

## FROM SUMMIT TO SEA

The crucial role of environmental management for sustainable development and safeguarding essential land, water and marine resources was highlighted by a UNEP report released in September, prior to the 2005 World Summit. Entitled *The Fall of the Water*, the report revealed that the Himalayas and the other mountains of Asia are facing accelerating threats from road building, settlements, overgrazing and deforestation. There is particular concern for water supplies in the region, which hosts more than half of the world's population. Satellite images reveal that deforestation and unsustainable land use practices have given Asia's rivers the largest sediment loads in the world, and are among the primary causes of increasing drought and flood-related disasters.

Compiled and supported by UNEP, the World Conservation Union (IUCN), the International Centre for Integrated Mountain Development (ICIMOD), the Chinese Academy of Sciences and the Netherlands Environmental Assessment Agency, *The Fall of the Water* warns that more effort is needed to protect lowland and mountain areas across the region. Less than 3 per cent of watersheds are currently protected. The study is based on a new way of assessing the direct and cumulative impacts of infrastructure development called Global Methodology for Mapping Human Impacts on the Biosphere (GLOBIO), developed by UNEP's GRID Arendal centre in Norway, the UNEP World Conservation Monitoring Centre (WCMC) in the United Kingdom and the Netherlands Environmental Assessment Agency.

As well as providing the source of much of the world's freshwater, mountain areas are often home to unique wild species of animals and plants on which local people depend for food, medicines and other important materials. UNEP is a member of the Mountain Partnership, a voluntary alliance for improving the lives of mountain people and protecting mountain environments around the world. Launched at the World Summit for Sustainable Development (WSSD) in 2002, the Mountain Partnership works to support positive

change in mountain areas. UNEP's Interim Secretariat of the Carpathian Convention office in Vienna links the Mountain Partnership to UNEP's mountain-related work, including assessments and multilateral environmental agreements, and works to make environmental concerns central to the work of the Partnership. In December 2005, UNEP organised two workshops, for the Caucasus and for southeastern Europe respectively, on capacity building on legal instruments for the protection and sustainable development of mountain regions in collaboration with the ENVSEC Initiative, in Bolzano, Italy.

### COMBATING LAND DEGRADATION

With the forthcoming International Year of Deserts and Desertification, which is also recognized in the theme for World Environment Day 2006 'Don't Desert Drylands' the challenges faced by the 2 billion inhabitants of the world's arid and semi-arid lands is a growing focus. UNEP participated in the seventh Session of the Conference of the Parties to the United Nations Conference to Combat Desertification (UNCCD), which was held in Nairobi in October. During the conference, the New Alliance to Combat Land Degradation in Africa (TerrAfrica) was launched. TerrAfrica, in which UNEP is a partner, aims to raise \$4 billion over the next 12 years to address land degradation in Africa. UNEP is also working on a *Global Environment Outlook for Deserts*, which will be released on World Environment Day, 5 June 2006, and is also co-organizing an international conference on the Future of Drylands.

The greatest challenges to achieving the UN Millennium Development Goals (MDGs), particularly on poverty and hunger and environmental sustainability, are found in dryland areas of sub-Saharan Africa and South Asia, where extreme poverty and environmental degradation combine and reinforce each other to hold back human development. In 2005, UNEP launched the project An Ecosystem Approach to Restoring West African Drylands and Improving Rural Livelihoods through Agroforestry-based



**This photograph of people trying to save a beached whale just outside Rio de Janeiro in Brazil won the UNEP Executive Director's Special Prize in the 2005 UNEP Focus on Your World Photographic Competition on the Environment. The life in the world's oceans is coming under increasing pressure from human activities on land and sea. © Paulo Cesar Lopes Alvadia/UNEP**

Land Management Interventions to help build the scientific and technical capacity of some of the world's poorest dryland countries. The project will promote an ecosystems approach for sustainable management of integrated-tree-crop-livestock systems in the semi-arid lands of West Africa. The project is a collaboration between UNEP, the World Agroforestry Centre (ICRAF), the University of Florida Center for Environmental Policy, and the Governments of Burkina Faso, Mali, Mauritania, Niger, and Senegal.

In West Asia, nearly 80 per cent of the land cover is desert or desertified, with a further 16 per cent vulnerable to desertification. UNEP's Regional Office for West Asia hosts the Regional Coordinator for the UNCCD sub-Regional Action Programme. Activities under this programme have include inventorying of water resources and vegetation cover in the region and implementing four pilot demonstration projects in Jordan, Lebanon, Syria and Yemen. In northeast Asia the frequency, extent and intensity of dust and

sandstorms has accelerated over the past 50 years, becoming a serious environmental problem, disrupting communications and economic activity and affecting health. In response to requests from governments in the region, UNEP, the Asian Development Bank, the UN Economic and Social Commission for Asia and the Pacific and the UNCCD developed a project on Prevention and Control of Dust and Sandstorms, funded by the Global Environment Facility (GEF) and the Asian Development Bank. The project includes the establishment of a regional monitoring and early warning network, led by UNEP, and the development of an investment strategy to strengthen mitigation measures to address root causes of dust and sandstorms.

## **MANAGING WATER RESOURCES**

As *The Fall of the Water* demonstrates, land management directly affects water resources. The most concrete targets adopted at WSSD relate to water. In a reaffirmation of MDG 7, the Johannesburg Plan of Implementation calls on

## Protecting natural capital

governments to halve, by 2015, the proportion of people without access to safe drinking water. It also calls for the development of integrated water resources management (IWRM) and water efficiency plans by 2005, including support to developing countries. To that end, UNEP's Collaborating Centre on Water and Environment (UCC-Water) has been working with partners to support these targets in southern and West African countries. In 2005, it expanded the programme to five additional sub-regions, including Southeast Asia, North and Central Africa, Central Asia, and Latin America. UNEP has also been supporting IWRM in West Asia.

IWRM is a central component of the UNEP water policy and strategy, which is undergoing a critical review. The updated water policy and strategy will consist of two main components, assessment and management, and will address coordination and cooperation from national to global levels. It will promote ecosystems-based approaches that contribute to sound economic and social development, including poverty reduction and addressing risks from natural and anthropogenic disasters. The Bali Strategic Plan for Technology Support and Capacity Building will guide the policy's implementation.

Underpinning the policy are UNEP's assessments. As well as the Global International Waters Assessment, which concluded this year, UNEP continues to develop a water quality database under the Global Environmental Monitoring System (GEMS) Water Programme. The GEMStat website, a new online searchable database of global water quality data and statistics was launched in March 2005. The database covers 112 watercourses from more than 80 countries and contains information for the detection of long-term trends in water quality. Other ongoing assessments include *Assessing the Vulnerability of Africa's Water Resources to Environmental Change* and *Groundwater Resources Protection and Management in Africa*, both of which are being finalized for publication.

Africa was also the subject of *Africa's Lakes: an Atlas of Environmental Change*, released in October 2005 at the 11th World Lakes Conference, in Nairobi. Human activities and global warming are causing rapid changes to Africa's lakes, altering ecosystem processes and threatening the health and livelihoods of the communities who

depend on them. The publication uses satellite images to document, assess and vividly show the changes in and around African lake basins in recent years.

## WATER FOR DEVELOPMENT

Addressing water scarcity demands a wide range of tactics, from national-level policy interventions to local-level appropriate technological solutions. The UNEP Dams and Development project, which was established in 2001 and entered its second phase in 2005, works to promote improved decision making, planning and management of dams and their alternatives. The heart of the programme is stakeholder involvement. During 2005 the project continued to support national dialogue activities, while at the global level the fourth Dams and Development Forum was held in Nairobi in October 2005.

At the other end of scale is rainwater harvesting. Rainwater harvesting has proven to be a good, low-cost and simple water supply technology for domestic, agricultural, industrial and environmental purposes. In Africa, continent-wide spatial information on rainwater harvesting potential is lacking. Since this information is necessary to guide policy decisions on the use of rainwater harvesting to meet water supply needs, UNEP and ICRAF—both members of the recently established Rainwater Partnership, whose objective is to promote the use of rainwater by mainstreaming the resource into IWRM—embarked on a project to develop maps that show the opportunities for rainwater harvesting in Africa.

Across the Atlantic, UNEP announced a new project in June at the GEF third Biennial International Waters Conference, in Salvador Bahia, Brazil, aimed at helping the Amazon Basin and its 10 million inhabitants conserve and better manage the region's economically important waters, forests and wildlife. Pollution hot spots and damaged habitats and ecosystems will be identified and measures drawn up to reduce the threats and restore the damage. Other aims include moving to harmonized laws covering the management of the Amazon Basin and developing a regional vision on how to achieve sustainable development across the eight countries concerned. An important part of the project will be helping vulnerable countries and communities adapt



and cope with acute climatic change. The \$1.5 million GEF project, covering Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela, will aim to coordinate the numerous but fragmented national efforts currently under way to better manage and conserve the basin's natural resources. The project is in preparation for a more wide-ranging \$10 million 'mega-basin project' scheduled to commence in 2007.

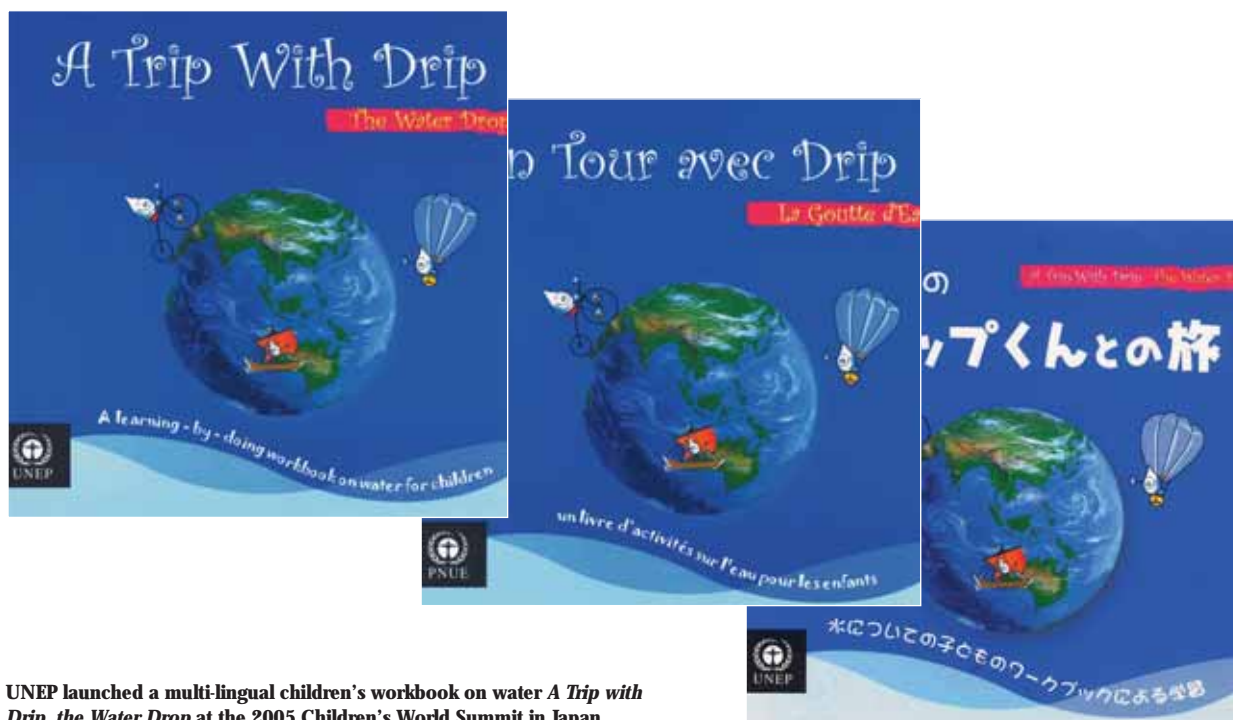
**SEAS AND OCEANS: DEAD OR ALIVE?**

The management of land and water resources directly affects the marine environment. The UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) is the only global mechanism that explicitly addresses the links between freshwater, coastal and marine environments. In 2005, the GPA intensified efforts to address the serious impacts of land-based sources of pollution and physical degradation of the coastal and marine environments.

At the global level, it provided substantive inputs to the preparatory reports of the 13th session of the Commission on Sustainable Development (CSD-13), which focused on water, sanitation and human settlements. In the Secretary General's report to CSD-13, a holistic approach to sanitation was promoted, comprising wastewater collection,

treatment, re-use and safe re-allocation to the environment. Global cooperation was further strengthened through partnerships and jointly organized meetings such as the TOPS 2005 Ocean Policy Summit. 2005 also saw the launch of the Xiamen International Forum for Coastal Cities for the seas of Southeast Asia.

UNEP helps governments to develop national programmes of action for implementing the GPA. Over 40 National Programmes of Action are in development. UNEP also coordinated more than 10 training courses on Municipal Wastewater Management in Coastal Cities, in collaboration with the UN Educational, Scientific and Cultural Organisation (UNESCO) and the UN Division of Ocean Affairs and the Law of the Sea. More than 230 managers from 15 different countries speaking English, Portuguese, Turkish and Spanish were trained. Under the Physical Alteration and Degradation of Habitats Programme, Key Principles have been developed and endorsed by intergovernmental bodies, UN agencies and the private sector for four economic sectors: aquaculture, ports and harbours, tourism and mining. Twelve Guiding Principles for Integrated Coastal Area and River Basin Management (ICARM) have also been finalized and published and an *ICARM Best Practices Casebook* and *Progress Marker* are being developed.



UNEP launched a multi-lingual children's workbook on water *A Trip with Drip, the Water Drop* at the 2005 Children's World Summit in Japan.

### REGIONAL SEAS

The UNEP Regional Seas Programme provides an important platform for implementing the GPA. The Regional Seas Programme covers eighteen regions, operating either through a Convention or an Action Plan. The sustainability and effectiveness of the Regional Seas Programme was addressed in October 2005 at the seventh Global Meeting of Regional Seas Conventions and Action Plans in Helsinki, Finland, with a focus on financial challenges and programme implementation. A new Regional Seas brochure, *Partnerships for Sustainable Development*, was published, highlighting the Programme's global strategy, priorities and partnerships, common elements among the Regional Seas, and a summary of each of the Conventions and Action Plans. 2005 also marked the 30th anniversary of the Mediterranean Action Plan (Barcelona Convention), the first Regional Seas Programme established under UNEP's auspices. Since the entry into force of the Barcelona Convention in 1978, six landmark protocols have been adopted, including the recent adoption of the Mediterranean Strategy for Sustainable Development.

Other Regional Seas highlights for 2005 include the meeting Looking for Synergy in Achieving the Biodiversity Millennium Goals in the Black Sea, in Istanbul, in September 2005, with the Convention on Biological Diversity (CBD) and the Black Sea Commission Secretariat to harmonise approaches, actions, research and educational activities for the protection and conservation of biodiversity in the Black Sea. UNEP also published the *Managing Marine Protected Areas Toolkit in the Western Indian Ocean* with the CBD, the Nairobi Convention, and IUCN East Africa. The Programme also focused on the emerging issue of marine and coastal invasive species by helping the Global Invasive Species Programme to develop a *Training Course Toolkit on the Management of Coastal and Marine Invasive Alien Species*. The toolkit was tested in East Africa in November 2005 and will now be finalized for implementation in other regions.

In Asia-Pacific, UNEP is implementing a \$32 million five-year GEF project titled Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand. It is the first time Cambodia, China, Indonesia, Malaysia, the Philippines, Thailand and Viet Nam have signed

a single operational agreement for protecting the marine environment. In 2005, seven National Action Plans were finalized and adopted by some governments for integration into sustainable development planning. Goals and targets were also developed for a Regional Strategic Action Plan. Following the characterization and prioritizing of 136 mangrove, seagrass, coral reef and wetland habitats, six of 18 chosen demonstration sites were under implementation by June 2005. A model for pollution carrying capacity of the South China Sea Basin with respect to nutrient loading was also developed.

In Central Asia, ratification of the Framework Convention for the Protection of the Marine Environment of the Caspian Sea continues at a good pace. Four of the five countries (Turkmenistan, the Russian Federation, the Islamic Republic of Iran and Kazakhstan) have ratified the Convention; Azerbaijan is close to finalizing its ratification procedure. A Ministerial Conference to mark the entry into force of the Convention may be held in early 2006. Work is also advanced on Protocols on biodiversity, land based sources of pollution, and environmental impact assessment in a transboundary context and negotiations on a Protocol concerning regional preparedness, response and cooperation in combating oil pollution incidents have produced an in-principle agreed text.

### CLEANING THE SEAS

A growing priority for seas and oceans is marine litter. Marine litter is found everywhere, from the poles to the equator and from continental coastlines to small remote islands, with a wide spectrum of environmental, economic, safety, health and cultural impacts. In collaboration with UN Agencies, including the International Maritime Organisation (IMO), UNESCO, the Secretariat of the Basel Convention and the UN Food and Agricultural Organisation (FAO), UNEP's Regional Seas Programme and the GPA have been developing and implementing a number of activities to reduce marine litter. These include the publication *Marine Litter: an Analytical Overview* and a leaflet on marine litter *Tightening the Noose*, the development of a GEF Medium Size Project proposal on the Sustainable Management of Marine Litter and a series of regional activities. Marine litter was also included in the Draft Decisions of the 60th United Nations

General Assembly, on Oceans and the Law of the Sea. The Regional Seas Programme has also joined forces with the Secretariat of the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal to raise awareness on hazardous waste and marine pollution.

Waste is among the major challenges for the world's Small Island Developing States (SIDS) identified in a series of reports prepared by UNEP in preparation for the international meeting to review progress on the 1994 Barbados Plan of Action for SIDS, held in Mauritius in January. Other issues include vulnerability to natural and human-made disasters, pollution and discharge from ships, and over-fishing. Even though SIDS are found in all regions and are economically, socially and culturally diverse, they have a number of things in common, including limited physical size, high population density and poor infrastructure due to a lack of natural resources. These are all constraints on sustainable development.

During 2005, UNEP's activities related to SIDS focused mainly on the Mauritius meeting and the implementation of the Mauritius Strategy. At the

meeting, UNEP organized and moderated a panel discussion on environmental vulnerability, with a focus on assessing and strengthening capacity in areas such as adapting to climate change, preparing for and mitigating natural disasters, developing integrated waste management strategies and promoting renewable energy. The panel's recommendations were presented to the high-level roundtables, stimulating intergovernmental dialogue on practical measures to support environmental sustainability in SIDS.

UNEP's Governing Council also adopted a decision aimed at strengthening UNEP's own activities in SIDS. UNEP's contribution to implementing the Mauritius Strategy is aligned to its Bali Strategic Plan for Technology Support and Capacity Building, and activities are coordinated with several other UN agencies through the Inter-Agency Task Force established to maximise efforts of the UN system in SIDS. UNEP also contributed to the Secretary General's report on the follow-up and implementation of the Mauritius Strategy which was presented to the General Assembly at its 60th session. The report shows that SIDS are benefiting from UNEP's assistance in key areas such as coastal and marine resources, climate change and biodiversity resources.

**UNEP produced a number of environmental assessments as an input to the International Meeting to Review the Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States (SIDS), which took place in Mauritius, 10 to 14 January 2005. The reports make it clear that, in terms of vulnerability, SIDS represent a special category of countries as a result of their often remote locations, small and fragile economies based on tourism and a small number of exports, heavy dependence on fossil fuel imports and limited availability of natural resources, including land and freshwater. Other issues include marine and coastal pollution from poor waste disposal and shipping traffic, unsustainable exploitation of fisheries and vulnerability to natural disasters.**

