

Chapter VIII

Environment

Environmental problems, including global warming and depletion of the ozone layer, became increasingly prominent in the international public debate and political agenda in 1988. The United Nations Environment Programme (UNEP) continued its efforts to monitor and assess those problems and to protect the Earth's environment. An international conference held in Canada addressed the growing evidence that industrial gases might be responsible for global warming. The General Assembly, by resolution 43/212, urged States to prohibit all transboundary movement of toxic and dangerous wastes carried out without the prior consent of the importing country's authorities. The Economic and Social Council, by resolution 1988/71, stressed the importance of the active participation of all Governments in preparing for the the global convention on transboundary movements of hazardous wastes.

The UNEP Governing Council held its first special session in March, at Nairobi, Kenya, focusing on the system-wide medium-term environment programme for 1990-1995. UNEP continued its various activities in conserving biodiversity and protected areas, controlling soil erosion and forest loss, protecting the marine environment and collecting information on such topics as air and water quality, food contamination and ozone depletion.

General aspects

International co-operation

As a result of the 1972 United Nations Conference on the Human Environment, the General Assembly established that year the institutional and financial arrangements for international co-operation on the environment.(*) It also established the Governing Council of UNEP and set out its role of environmental policy guidance.

ECONOMIC AND SOCIAL COUNCIL ACTION

On 28 July 1988, on the recommendation of its First (Economic) Committee, the Economic and Social Council adopted resolution 1988/69 without vote.

International co-operation on the environment
The Economic and Social Council,

Recalling General Assembly resolution 2997(XXVII) of 15 December 1972 on institutional and financial ar-

rangements for international environmental co-operation, in particular, section III, paragraph 4, thereof,

Reiterating the need to keep under review the problem of additional costs that may be incurred by developing countries in the implementation of environmental programmes and projects,

Reaffirming the need for additional financial resources to be provided by donor countries and organizations to assist developing countries in identifying, analysing, monitoring, preventing and managing environmental problems in accordance with their national development plans, priorities and objectives,

1. Requests the Executive Director of the United Nations Environment Programme, in co-operation with the competent organizations, to carry out an up-to-date review of the problem referred to in General Assembly resolution 2997(XXVII), section III, paragraph 4, and to report thereon to the General Assembly at its forty-fourth session, through the Economic and Social Council;

2. Calls upon all Governments to request their central economic and sectoral agencies to ensure that their policies, programmes and budgets encourage sustainable development and to strengthen the role of their environmental and natural resource agencies in advising and assisting the central and other sectoral agencies in that task;

3. Requests the organizations of the United Nations system concerned to include in their reports to the General Assembly at its forty-fourth session an account of the measures they have taken to give effect to the provisions of General Assembly resolutions 42/184 and 42/187 of 11 December 1987 calling on them to provide additional resources to developing countries.

Economic and Social Council resolution 1988/69

28 July 1988 Meeting 40 Adopted without vote

Approved by First Committee (E/1988/118) without vote. 21 July (meeting 19): draft by Tunisia, for Group of 77 (E/1988/C.1/L.2), orally revised following informal consultations; agenda item 11.

UNEP programme

Programme policy

Pursuant to a 1987 General Assembly resolution,@) the UNEP Governing Council in 1988 held its first special session (Nairobi, 14-18 March)⁽³⁾ to consider and approve the United Nations system-wide medium-term environment programme for 1990-1995 and to consider the global environmental programme of the proposed United Nations medium-term plan, which had been extended to cover 1990-1991.⁽⁴⁾ The medium-term plan of UNEP for 1990-1995 was also before the Council.

In an introductory report,⁽⁵⁾ the UNEP Executive Director outlined the goals and organization of the system-wide medium-term environment programme covering 1990-1995. The programme had been submitted by the Administrative Committee on Co-ordination (ACC), which stated, in its annual report to the Council,⁽⁶⁾ that the programme constituted an overall strategy and planning framework for United Nations action on the environment. The ACC report discussed general co-ordination policy issues on environmental matters and the integration of environmental considerations into development planning and projects.

The system-wide medium-term environment programme was an expression of the catalytic and co-ordinating role of UNEP in respect of the efforts of the United Nations system to address environmental issues as a dimension of its overall activities, the Executive Director noted. The programme corresponded closely in its philosophy and approach to UNEP's 1987 report, "Environmental Perspective to the Year 2000 and Beyond", adopted by the Assembly as a broad framework to guide action and co-operation on policies and programmes aimed at achieving environmentally sound development.⁽⁷⁾ That report, in turn, drew on the 1987 report of the World Commission on Environment and Development titled "Our common future", which emphasized the need for environmentally sustainable development and which was welcomed by the Assembly.⁽⁸⁾

In his introductory statement to the Council,⁽⁹⁾ the Executive Director described the basis of the Council's mandate to orchestrate a sustained and multisectoral response by the United Nations system. What was expected from member Governments of the Council was, first and foremost, firm guidance on the long-term strategy for achieving a system-wide application of sustainable development.

On 18 March,⁽¹⁰⁾ the Governing Council resolved to exercise fully the role expected of it with respect to the follow-up of the Environmental Perspective to the Year 2000 and Beyond, the report of the World Commission on Environment and Development and the system-wide medium-term environment programme for 1990-1995; it also decided to follow up on the relevant Assembly resolutions at its fifteenth (1989) session. The Council emphasized that sustainable and environmentally sound development should be one of the main objectives of the proposed international development strategy for the fourth United Nations development decade (1991-2000) (see PART THREE, Chapter I).

System-wide medium-term environment programme, 1990-1995

The system-wide medium-term environment programme for 1990-1995 was developed by UNEP

in collaboration with other United Nations organizations and submitted to the UNEP Governing Council in a report by ACC.⁽¹¹⁾ Its structure was derived from that of the first such programme, covering 1984-1989, which in turn flowed from the evolving structures decided upon by the Council since its establishment.

The report stated that problems related to the misuse of natural resources and pollution would dominate the concerns of both developing and developed countries well into the twenty-first century. Many of them would be eased by the wide application of better environmental management techniques, while others would require changes in social and economic structures. A prerequisite for environmentally sound development was the achievement of an equitable system of international economic relations. Another fundamental goal was the elimination of poverty on the one hand and excessive consumption on the other. The issues addressed by the programme were the human environment, including atmosphere, water, terrestrial ecosystems, coastal and island systems, oceans, lithosphere, human settlements and the environment, human health and welfare, energy, industry and transportation, and peace, security and the environment; and environmental assessment, management and awareness.

While describing the strategies for achieving progress in each of these areas, the report stressed that the programme was not a rigid prescription for action, but rather reflected fundamental policies and priorities which were to be translated into action programmes by UNEP and other United Nations bodies.

On 18 March,⁽¹²⁾ the Council approved the programme and decided that, at its 1991 session, ACC should present a revised programme for 1990-1995 incorporating policy guidelines that the Council would provide at its 1989 session. The Council brought the programme to the attention of the General Assembly and urged the organizations and programmes of the United Nations system to co-operate closely in its implementation.

UNEP medium-term plan, 1990-1995

UNEP's medium-term plan for 1990-1995, described in a report by the Executive Director,⁽¹³⁾ proposed 13 programmes which were to constitute UNEP's contribution towards the objectives of the system-wide programme.

On 18 March,⁽¹⁴⁾ the Governing Council approved the plan and requested the Executive Director to use it as a guide for formulating UNEP's next three programme budgets.

UN medium-term plan, 1984-1989

The General Assembly in 1987 had extended the United Nations medium-term plan for 1984-

1989 to cover 1990-1991,⁽⁴⁾ requiring revision of the environment chapter to take into account the new system-wide programme. The proposed revisions were submitted to the Secretary-General by the Executive Director.⁽¹⁵⁾

On 18 March,⁽¹⁶⁾ the Governing Council took note of the proposed revisions and recommended to the Assembly that the global programme on the environment of the United Nations medium-term plan beginning in 1992 be structured along the lines of the system-wide medium-term environment programme to ensure uniformity of content and to facilitate co-ordination of the environmental activities being undertaken by the United Nations system.

Regional and subregional programmes

Cairo Programme for African Co-operation

The UNEP Governing Council, on 18 March 1988,⁽¹⁷⁾ urged the governing bodies of the organizations of the United Nations system to give priority to the provision of financial and technical assistance for the effective implementation of each of the programme areas of the Cairo Programme for African Co-operation, adopted in 1985.⁽¹⁸⁾ It noted with appreciation UNEP'S involvement in and support for the Programme and urged the Executive Director to continue to give priority to its implementation in UNEP's next three programme budgets.

Latin America and the Caribbean

On 18 March,⁽¹⁹⁾ the Governing Council expressed its appreciation to UNEP for its support for the Action Plan for the Protection of the Marine Environment and Coastal Areas of the South-East Pacific and the Action Plan for the Caribbean Environment Programme. The Council decided that, in developing the medium-term plan of UNEP for 1990-1995, priority should continue to be given to those two plans, and requested the Executive Director to continue providing technical and financial support for activities under them.

1990 state-of-the-environment report

On 18 March,⁽²⁰⁾ the Governing Council decided that the topic of the state-of-the-environment report for 1990 should be children and the environment, and requested the Executive Director to prepare the report in co-operation with the United Nations Children's Fund.

Environmental education and training

UNEP in 1988 published the "International Strategy for Action in the Field of Environmental Education and Training for the 1990s", replacing the Tbilisi Declaration of 1977, which had provided guiding principles for environmental

education for 10 years.⁽²¹⁾ The Strategy defined nine major areas of action: access to environmental information; research and experimentation; development of programmes and teaching materials; training of personnel; incorporation of an environmental dimension into technical and vocational education; its incorporation into general university education; educating and informing the public; provision of specialist environmental training; and development of international and regional co-operation. Those principles were or would be reflected in phase VI of the UNEP/United Nations Educational, Scientific and Cultural Organization (UNESCO) International Environmental Education Programme, which remained the major international vehicle for the promotion of environmental education.

A joint UNESCO/UNEP steering committee, set up to provide overall guidance for the Education Programme, met at Bangkok, Thailand, in November 1988 to review environmental education in Asia and the Pacific. National workshops and seminars on environmental education were held in Sri Lanka in February, Egypt and Bolivia in March, Jamaica and Ecuador in May, Uganda in June/July and Jordan in October. A proposal for a primary environmental science curriculum for 16 Pacific island States was discussed at a workshop in Fiji in July. A regional seminar on the integration of environmental issues into education was held in Senegal in May, and subregional seminars on that issue were held in Argentina in September and in Costa Rica in December. An Afro-Arab training course on the incorporation of environmental education into industrial education was held in Egypt in October/November, and the advisory committee on the environmental training network for Latin America and the Caribbean met in Venezuela in April.

UNEP continued to provide training designed to promote acceptance of sustainable development. Those activities took two forms: general attempts to build awareness of the environment, directed at such groups as policy makers, engineers, industrialists and trade unionists; and specialized training to perfect the problem-solving skills of professionals whose work affected the environment.

In 1988, UNEP supported the establishment of environmental training networks in Africa, Asia and the Pacific and western Asia similar to the one established in 1983 in Latin America and the Caribbean, which had trained more than 800 professionals in different environmental fields. A second awareness-building workshop for 40 key personnel from ministries of planning, environment and education in French-speaking African countries was held at Rabat, Morocco, in November. UNESCO, UNEP and the USSR organized a two-week international training course on geolog-

ical aspects of environmental protection for 15 participants from seven developing countries. The annual postgraduate course on the ecological aspects of resource development, land management and impact assessment was held at the Technical University of Dresden in the German Democratic Republic.

Public information

To secure coverage of its priority issues, UNEP continued to make use of the editorially independent Television Trust for the Environment (TVE), established in 1984. In 1988, the Trust distributed more than 200 programmes free of charge to television stations in 22 developing countries and started a quarterly bulletin in English and French with news on the latest productions coming out world-wide. Using computer equipment donated by International Business Machines (IBM), TVE established the world's first environment and development television programme data base, accessible through the "Green-net" computer link-up. Since 1984, TVE had arranged nearly 60 international television co-productions seen by millions in more than 80 countries, and had mobilized close to \$15 million for its projects. About 5,000 television stations, development agencies and non-governmental organizations (NGOs) subscribed to the service.

UNEP stepped up its media relations in 1988. It held a training course in Mauritius, in cooperation with UNESCO, for journalists from five African countries. Efforts were concentrated on joint publications, such as the three-volume directory *Coral Reefs of the World*, written with the International Union for Conservation of Nature and Natural Resources.

UNEP supported the Environment Liaison Centre in publishing its *Ecoforum* magazine, and also supported the magazine *African Journalist*, issued by the Union of African Journalists, which continued to stimulate more and better environmental media coverage in 30 African countries. A similar project for the Arab region was managed by the Arab Office for Youth and Environment. A network of 12 UNEP regional youth focal points was established and a framework for their activities was defined at a January meeting at Nairobi. The principal ceremonies for World Environment Day on 5 June, held at Bangkok, emphasized the role of women in environmental protection and sustainable development.

UNEP Fund

Contributions to the Environment Fund in 1988 exceeded those of 1980, hitherto the year in which contributions had been the highest.(21) At the end

of the year, \$34.47 million had been either paid or pledged to the Fund. In real terms, however, contributions had declined steadily since 1979. The number of contributors also continued to fall: from 90 in 1985 to 65 in 1988.

Commitments for programme and reserve activities totalled \$27.53 million in 1988, including: support measures, \$5.24 million; desertification control, \$3.58 million; monitoring and assessment, \$3.54 million; oceans, \$3.11 million; information exchange, \$2.58 million; terrestrial ecosystems management, \$2.42 million; technical and regional co-operation, \$1.93 million; technology and environment, \$1.69 million; water, \$1.39 million; environmental health, \$0.71 million; peace, arms race and environment, \$0.18 million; and reserve, \$1.15 million. Geographical distribution of Fund commitments was as follows: global projects, \$17.98 million (65.3 per cent of total commitments); interregional projects, \$1.54 million (5.6 per cent); Africa, \$3.46 million (12.6 per cent); Asia, \$2.35 million (8.5 per cent); Latin America, \$1.93 million (7 per cent); Europe, \$0.24 million (0.9 per cent); and North America, \$0.03 million (0.1 per cent).

Commitments accounted for only 84 per cent of allocations in 1988, due to difficulty in committing funds provided in non-convertible currencies and a perceived need to hold back some resources to provide for essential commitments in 1989. The largest share of Fund project commitments was implemented by UNEP directly and amounted to 53 per cent of the total. The Executive Director expressed a desire to reduce that share so that co-operating agencies, supporting organizations and UNEP would each account for approximately one third of total commitments during the 1990-1991 biennium.

ECONOMIC AND SOCIAL COUNCIL ACTION

On 28 July, on the recommendation of its First Committee, the Economic and Social Council adopted resolution 1988/72 without vote.

International co-operation on the environment: the Environment Fund

The Economic and Social Council,

Having considered the report of the Governing Council of the United Nations Environment Programme on the work of its first special session,

Expressing its concern at the almost complete stagnation in nominal terms of the resources available to the Environment Fund, at a time when the challenges facing the international community in the field of the environment and in the achievement of sustained, environmentally sound and socially just development by the developing countries continue to multiply and assume critical importance,

Considering that a 50 per cent increase in real terms in the resources of the Environment Fund is desirable,

1. Takes note of the report of the Governing Council of the United Nations Environment Programme on the work of its first special session;
2. Recognizes the resolve of the Governing Council to exercise fully the role expected of it in accordance with its mandate;
3. Welcomes the request of the Governing Council to the governing bodies of the organizations of the United Nations system to give priority to the provision of financial and technical assistance for the effective implementation of the Cairo Programme for African Co-operation in each of its programme areas;
4. Expresses its appreciation to those Governments that have substantially increased their contributions to the Environment Fund;
5. Considers it essential to increase the resources of the Environment Fund substantially;
6. Calls upon Governments of developed countries that have not contributed in the past to the Environment Fund to do so at a level commensurate with that of other developed countries, in order to give the Fund a much wider base, and encourages those Governments that are contributing to the Fund to continue to do so and, if possible, to increase their contributions in accordance with their capacity to do so.

Economic and Social Council resolution 1988/72

28 July 1988 Meeting 40 Adopted without vote

Approved by First Committee (E/1988/118) without vote, 22 July (meeting 20); draft by Tunisia, for Group of 77 (E/1988/C.1/L.II), orally revised following informal consultations: agenda item 11.

REFERENCES

- (1)YUN 1972, p. 331, GA res. 2997(XXVII), 15 Dec. 1972.
 (2)YUN 1987, p. 692, GA res. 42/185, 11 Dec. 1987.
 (3)A/43/25. (4)YUN 1987, p. 1118, GA res. 42/215, 21 Dec. 1987. (5)UNEP/GCSS.I/6 & Corr.1 & Add.2.
 (6)UNEP/GCSS.I/5. (7)YUN 1987, p. 661, GA res. 42/186, 11 Dec. 1987. (8)Ibid. p. 679, GA res. 42/187, 11 Dec. 1987.
 (9)UNEP/GCSS.I/6/Add.3. (10)A/43/25 (dec. SS.I/1).
 (11)UNEP/GCSS.I/2 & Corr.1,2. (12)A/43/25 (dec. SS.I/3).
 (13)UNEP/GCSS.I/3 & Corr.1. (14)A/43/25 (dec. SS.I/6).
 (15)UNEP/GCSS.I/4. (16)A/43/25 (dec. SS.I/7). (17)Ibid. (dec. SS.I/5). (18)YUN 1985, p. 793. (19)A/43/25 (dec. SS.I/4).
 (20)Ibid. (dec. SS.I/2). (21)UNEP/GC.15/4.

Environmental activities

Environment and development

The Secretary-General in May 1988 submitted to the General Assembly, through the Economic and Social Council, a progress report⁽¹⁾ on the implementation of a 1987 resolution⁽²⁾ that endorsed the principle of sustainable development.

The Secretary-General stated that a number of Governments had notified the UNEP Executive Director that the resolution and the report of the World Commission on Environment and Development were under consideration. The Secretariat intended to request Governments to provide relevant information by 31 December 1988. The governing bodies of eight United Nations organs, or-

ganizations and programmes reported that they had reviewed the resolution and/or the World Commission's report with a view to taking the recommendations into account in their programmes. Eight other organizations reported that they expected to consider the resolution and report when their governing bodies next met. Further information was provided at the secretariat level of 13 United Nations bodies.

On 28 July, by decision 1988/175, the Economic and Social Council took note of the report. On 1 July,⁽³⁾ the Governing Council of the United Nations Development Programme (UNDP) stressed the need for additional financial resources and strengthened technical co-operation to assist developing countries in dealing with environmental problems. It requested the UNDP Administrator to assist recipient countries in enhancing their capacity to integrate environmental concerns into their development strategies and programmes, and to report on the manner in which agencies that designed, implemented and evaluated UNDP-funded projects took environmental aspects into account.

In October, ACC agreed that co-operation among the organizations of the United Nations system should be strengthened in order to enable them effectively to assist Member States in selected priority areas, and decided to consider the question of sustainable and environmentally sound development at its first regular session of 1989.⁽⁴⁾

At the Oslo Conference on Sustainable Development (Oslo, Norway, 9 and 10 July), the Secretary-General, the executive heads of 22 United Nations organizations and members of the World Commission on Environment and Development identified priority issues for United Nations action on sustainable development towards the year 2000 and beyond. They also agreed to include in their programmes and budgets for 1990-1991, as well as in their medium-term plans, measures responding to the World Commission's recommendations regarding the promotion of sustainable development by enhancing global economic growth and social development.

GENERAL ASSEMBLY ACTION

On 20 December, on the recommendation of the Second (Economic and Financial) Committee, the Assembly adopted resolution 43/196 without vote.

United Nations conference on environment and development

The General Assembly, Reading its resolution 42/186 of 11 December 1987, by which it adopted the Environmental Perspective to the Year 2000 and Beyond as a broad framework to guide national action and international co-operation on policies and programmes aimed at achieving environmentally sound development,

Recalling also its resolution 42/187 of 11 December 1987, in which it welcomed the report of the World Commission on Environment and Development,

Bearing in mind that the United Nations Conference on the Human Environment, convened in 1972 in accordance with Assembly resolution 2398(XXIII) of 3 December 1968, recommended that the Assembly convene a second United Nations conference on the subject,

Believing it highly desirable that a United Nations conference on environment and development be convened no later than 1992,

Aware that serious environmental problems are arising in all countries and that these problems must be progressively addressed through preventive measures at their source,

Emphasizing the common goal of all countries to strengthen international co-operation for the promotion of growth and development worldwide and recognizing that, in view of the global character of major environmental problems, all countries have a common interest in pursuing policies aimed at achieving sustainable and environmentally sound development within a sound ecological balance,

Noting that the critical objectives for environment and development policies that follow from the need for sustainable and environmentally sound development must include creating a healthy, clean and safe environment, reviving growth and improving its quality, remedying the problems of poverty and the satisfaction of human needs through raising the standard of living and the quality of life, addressing the issues of population and of conserving and enhancing the resource base, reorienting technology and managing risk and merging environment and economics in decision-making,

Aware that a supportive international economic environment that would result in sustained economic growth and development in all countries, particularly in developing countries, is of major importance for sound management of the environment,

Stressing that it is important for all countries to take effective measures for the protection, restoration and enhancement of the environment in accordance, *inter alia*, with their respective capabilities, and, at the same time, acknowledging the efforts being made in all countries in this regard, including international co-operation between developed and developing countries,

Noting the fact that the largest part of the current emission of pollutants into the environment, including toxic and hazardous wastes, originates in developed countries, and therefore recognizing that those countries have the main responsibility for combating such pollution,

Reaffirming the need for additional financial resources from the international community effectively to support developing countries in identifying, analysing, monitoring, managing or preventing environmental problems in accordance with their national development plans, priorities and objectives,

Reaffirming also the need for developed countries and the appropriate organs and organizations of the United Nations system to strengthen technical co-operation with the developing countries to enable them to develop and strengthen their capacity for identifying, analysing, monitoring, managing or preventing environmental problems in accordance with their national development plans, priorities and objectives,

Recognizing the importance of international co-operation in the research and development of environmentally sound technology and recognizing the need for an international exchange of experience and knowledge as well as the promotion of the transfer of technology for the protection and enhancement of the environment, especially in developing countries, in accordance with national laws, regulations and policies,

Reaffirming the need for the international community to play a catalytic role in technical co-operation among developing countries in the field of the environment, and inviting the appropriate organs and organizations of the United Nations system to co-operate, at the request of the parties concerned, in the promotion and strengthening of such co-operation,

Aware that threats to the environment often have a transboundary impact and that their urgent nature requires strengthened international co-operative action, *inter alia*, by assessing and providing early warning to the world community on serious environmental threats within the framework of Earthwatch,

Taking note with appreciation of the progress report of the Secretary-General on the implementation of resolution 42/187,

Recalling that, in its resolution 42/187, the General Assembly invited Governments, in co-operation with the regional commissions and the United Nations Environment Programme and, as appropriate, intergovernmental organizations, to support and engage in follow-up activities, such as conferences, at the national, regional and global levels,

Noting the importance of exploring the best ways and means to promote sustainable and environmentally sound development in all countries, taking into account General Assembly resolutions 42/186 and 42/187,

Considering in this context that the conference could, *inter alia*:

(a) Review trends in policies and action taken by all countries and international organizations to protect and enhance the environment and to examine how environmental concerns have been incorporated in economic and social policies and planning since the United Nations Conference on the Human Environment in 1972,

(b) Assess major environmental problems, risks and opportunities associated with economic activities in all countries,

(c) Make recommendations for further strengthened international co-operative action within a set of priorities to be established by the conference, define the research and development effort required to implement such recommendations, and indicate financial requirements for their implementation, together with a definition of possible sources for such financing,

1. Decides to consider at its forty-fourth session the question of the convening of a United Nations conference on the subject of the present resolution no later than 1992, with a view to taking an appropriate decision at that session on the exact scope, title, venue and date of such a conference and on the modalities and financial implications of holding the conference;

2. Requests the Secretary-General, with the assistance of the Executive Director of the United Nations Environment Programme, urgently to obtain the views of Governments on:

(a) The objectives, content, title and scope of the conference;

(b) Appropriate ways of preparing for the conference;

(c) A suitable time and place and other modalities for the conference;

and to submit those views to the General Assembly at its forty-fourth session, through the Economic and Social Council, and to make them available to the Governing Council of the United Nations Environment Programme at its fifteenth session;

3. Also requests the Secretary-General, with the assistance of the Executive Director, to obtain the views of appropriate organs, organizations and programmes of the United Nations system and relevant intergovernmental and non-governmental organizations on the objectives, content and scope of the conference, and to submit those views to the General Assembly at its forty-fourth session, through the Economic and Social Council, and to make them available to the Governing Council at its fifteenth session;

4. Further requests the Secretary-General, with the assistance of the Executive Director, to prepare a statement of the financial implications of preparing and convening the conference, and to submit that statement to the General Assembly at its forty-fourth session, through the Economic and Social Council, and to make it available to the Governing Council at its fifteenth session;

5. Invites the Governing Council to consider the documents referred to in paragraphs 2 to 4 above and, on the basis of that consideration, to submit to the General Assembly at its forty-fourth session, through the Economic and Social Council, its views on the matters referred to in the present resolution, in particular its views on the objectives, content and scope of the conference.

General Assembly resolution 43/196

20 December 1988 Meeting 83 Adopted without vote

Approved by Second Committee (A/43/915/Add.7) without vote, 6 December (meeting 47); 43-nation draft (A/C.2/43/L.36/Rev.2), orally revised following informal consultations; agenda item 82 (g).

Sponsors: Argentina, Austria, Bangladesh, Barbados, Belize, Bolivia, Brazil, Canada, China, Colombia, Costa Rica, Czechoslovakia, Denmark, Ecuador, Egypt, Finland, Guatemala, Guyana, Honduras, Iceland, India, Indonesia, Jamaica, Kenya, Lesotho, Maldives, Malta, Mexico, Netherlands, New Zealand, Nicaragua, Norway, Peru, Poland, Romania, Samoa, Sweden, Tunisia, Ukrainian SSR, Uruguay, Venezuela, Yugoslavia, Zimbabwe.

Meeting numbers. GA 43rd session: 2nd Committee 21-26, 38, 47; plenary 83.

Environmental monitoring and assessment

Earthwatch, the environmental assessment arm of UNEP, continued in 1988 to collect and disseminate information on changes in the global environment, such as ozone depletion, climate change, soil loss and deforestation.(6)

UNEP continued to hold training seminars and expert group meetings on environmental monitoring and data collection. Among these were the second Economic Commission for Europe (ECE) workshop on integrated monitoring, a meeting on remote-sensing technologies for biosphere studies and a workshop on the evaluation of air pollution pressure through pine-needle analysis and mapping.

GENERAL ASSEMBLY ACTION

In October 1988, the Secretary-General submitted to the Second Committee the text of a draft resolution(7) on international ecological security. The Assembly in 1987 had deferred consideration of the draft until 1988.(8) On 29 November, the sponsors of that draft, Czechoslovakia and the Ukrainian SSR, introduced a revised draft resolution(9) on international co-operation in the monitoring, assessment and anticipation of environmental threats. On the recommendation of the Second Committee, the Assembly, by decision 43/440 of 20 December, deferred consideration of the draft until 1989.

Global Environmental Monitoring System

The Global Environmental Monitoring System (GEMS), through its Programme Activity Centre, continued to co-ordinate the collection of environmental data at the global, regional and national levels and to make them available to managers and planners of natural resources and the environment. These activities encompassed monitoring, data management and environmental assessment.

In March, GEMS was instructed by the Bureau of the African Ministerial Conference on the Environment to co-ordinate environmental monitoring activities in Africa. In 1988, UNEP collected detailed information on eight African countries' needs for resource monitoring and assessment capabilities.

Together with other agencies and organizations, UNEP was developing a satellite-based methodology to map and monitor tropical forests. It continued to co-operate with the World Meteorological Organization (WMO) in monitoring climate systems and with UNESCO and the Swiss Federal Institute of Technology in a world glacier-monitoring service. That project also encompassed the publication in 1988 of the fifth volume in a series on the fluctuation of glaciers covering 1980-1985, and an inventory of the world's glaciers, scheduled for publication in 1989. Attention was given to the development of methods of studying the effects of pollution on forest ecosystems. The newly constituted World Conservation Monitoring Centre gathered data on the status of endangered species, parks and protected areas and trade in animal products. The Monitoring and Assessment Research Centre (MARC) continued to collect and analyse data for the next edition of the environmental data report, to be published in 1989. UNEP also collaborated with the World Resources Institute in the preparation of World Resources 1988-1989, issued in November 1988. An interactive environmental data base was being established at MARC in order to offer instant access to the best environmental data.

Three major global assessments were undertaken by UNEP and the World Health Organization (WHO) in air quality, freshwater quality and food contamination. Regarding urban air quality, studies had found that in many industrialized countries, while the levels of sulphur dioxide, particulate matter and lead were improving as a result of various control and prevention strategies, there was still cause for concern in many cities. Data on urban air quality in developing countries, while scanty, indicated deteriorating conditions. While water pollution in cities in developing countries could be severe, water resources did not in general suffer greatly from pollution. Severe pathogen pollution could be found in many rivers in South America, the Indian sub-continent, South-East Asia and probably Africa. Eutrophication, often linked to organic waste, was a problem in many small lakes in Europe, the United States and Asia. Increased levels of nitrate in ground water were found in many western European countries and the United States. Salinization of ground water was found to be extremely widespread in Sahelian Africa and in the arid belt from the Middle East to India. Levels of contaminants in food, particularly in industrialized countries, were generally well within established limits, with the exception, in several countries, of organochlorine pesticides in human milk, mercury and polychlorinated biphenyls in fish, lead in canned foods and aflatoxins in nuts and cereals. In developing countries, however, while the situation was less clear, there were indications that the levels of contaminants, particularly for organochlorine pesticides and aflatoxins, were in excess of health guidelines.

Global Resource information Database

The Global Resource Information Database (GRID), the principal data management programme within GEMS, continued its efforts to make environmental data available to environmental managers and decision makers with the help of its computer-based Geographic Information System. In December, IBM donated some \$6 million worth of computer hardware to UNEP for use in the GRID programme, including two mainframe computers and 15 micro-based systems.

By year's end, the GRID training course for third world professionals, sponsored by the Swiss Directorate for Development Co-operation, had trained 20 persons from as many countries. A GRID scientific and technical advisory group meeting was held at Nairobi (18-21 January), and an expert meeting on hardware and software was held in Washington, D.C. (15-17 November).

INFOTERRA

UNEP's International Environmental Information System, INFOTERRA, continued to assist developing countries in gathering scientific and tech-

nological information on environment and resource management issues. The INFOTERRA network continued to grow, with 700 new information sources registered during the reporting period. The number of national focal points (NFPS) increased to 134 with the addition of Lesotho. During 1988, more than 14,000 people from some 90 countries made use of INFOTERRA's information services. Several new publications were issued, and a training course for new staff from 10 English- and French-speaking NFPS was held (Nairobi, 14-18 November). Several INFOTERRA NFPS organized events for World Environment Day, using the promotional kits distributed to them on behalf of the UNEP information service.

1988 state of the world environment

UNEP's 1988 state-of-the-environment report(10) focused on the public and the environment, with special emphasis on the role of women. The report covered the environmental movement, perceptions and attitudes towards environmental issues, public participation in environmental activities, the special role of women and the role of the media.

Protection against harmful products and pollutants

Registration of harmful products

The International Register of Potentially Toxic Chemicals (IRPTC), UNEP's chemical information exchange network, continued in 1988 to expand its computerized files, which included some 600 chemicals of international concern. Scientific and technical information was given to Governments, research institutions, international organizations, NGOs and industry for hazard assessment, risk evaluation and disposal or control.

IRPTC files were made available for use on minicomputers to Canadian users in June, and ways of making that system available outside Canada were explored. An updated version of the Registry of Chemicals Currently Being Tested for Toxic Effects was published in October. An international workshop on the use of classification systems for chemicals based on their toxicity and hazards was organized in Leningrad, and an expert consultation on a regional information exchange network for chemicals was organized in Moscow. IRPTC participated in a meeting of an ad hoc working group of experts on prior informed consent and other modalities to supplement the London Guidelines for the Exchange of Information on Chemicals in International Trade(11) (Dakar, Senegal, 19-23 September), organized in response to a 1987 decision by the UNEP Governing Council on the exchange of information on chemicals

in international trade. Also in response to that decision, IRPTC continued to implement the London Guidelines by maintaining and distributing a list of designated national authorities; processing and disseminating notifications of control action to those authorities and other appropriate bodies; maintaining regular contacts with the authorities on national implementation of the Guidelines; and developing and maintaining a computerized data base of notifications of control action received in IRPTC. IRPTC continued to participate in the updating of the United Nations consolidated list of products whose consumption and/or sale had been banned, withdrawn, severely restricted or not approved by Governments. An expert consultation meeting (Geneva, 21-24 November), held in response to a 1987 decision of the Governing Council,⁽¹²⁾ examined the short- and long-term financial position of IRPTC.⁽¹³⁾

Health-related monitoring

The Food and Agriculture Organization of the United Nations (FAO)/UNEP/WHO Panel of Experts on Environmental Management for Vector Control held its eighth session (Nairobi, September), focusing on education and training in environmental management of water resource development projects.

A symposium on genetic monitoring for the protection of human health and environment was held to promote and encourage research in environmental mutagenesis in Latin America (San José, Costa Rica, 6-11 March). UNEP co-operated with the International Labour Organisation (ILO) and WHO in the International Programme on Chemical Safety (IPCS), providing an effort to assess the risks of chemicals to human health and the environment and to strengthen national capabilities in chemical safety. IPCS held an expert group meeting (Rome, Italy, 20-29 September) on categories of information useful for the identification of hazards during the manufacture, storage and transport of chemicals. It subsequently produced an annotated check-list of that information. It also published a survey on facilities dealing with poisonings, covering 200 institutions in 40 countries, which showed that only 11 developing countries had a full range of facilities to respond to poisonings. In 1988, IPCS published 15 documents on potentially toxic chemicals in the Environmental Health Criteria series, bringing the number of chemicals evaluated to 75. The preparation of 75 international chemical safety cards, giving health and safety information on chemicals for use by factory, agricultural and other workers and employers, was in the pilot phase. A consultation on the pilot phase (Brussels, Belgium, 11-15 April) and a meeting for the peer review of the cards (Rome, 7-11 November) were held.

Other meetings sponsored or co-sponsored by IPCS during the year dealt with chemicals and the aging process, an environmental health review of vinylidene chloride, revision of WHO guidelines for drinking-water quality, the effects of vehicle exhaust, environmental reduction of asbestos, development of a poison information package for developing countries, food additives, pesticide residues, chemical hazards and methods for assessing adverse effects of pesticides.

Several projects were initiated in the area of agricultural chemicals in 1988. In April/May, an independent consultant evaluated a joint UNEP/International Centre of Insect Physiology and Ecology (ICIPE) project on training for self-reliance in ecological pest management in Africa, concluding that the overall impact of the training courses had been positive. From August to October, a working group appointed by ICIPE identified live areas of research which could be addressed in a longer-term programme for locust control. Scientists and donor agencies, including UNEP, met at Cairo, Egypt, in December to discuss such a programme, agreeing that the pursuit of alternative control strategies would be promoted through an international research network. In September/October, a consultant reviewed current activities in Botswana, Malawi, Zambia and Zimbabwe for the control of the tsetse fly and the reduction of animal trypanosomiasis in Africa under the Zambezi Action Plan. A joint FAO/UNEP meeting was held at Rome in November to review the guidelines on biological control in developing countries, which had just been completed. Two Soviet scientists undertook a mission to conduct a feasibility study for a project on training in zoonosis epidemiology, control and prevention in Mongolia. Between May and October, training aids on the safe use and handling of pesticides were prepared for 150 women's group leaders in Thailand. Under the FAO/UNEP Co-operative Global Programme for the Implementation and Development of Integrated Pest Control in Agriculture, a Latin American intercountry programme for the development and application of integrated pest control in cotton growing was developed and implemented, and it was expected that its guidelines would be used in all the cotton-growing countries of Central and South America.

Traffic in toxic and dangerous products and wastes

In response to a 1987 General Assembly resolution,⁽¹⁴⁾ the Secretary-General in May 1988 submitted a report on illegal traffic in toxic and dangerous products and wastes.⁽¹⁵⁾ The report was based on information which Governments and international organizations had submitted to the UNEP Executive Director on instances of illegal

traffic in toxic products and wastes that had occurred in the past five years. Information came from 16 countries—seven of which cited concrete examples of illegal traffic—and 27 organizations.

The Secretary-General concluded that the number of responses would seem to indicate increased international traffic in toxic and dangerous products and wastes. The movement of hazardous wastes tended to go from developed to developing countries or to countries whose standards of environmental protection were more permissive. Movements of toxic products—mostly pesticides—followed a similar trend. It was likely that environmentally hazardous substances would be increasingly transferred to developing countries as a result of improved environmental standards and decreasing waste-disposal capacities in developed countries. Part of such international movements might not be deemed illegal in the recipient countries themselves, even though they could pose risks to human health and to the environment. Several developing countries were enacting legislation to prevent them from being used as “dumping places” for environmentally hazardous substances. The prospect of an increased flow of hazardous products and wastes underscored the importance of adherence to the London Guidelines, which apparently had not been complied with in many of the reported cases. A global convention on the control of the transboundary movements of hazardous wastes, which was being negotiated under the aegis of UNEP, was urgently needed (see below).

ECONOMIC AND SOCIAL COUNCIL ACTION

On 28 July, on the recommendation of its First Committee, the Economic and Social Council adopted resolution 1988/70 without vote.

Traffic in toxic and dangerous products and wastes
The Economic and Social Council,

Taking into account General Assembly resolution 42/183 of 11 December 1987,

Noting that the preliminary report of the Secretary-General on illegal traffic in toxic and dangerous products and wastes indicates a trend of increased international traffic in toxic and dangerous products and wastes, which in most cases has tended to flow from developed to developing countries,

Concerned that part of this traffic is carried out in contravention of existing national legislation and relevant international instruments,

Emphasizing the urgent need for all States to transmit pertinent information requested by the Executive Director of the United Nations Environment Programme in response to General Assembly resolution 42/183,

Taking into account the increase in this traffic as reported by various organizations of the United Nations system, non-governmental organizations and the international media,

Deeply concerned at the rising incidence of dumping of toxic wastes in many countries, particularly in the developing countries,

Considering the potential danger to the health of the population and to the environment of all States posed by toxic and dangerous products and wastes,

1. Requests the Secretary-General, in preparing his report to the General Assembly at its forty-fourth session, to draw on information provided by the United Nations Environment Programme and other organizations of the United Nations system, in line with internationally accepted guidelines and principles, and to focus on the following:

(a) A quantitative and geographical assessment, by region of origin and of destination, of the illegal traffic in toxic and dangerous products and wastes;

(b) A classification of types of toxic and dangerous products and wastes according to their nature, their potential toxicity and the probability of their being traded or dumped;

2. Also requests the Secretary-General to submit conclusions and recommendations on different mechanisms that can be devised to monitor and control the illegal traffic in toxic and dangerous products and wastes;

3. Further requests the Secretary-General to increase his efforts to obtain information on illegal traffic in toxic and dangerous wastes and on steps taken to eliminate or reduce this type of traffic.

Economic and Social Council resolution 1988/70

28 July 1988 Meeting 40 Adopted without vote

Approved by First Committee (E/1988/118) without vote. 22 July (meeting 20); draft by Tunisia, for Group of 77 (E/1988/C.1/L.3), orally revised following informal consultations: agenda item 11.

GENERAL ASSEMBLY ACTION

On 20 December, on the recommendation of the Second Committee, the Assembly adopted resolution 43/212 without vote.

Responsibility of States for the protection of the environment: prevention of the illegal international traffic in, and the dumping and resulting accumulation of, toxic and dangerous products and wastes affecting the developing countries in particular
The General Assembly,

Recalling its resolution 42/183 of 11 December 1987 on traffic in toxic and dangerous products and wastes,

Taking note of Economic and Social Council resolutions 1988/70 and 1988/71 of 28 July 1988,

Concerned about the increase in the illegal international traffic in, and the dumping and resulting accumulation of, toxic and dangerous products and wastes, in contravention of existing national legislation and relevant international legal instruments, adversely affecting many countries, particularly developing countries, as well as international waters,

Stressing the obligation of all States, in accordance with their responsibilities, to protect the environment and, in this overall context, stressing also the need for all States to prevent the illegal international traffic in, and the dumping and resulting accumulation of, toxic and dangerous products and wastes adversely affecting many countries, in particular developing countries,

1. Urges all States, bearing in mind their respective responsibilities, to take the necessary legal and technical measures in order to halt and prevent the illegal international traffic in, and the dumping and resulting accumulation of, toxic and dangerous products and wastes;

2. Also urges all States to prohibit all transboundary movement of toxic and dangerous wastes carried out without the prior consent of the competent authorities of the importing country or without full recognition of the sovereign rights of transit countries;

3. Further urges all States in this connection to prohibit such movement without prior notification in writing of the competent authorities of all countries concerned, including transit countries, and to provide all information required to ensure the proper management of the wastes and full disclosure of the nature of the substances to be received or transported;

4. Urges all States generating toxic and dangerous wastes to make every effort to treat and dispose of them in the country of origin to the maximum extent possible consistent with environmentally sound disposal;

5. Requests the Ad Hoc Working Group of Legal and Technical Experts with a Mandate to Prepare a Global Convention on the Control of the Transboundary Movements of Hazardous Wastes, established by the United Nations Environment Programme, to give due consideration to the present resolution and to take into account the various views expressed during the forty-third session of the General Assembly on the respective responsibilities for the prevention of the illegal international traffic in, and the dumping and resulting accumulation of, toxic and dangerous products and wastes;

6. Culls upon the international community, in particular the developed countries, to strengthen its scientific and technical co-operation with the developing countries and to provide appropriate assistance to them in their efforts to eliminate the adverse consequences of toxic and dangerous products and wastes for human health and the environment.

General Assembly resolution 43/212

20 December 1988 Meeting 83 Adopted without vote

Approved by Second Committee (A/43/919) without vote, 6 December (meeting 47); draft by Vice-Chairman (A/C.2/43/L.74), orally revised, based on draft by Tunisia, for Group of 77 (A/C.2/43/L.23); agenda item 143. Meeting numbers. GA 43rd session: 2nd Committee 21-26, 30, 47; plenary 83.

Transboundary movements of hazardous wastes

The Executive Director of UNEP, as authorized by a 1987 decision of the Governing Council,⁽¹⁶⁾ convened the third session of the Ad Hoc Working Group of Legal and Technical Experts with a Mandate to Prepare a Global Convention on the Control of Transboundary Movements of Hazardous Wastes (Geneva, 7-16 November 1988). The draft convention was to be submitted to a diplomatic conference for adoption early in 1989.

ECONOMIC AND SOCIAL COUNCIL ACTION

On 28 July, on the recommendation of its First Committee, the Economic and Social Council adopted resolution 1988/71 without vote.

Global convention on the control of transboundary movements of hazardous wastes

The Economic and Social Council,

Noting the work of the Ad Hoc Working Group of Legal and Technical Experts with a Mandate to Prepare a Global Convention on the Control of Transboundary Movements of Hazardous Wastes, convened by the Executive Director of the United Nations Environment Programme pursuant to Governing Council decision 14/30 of 17 June 1987, and that the draft of the convention will be submitted to a diplomatic conference for adoption by Governments in Basel, Switzerland, in early 1989,

1. Stresses the importance of the active participation of all Governments in the preparatory work for the global convention on the control of transboundary movements of hazardous wastes, with a view to its speedy and successful completion;

2. Requests the Secretary-General to report to the General Assembly at its forty-fourth session on developments in regard to the convention.

Economic and Social Council resolution 1988/71

28 July 1988 Meeting 40 Adopted without vote

Approved by First Committee (E/1988/118) without vote, 22 July (meeting 20); draft by Chairman (E/1988/C.1/L.10), based on informal consultations; agenda item 11.

Atomic radiation and nuclear dumping

In August, the United Nations Scientific Committee on the Effects of Atomic Radiation issued a report on the sources, effects and risks of ionizing radiation.⁽¹⁷⁾ The report gave a historical review of the Committee's work and outlined the levels and effects of radiation from such sources as nuclear explosions, nuclear power production and medical exposures. It summarized the developments and trends in the field and presented the highlights and conclusions to be drawn from the most recent studies in radiation physics and biology.

On 6 December, the Assembly adopted resolution 43/55, requesting the Committee to continue its work and noting with satisfaction the continued and growing scientific co-operation between the Committee and UNEP.

On 28 July, the Economic and Social Council, by decision 1988/174, requested the Secretary-General-through UNEP's Governing Council and in co-operation with the Director General of the International Atomic Energy Agency-to submit a report to the Assembly at its 1989 session on the effects of the dumping of nuclear wastes on the environment.

Global climate

In January 1988, UNEP organized an internal seminar to identify environmental sectors that might be sensitive to climate change. The Intergovernmental Panel on Climate Change, a forum in which Governments were examining greenhouse warming and global climate change, held

its first session at Geneva in November, with representatives from 30 Governments and 19 international organizations. One of the main objectives of the UNEP climate change programme was to improve understanding of the probable effect of greenhouse gas warming on socio-economic systems in various regions. To that end, several regional studies on the effect of climate change on society were planned. In response to a 1987 decision of the Governing Council,(18) UNEP commissioned the Beijer Institute to prepare a report on possible responses by Governments and international agencies to anticipated climate change.

UNEP sponsored numerous meetings dealing with climate change during the year, including a seminar on climate and agriculture, world conferences on climate and development and on the changing atmosphere, and a workshop on drought early-warning systems. Seminars on climate impact assessment techniques were held at Kathmandu, Nepal, and New Delhi, India, in March. The UNEP Ad Hoc Working Group on El Niño and the Southern Oscillation (Bangkok, 11-15 January) concluded that the recent El Niño events had been associated with world-wide climatic anomalies, such as droughts in Australia, Brazil, Ethiopia and India and widespread temperature anomalies in the northern hemisphere. The Group adopted objectives and a work plan for the next two years.

In October,(19) ACC decided to consider in 1989 the question of world climate change and requested UNEP, in co-operation with WMO and other concerned organizations, to prepare an issues paper as the basis for its discussion.

On 9 September, in a letter to the Secretary-General,(20) Malta requested that an item entitled "Declaration proclaiming climate as part of the common heritage of mankind" be added to the agenda of the 1988 session of the Assembly.

GENERAL ASSEMBLY ACTION

On 6 December, on the recommendation of the Second Committee, the Assembly adopted resolution 43/53 without vote.

Protection of global climate for present and future generations of mankind

The General Assembly,

Welcoming with appreciation the initiative taken by the Government of Malta in proposing for consideration by the Assembly the item entitled "Conservation of climate as part of the common heritage of mankind",

Concerned that certain human activities could change global climate patterns, threatening present and future generations with potentially severe economic and social consequences,

Noting with concern that the emerging evidence indicates that continued growth in atmospheric concentrations of "greenhouse" gases could produce global warming with an eventual rise in sea levels, the effects of which could

be disastrous for mankind if timely steps are not taken at all levels,

Recognizing the need for additional research and scientific studies into all sources and causes of climate change,

Concerned a/so that emissions of certain substances are depleting the ozone layer and thereby exposing the earth's surface to increased ultra-violet radiation, which may pose a threat to, inter alia, human health, agricultural productivity and animal and marine life, and reaffirming in this context the appeal, contained in its resolution 42/182 of 11 December 1987, to all States that have not yet done so to consider becoming parties to the Vienna Convention for the Protection of the Ozone Layer, adopted on 22 March 1985, and the Montreal Protocol on Substances that Deplete the Ozone Layer, adopted on 16 September 1987, as soon as possible,

Recalling its resolutions 42/186 and 42/187 of 11 December 1987 on the Environmental Perspective to the Year 2000 and Beyond and on the report of the World Commission on Environment and Development, respectively,

Convinced that changes in climate have an impact on development,

Aware that a considerable amount of valuable work, particularly at the scientific level and in the legal field, has already been initiated on climate change, in particular by the United Nations Environment Programme, the World Meteorological Organization and the International Council of Scientific Unions and under the auspices of individual States,

Welcoming the convening in 1990 of a second World Climate Conference,

Recalling also the conclusions of the meeting held at Villach, Austria, in 1985, which, inter alia, recommended a programme on climate change to be promoted by Governments and the scientific community with the collaboration of the World Meteorological Organization, the United Nations Environment Programme and the International Council of Scientific Unions,

Convinced that climate change affects humanity as a whole and should be confronted within a global framework so as to take into account the vital interests of all mankind,

1. Recognizes that climate change is a common concern of mankind, since climate is an essential condition which sustains life on earth;

2. Determines that necessary and timely action should be taken to deal with climate change within a global framework;

3. Reaffirms its resolution 42/184 of 11 December 1987, in which, inter alia, it agreed with the Governing Council of the United Nations Environment Programme that the Programme should attach importance to the problem of global climate change and that the Executive Director of the United Nations Environment Programme should ensure that the Programme co-operates closely with the World Meteorological Organization and the International Council of Scientific Unions and maintains an active, influential role in the World Climate Programme;

4. Considers that activities in support of the World Climate Programme, approved by the Congress and Executive Council of the World Meteorological Organization and elaborated in the system-wide medium-term environment programme for the period 1990-1995, which was approved by the Governing Council of the

United Nations Environment Programme, should be accorded high priority by the relevant organs and programmes of the United Nations system;

5. Endorses the action of the World Meteorological Organization and the United Nations Environment Programme in jointly establishing an Intergovernmental Panel on Climate Change to provide internationally coordinated scientific assessments of the magnitude, timing and potential environmental and socio-economic impact of climate change and realistic response strategies, and expresses appreciation for the work already initiated by the Panel;

6. Urges Governments, intergovernmental and non-governmental organizations and scientific institutions to treat climate change as a priority issue, to undertake and promote specific, co-operative action-oriented programmes and research so as to increase understanding on all sources and causes of climate change, including its regional aspects and specific time-frames as well as the cause and effect relationship of human activities and climate, and to contribute, as appropriate, with human and financial resources to efforts to protect the global climate;

7. Calls upon all relevant organizations and programmes of the United Nations system to support the work of the Intergovernmental Panel on Climate Change;

8. Encourages the convening of conferences on climate change, particularly on global warming, at the national, regional and global levels in order to make the international community better aware of the importance of dealing effectively and in a timely manner with all aspects of climate change resulting from certain human activities;

9. Calls upon Governments and intergovernmental organizations to collaborate in making every effort to prevent detrimental effects on climate and activities which affect the ecological balance, and also calls upon non-governmental organizations, industry and other productive sectors to play their due role;

10. Requests the Secretary-General of the World Meteorological Organization and the Executive Director of the United Nations Environment Programme, utilizing the Intergovernmental Panel on Climate Change, immediately to initiate action leading, as soon as possible, to a comprehensive review and recommendations with respect to:

(a) The state of knowledge of the science of climate and climatic change;

(b) Programmes and studies on the social and economic impact of climate change, including global warming;

(c) Possible response strategies to delay, limit or mitigate the impact of adverse climate change;

(d) The identification and possible strengthening of relevant existing international legal instruments having a bearing on climate;

(e) Elements for inclusion in a possible future international convention on climate;

11. Also requests the Secretary-General to bring the present resolution to the attention of all Governments, as well as intergovernmental organizations, non-governmental organizations in consultative status with the Economic and Social Council and well-established scientific institutions with expertise in matters concerning climate;

12. Further requests the Secretary-General to report to the General Assembly at its forty-fourth session on the implementation of the present resolution;

13. Decides to include this question in the provisional agenda of its forty-fourth session, without prejudice to the application of the principle of biennialization.

General Assembly resolution 43/53

6 December 1988 Meeting 70 Adopted without vote

Approved by Second Committee (A/43/905) without vote, 23 November (meeting 44); 21-nation draft (A/C.2/43/L.17/Rev.1) agenda item 148. Sponsors: Australia, Canada, Colombia, El Salvador, Fiji, Finland, India, Jamaica, Malta, Morocco, New Zealand, Norway, Papua New Guinea, Poland, Samoa, Solomon Islands, Sweden, Togo, United Kingdom, Vanuatu, Venezuela.

Meeting numbers. GA 43rd session: 2nd Committee 21-26, 30, 44; plenary 70.

Ecosystems

Atmosphere

Protection of the ozone layer

Activities addressing the depletion of the ozone layer continued to build on the 1985 Vienna Convention for the Protection of the Ozone Layer(21) and the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer.(22)

The Ozone Trends Panel-set up by UNEP, WMO and three United States agencies in 1986—published a report in 1988 which found that the atmospheric concentrations of trace gases important in controlling stratospheric ozone had continued to increase globally because of human activities and that ozone losses in general were greater than had been predicted, primarily as a result of chlorofluorocarbons. The report confirmed the repeated sudden decreases in the amount of Antarctic ozone in the spring, and stated that evidence strongly indicated that man-made chlorine species were primarily responsible for the ozone hole over Antarctica.

UNEP organized a series of expert group meetings (The Hague, Netherlands, October) to review measures for controlling ozone-depleting gases and their effectiveness, as called for in the Montreal Protocol. Scientists attending the meeting confirmed that while implementation of the Montreal Protocol would do much to stabilize the ozone layer, it would be insufficient to repair the Antarctica hole.

UNEP and WMO co-sponsored the World Conference on the Changing Atmosphere: Implications for Global Security (Toronto, Canada, 27-30 June), which urged immediate action to counter the ongoing degradation of the atmosphere, including the development of a plan to protect the atmosphere, speedy ratification of the Montreal Protocol, the reduction of carbon dioxide emissions to approximately 80 per cent of the 1988 level by 2005 and establishment of a World Atmosphere Fund. The Advisory Group on Greenhouse Gases (Toronto, 1 and 2 July), continuing its role of ad-

vising the executive heads of UNEP, the International Council of Scientific Unions and WMO, approved the establishment of three working groups to review analyses of limitation strategies, indicators for management of climatic change and costs of adaptation and limitation strategies.

The WMO/UNEP Background Air Pollution Monitoring Network continued to publish data regularly and held a training course at Budapest, Hungary, for observers at its stations.

Terrestrial ecosystems

Soil management

Soil erosion had become so severe in many areas of the developing world that controlling it was a matter of life and death to many low-income farmers. The rate of soil loss had reached 26 billion tons annually, which was equivalent to 20 million tons of grain. The United States reported that it had reversed the rate of soil erosion through legislation and increased public awareness of the serious environmental threat. A project to assess global soil degradation, initiated in 1987, was implemented by the International Soil Reference and Information Centre in the Netherlands in association with FAO and other agencies. In April, the project published a set of guidelines for general assessment of the status of human-induced soil degradation, which was adopted at a regional workshop for Latin American soil scientists in Montevideo, Uruguay, in March. A procedure manual for small-scale map and data base compilation was completed in December.

In the context of implementing the 1985 Cairo Programme for African Co-operation,⁽²³⁾ the Soil Research Institute of the Council for Scientific and Industrial Research at Kumasi, Ghana, agreed to assume responsibility for the co-ordination of the African Soils and Fertilizers Network. Initial activities included a training workshop with the University of Zimbabwe (Harare, 24 May-9 June), the second meeting of the Network's management and planning group (Kampala, Uganda, 4 and 5 December) and the All-Africa Soil Science Society Conference (Kampala, 5-10 December). UNEP supported the International Conference on Soil Classification (Alma-Ata, USSR, 12-16 September) and an international workshop on classification, management and use potential of swell-shrink soils (Nagpur, India, 24-28 October).

Forest and mountain ecosystems

Amid growing concern over the continuing destruction of forest ecosystems in general and tropical forests in particular, UNEP played an active role in the implementation of the FAO-co-ordinated Tropical Forestry Action Plan⁽²⁴⁾ by

strengthening its conservation component. More than 10 national forestry sector reviews had been completed and 33 were being developed under the Plan. Six African countries expressed interest in reafforestation plans recommended by the African Ministerial Conference on the Environment. UNEP provided resources to enable participants from developing countries to attend workshops on forest research, conservation and nature management.

An expert meeting on compensation mechanisms for conserving tropical forest ecosystems was held at Nairobi in March, addressing issues such as debt swaps and the development of methodologies to assess the real value of forest ecosystems. A training seminar on agroforestry applications for arid and semi-arid French-speaking African countries was organized at Samarkand, USSR, in May. Missions visited Costa Rica and Peru, resulting in proposals to train local experts. Two expert missions produced proposals for a plan to improve forestry conservation and management in the United Republic of Tanzania. A UNEP-supported forestry sector overview in Uganda was published.

An international seminar on the ecology and management of natural resources in high mountain areas (Cajamarca, Peru, 20-27 August) was organized as part of a pilot project that had been active in encouraging farmers' participation in training, rescuing traditional technologies and improving living conditions.

Protection of endangered species

The non-sustainable and exploitative use of natural resources was expected to result in the loss of perhaps a quarter of the Earth's species during the next 20-30 years. Among the measures demonstrated to be effective in preserving biological diversity were establishing protected areas, incorporating the maximum amount of biological diversity in those areas and providing secure scientific management for them, promoting regional and national conservation strategies, encouraging the application of international conservation conventions, protecting particular species from destructive exploitation and encouraging Governments to apply to non-protected lands the conservation principles outlined in the World Charter for Nature⁽²⁵⁾ and the World Conservation Strategy,⁽²⁶⁾ which in 1988 was being updated and expanded.

In response to a 1987 decision of the Governing Council on the establishment of a biological diversity convention,⁽²⁷⁾ UNEP surveyed Governments—58 of which had replied—on their activities related to the conservation of biological diversity. A meeting of experts (Nairobi, 29-31 August) concluded that a global convention should proceed only if it were truly comprehensive with a sound basis in science, practical in defining ob-

ligations and goals, adequately funded by Governments, capable of co-ordinating efforts under other conventions on the subject, and provided for a transfer of resources to allow for its implementation in poorer countries, which were the custodians of much of the Earth's biological heritage. An ad hoc working group of experts (Geneva, 16-18 November), building on the work of the Nairobi meeting, determined that an umbrella convention to rationalize existing international instruments was neither desirable nor possible, given political and logistical difficulties, and that other ways to achieve that goal should be sought. The Group endorsed the view that a new global legal instrument and other measures were required for the conservation of biological diversity and proposed that the Governing Council should decide on how to resolve several important issues critical to such a convention.

UNEP continued in 1988 to provide the secretariat for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) at Lausanne, Switzerland. Six technical assistance missions took place during the year to assist developing countries in implementing the Convention. The Ivory Co-ordination Unit continued its work on an ivory quota system and a survey of ivory trade and stocks. The CITES African Elephant Working Group agreed at its first meeting (Nairobi, October/November) to submit a comprehensive elephant conservation strategy to Governments for consideration. UNEP also provided the secretariat for the Convention on the Conservation of Migratory Species of Wild Animals; the first meeting of its Scientific Council and the second meeting of the Conference of the Parties to the Convention were held at Geneva in October. The Conference discussed the development of agreements among States on conservation of species and populations and directed that priority should be given to a global review of the conservation status of small cetaceans, including freshwater species.

The Ecosystem Conservation Group, comprising the four major global conservation organizations—UNEP, FAO, UNESCO and the International Union for Conservation of Nature and Natural Resources (IUCN)—at its fifteenth general meeting, reviewed activities for implementing the Action Plan for Biosphere Reserves. UNEP had drawn up a project on training of biosphere reserve managers in Africa in co-operation with UNESCO.

Among the activities intended to help preserve the genetic diversity of the world's crop plants was a project sponsored by UNEP and the International Board for Plant Genetic Resources, in which samples of the germ plasm of 11 genera of plants were collected in Zaire for deposit in the Board's gene

bank network. An international consultation on the conservation of medicinal plants was held in March, and a pan-African workshop on plant genetic resources (Nairobi, 26-30 September) called for greater African co-operation through networking on germ-plasm research and the development of projects to conserve important plant species.

An agreement was reached between FAO and the European Association of Animal Production to expand the newly established data bank for Europe to hold a summary of genetic characteristics of breeds from developing countries, thus making the data bank a global one. FAO, with support from UNEP, continued to provide technical inputs for the establishment of regional gene banks for animal genetic resources. Studies began as a step towards the creation of such gene banks in Africa, Asia and Latin America for the cryogenic storage of semen and embryos of endangered breeds. UNEP continued its support to the regional Microbiological Resources Centres in Brazil, Egypt, Guatemala, Kenya, Senegal and Thailand, which enabled them to carry out training activities and pilot projects for the application of microbial resources in environmental management. UNEP also supported the International Microbial Strain Data Network as a means of collating knowledge about and ensuring access to data on the location and availability of strains with desired properties. The Network held two training courses—in Guatemala and the United States—for potential users and operators. In the area of biotechnology, the joint United Nations Industrial Development Organization/WHO/UNEP Working Group on Biotechnology Safety continued its work, and an international conference (Cardiff, United Kingdom, 5-8 April) discussed the need to proceed with caution and to raise the level of understanding and confidence among the general public about the release of genetically engineered organisms into the environment.

Lithosphere

Addressing the environmental aspects of the lithosphere, the UNEP/UNESCO/USSR project on geology and environment continued, and the proceedings of a 1985 workshop (Tashkent, USSR) on the impact of water management projects on the hydrogeological and engineering geological conditions of the lithosphere were published. In September 1988, a joint workshop of the Scientific Council on Problems of the Environment/UNEP Carbon and Sulphur Units was held on the shores of Lake Baikal in the USSR, which holds nearly 20 per cent of the world's freshwater reserves. The workshop was the first to appraise all major biogeochemical elements with respect to their integrated feedbacks in a biogeochemical su-

percycle. The proceedings of the workshop were to form part of a publication series on the transport of carbon and minerals in major world rivers, lakes and estuaries.

Desertification control

Desertification continued to be a major environmental problem, worsened by the persistent droughts reported in the northern hemisphere during 1988. Heavy rains broke the drought of previous years in Africa, but also caused catastrophic floods and an unprecedented desert locust plague in the Maghreb countries, the western Sahel, eastern Africa and the Arabian peninsula. Efforts to combat desertification were in most countries limited to isolated sectoral anti-desertification projects whose impact was hampered by the lack of a clearly defined framework for desertification control within national development plans as well as inadequate human and financial resources.

In response to those problems, UNEP during the year made a major effort to assist the 16 Governments that had fully or partly developed national desertification control plans. UNEP and the United Nations Sudano-Sahelian Office (UNSO) consulted with various Governments to agree on steps to formulate concrete project proposals on priority areas identified under those national action plans. In compliance with a 1987 decision of the Governing Council,⁽²⁸⁾ the Executive Director consulted with representatives of Governments and United Nations agencies on enhancing the efficiency of the Consultative Group for Desertification Control, a new approach to the special account for financing desertification control programmes and means of financing implementation of the United Nations Plan of Action to Combat Desertification.⁽²⁹⁾ A meeting of officials and experts at Geneva in July made various recommendations in those areas, which were discussed in detail in a report to the Governing Council on implementation of the Plan of Action.⁽³⁰⁾

The Inter-Agency Working Group on Desertification continued to co-ordinate a programme for the establishment of regional networks on desertification. The programme culminated in 1988 in the creation of a major operational sand-dune mapping, stabilization and afforestation network for the Middle East and North Africa, an arid lands forestry network for the Sahelian and north Sudanian zones of Africa and five Caribbean and Latin American technical co-operation networks on watershed management, all established by FAO. The network of research and training centres for desertification control in Asia and the Pacific and the Latin American and Caribbean environmental training network also continued to consolidate their programmes. UNEP was funding a three-year project to establish an NGO network of research

and information on the development of sustainable livelihoods in arid and semi-arid lands in Africa.

In 1988, UNEP continued its efforts to implement the Plan of Action to Combat Desertification, providing technical assistance to Governments in integrating desertification control plans into national development plans and programmes. In addition, the UNEP Desertification Control Programme Activity Centre assisted 15 African countries in formulating pilot projects for the rehabilitation of villages and the sustainable development of stock-raising zones in semi-arid areas, with the aim of fostering grass-roots participation. UNEP initiated a study in the Sudan and Uganda to identify local sources of minerals and assess their usability as low-cost soil ameliorants and fertilizers. At the request of Uganda, UNEP undertook a study on the production of stabilized soil/lime bricks and roofing tiles, a technology that can considerably reduce the amount of deforestation resulting from the traditional production of fire-baked clay bricks. Other activities included co-ordination and support of various sand-dune stabilization and afforestation programmes, training programmes, the assessment and mapping of desertification and preparation of an arid lands bibliography data base and a wind erosion bibliographic referral system.

Implementation in the Sudano-Sahelian region

In 1988, many areas of the Sudano-Sahelian region received torrential downpours that resulted in serious flooding and massive soil erosion, particularly in Burkina Faso, Mali and the Sudan.

The Plan of Action to Combat Desertification was implemented in the Sudano-Sahelian region by UNSO, which supported a desertification control programme in 22 countries, consisting, as at September 1988, of 64 ongoing projects with total funding of some \$71 million. An in-house study conducted in late 1987 and early 1988 on the role of UNSO refined its role to include, inter alia: co-ordination and harmonization of a wide spectrum of drought-related and desertification control activities; assistance in the mobilization of external financial resources needed for implementation of such activities; management of the United Nations Trust Fund for Sudano-Sahelian Activities; intensification of public interest in the plight of the region; co-operation with Governments of the region in carrying out their activities; identification, development, financing and monitoring of programmes; and mobilization of resources. It was decided to establish a regional office of UNSO at Nairobi to serve as a link between UNEP and UNSO, to function as an extended arm of UNEP in East Africa in implementing the Plan of Action, and to act as a United Nations liaison with the

Intergovernmental Authority for Drought and Development and its member States in developing and implementing their drought-related programmes and desertification control activities.

In 1988, projects were carried out in the areas of afforestation and reforestation, alternative energy sources aimed at conserving fuelwood, rangeland management, water resources, soil protection and dune stabilization and integrated land management.

Freshwater ecosystems

UNEP's programme for the environmentally sound management of inland water (EMINWA) focused in 1988 on the Lake Chad basin, which had deteriorated because of drought. UNEP outlined steps for the preparation of a water master plan and an action programme for the environmentally sound management of the basin. A survey mission was dispatched to the Mekong Delta to establish two pilot farms with a view to increasing food production. Projects were developed for the development of the Lake Xolotlán basin in Nicaragua and the Orinoco-Apure river system in Venezuela.

On the subject of environmentally sound development of ground-water resources, an expert group met in Bahrain in March to discuss the preparation of an action plan for the Damman aquifer. The fourth planning meeting on the freshwater part of the World Climate Programme, organized by UNESCO and WMO (Paris, 12-16 September), agreed that in climate and water resource development projects attention had to be focused on studies of hydrological data in the context of climate variability and change, modelling of the hydrological cycle and a methodology for the application of climatological data to water resources projects. In the context of the International Drinking Water Supply and Sanitation Decade (1981-1990), UNEP and WHO established water quality surveillance systems in villages in Indonesia, Peru and Zambia, with plans for similar projects in the United Republic of Tanzania and Vanuatu.

A first draft code of conduct on accidental pollution of transboundary inland waters was prepared by representatives of 13 European countries under the auspices of ECE. The code of conduct was to be used as guidance for solving similar problems throughout the world. A series of guidelines on environmental impact assessment methods was prepared, aimed at helping Governments, institutions and individuals to highlight environmental components in the design of water resources projects. Training seminars and workshops were held on environmentally sound lake management (Japan), environmentally sound water management (Egypt, the Niger and Thailand) and the management of water resource development

projects (USSR). During the year, UNEP published recommended syllabuses on the integration of environmental aspects into water resources engineering education, following a world-wide survey conducted with UNESCO.

The Advisory Group on Water Resources, focusing on the preparation of guidelines for sustainable water management and on the implementation of the EMINWA programme, held two sessions in 1988. Expert group meetings were held on the organization of ecological investigations dealing with water and soil resources development and on international river basin development.

Marine ecosystems

UNEP's activities with regard to oceans and coastal areas included global and regional programme elements that concentrated on issues that could benefit from UNEP's co-ordinating role and from the Environment Fund.

UNEP continued to support the Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP) and co-sponsored six GESAMP working groups dealing with specific environmental problems: evaluation of the hazards of harmful substances carried by ship; review of potentially harmful substances; interchange of pollutants between the atmosphere and the oceans; coastal modelling; state of the marine environment; and long-term ecological consequences of low-level contamination of the marine environment. The reports produced by these working groups provided the scientific basis for the formulation of proposals for government action in pursuance of regional seas conventions. Assessments of the state of the marine environment, co-ordinated by UNEP with the assistance of several other organizations, were completed during the year in 14 regions, covering practically all the world's coastal waters. These reports were intended to be used by GESAMP to finalize a global report on health of the oceans and by States in assessing their marine pollution control priorities. Six regional overviews on the potential impact of expected climatic changes on coastal and marine ecosystems were prepared. Eight new reference methods for studying marine pollution were prepared, two were revised and four were translated into French and Spanish.

Regional seas programme

Mediterranean region. In the Mediterranean region in 1988, the number of countries that had ratified the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and the Protocol concerning Mediterranean Specially Protected Areas rose to 12 and 13, respectively. Pledges to the Trust Fund totalled \$3,988,035 for 1988. During their fifth ordinary meeting, the contracting par-

ties approved joint measures to prevent mercury pollution; approved environmental quality criteria for shellfish waters; agreed to amend the Protocol on land-based sources; and decided to allow the Regional Oil Combating Centre to deal with dangerous substances other than oil. Numerous technical meetings and training programmes were organized, on issues such as oil pollution control, microbiological methods for determining the quality of beaches and management of liquid waste treatment plants. Pilot coastal zone development projects continued, and the Regional Centre for the Reduction of Seismic Risk in Mediterranean Coastal Areas was inaugurated at Genoa, Italy. Documents published included six volumes of the Mediterranean Action Plan technical report series and Futures of the Mediterranean Basin 2000-2025.

Kuwait region. The Council of the Regional Organization for the Protection of the Marine Environment (ROPME) held its sixth meeting in Kuwait in April and approved UNEP proposals for future co-operation on coastal zone management, strengthening national and regional capabilities for monitoring the marine environment and public awareness. The Council also agreed to a UNEP initiative for an in-depth evaluation of the Kuwait Action Plan. An extraordinary meeting of the ROPME Council (Kuwait, 31 October and 1 November) endorsed the reorientation of the Action Plan towards concrete achievable targets and approved the actions proposed for cleaning up the sea area after the eight-year conflict in the region.

West and Central African region. In May, the steering committee for the marine environment of the region agreed to a rescheduling of unpaid pledges to the Trust Fund, but the continuing failure of most Governments to contribute had seriously retarded implementation of the Action Plan. Despite these financial problems, the network of institutions and laboratories participating in marine-pollution monitoring grew to 23 in 10 countries during the year. A manual on methods for evaluating and controlling coastal erosion in the region was also completed.

Wider Caribbean region. In 1988, the UNEP Regional Co-ordinating Unit for the Wider Caribbean reached full staffing and its information network became operational. Fifteen Governments had ratified or acceded to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region and its Protocol concerning Co-operation in Combating Oil Spills. Four umbrella projects-co-ordination and common costs; environmental management of coastal areas; assessment and control of marine pollution; and environmental training, education and public awareness-were being implemented.

East Asian seas region. Four projects were completed within the framework of the East Asian Seas Action Plan, leaving four ongoing and two being formulated. The seventh meeting of the East Asian seas co-ordinating body (Yogyakarta, Indonesia, 17-19 July) reviewed the progress of the Action Plan and requested UNEP to prepare for a meeting of experts in 1989 to look into the feasibility of preparing a draft convention as a possible legal framework for

the Action Plan. The regional report on the state of the marine environment was completed and a regional study on the socio-economic implications of expected climate changes was initiated.

South-East Pacific region. Protocols on environmental impact assessment and specially protected areas were being prepared, following the entry into force of the Convention on the Protection of the Marine Environment and Coastal Area of the South-East Pacific. About 200 experts benefited from seminars, workshops and other activities carried out under the Action Plan. The regional institutional network comprised 50 institutions conducting research in 29 areas of interest.

Red Sea and Gulf of Aden region. Following a proposal from the secretariat of the Red Sea and Gulf of Aden Environment Programme concerning marine conservation surveys in Democratic Yemen, Somalia and the Sudan, UNEP was drafting a project on strengthening research and monitoring capabilities in Democratic Yemen for assessment of pollution in the marine environment.

South Pacific region. A wide range of activities continued within the framework of the South Pacific Regional Environment Programme (SPREP). An intergovernmental review meeting on the SPREP Action Plan (Noumea, New Caledonia, 27 June-1 July) approved a concentration on six major programme elements: monitoring, research and control of pollution; management of specially protected areas, historic sites and exotic organisms; inland water quality, pesticides and pollution control; natural resource management, environmental planning and administration; environmental education, training and information; and impact of climatic changes and sea-level rise. A training course on the basic techniques for assessing environmental impacts on the marine environment and coastal areas of the South Pacific was also held (Cali, Colombia, 8-12 February).

Eastern African region. Somalia in 1988 ratified the Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region. Somalia was assisted in assessing pollution in Mogadishu harbour, where the M.V. Ariadne had spilled hazardous chemicals when it went aground in 1985. A national oil spill contingency plan for Mauritius was developed by the International Maritime Organization (IMO) and UNEP, and a national action plan for the protection, management and development of the marine and coastal environment of the United Republic of Tanzania was prepared.

South Asian seas region. UNEP, with the assistance of IUCN and IMO, had initiated two projects in the South Asian seas region and was in the process of formulating a third. The regional report on the state of the marine environment was completed and the regional report on the socio-economic implications of expected climatic changes was being finalized.

UNEP served as the secretariat for the Committee on Seas of the African Ministerial Conference on the Environment. At its second meeting

in December, the Committee finalized its organization and established a mechanism for the exchange of information and expertise between the African subregions on protection and development of the marine and coastal environment. The Committee declared an African Decade for the Protection of the Marine and Coastal Environment, 1991-2000.

UNEP continued its efforts to promote the implementation of the Global Plan of Action for the Conservation, Management and Utilization of Marine Mammals. A regional action plan for the protection of the Mediterranean monk seal was prepared by experts participating in the Mediterranean Action Plan. An extensive evaluation of the development of the Global Plan of Action and its achievements to the end of 1988 was undertaken. The Planning and Co-ordinating Committee reviewed progress in the implementation of the Plan and made recommendations regarding its future orientation and co-ordination.

Some other relevant meetings concerning the marine environment that were sponsored by UNEP were: a western South American marine geology symposium (Santiago, Chile); an international symposium on living resources and fisheries (Valparaiso, Chile); and a training course on the assessment of pollution from land-based sources (Singapore).

Environment and technology

In response to the growing concern that greenhouse gases were inducing climate change, UNEP took steps to become a source of comprehensive information on the environmental impacts of energy systems and management options. During the year, UNEP developed a mailing list of close to 1,500 addresses of institutions and individuals with an interest in energy and environment, which was used in distributing publications from the Energy Report Series. Preparatory work was done on a project that would enhance the computerized energy planning system popularly known as LEAP (Less Developed Country Energy Alternatives Planning System) by allowing for the tracking of environmental impacts of different energy policies generated in the planning system. Preparations were also made for a project to apply the results of impact studies to assess and manage the health and environmental risks of energy and other complex industrial systems. Preparatory work for the African Ministerial Conference on the Environment energy network was carried out, and the first meeting of the network was held at Dakar in February.

UNEP continued to contribute to the achievement of environmentally sustainable industrial development by providing technical guidelines and

reviews, information transfer, technical co-operation and training.

UNEP sponsored several diagnostic missions of experts on industry and environment issues in Africa and Asia, arranged training programmes for industrial managers and organized study tours for government and industry specialists to upgrade their skills in pollution prevention and control. Workshops on hazardous waste management were held in Malaysia and Mexico, and a workshop on clean technologies was held at Cairo. ILO and UNEP continued training activities for employers; seminars were held in Barbados, Jamaica and Trinidad and Tobago. In addition, UNEP worked closely with industry associations to stimulate and support environmental initiatives. A handbook on community awareness and preparedness for industrial accidents at the local level was released, and a special issue of *Industry and Environment* dealt with the working environment. Four expert group meetings on industrial accidents were held in Paris during the year.

Human settlements

UNEP and the United Nations Centre for Human Settlements (Habitat) completed in 1988 a demonstration project in Democratic Yemen, initiated in 1985 to provide a model for the planning and building of human settlements taking the environment specially into account. In addition to the demonstration housing units and other infrastructure, the project also produced a technical report and a video film to be used as training tools and guidance material for similar projects expected to be initiated under the Government's sponsorship.

Technical co-operation

The technical co-operation activities of UNEP were described in an addendum to the report of the Secretary-General to the UNDP Governing Council on United Nations technical co-operation.⁽³¹⁾ Technical assistance to developing countries, including the provision of experts, equipment, training, grants and fellowships, was central to the work of UNEP. Its technical co-operation programme allocation amounted to \$2.6 million in 1988.

In October,⁽³²⁾ ACC decided that, following a consultant's review, a joint meeting of its Consultative Committee on Substantive Questions (Operational Activities) and the designated officials on environmental matters should be convened on the approaches to be followed by United Nations organizations regarding environmental guidelines and their application to the operational activities of the United Nations system.

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