

most populous ones, India and China. As a general rule, legislation is not the critical factor for environmental management in developing countries, as it is often made out to be, but rather due to inadequacy of implementation and enforcement of legal measures already available, and to lack of standards and controls for maintaining and/or enhancing environmental quality.

Many other aspects of international environmental laws were discussed in the Workshop, among which were environmental law and State sovereignty, the future of endangered species, balancing the equities in international environmental law, pending problems of international law of the environment, environmental protection and the law of international trade, environmental law of war and the future of Mankind, and international law: common patrimony and intergenerational equity.

In a world where the subjects of specialization are becoming smaller and smaller with time, it is essential to take a broader view of problems in order to ensure the long-term sustainability of the development process. One means by which specialists can broaden their perspectives, is by interactions with specialists from other disciplines and fields than their own. This well-organized Workshop provided an ideal opportunity for international experts from different backgrounds to discuss various issues having a common focus—international environmental law. The resulting discussions were authoritative, comprehensive, and stimulating. It is a great pity that these types of high-level interdisciplinary meetings are so few and far between. The papers discussed during this workshop are being published, and the book is bound to be welcomed by every person interested in international environmental law.

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MAB REGIONAL SEMINAR 'MAN'S IMPACT ON COASTAL AND ESTUARINE ECOSYSTEMS', HELD AT, SHIBAYAYOI-KAIKAN IN TOKYO, JAPAN, DURING 13-16 NOVEMBER 1984

This Seminar was organized by the MAB Coordinating Committee of Japan in relation to MAB Project No 5, on the Ecological Effects of Human Activities on the Value and Resources of Lakes, Marshes, Rivers, Deltas, Estuaries, and Coastal Zones. The 26 overseas participants were mainly from Asian or Australasian countries, including Australia, China, Indonesia, Korea, Malaysia, Micronesia, New Zealand, Papua New Guinea, Philippines, Singapore, and Thailand. In addition there were 56 Japanese participants.

The sessions were (1) Overviews: Inventory of coastal and estuarine ecosystems, (2) Problems of coastal and estuarine ecosystems, (3) Problems of mangrove ecosystems, (4) Management of coastal ecosystems, and (5) Ecological and socio-economic aspects of coastal zones. There was also a scientific cruise in Tokyo Bay on the last day. Among the topics, human impacts on mangrove forests and coral reefs were particularly stressed as creating urgent and serious environmental problems.

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FIRST MEETING OF THE WORKING GROUP FOR THE WESTERN PALAEARCTIC, MIGRATORY BIRDS COMMISSION, INTERNATIONAL COUNCIL FOR GAME AND WILDLIFE CONSERVATION, HELD AT 15 RUE DE TÉHÉRAN, 75008 PARIS, FRANCE, ON 7 DECEMBER 1984

This Meeting was the result of 5 years of discussions to define the bases of a strategy for inventorizing the humid zones and their faunas, in order to protect and to conserve them.

The President of Honour of the Meeting was Professor Erik Dahl, President of the Migratory Birds Commission. The Meeting was 'animated' by Mr Raymond Pouget, President of the Working Group, while Mrs Huguette Bouchardeau, French Minister of the Environment, participated. The Meeting brought together representatives of 22 European and African countries, national organizations, hunters, biologists, and other scientists, as well as representatives of the International Bureau for Research on Water Birds, the Federation of the Associations of Hunters, and the European Economic Community.

Two main steps were taken during the Meeting:

-The start of an inventory of African humid zones and numbers bagged in all countries through which migratory birds pass.

-The creation of an international fund, administered by the International Council for Game and Wildlife Conservation, with inputs from organizations of European hunters, in order to ensure substantial support to countries of North and West Africa to implement this inventory, and for the conservation of those fragile habitats.

Several projects of assistance are under study, which will emphasize the solidarity between European hunters and African administrators. These projects, some of which are spectacular, will be officially announced during the Second Meeting of the Working Group, to be held in DAKAR, Senegal, in April 1985, on the occasion of the next General Assembly of the International Council for Game and Wildlife Conservation.

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IUCN-WWF PLANT ADVISORY GROUP, FIRST MEETING, HELD IN THE MISSOURI BOTANICAL GARDEN, ST LOUIS, MISSOURI, USA, DURING 17-18 DECEMBER 1984

In March 1984, the International Union for Conservation of Nature and Natural Resources (IUCN) and the World Wildlife Fund (WWF) started a US\$ 4 millions programme to promote plant conservation more effectively than hitherto around the world (*see the review, by Dr F. Raymond Fosberg, in Environmental Conservation, 11(2), pp. 285-6, 1984, of our introductory booklet*). Most of the programme which is designed and fostered by IUCN, is being financed from a special WWF campaign on plants.

To guide their efforts, IUCN and WWF have established a small Advisory Group of leading botanists. Scientific advice is especially needed in this case because what is now called the 'Plants Programme' is very novel and breaks much new ground in conservation thinking; until now the subject of plant conservation has lacked a clear conceptual framework free from zoological bias.

It is a matter of considerable satisfaction to both of the main sponsoring organizations that Peter H. Raven, Engel-

mann Professor and Director of the renowned Missouri Botanical Garden, has agreed to be the Chairman, and that all the other botanists approached so far have agreed to serve in the Advisory Group. The members are: P.S. Ashton* (UK), L. Ake Assi* (Ivory Coast), R.W. Boden* (Australia), J.A. Duke* (USA), E. Forero* (Colombia), A. Gomez-Pompa* (Mexico), V.H. Heywood* (UK), K. Kartawinata* (Indonesia), T.N. Khoshoo (India), G.T. Prance* (USA), A. Quézel (France), Peter H. Raven* (USA), R.E. Schultes* (USA), and A. Takhtajan (USSR). [The asterisks indicate those members who were able to attend the first meeting.] The meeting was possible thanks to a generous donation from the Ernest Kleinwort Charitable Trust, to whom IUCN and WWF are most grateful.

At its First Meeting, the Plant Advisory Group prepared a 16-points set of conclusions, which IUCN and WWF will distribute widely, as well as many internal recommendations and suggestions to guide the activities of IUCN and WWF. The preamble to the conclusion, which outlines in concise form why conservationists should give far more attention than they currently do to plants, reads:

'Plants are a primary resource of fundamental importance for human life. Rapid population growth, together with the excessive and increasing demands that are placed on the world's resources by our societies, are threatening the destruction of a major portion of our common heritage of plants. This threat is especially evident in the tropics and subtropics, where at least two-thirds of the [species of] plants of the world occur, and where the process of deforestation is proceeding at an alarming rate. Widespread poverty, famine, and instability, for example in Africa, are manifestations of the same processes that are driving plants to extinction and, by doing so, seriously limiting our future resource options.

All human beings depend upon plants, directly or indirectly, for their lives, as do most other forms of life: at least four million different kinds of organisms depend on about 250,000 kinds of plants. Unless we begin immediately to take drastic and innovative measures to preserve them, it is likely that tens of thousands of plant species will disappear for ever during our lives or those of our children. Their loss would amount to a fundamental and permanent change in the character of life on Earth—a life that is characterized by great diversity.

Some 20 kinds of plants provide more than 85% of our food, and only a few hundred are cultivated widely. Most plant species have never been examined to see if they might have properties that would make them useful as food or for other purposes in our modern industrial age, and thousands of species have not even been described scientifically or given a name.'

The recommendations cover, among other topics, the need for increased attention to be given to tropical and subtropical plants, and the need for plant inventories for these regions—so that adequate information would be available to take effective conservation action. Otherwise it will be impossible to develop meaningful plans for conservation of tropical plants. The Advisory Group proposed that, when natural and semi-natural areas are converted to Man-made ecosystems, a reasonable proportion of the land—they suggested 10%—be set aside as germ-plasm reserves, and called for more botanists to be involved in land-use planning teams.

The Group stressed the need for greatly increased training in plant conservation, and considered how this could be achieved. They felt that conservation bodies should also do more than at present to extend their network of supporters beyond the audiences of developed countries, and urged that essential materials be made widely available in many languages. They wanted IUCN to involve even more close than at present its extensive network of NGOs, and to develop more links with the botanical community.

The role of botanic gardens in plant conservation was also considered; here the Group urged IUCN to prepare a

strategy outlining this important and often neglected part of botanic gardens' work, as a way both to help gardens to get more resources themselves, and to encourage them to see conservation as one of their principal aims. This strategy will be described in one of 15 books and major reports that are being prepared under the Plants Programme—products that IUCN and WWF hope will provide the conceptual and practical basis for plant conservation worldwide.

The Advisory Group will meet once or twice a year, to provide a continuing intellectual input to the activities of IUCN and WWF on plants. It is intended that this advice from a distinguished group of the world's leading botanists would also be available to governments, development agencies, and conservation organisations, in both industrialized and Third World countries. While the group was pleased that about US\$ 1.6 m had been committed to 35 projects under the IUCN-WWF International Plants Programme by the end of 1984, they felt very strongly that conservationists had been remiss in neglecting plants until now and that the initial momentum launched by IUCN and WWF must be continued and built upon by other organizations as well. They also supported IUCN's and WWF's approach in addressing the major issues in plant conservation, so that, with the help of the Group, the sister organizations should soon be in a position to outline what has to be done by the world community to ensure that the essential diversity of the plant kingdom survives into the next century and beyond.

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Important Prospect:

ARCTIC HERITAGE SYMPOSIUM, TO BE HELD AT THE BANFF CENTRE, BANFF, ALBERTA, CANADA, DURING 24–28 AUGUST 1985

The Association of Canadian Universities for Northern Studies (ACUNS)* is in the process of planning its third international conference—an Arctic Heritage Symposium. Co-sponsored by the International Union for Conservation of Nature and Natural Resources, through its Commission on Ecology (COE) and Commission on National Parks and Protected Areas (CNPAA), this Symposium will be held at The Banff Centre in Banff, Alberta, Canada, during 24–28 August 1985. The two previous ACUNS conferences were on Renewable Resources and the Economy of the North, and on Resources and Dynamics of the Boreal Forest Zone.

The Arctic Heritage Symposium is an attempt to bring together members of the international arctic community to discuss the current knowledge of arctic systems, and research and management needs, from the standpoint of natural and cultural heritage. A central aim is to help to find the proper balance between resource use and conser-

* The origin and establishment of which are described by the then Director of the Centre for Northern Studies and Research, McGill University, Professor Trevor Lloyd, in *Environmental Conservation*, 4(2), p. 114, 1977.—Ed.

(Concluded on page 36)