The report underlined the need for more international cooperation to conserve habitats and highlighted how biodiversity in protected areas influences the status of ecosystems on a wider scale. Protected areas are essential to achieving the 2010 biodiversity goals. Under the guidance of the UNEP World Conservation Monitoring Centre (UNEP-WCMC), in Cambridge, UK, work continued in 2004 to establish a World Database of Protected Areas. UNEP also played a key role



Delegates arrive for registration at Queen Sirikit Convention Centre on the eve of the World Conservation Congress in Bangkok, 16 November 2004. More than 5,000 scientists, activists and government representatives attended the nine-day conference designed to highlight the growing threat to the planet's wildlife. UNEP works closely with the World Conservation Union (IUCN) on biodiversity-related issues. © Saeed Khan/AFP/Getty Images

**HUMAN HEALTH AND WELL-BEING
DEPEND ON BIODIVERSITY. WORLD
LEADERS AGREED IN 2002 TO
SIGNIFICANTLY REDUCE GLOBAL
BIODIVERSITY LOSS BY 2010...**

in Beyond Extinction Rates: Monitoring Wild Nature for the 2010 Targets, a meeting held at the Royal Society, in London, UK. The meeting marked an important step forward in reporting on progress towards the 2010 target.

Another important biodiversity assessment is the Globio programme. The Global Methodology for Mapping Human Impacts on the Biosphere, a collaboration between UNEP-WCMC, UNEP/GRID-Arendal and the Netherlands Environmental Assessment Agency, is working to develop a new global biodiversity model. Several projects were initiated in 2004, including scenarios and assessments of marine and coastal areas, coral reefs, drylands and threats to freshwater resources in Asia's mountain regions. The intention is to cover all major ecosystems before 2010. UNEP also completed the

Biodiversity Indicators for National Use project in 2004. Funded by the Global Environment Facility (GEF), the project developed biodiversity indicators to support planning and decision making in four participating countries: Ecuador, Kenya, Philippines and Ukraine. The successful approaches identified by the project will now be disseminated to other countries to build their capacity for biodiversity protection and to support the global and regional development of biodiversity indicators under the CBD.

**GENETIC RESOURCES
AND BENEFIT SHARING**

Some of the richest countries in terms of biological diversity are also the least developed. There are numerous examples where food or pharmaceutical companies have made billions of dollars from genetic resources from these countries with little or no return to the originating countries or communities. The issue of access to and benefit from genetic resources is the focus of a UNEP initiative. The UNEP Initiative on Access to Genetic Resources and the Equitable

Protecting the earth's resources

Sharing of Benefits Arising Out Of Their Utilization aims to build the capacity of developing countries in this area of need. March 2004 saw a meeting of an informal advisory group of experts to guide the initiative, consistent with the decisions of the governing bodies of relevant multilateral environmental agreements and taking into account other ongoing processes on access and benefit sharing.

The capacity building focus of the initiative includes supporting national implementation of the Action Plan on Capacity Building for Access to Genetic Resources and Benefit Sharing, adopted by the CBD Parties in 2004, and helping stakeholders to negotiate mutually beneficial contractual terms by providing information, training materials and relevant tools, in collaboration with the CBD, the World Intellectual Property Organization (WIPO), the UN Conference on Trade and Development (UNCTAD) and other relevant organizations.

An example of such a collaboration is a joint UNEP/WIPO report produced for the February CBD conference. The report highlights the complexities of how best to recompense countries, communities and indigenous peoples for the knowledge and genetic resources they possess, and the practicalities of ensuring that benefits are shared equitably. The study features two examples: a medicine derived from an Indian plant with apparent fatigue relieving properties, and a gene from a wild West African rice being used in the biotechnology industry.

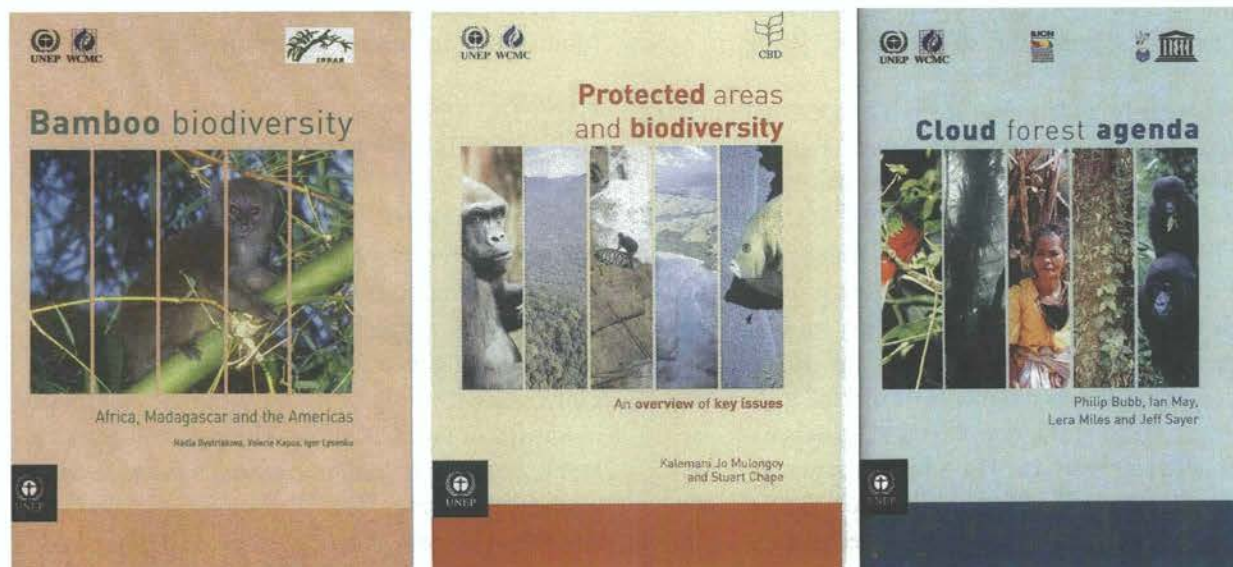
Both examples illustrate the potential benefits and pitfalls of current benefit sharing agreements. The value of wild relatives of some of the world's major crops was also the focus of a new project launched by UNEP and the International Plant Genetic Resources Institute. Crop wild relatives play a major role in plant breeding, contributing to disease resistance and increased yield. However, many of these species face extinction. The project, In Situ Conservation of Crop Wild Relatives Through Enhanced Management and Field Application, is co-funded by the GEF, and is being implemented in Armenia, Bolivia, Madagascar, Sri Lanka and Uzbekistan.

GENETICALLY MODIFIED ORGANISMS

February also saw the first Conference of Parties of the CBD's Cartagena Protocol on Biosafety, an agreement to protect natural biological diversity from organisms modified by modern technology. The concern is that, should these organisms be carelessly managed, they could be introduced to ecosystems where they could interbreed with wild flora and fauna, thus compromising the genetic stock of wild species that are needed for selective breeding for increased yield or disease resistance.

At the meeting, the 87 member States of the treaty adopted labelling requirements for all living or genetically modified organisms (known as LMOs and GMOs) intended for food, feed or processing. The new system is binding on all countries that are party to the Protocol. The meeting also adopted procedures and mechanisms for promoting

UNEP's assessment reports provide valuable information for decision making for biodiversity protection.



compliance with the Protocol and assisting countries in cases of non-compliance. A negotiating group of legal and technical experts on liability and redress for damages resulting from transboundary movements of GMOs was launched.

UNEP, through the GEF, has been instrumental in building capacity in developing countries and those with economies in transition to participate in and comply with the Cartagena Protocol. UNEP is also working with the Norwegian Institute for Gene Ecology to help developing countries, countries with economies in transition and Small Island Developing States (SIDS) to enhance their risk assessment and risk management capacity related to LMOs.

A two week course at the University of Tromsø, Norway, in July and August entitled Holistic Foundations for Assessment and Regulation of Genetic Engineering and Genetically Modified Organisms attracted 62 participants from 40 countries. The goal of the course was to enable participants to implement the risk assessment provisions of the Cartagena Protocol in their respective countries. The course is unique in following the process of genetically modifying an organism from the first step of finding a gene up to and beyond the stage of releasing it into the environment. Representatives of indigenous communities were among the participants and resource persons.

FOREST CONSERVATION

Forests are among the most biodiverse habitats. Their loss is a global problem. A report issued by the UNEP World Conservation Monitoring Centre in February 2004 highlighted the threats to a particularly important but little understood forest habitat type. Cloud forests—mountain and hilltop forests that are continually bathed in mist—are home to thousands of rare and endangered species. They also provide essential water catchment services, stabilizing topsoil and providing a steady source of freshwater for millions of people.

The report, *Cloud Forest Agenda*, compiled by UNEP in collaboration with UNESCO and the World Conservation Union, and launched in February for the CBD conference, is the first major output of the Mountain Cloud Forest

Initiative. Among its findings are that the majority of these moist forests are in Asia, not in Latin America as was previously assumed—with 60 per cent in Asia, 25 per cent in Latin America and 15 per cent in Africa. Emphasizing their importance to developing world economies, as well as crucial biodiversity conservation, the report underlines the vital need for improved monitoring and conservation measures if these important habitats are to be preserved.

Another report, launched in May 2004, highlighted the urgent need to act to preserve the world's diminishing stock of bamboos. These giant grasses provide essential habitats for some of the world's most charismatic and endangered species, such as pandas and gorillas. They are also widely used by people for construction, handicrafts and for food. International trade in bamboo, mostly from cultivated sources, is worth more than \$2 billion annually. *Bamboo Biodiversity (Africa, Madagascar and the Americas)*, produced by the International Network for Bamboo and Rattan in collaboration with UNEP-WCMC notes that as many as half of the 1,200 woody bamboo species may be in danger of extinction.

PROTECTING THE GREAT APES

Mountain gorillas depend on bamboo for up to 90 per cent of their diet in some seasons. They are the most endangered of all the planet's great apes—which include lowland gorillas, chimpanzees, bonobos and orangutans—with an estimated total population of less than 700. UNEP has for some years been involved with UNESCO and the world's major conservation organizations in the Great Apes Survival project, which is working with the countries where great apes are found to promote their preservation.

The project is also enlisting private sector assistance. An example from 2004 was the donation by the logistics company DHL of free delivery of office equipment purchased by the Born Free foundation to conservation authorities in West and Central Africa. During the year UNEP also contributed \$50,000 to GRASP to facilitate the building of a low stone wall to stop encroachment into the strategically important Virunga transboundary conservation area.

IMPROVING FINANCIAL SITUATION

UNEP's financial situation continued to improve in 2004. Governments remain the most important donors in the long-term process of ensuring adequate, stable and predictable financial resources for UNEP. The emphasis in resource mobilization is on securing timely and increased contributions from Governments to the Environment Fund to ensure adequate capacity on the part of UNEP to implement the Environment Fund programme of work agreed upon by Governments.

Following a decision of the Governing Council/Global Ministerial Environment Forum in Cartagena in 2002, the UNEP Executive Director extended a pilot phase of the voluntary indicative scale of contributions, launched in 2003, into the current 2004–2005 biennium.

Since 2000, annual contributions to the Environment Fund have been growing in US dollar terms at an average rate of between 9 and 10 per cent (see table). The number of donor countries has also been increasing. In 2003, 126 countries pledged or paid a total of \$52.7 million. In 2004, contributions continued to increase. At the time of writing, more than 110 countries had made their pledges or contributions, and it is estimated that total annual contributions for 2004 will be around US \$59.1 million—about \$6.4 million more than in 2003.

Such a major increase in US dollar terms was achieved partly because of a weak dollar. At the same time many countries made a significant effort to bring their contributions in line with a voluntary indicative scale. Many of them increased their payments in national currencies, including 12 new donor countries that resumed or started their pledges to the Environment Fund in 2004. In total, about 50 countries pledged or paid higher contributions in 2004 than a year before.

GROWTH OF SUPPLEMENTARY FUNDS AND EARMARKED SUPPORT

While mobilizing adequate contributions to the core Environment Fund remains a top fund-raising priority for UNEP, supplementary funds, including trust funds, trust fund support and earmarked contributions, are vital to the organization as they allow UNEP to implement fully the work programme approved by the Governing Council.

In 2004, UNEP continued its work within existing partnership agreements with Norway, Ireland and the Netherlands, and concluded a new long-term partnership with Belgium, which signed a Unilateral Act securing an initial contribution of \$10.1 million for the period 2004–2007.

Partnership agreements have demonstrated their clear advantages and efficiency compared to traditional project-oriented approaches to fund-raising and ad-hoc bilateral discussions on programme issues. The main focus of all partnerships is on programme activities in developing countries. Partnerships accordingly facilitate UNEP access to the development funds of donor countries and enable it to make an adequate contribution towards achieving the internationally agreed goals of the Millennium Declaration by 2015.

In addition, partnerships provide predictable financial support to the core UNEP programme areas and activities, with clear objectives and work plans for a period of between three and four years. That is a major contribution towards improving the strategic planning of UNEP activities as a whole and reducing the administrative burden. In addition, partnerships stimulate innovative approaches and priority setting through the introduction of regular policy dialogue and programme consultations.

ENVIRONMENT FUND CONTRIBUTIONS (US\$) 2002–2004: TOP 20 DONORS

Country	2002	2003	2004*	TOTAL*
1 United Kingdom	6,514,234	6,867,000	7,672,560	21,053,794
2 United States	6,500,000	5,475,000	5,910,100	17,885,100
3 Germany	5,009,716	5,865,872	6,945,516	17,821,104
4 Netherlands	4,682,104	4,661,858	6,020,352	15,364,314
5 Japan	4,100,000	3,500,000	3,400,000	11,000,000
6 France	2,006,800	3,340,130	3,927,720	9,274,650
7 Finland	2,820,689	3,085,147	3,364,760	9,270,596
8 Italy	2,074,600	2,807,240	3,072,800	7,954,640
9 Switzerland	2,161,538	2,582,205	2,827,216	7,570,959
10 Sweden	2,210,311	2,503,129	2,800,532	7,513,972
11 Denmark	2,055,567	2,565,382	2,658,662	7,279,611
12 Norway	1,983,340	2,145,923	2,134,259	6,263,522
13 Canada	1,725,626	1,693,284	2,002,495	5,421,405
14 Spain	596,625	678,830	950,902	2,226,357
15 Belgium	505,000	674,700	758,920	1,938,620
16 Russian Federation	500,000	500,000	500,000	1,500,000
17 Austria	316,677	376,740	509,543	1,202,960
18 Australia	345,280	328,845	424,600	1,098,725
19 Ireland	271,986	359,003	381,795	1,012,784
20 Kuwait	200,000	200,000	200,000	600,000
TOTAL	46,580,093	50,210,288	56,462,732	153,253,113
WORLD TOTAL	48,348,314*	52,712,359*	59,049,868	160,110,541

* Includes pledges

INCREASE IN PLEDGES AND NUMBER OF DONOR COUNTRIES PAYING TO THE ENVIRONMENT FUND

	2000	2001	2002	2003	2004*
Contributions and pledges (US\$)	41,003	44,096	48,348	52,714	59,100
Percentage	100%	107.5%	118%	128.5%	144%
Number of donor countries	75	81	91	126	126
Percentage	100%	108%	121%	168%	168%

* Estimated

ENVIRONMENT FUND: COUNTRIES INCREASING CONTRIBUTIONS/PLEDGES 2003-2004

Country	Contributions and Pledges in 2003	Contributions and Pledges in 2004	Increase US\$
Andorra	11,952	17,898	5,946
Angola	-	24,980	24,980
Argentina	6,000	25,000	19,000
Armenia	-	1,300	1,300
Australia	328,845	424,600	95,755
Austria	376,740	509,543	132,803
Bahamas	600	12,169	11,569
Barbados	5,000	6,000	1,000
Belgium	674,700	758,920	84,220
Brazil	-	68,593	68,593
Brunei Darussalam	9,551	9,700	149
Canada	1,693,284	2,002,495	309,211
Central African Rep.	-	600	600
Cyprus	2,000	15,000	13,000
Czech Rep.	126,222	132,000	5,778
Dem. People's Rep. Korea	-	1,000	1,000
Denmark	2,565,382	2,658,662	93,280
Ethiopia	-	1,000	1,000
Finland	3,085,147	3,364,760	279,613
France	3,340,130	3,927,720	587,590
Germany	5,865,872	6,945,515	1,079,643
Ghana	1,500	10,000	8,500
India	100,000	101,844	1,844
Ireland	359,003	381,795	22,792
Italy	2,807,240	3,072,800	265,560
Kazakhstan	-	10,000	10,000
Kiribati	-	600	600
Latvia	5,900	6,000	100
Lesotho	-	10,000	10,000
Liechtenstein	3,600	3,900	300
Mongolia	996	1,000	4
Netherlands	4,661,858	6,020,352	1,358,494
New Zealand	145,800	155,000	9,200
Nigeria	-	40,000	40,000
Republic of Korea	100,000	200,000	100,000
Romania	19,800	20,000	200
San Marino	1,200	1,300	100
Seychelles	1,200	1,500	300
Slovakia	19,800	20,000	200
Spain	678,830	950,902	272,072
Sri Lanka	5,000	5,200	200
Sweden	2,503,129	2,800,532	297,403
Switzerland	2,582,205	2,827,216	245,011
Tajikistan	10,950	12,000	1,050
Thailand	19,631	20,000	369
Tunisia	-	13,000	13,000
Turkmenistan	-	1,200	1,200
United Kingdom	6,867,000	7,672,560	805,560
United States	5,475,000	5,910,100	435,100
TOTAL	44,461,067	51,176,256	6,715,189

Number of new contributors: 12

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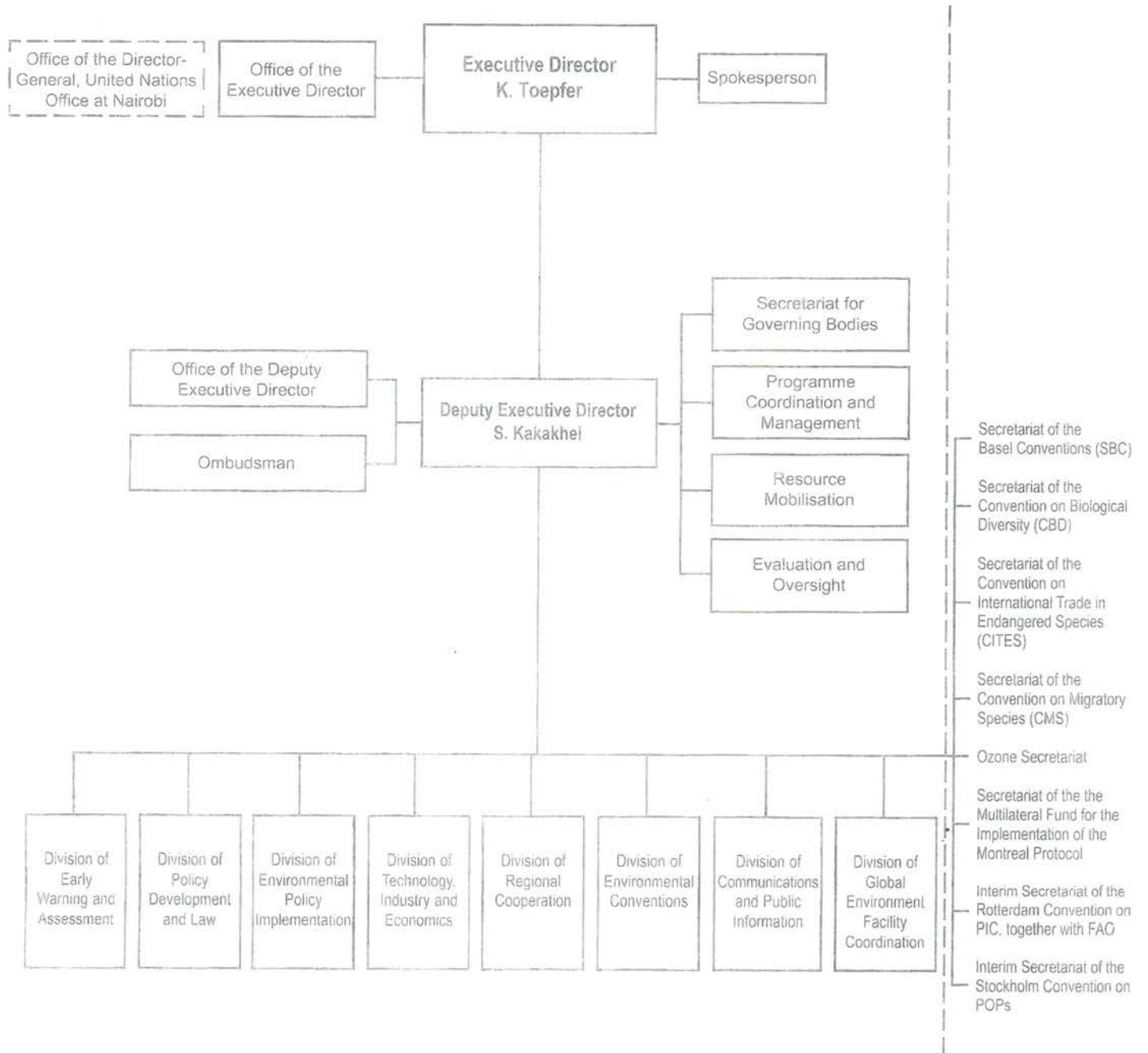
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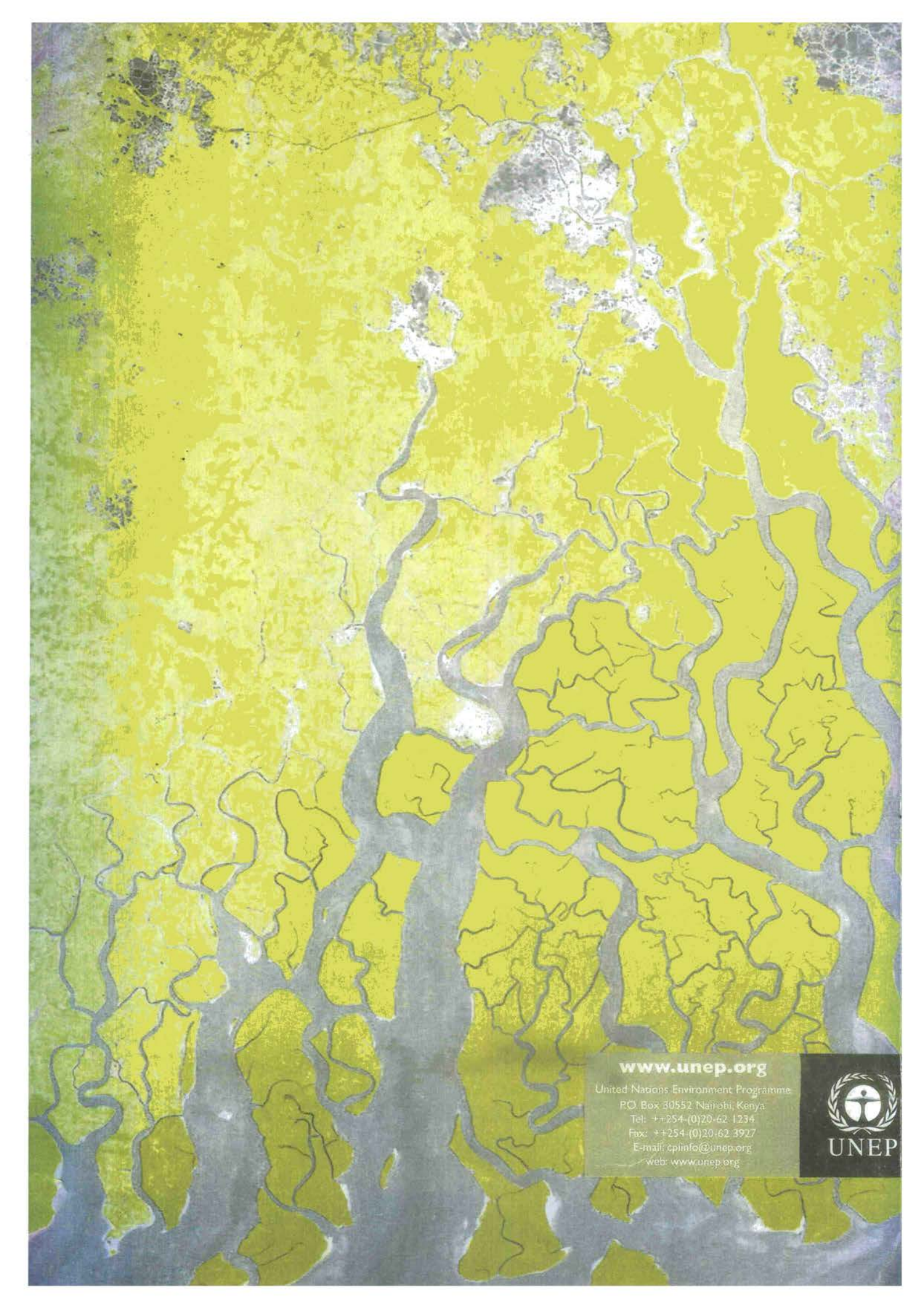
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