

and, with his high sense of duty and ethics, knowing precisely what he felt had to be done. He will be missed by many people from different nations and of all ages, and will leave us with glorious memories. He was in many ways comparable with the great encyclopaedists of the Renaissance, and was a true citizen of the world.

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Convention on Biological Diversity

Barely 18 months after its signing at the June 1992 'Earth Summit' in Rio de Janeiro, the Convention on Biological Diversity became international law on 29 December 1993. The Executive Director of the United Nations Environment Programme has hailed the occasion as 'one of the most significant recent developments in international law and in international relations relating to environment and development.'

In the face of the greatest extinction of species for 60 million years, mostly of late as a result of human activities, the treaty commits nations to protect biological diversity — ecosystems and genetic resources as well as species. The treaty pledges them to use sustainably the world's plants, animals, and all other organisms, and seeks to ensure the fair and equitable sharing of the benefits that result from the use of genetic resources, particularly for developing countries.

The benefits reaped from biodiversity can be found almost everywhere. Thus a plant found only in the Madagascar rain-forests has proved of enormous value in combating childhood leukaemia, while the bark of a tree growing in the northwestern United States is being used to combat certain forms of cancer, and more than a quarter of all prescriptions in modern Western medicine contain active ingredients that have been extracted from wild plants. Varieties of wheat grown in Canada contains genes that have been introduced from as many as 14 other countries, while a 'useless' wild wheat plant from Turkey is used to give commercial wheat crops resistance to disease and a wild species of coffee from Madagascar does the same for that crop.

Our planet's food supply also depends on diversity — the genetic uniformity of some crops has allowed pests to sweep across countries, causing crippling damage and, at times, enormous loss of life. Habitat destruction is a major threat to biodiversity, which is also lost through over-harvesting, chemical pollution, and the inappropriate introduction of foreign plants and animals. Climate change threatens to accelerate the current destruction.

* In chronological order of their ratification, the following countries were the first 36 to ratify the biological diversity treaty by mid-December of 1993: Mauritius, Seychelles, Marshall Islands, Maldives, Monaco, Canada, China, Saint Kitts and Nevis, Ecuador, Fiji, Antigua and Barbuda, Mexico, Papua New Guinea, Vanuatu, Cook Islands, Guinea, Armenia, Japan, Zambia, Peru, Australia, Norway, Tunisia, Saint Lucia, Bahamas, Burkina Faso, Belarus, Uganda, New Zealand, Mongolia, Philippines, Uruguay, Nauru, Nepal, Czech Republic, and Barbados.

The ratification that made the Convention international law came from Mongolia on 30 September. Ninety days later — actually on 29 December 1993 — the treaty became a binding legal document for the countries that have ratified it, 36 to date.*

By mid-December of 1993, 167 States had signed the Convention, including the ratifiers. Many Governments that have signed are in the process of securing ratification, including the United States and countries of the European Union. It is to be hoped that States which have signed made New Year resolutions to ratify the biodiversity agreement early in 1994, while another resolution would be to start implementing it. The Convention's commitments need to be integrated into national laws and policies and into countries' plans for managing their resources of plants, animals, and natural habitats.

The first meeting of Governments that have ratified the Convention (the first Conference of Parties) is tentatively scheduled for 28 November to 9 December 1994, to take some of the fundamental decisions for advancing the Convention's provisions. Under the treaty, countries promise to develop national plans for the conservation and sustainable use of biodiversity, through making inventories of resources and integrating such plans into development strategies. They are also required to enact laws to protect threatened species and habitats and expand natural protected areas.

Developed countries are to assist poorer nations in carrying out their conservation programmes through the use of appropriate technologies and the provision of new financial assistance. The treaty also says that developed countries shall 'provide new and additional financial resources' to developing countries, so that the latter can carry out their treaty obligations.

Agreements for access to genetic resources and the transfer of biotechnologies are to be promoted. Countries are encouraged to preserve the traditional knowledge of indigenous communities in the conservation and use of biological diversity. According to the Convention, this should be done with the active involvement of indigenous peoples who possess such knowledge, so that all can benefit from its use.

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Small-island States and Low-lying Coastal Areas Especially Vulnerable to Climate, Global Warming, and Sea-level Changes

In his opening address to the World Coast Conference held recently in The Hague, Netherlands, the Secretary-General of the World Meteorological Organization (WMO), Professor G.O.P. Obasi, emphasized how 'small island states and coastal areas are very vulnerable and

sensitive to climate and atmospheric changes which result in global warming and sea-level change'. He also said that these areas are prone to suffer from the devastating effects of storms, whose frequencies and intensities might be altered as a result of climate change. The Government of

the Netherlands was hosting the five-days' intergovernmental meeting, which was being held under the auspices of the Intergovernmental Panel on Climate Change (IPCC), which itself was established by WMO and UNEP in 1988 to assess and explore ways of furthering our understanding of the climate-change process.

The WMO Secretary-General also emphasized to participants that sea-level change could affect global shipping infrastructures, ports and harbours, and the world trade and communication that these sustained. In addition, sea-level change could have detrimental effects on the beautiful beaches and resorts which promote global tourism and generate revenues for many nations. He also pointed out that coastal zones and small-island states were prone to storm surges, which are usually caused by tropical cyclones, hurricanes, or typhoons. In turn, these surges cause severe flooding and in some cases inundate large areas of coastal lands, thus destroying lives and property. Rising sea-levels may exacerbate these extreme events.

Rising tides and storm surges, coupled with floods from rivers, will also cause water-quality problems for coastal areas. The solution, according to Professor Obasi, is being constrained by the lack of sufficient observations of surface water and river flows. In many parts of the world, especially in the developing countries, measurements of river flows are lacking, and where they exist, networks of stations are often inadequate at best.

It is for this reason that WMO is promoting, with the support of the World Bank, UNESCO, and others, the concept of a World Hydrological Cycle Observing System (WHYCOS). Using existing WMO systems, such as the World Weather Watch and the Hydrology and Water Resources Programme, WHYCOS aims at providing timely observations of discharge and water quality from the major rivers of the world, together with associated observations of weather and climate. WHYCOS is expected to create a reliable global water resources archive which would make the data available for sound coastal-zone management and for decision-making.

The Secretary-General described the various WMO programmes and endeavours that were being carried out, with other UN agencies and non-governmental organizations, related to the ocean and atmosphere — such as the World Ocean Circulation Experiment (WOCE) and the Tropical Oceans Global Atmosphere (TOGA) project. Many of the islands in the tropical Pacific have been equipped with tide-gauges through the TOGA project. The Global Ocean Observing System (GOOS) will ensure global, permanent, and systematic, observations that are essential for forecasting climate change and variability, and for assessing the health and state of the marine environment. GOOS will serve as the ocean component of the Global Climate Observing System (GCOS), another inter-agency effort which aims to reduce the uncertainties about climate change.

In view of the important interactions of the atmosphere with the world ocean, the role of the Global Atmosphere Watch (GAW) of WMO and its value in the monitoring and prediction of the chemical and biological exchanges within the atmosphere, were underlined, while in emphasizing the strengthening of national capacities for sustainable development, the WMO Secretary-General said that 'it is of vital importance that the existing national, regional, and global, scientific and technological capacities be strengthened for the monitoring, assessment, analysis, and prediction, of climate and environmental changes — particularly in critically vulnerable regions such as small islands and low-lying coastal areas.'

The World Coast Conference was one of the first major conferences that are being held on all aspects of coastal-zone management. A global conference on the Sustainable Development of Small-island Developing States will be convened by the United Nations in Barbados in April of 1994.

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London Initiative on the Russian Environment

Following a year of preparatory work, including meetings in four other countries, the London Initiative on the Russian Environment held its inaugural Steering Committee meeting at the Royal Geographical Society, London, early in December 1993, to consider future projects. The Committee developed follow-up points for action based upon a protocol signed by the Initiative's Russian delegation, headed by Russia's Deputy Minister for Environmental Protection and Natural Resources, Dr Amirkhan M. Amirkhanov, and the Conservation Foundation. The protocol outlined the possibility of investigations or collaboration on projects with a number of UK institutions and organizations which met with the Russian ministerial delegation, including:

- development of a programme to save the endangered Siberian Tiger (*Felis tigris ssp.*);
- a partnership with Imperial College, London, regarding solid waste;
- participation with British commercial partners in the World Bank's master plan for ecotourism in the Lake Baikal basin;
- the establishment of a common database on specific

environmental issues and technical assistance from the World Conservation Monitoring Centre in Cambridge, England;

- cooperation with the Television Trust for the Environment, London, to provide environmental education tapes for Russian schoolchildren and students;
- possible cooperation between the protected area systems of Russia and the UK in support of the EECONET system; and
- examination of the possibility of twinning protected areas in Russia and the UK.

The London Initiative, presided over by Professor David Bellamy, is a new private-sector group developed to encourage and focus environmental expertise, aid, and investment, from Britain and other market-economy countries to help Russia to deal with its massive environmental needs. The organization aims to assist the Russian environment in six targeted areas: water quality, waste management, energy conservation, sustainable local development, protected areas, and environmental education. The Initiative was launched at a high-level reception in the Victoria & Albert Museum, London, on 24 November 1993.