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United Nations Environment Programme

1987 ANNUAL REPORT

of the Executive Director

Nairobi, 1988



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ABBREVIATIONS

ACC	Administrative Committee on Co-ordination
ADB	African Development Bank
AGFUND	Arab Gulf Programme for United Nations Development Organizations
ALECSO	Arab League Educational, Cultural and Scientific Organization
ASEAN	Association of South-East Asian Nations
BAPMoN	Background Air Pollution Monitoring Network, UNEP/WMO
BBC	British Broadcasting Corporation
CEFIGRE	International Training Centre for Water Resources Management
CFC	Chlorofluorocarbon
CIDA	Canadian International Development Agency
CIDIE	Committee of International Development Institutions on the Environment
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMEA	Council for Mutual Economic Assistance
CNES	Centre National d'Etudes Spatiales, France
DANIDA	Danish International Development Agency
DOEM	Designated Officials for Environmental Matters
ECA	Economic Commission for Africa
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
EEC	European Economic Community
ELC	Environment Liaison Centre
EMINWA	Environmentally Sound Management of Inland Waters
ERIM	Environmental Research Institute of Michigan, United States
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
FAO	Food and Agriculture Organization of the United Nations
FINNIDA	Finnish International Development Agency
GEMS	Global Environmental Monitoring System
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Pollution
GRID	Global Resource Information Data Base
IAEA	International Atomic Energy Agency
IAHS	International Association of Hydrological Sciences
IAWGD	Inter-Agency Working Group on Desertification
IBPGR	International Board for Plant Genetic Resources
ICARDA	International Centre for Agricultural Research in the Dry Areas
ICIPE	International Centre of Insect Physiology and Ecology
ICRISAT	International Crop Research Institute for the Semi-arid Tropics
ICRO	International Cell Research Organization
ICSU	International Council of Scientific Unions
IDRC	International Development Research Centre, Canada
IEEP	International Environmental Education Programme
IFAD	International Fund for Agricultural Development
IGADD	Intergovernmental Authority on Drought and Development
IIASA	International Institute for Applied Systems Analysis
IIED	International Institute for Environment and Development
ILCA	International Livestock Centre for Africa

ILEC	International Lake Environment Committee
ILO	International Labour Organisation
IMO	International Maritime Organization
INFOTERRA	International Environmental Information System
IOC	Intergovernmental Oceanographic Commission, Unesco
IPAI	International Primary Aluminium Institute
IPCS	International Programme on Chemical Safety
IPU	Inter-Parliamentary Union
IRPTC	International Register of Potentially Toxic Chemicals
IUBS	International Union of Biological Sciences, ICSU
IUCN	International Union for Conservation of Nature and Natural Resources
IUFRO	International Union of Forestry Research Organizations
MAB	Man and the Biosphere programme, Unesco
MARC	Monitoring and Assessment Research Centre, University of London
MIRCEN	Microbiological Resources Centre
NASA	National Aeronautics and Space Administration, United States
NGO	Non-governmental organization
NOAA	National Oceanic and Atmospheric Administration, United States
NORAD	Norwegian Agency for International Development
OAS	Organization of American States
OAU	Organization of African Unity
OECD	Organisation for Economic Co-operation and Development
PPSC	Programme and programme support costs
RCSSMRS	Regional Centre for Services in Surveying, Mapping and Remote Sensing, Nairobi
ROPME	Regional Organization for the Protection of the Marine Environment
SADCC	Southern African Development Co-ordination Conference
SCOPE	Scientific Committee on Problems of the Environment, ICSU
SIDA	Swedish International Development Authority
SIPRI	Stockholm International Peace Research Institute
UNCHS	United Nations Centre for Human Settlements (Habitat)
UNCRD	United Nations Centre for Regional Development
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNDRO	Office of the United Nations Disaster Relief Co-ordinator
UNEPCOM	USSR Commission for UNEP
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHHSF	United Nations Habitat and Human Settlements Foundation
UNIDO	United Nations Industrial Development Organization
UNITAR	United Nations Institute for Training and Research
UNRISD	United Nations Research Institute for Social Development
UNSO	United Nations Sudano-Sahelian Office
USAID	United Nations Agency for International Development
USDA	United Nations Department of Agriculture
WFCC	World Federation of Culture Collections
WHO	World Health Organization
WMO	World Meteorological Organization
WRI	World Resources Institute
WTO	World Tourism Organization
WWF	World Wildlife Fund

Chapter I

THE YEAR IN RETROSPECT

THE YEAR IN RETROSPECT

1. Just over 15 years ago, I attended the first United Nations Conference on the Human Environment, held in Stockholm, as a delegate. My memories of that Conference are still very vivid—the long hours of consultations, the seemingly unsolvable impasses that were nonetheless somehow solved, the sudden flaring of tempers during protracted negotiations, a burst of ringing laughter providing a refreshing relief from the pent-up tension, the endless interventions droning on and on—and then, like a bolt of lightning flashing through a dull sky, a speech that would galvanize the entire assembly.

2. At Stockholm, we were united in one respect only—our common conviction that something had to be done about the human environment. But we occasionally found ourselves at loggerheads in defining just exactly what "environment" meant—and the views as to what should be done about it were more numerous than the delegations attending the Conference!

3. Like all conferences, the Stockholm Conference came to an end. None of us was completely satisfied, for no one left with everything he or she wanted, but such is the nature of the give-and-take of negotiations. Yet on 16 June 1972, the last day of the Conference, most delegates, I am sure, shared my elation at the fact that, despite our differences, we had managed to hammer out a Declaration on the Human Environment (the "Stockholm Declaration") and an Action Plan.[1]

4. As I returned to Cairo from Stockholm to resume my government duties, I could not help but wonder what would evolve from our work at the Conference. A conference, culminating in a declaration and action plan, is one thing; palpable, concrete and practical action is another. Never did it cross my mind then, nor in the months to come, that I would eventually have the honour—and be entrusted with the responsibility—of heading the organization that was to translate the Stockholm Declaration into action.

5. That was slightly over 15 years ago, and I now find myself giving an account to the members of the Governing Council, to the States Members of the United Nations, to numerous intergovernmental and non-governmental organizations and to the world at large of how UNEP has exercised its stewardship in 1987, 15 years after Stockholm.

6. Let me begin without false modesty: I am proud! First, I am proud of the work all of us did at Stockholm 15 years ago. The Stockholm Declaration and Action Plan have stood the test of time. They have lost neither validity nor urgency: "In our time, man's capability to transform his surroundings, if used wisely, can bring to all peoples the benefits of development and the opportunity to enhance the quality of life. Wrongly or heedlessly applied, the same power can do incalculable harm to human beings and the human environment."[2]

7. Second, I am proud of the "small secretariat" of UNEP, established by the General Assembly of the United Nations at the recommendation of the Stockholm Conference. This small secretariat, the first within the UN system to have its headquarters in a third world country, with a staff of less than 200 professionals, has in a remarkably short time grown to maturity and taken its rightful place among the many distinguished organizations of the UN system.

8. Third, I am proud to be part of a generation that is increasingly willing to put aside narrow short-term national and regional interests in favour of protecting and enhancing our common human environment. Governments are agreeing to conventions and protocols that have very real and immediate negative impacts upon certain sectors of their economies because they realize that the alternative would be even more costly—perhaps even catastrophic. I have become accustomed, though it makes me no less proud, to seeing representatives of warring nations seated around UNEP conference tables to discuss ways of solving the environmental problems they share.

9. Looking in retrospect at 1987, the year under review, I would say it was more than just a milestone in our 15-year journey since Stockholm. It was not a crossroad, not a deviation or detour, not a dead-end, but rather, a turning point at which the steep, rocky, winding path we had been following since Stockholm suddenly, almost imperceptibly, broadened into an avenue, revealing wider vistas and giving us a greatly expanded view of the future. In short, 1987 was the year in which, environmentally speaking, we seemed to have come of age—not just UNEP or the environmental groups, but the world community. This year, as never before, we seemed to be facing up to the fact that the environment is not just the concern of nature lovers or "green groups", but fundamental to all our human needs. In 1987, more so than in any previous year, there was rapid and world-wide recognition that the environmental problems facing humankind—particularly the global ones—call for urgent and concentrated action by the international community. Not that such problems as the ozone layer, global warming or desertification were new, but the seriousness of the situation finally began receiving the attention it deserves—and requires.

10. What were the events and developments in 1987 that made this year an environmental turning point? Let me start with the two important independent but interconnected reports concerning the environment, both of which were presented to the General Assembly of the UN in the fall of 1987. Both reports originated in an idea conceived by the Governing Council of UNEP, meeting at its session of special character in Nairobi in 1982 to commemorate the tenth anniversary of Stockholm. Out of that session, part of which was devoted to a kind of stock-taking 10 years after Stockholm, grew the awareness of the need for some kind of far-reaching blueprints and long-term environmental strategies for achieving sustainable development to the Year 2000 and Beyond in the face of rapid socio-economic, political and technological change (i.e. a global agenda for change). The following session of the Governing Council built upon and elaborated this concept until it took the form of a draft resolution submitted to the General Assembly for its consideration.[3]

11. The Assembly subsequently adopted a resolution in 1983 in which it called for two reports. One report was to be prepared by a "special commission" made up of individual Commissioners—from Governments, intergovernmental and non-governmental organizations, industry, the scientific community, the community of social scientists, of planners, of other professions related to the environment—selected to serve in their personal capacities, but with due regard to broad geographical distribution and regional balance. The other report was to be prepared by Governments themselves through an intergovernmental mechanism, the Governing Council of UNEP.

12. The report of the special World Commission on Environment and Development,[4] presented to the General Assembly in the fall of 1987 by the Commission's distinguished Chairman, the honourable Prime Minister of Norway, Mrs. Gro Harlem Brundtland, represented the culmination of nearly three years of concentrated work by Mrs. Brundtland, Mr. Mansour Khalid, Vice Chairman of the Commission, and the 19 Commissioners. The Assembly unanimously welcomed the report, aptly entitled "Our Common Future" and took action upon it (see chapter V, under General Assembly resolution 42/187, for details).

13. At the same session, the General Assembly had before it a report entitled "The Environmental Perspective to the Year 2000 and Beyond,"[5] submitted to it at its own request by the Governing Council of UNEP. The Governing Council had been assisted in formulating the Environmental Perspective by a Preparatory Committee which met regularly over a three-year period to prepare a draft for the Council's consideration and adoption at its fourteenth session in June 1987. The Intergovernmental Preparatory Committee and the World Commission on Environment and Development had maintained close contact throughout the course of their parallel endeavours, drawing on one another's experience and expertise. Hence, it should come as no surprise that the final results, as reflected in the two reports, were mutually supportive. The General Assembly not only welcomed the Environmental Perspective, but adopted it as a "broad framework to guide national action and international co-operation on policies and programmes aimed at achieving environmentally sound development" (see chapter V, under General Assembly resolution 42/186 for details).

14. There is no need for me at this juncture to attempt a recapitulation of the two reports. Suffice it to say that "sustainable development" is the message, the central theme, of both. Or, conversely stated, development that is not sustainable is not development at all, for mismanagement and irrational exploitation of our finite natural resources ultimately lead not to development, but to destruction.

15. This theme is not new. It was mooted already at Stockholm. What is new is the emphasis, urgency and unity with which it is stated. I well recall at Stockholm the suspicion and distrust with which some of us from the third world viewed the environmental aspirations of some of our colleagues from the "developed" countries whose greatest concern seemed to be the containment and prevention of industrial pollution. To some of us from developing countries, that concern seemed a ready-made excuse to put a brake on our development efforts, particularly our fledgling industrialization. But, as I have stated earlier, we reached agreement: "To defend and improve the human environment for present and future generations has become an imperative goal for mankind—a goal to be pursued together with, and in harmony with, the established and fundamental goals of peace and of world-wide economic and social development" (Stockholm Declaration paragraph 6).

16. But even after Stockholm, we have heard voices crying out that development and protection of the environment are mutually exclusive; "environment OR development", they say. This has never been the course followed by UNEP. For over a decade we have preached "development without destruction" and promulgated the message of "eco-development". We have never ceased in our attempts to bring development planners, industrialists, scientists and others into our camp as partners in our efforts to promote environmentally sound and sustainable development.

17. Let us hope that with the publication of the World Commission's report and with the adoption by the General Assemby of the Environmental Perspective to the Year 2000 and Beyond, this issue has been put to rest, for the protection and enhancement of the environment cannot be used as a pretext to stifle the just aspirations of the peoples and countries of the third world for a better life. Nor can untrammelled greed and ignorance, in the form of exploitation, be allowed to usurp the term "development". Environment and development should—indeed, must—go hand in hand.

18. But if, as we believe, environment and development are inseparable then action to protect and enhance the environment must take place on a much broader basis than we have hitherto envisaged. To paraphrase George Bernard Shaw, "Environment is much too important to be entrusted to environmentalists". The environment affects, and is affected by all sectors of human activity—not just forestry, agriculture, fisheries, but health, industry,

development, finance, education, energy and numerous others. We must, both nationally and internationally, co-ordinate the efforts of all sectors of our society and Governments to ensure that our decisions, policies and actions reflect and embody our real long-term interest of preserving the human environment. This message resounds from the pages of both the World Commission Report and the Environmental Perspective.

19. Another milestone was reached in 1987: according to the UN Population Fund, the five billionth individual joined the human race sometime in July 1987.[6] From a total of about one billion in 1830, the world population has quintupled in less than 160 years. It took nearly a century for humankind to grow from the first billion in 1830 to the second, but only some 35 years (1964) for the next billion to swell our numbers, 10 years (1974) for the fourth billion, 13 years (1987) for the fifth, and the sixth billion mark is expected to be reached around the turn of this century. This rapid growth presents a great challenge, but also constitutes a great risk to humankind. The demands being made on our finite natural resources, on our human environment, are greater than ever before—and these demands will continue to increase in the foreseeable future. Perhaps no other single event in 1987 as this, the welcoming to our human population of the five billionth individual, underscores so dramatically the need for a common global policy aimed at sustainable development.

20. So 1987 was a turning point. It saw the General Assembly of the United Nations call upon all Governments, upon the various organs, bodies and agencies of the UN system, upon intergovernmental and non-governmental organizations—indeed, upon the whole world—to make environmentally sound and sustainable development a goal towards which all peoples should strive. I realize, of course, that these are only words, statements of intent, that must now be followed up by concrete action, but it is extremely gratifying that we are all agreed on the direction we should take.

21. A most encouraging event in 1987 was the concrete step taken by two of the world's superpowers to reduce the awesome and terrifying armory of nuclear weapons, for man's destruction of man surely is the ultimate scourge of our human environment. We cannot but hope that this first agreement will be followed by others even more comprehensive and far-reaching, and that all nations of the world will consent to settle their disputes at the negotiating table rather than on the field of battle.

22. We at UNEP are justly proud that on 16 September 1987 in Montreal, Canada, twenty-four countries and the European Economic Community signed the Montreal Protocol on Substances that Deplete the Ozone Layer. This was an enormous milestone in UNEP's efforts and work that stretch back more than a decade. Together with scientists, diplomats, lawyers and statesmen, UNEP has been involved in this endeavour—from the earliest preliminary and exploratory meetings to the Vienna Conference, convened by UNEP in March 1985, which adopted a Convention[7] committing Governments to "take appropriate measures to protect human health and the environment" from adverse effects of human activities that are likely to modify the ozone layer. The Vienna Convention was a statement of intent; the community of nations decided to do "something". It was at Montreal, under the aegis of UNEP, that they decided "what" to do.

23. Basically, the Montreal Protocol, which is expected to enter into force on 1 January 1989, will first freeze the production of the controlled chlorofluorocarbons (CFCs) at their 1986 level, within one year of the date of entry into force. The Protocol sets a 50 per cent reductions in production and consumption of (CFCs) by mid-1999. Beginning in 1992, the consumption of halons will be frozen at 1986 levels. Even these steps, drastic as they are (global production of CFCs is worth over $US two billion a year), may not be enough and the Montreal Protocol provides for additional legal work if controls have to be tightened further.

24. The Montreal Protocol also marks a turning point. It is the first trully global agreement on protection of the environment. It is the first global pre-emptive environmental agreement: looking ahead to a distant threat, the world community of nations has agreed to take action now to prevent grave damage in the future. Lastly, it sets a precedent for further global action against global dangers to the environment.

25. Many of the world's urgent environmental concerns transcend national frontiers and therefore call for a new pattern of relationships among sovereign States. In my optimism, I have described this situation as presenting an opportunity for "the politics of fusion". Fortunately for all of us, my optimism does not seem to have been misplaced. We can cite many examples of multinational co-operation in the field of the environment that have taken place in 1987 alone. In May 1987, at a Conference of Plenipotentiaries convened by UNEP, five African countries, all of which share the Zambezi River basin system, adopted a Zambezi Action Plan[8] which they agree to co-operate in, rather than contest, the utilization of one of their greatest shared natural resources—the Zambezi River. Similar plans are being developed and promoted in various regions of the world by UNEP and its partners.

26. In June 1987, the Governing Council of UNEP approved the Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes[9] and requested UNEP to play a lead role in developing a global convention on the control of transboundary movements of hazardous wastes.[10] The first, organizational meeting of the working group on this subject was held in October 1987; this group of legal and technical experts adopted a work plan and timetable to achieve this objective.[11] Also at its 1987 session, the Governing Council adopted the London Guidelines for the Exchange of Information on Chemicals in International Trade,[12] as well as the Goals and Principles of Environmental Impact Assessment.[13] These various guidelines, goals and principles were subsequently welcomed by the General Assembly and it is hoped that Governments will use them in formulating national legislation and that ultimately they will become international agreements.

27. The year 1987 also witnessed the second session of the African Ministerial Conference on the Environment, meeting two years after it was first convened by UNEP in December 1985. At its first historic session—the very first official gathering of African Ministers responsible for the environment—the Conference adopted the Cairo Programme for African Co-operation.[14] At its second session the Conference reviewed progress made in the implementation of the Programme and reinforced the resolve of its members particularly to assist 150 villages (three per country) and 30 semi-arid stock-raising zones in Africa to become self-sufficient in food and energy.[15]

28. During 1987 my colleagues and I were deeply engaged at both the working and policy levels in the task of assisting the Administrative Committee on Co-ordination to complete the draft of the second United Nations System-Wide Medium-Term Environment Programme (SWMTEP II)[16] for 1990-1995. In this task, we drew on the Report of the World Commission on Environment and Development and on the Environmental Perspective to the Year 2000 and Beyond. In our own way and within our respective areas of competence within the UN system, we were taking the first steps towards translating the words of the World Commission Report and the language of the Environmental Perspective into concrete programmes, projects and activities. We were supported and assisted throughout the long period of preparatory work by friends and colleagues in the other organs, bodies and agencies of the UN system, particularly the Designated Officials for Environmental Matters. SWMTEP II, encompassing the aspirations and envisaged work of the entire UN system in the field of the environment for the six-year period 1990-1995, will be submitted to a special session of the Governing Council in 1988. Once approved by the Council,

SWMTEP II will be a type of master plan by which all the organizations of the UN system will chart their environmental activities.

29. Yes, 1987 was a most eventful year, a milestone and turning point on our journey from Stockholm. As I said earlier, I am proud to have been associated with the delegates of Stockholm; I am proud and honoured to be the head of the United Nations Environment Programme; I am proud to be the executive head of the relatively small group of loyal, dedicated and hard-working staff at UNEP; I am proud to be associated with a generation that can see beyond its narrow short-term interests to plan and sacrifice for the common good of future generations.

30. We all have reason to be proud. We can take pride in the achievements of 1987—the Report of the World Commission on Environment and Development, the Environmental Perspective to the Year 2000 and Beyond, the second UN System-Wide Medium-Term Environment Programme, and the Montreal Protocol, but none of these achievements can be regarded as the end of a process. They are but milestones by which we measure how far we have come—and how far we have yet to go. We must never allow our pride to become complacency. Monuments commemorating progress only up to a certain point are usually tombstones. For our own sake and for the sake of our children, let us view our accomplishments in 1987 as milestones. Let us take pride in how far we have come, but let us never lose sight of the long, long road ahead.

Notes

1 See Report of the *United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972* (United Nations publication, Sales No.E.73.II.A.14).

2 *Ibid.*, Declaration of the United Nations Conference on the Human Environment, para. 3.

3 Annex to Governing Council decision 14/4, adopted as General Assembly resolution 42/187.

4 Official Records of the General Assembly, Forty-second Session, Supplement No.25 (A/42/25 and Corr.1) annex II, initially issued as UNEP/GC.14/13.

5 *Ibid.*, annex I, initially issued as UNEP/GC.14/13.

6 "A World of Five Billion" from *UNFPA 1986 Report* by the Executive Director of the United Nations Fund for Population Activities (incorporating "The State of World Population 1987" and "UNFPA 1986") UNFPA. ISBN 0-89714-051-6.

7 Vienna Convention for the Protection of the Ozone Layer.

8 Action Plan for the Environmentally Sound Management of the Zambezi River System.

9 UNEP/GC.14/17, annex II.

10 Decision 14/30.

11 See UNEP/WG/180/3.

12 UNEP/GC.14/17, annex IV.

13 UNEP/GC.14/17, annex III.

14 UNEP/GC.14/4/Add.6, annex I.

15 See Report of the Second Session of the African Ministerial Conference on the Environment, UNEP/ACE.2/3.

16 UNEP/GCSS.I/7/Add.1.

Chapter II

THE CO-ORDINATING, CATALYTIC AND STIMULATING ROLE OF UNEP

Co-ordination with the UN system

Co-ordination with supporting organizations

Environmental Outreach

Committee of International Development Institutions on the Environment (CIDIE)

Clearing-house

THE CO-ORDINATING, CATALYTIC AND STIMULATING ROLE OF UNEP

1. When considering the co-ordinating, catalytic and stimulating role of UNEP, it must be borne in mind that UNEP's terms of reference are unique within the UN system. UNEP is not an environmental bank or funding institution, a type of World Bank or UNDP to disperse funds for environmental projects. It does, however, provide financial support to other co-operating and supporting organizations to assist them in carrying out environmental activities. Although UNEP carries out some environmental projects on its own, it was not established to be the UN body or organ responsible for executing environmental programmes and activities, along the same lines as, for example, UNIDO in the field of industry, WHO in the field of health, or FAO in respect of food and agriculture.

2. The role of UNEP, as defined by the General Assembly and the Governing Council, is one of co-ordinating, catalysing and stimulating environmental action, primarily—but not exclusively—within the UN system. UNEP also works with and through the international scientific community, research centres and institutions, intergovernmental organizations and non-governmental organizations (NGOs). The great majority of environmental activities being implemented by the UN system are carried out with little or no direct participation of UNEP. Within their specialized mandates, ILO, FAO, WHO, Unesco, WMO, UNIDO and others have long been executing environmental projects, some of which pre-date the establishment of UNEP by the General Assembly 15 years ago.

3. But whether UNEP is portrayed as the environmental "leaven" in the UN loaf or as the environmental "gadfly" of the system, its role remains essentially the same: to identify gaps where nothing or too little is being done and to stimulate and catalyse the necessary action; and to pinpoint overlaps in the UN system's efforts to protect and improve the environment and to seek to co-ordinate those efforts both inside and outside the system.

4. UNEP exercises its co-ordinating and catalytic role in a variety of ways—from high-level policy planning and programming down to support for grassroots groups striving to protect and save their local environment. The co-ordinating and catalytic elements are embodied in every activity, project and programme of UNEP. For this reason, no attempt is made in the following paragraphs to provide a comprehensive report on all of UNEP's co-ordinating, catalytic and stimulating efforts in 1987; rather, a general overview is provided to give the reader an idea of the extent and scope of these efforts. Further details of such measures are also found in the next chapter, which describes the main thrusts of the activities carried out in 1987 under the UNEP programme. When describing particular activities, reference is made to co-operating agencies and bodies within the UN system, and to supporting organizations—intergovernmental bodies and organizations as well as international non-governmental organizations—with which and through which UNEP exercised its co-ordinating and catalytic role in 1987. Further detailed examples of co-operation and co-ordination can be found in annexes III and IV, which list the numerous UNEP meetings, training courses, publications and papers carried out or produced jointly with other agencies and organizations in 1987.

CO-ORDINATION WITHIN THE UN SYSTEM

5. Never before, in the 15-year history of UNEP, have co-operation and co-ordination on environmental concerns been so intensely pursued within the UN system as in 1987. And this increased co-operation and co-ordination started at the top, with the Administrative Committee on Co-ordination (ACC), the highest administrative forum in the UN system, the membership of which is comprised of the executive heads of the specialized agencies and very senior UN officials under the chairmanship of the Secretary-General of the United Nations.

6. At its meeting on 22-23 October 1987, ACC considered and approved its annual report to the UNEP Governing Council.[1] The report reflects the number of important environmental subjects dealt with by ACC in 1987. First, the ACC took up the report of the World Commission on Environment and Development that the Governing Council, at its fourteenth session, had transmitted to the General Assembly.[2] It also dealt with the Environmental Perspective to the Year 2000 and Beyond, adopted by the Governing Council, and forwarded to the General Assembly for consideration and adoption.[3] Finally, the ACC agreed to transmit to the Governing Council a proposed system-wide medium-term environment programme for the period 1990-1995. This was the first time that this top-level administrative body had submitted a proposed six-year environment programme, covering the whole of the UN system, to the Governing Council for its consideration. In the view of ACC, this programme is a unique mechanism for formulating joint commitments by all partners of the UN system to the development and implementation of jointly agreed strategies. As such, it is an outstanding example of co-operation and co-ordination within the UN system.

7. At its October session, ACC expressed the desire that the UN system should, in a few countries at this stage, initiate a process by which the system would assist countries in incorporating environmental dimensions into development planning and projects, stressing that such work should be done at an early stage of project design. Further, ACC gave increased importance to the Designated Officials for Environmental Matters (DOEM) mechanism, particularly for the monitoring and evaluation of the system-wide medium-term environment programme. ACC considered that, in its final stage, the evaluation of the programme should be the responsibility of DOEM, and recommended the development of monitoring and evaluation procedures at two levels: projects and programmes.

8. The groundwork for system-wide co-operation on environmental matters within the UN system is laid by DOEM. Each specialized agency and relevant UN body has designated one of its officials as a DOEM. DOEM played an active part in the preparation of the draft system-wide medium-term environment programme for the period 1990-1995, starting with discussions on the format and content in 1985, continuing work on through 1986 and culminating in a meeting in September 1987 at which they agreed to submit the draft to ACC.

9. DOEM devoted considerable attention in 1987 to the implications of the Environmental Perspective to the Year 2000 and Beyond and the report of the World Commission on Environment and Development. These were first discussed in a small informal "think-tank" meeting held in Antalya, Turkey, in September 1987 prior to the regular DOEM meeting later that month. The regular meeting recognized that the DOEM mechanism, and particularly the framework of the system-wide medium-term environment programme, might be instrumental in keeping under review and co-ordinating progress by the UN system towards sustainable development. These views were endorsed by ACC at its October meeting. DOEM also welcomed the recognition it had been accorded in the Environmental

Perspective as the appropriate inter-agency mechanism to guide, support and monitor more effectively activities within the UN system to ensure a consistent policy.

10. During 1987, DOEM actively contributed to the preparation of the cross-organizational programme analysis (COPA) on environment, a report prepared by the United Nations Department of International Economic and Social Affairs under the responsibility of the Secretary-General, for which DOEM had been asked to provide advice under a delegation of authority from Consultative Committee on Substantive Questions. UNEP provided assistance for the holding of an expert meeting in December 1987 to review the first draft of COPA, following a favourable reaction by DOEM to the idea.

11. With regard to the integration of environmental concerns into development planning and projects, DOEM expressed a wish for more active co-operation with the major funding agencies and with CIDIE, in line with the recognition by ACC, in its 1986 report submitted to the Governing Council at its fourteenth session, of the great importance for the UN system to assist developing countries in integrating environmental considerations fully into the socio-economic process and into development plans and projects.[4]

12. DOEM contributed to the refinement of the goals and targets presented by the Executive Director to the Governing Council at its fourteenth session in his report on the future orientation of the work of UNEP.[5] In the light of the Council's subsequent decision 14/7 on this subject, DOEM encouraged UNEP to continue to develop such goals and targets and made a number of suggestions regarding the review suggested by the Council.

13. The discussion initiated in 1985 and 1986 on the role and functioning of DOEM were pursued in 1987, as recommended by ACC, through bilateral discussions between UNEP and its partners in the UN system and at DOEM meetings. DOEM welcomed the recognition by ACC in its 1986 report submitted to the Governing Council at its fourteenth session, of "the essential role of DOEM in providing an effective co-ordination mechanism on environmental matters for the entire UN system".[6] In order to improve the efficiency of the DOEM mechanism, however, further recommendations were made regarding the level of representation and the preparations of its meeting.

14. While the co-ordination of future activities was being planned and discussed by ACC and DOEM, actual co-ordination and co-operation at the project level continued apace throughout 1987. During the year, 107 out of a total of 290 active UNEP projects were being implemented in co-ordination with other UN agencies and bodies, including Unesco (23), FAO (19), WHO (15), Habitat (6), IMO (6), WMO (6), UNSO (5), ILO (4), IOC/Unesco (4), ECE (4), ESCAP (3), UN Department of Technical Co-operation for Development (3), IAEA (3), ECLAC (2), ECA (2), ESCWA (1) and IBRD (1). In financial terms, co-operating agencies were responsible for 19.6 per cent of the total expenditures of implementing Fund projects in 1987.

15. Particularly encouraging has been the co-operation throughout 1987 by the UN system in the implementation of the Cairo Programme for African Co-operation. Consultations have led to increased back-up support for the implementation of UNEP programmes in the region. The UNDP resident representatives in Africa have been very helpful in the launching of the various components of the Cairo Programme. Additionally, a UN inter-agency working group, established in 1986, continued work throughout 1987, seeking to co-ordinate the activities of their respective agencies and bodies in relation to the implementation of the Cairo Programme for African Co-operation.

16. Further, UNEP co-operation with Economic and Social Commission for Western Asia (ESCWA) has now moved steadily into a substantial programme of activities. The

UNEP/ESCWA-FAO Joint Division organized in 1987 a technical mission to the Yemen Arab Republic that prepared a draft national plan of action to combat desertification, which was presented to the Government of the Yemen Arab Republic in December 1987; the implementation of the plan will be subject of further collaboration between UNEP and ESCWA. In the field of energy, UNEP and ESCWA conducted a study in 1987 on auditing energy in the cement industry in the Syrian Arab Republic. They also jointly collaborated in an expert group meeting on urban development in Western Asia for which UNEP prepared a study on environmental aspects in the extraction and manufacturing and use of building materials in ESCWA States.

CO-ORDINATION WITH SUPPORTING ORGANIZATIONS

17. Whereas, in UNEP terminology, other UN system agencies and organizations are referred to as "co-operating agencies," organizations outside the UN system, both non-governmental and intergovernmental, that work together with UNEP in the implementation of projects and activities are referred to as "supporting organizations". In the year under review, supporting organizations were responsible for 26.3 per cent of the expenditures for implementing Fund projects in 1987.

Intergovernmental organizations

18. In 1987, 45 intergovernmental organizations enjoyed official observer status with the Governing Council, though the list of intergovernmental organizations that co-operate with UNEP is much longer. These organizations not only carry out activities in their own particular fields, but also work in close consultation with UNEP in such areas as desertification, regional seas, toxic and hazardous wastes, etc.

19. In Europe, UNEP continued throughout 1987 to follow closely the activities of the Organisation for Economic Co-operation and Development (OECD). UNEP participated in the April and December meetings of the OECD Environment Committee, the second of which was particularly important as it saw a thorough discussion of the report of the World Commission on Environment and Development and on the follow-up and implementation of its recommendations. Another important item was the OECD draft international agreement on control of transfrontier movements of hazardous wastes, which was of special relevance to the work under UNEP's auspices on a global convention, as mandated by the UNEP Governing Council at its fourteenth session. UNEP also took an active part in the November OECD Seminar on Strengthening Environmental Co-operation with Developing Countries, which covered a number of increasingly important issues related to sustainable development.

20. Throughout the year, UNEP stayed in regular contact with both the Commission of the European Communities and individual countries of the Council for Mutual Economic Assistance (CMEA), where an effort was made to widen the scope of the European Year of the Environment so that it could encompass all of Europe.

21. Through its Regional Office for Latin America and the Caribbean, UNEP, in co-operation with the Government of Uruguay, organized the Fifth Intergovernmental Regional Meeting on the Environment, at the technical and ministerial levels. The purpose of the meeting, which was held from 3 to 8 April, was to serve as a forum at which the Governments of the region could promote regional co-operation and recommend political principles on environmental matters. The participants at the meeting stressed the need for an expanded dialogue on national environmental policies, encompassing all governmental

sectors. UNEP informed participants of the progress made in the implementation of the regional environmental programmes of common interest. The report and decisions of this meeting were presented to the Governing Council at its fourteenth session.

22. UNEP, through its Regional Office for Latin America and the Caribbean, also provided logistical and technical support to the Caribbean Action Plan Regional Co-ordination Unit for the sixth meeting of the Monitoring Committee and the Fifth Intergovernmental Meeting on the Action Plan for the Caribbean Environment Programme, both of which were held in the year under review.

23. In the Asian and Pacific region, UNEP worked closely with, and provided assistance to, the South Asia Co-operative Environment Programme (SACEP) in the formulation of national and regional plans for the SACEP Year of the Tree Programme. UNEP also assisted in publishing the SACEP newsletter and in organizing the third SACEP Governing Council meeting, held in New Delhi, India. Under the South Asian Seas Programme, UNEP co-operated with SACEP in the development of an action plan with special reference to the institutional and financing arrangements necessary for speedy implementation of the plan. UNEP also collaborated with SACEP and the Sri Lanka Government, with funding by the Netherlands Government, in holding in Colombo, Sri Lanka, in 1987 a subregional workshop on benefits and constraints on the use of environment impact assessments.

24. Co-operation with the Association of South-East Asian Nations (ASEAN) was further strengthened during the year 1987. UNEP assisted ASEAN countries to formulate basic management policies for ASEAN heritage parks and reserves and other protected areas. UNEP provided catalytic assistance for a South-East Asian subregional information centre on cranes and other large wading birds, which was established in 1987. UNEP also assisted ASEAN countries in evolving a strategy for enhancing co-operation between the environmental experts of the region with the view to increasing their contribution to the protection of the marine and coastal environment of the East Asian Seas region. UNEP has also been receiving support from several intergovernmental organizations, such as FAO, Unesco, IMO, IOC and WHO, in the implementation of priority activities under the East Asian Seas Action Plan.

25. Throughout the year, UNEP continued its assistance to the South Pacific Regional Environmental Programme. Bearing in mind the fragility of the South Pacific environment and taking into account increasing economic pressures, the main focus of attention centred on the management of limited island resources on a sustained-yield basis.

26. In Africa, UNEP continued to work closely with the Organization of African Unity (OAU). UNEP participated in the OAU Council of Ministers Session and the Assembly of Heads of State and Government, held from 20 to 30 July 1987 in Addis Ababa. Both organizations co-operated to ensure that the Cairo Programme for African Co-operation would be implemented within the framework of the United Nations Programme of Action for African Economic Recovery and Development 1986-1990. UNEP participated in the first Congress of African Scientists, organized by the OAU (in co-operation with Unesco and UNDP) in Brazzaville in June 1987. UNEP also participated in the fourteenth session of the OAU Council of Ministers held in Addis Ababa in November/December 1987.

27. UNEP strengthened its ties with the Southern African Development Co-ordination Conference (SADCC) in 1987 and was represented at the Conference of Plenipotentiaries on the Environmental Management of the Common Zambezi River System held in Harare in May. Representatives of the two organizations continued to co-operate closely in the development of the plan for the integrated development of the common Zambezi river system which was eventually adopted as a SADCC Programme.

28. Through its Regional Office for Africa, UNEP continued to provide support to the Southern Africa Subregional Environment Group (SASREG), which is a forum for discussing major environmental issues in Southern Africa. SASREG which comprises directors of the environment in the SADCC member countries, held its third meeting in Blantyre, Malawi, from 3 to 5 August 1987. Through its Desertification Control Programme Activity Centre and its Regional Office for Africa, UNEP continued its co-operation with the Intergovernmental Authority on Drought and Desertification (IGADD), and participated in the IGADD Donors' Conference in Djibouti in March 1987.

29. Another significant development in 1987 was the improvement of co-operative links with the Lake Chad Basin Commission. UNEP attended the sixth summit meeting of the Commission, held in N'Djamena in October 1987. At the meeting consultations were held regarding a project proposal, to be financed by UNEP, on a comprehensive development plan for the environmentally sound management of the Lake Chad Basin.

30. Within the framework of the Cairo Programme for African Co-operation, UNEP in close co-operation with the Dakar Ministerial Conference on Desertification (COMIDES) convened the first meeting (Dakar, 16-18 March 1987) of the Committee on Deserts and Arid Lands of the African Ministerial Conference on the Environment (AMCEN), in which several African countries participated. In the same context and in its capacity as the AMCEN secretariat, UNEP continued throughout 1987 to assist and co-ordinate the implementation of the Cairo Programme for African Co-operation on the Environment. The UN inter-agency working group established within the framework of AMCEN held its second meeting in Rome from 20 to 21 March 1987 to review the status of implementation of the Cairo Programme. The AMCEN Committee on Seas met in Algiers from 25 to 27 May 1987, while the Committees on Forests and Woodlands and on River and Lake Basins met respectively in Kinshasa, from 23 to 25 March 1987, and in Harare from 25 to 27 March 1987. At these meetings, attended by representatives of several AMCEN member countries, decisions on priority activities of the committees were agreed upon.

31. During the year under review, UNEP took additional measures to establish AMCEN technical co-operation networks on water resources and on soils and fertilizers. Efforts are currently underway for the establishment of AMCEN networks on energy, environmental monitoring and education and training.

32. In June 1987, UNEP provided support for the convening in Nairobi of the second session of the African Ministerial Conference on the Environment. A significant outcome of the session was a decision to convene a donors' meeting to seek supplementary support for the implementation of the AMCEN pilot projects (three village projects per country and 30 projects in semi-arid stock-raising zones), the objective of which is to assist the communities concerned to attain self-sufficiency in food and energy.

33. In the course of 1987, UNEP's Regional Office for Western Asia (ROWA) maintained close collaboration with the Secretariat of the Gulf Co-operation Council (GCC). The studies prepared by UNEP/ROWA on strengthening environmental institutions in GCC countries, environmental legislation and standards in GCC States, and major common environmental problems in GCC countries were reviewed by representatives of the States concerned in a meeting sponsored jointly by UNEP and the GCC Secretariat in Bahrain. The studies were also presented to the meeting of the Ministers responsible for environment in GCC States in November and UNEP was requested to further develop the studies and integrate them with related reports prepared by the countries concerned.

34. A number of programmes supported by the Arab Gulf Programme for United Nations Development Organizations (AGFUND) were completed in 1987 and arrangements are

underway to increase the volume of AGFUND financial support to environment related projects in developing countries in 1988 and 1989.

35. ROWA maintained its contacts during 1987 with the Regional Organization for the Protection of the Marine Environment (ROPME) in Kuwait, with the Programme for the Protection of the Red Sea and Gulf of Aden (PERSGA) in Jeddah, and with the Mediterranean Action Plan (MAP) unit in Athens. These three regional seas programmes cover all the countries of UNEP's Regional Office for Western Asia.

36. In exercising its catalytic and co-ordinating role and in co-operation with UNEP/Tunis liaison office with the League of Arab States (LAS) and the Arab Educational, Cultural and Scientific Organization (ALECSO), UNEP has developed a number of activities with LAS and its specialized organizations. UNEP prepared draft proposals for joint activities by Arab States for consideration by the Interim Executive Council of the Conference of Arab Ministers Responsible for Environment which met in Riyadh in February 1987. The Council itself met in Rabat in July and formally institutionalized the Environmental Ministerial Council as a permanent body within the context of LAS. The Rabat Conference also decided to forward the proposed work programme to Governments for review and comments by the end of December 1987. It is envisaged that the work programme and the main elements of an Arab environmental strategy will be adopted by the Ministerial Council in the first half of 1988.

37. Co-operation with ALECSO, the Arab League specialized organization most involved in environmental issues, was maintained throughout 1987. A Pan-Arab Workshop on Environment and Mass Media was organized jointly by UNEP/ALECSO in Tunis in October 1987. UNEP prepared jointly with the Arab Centre for the Studies of Arid Zones and Dry Lands a final version of a national plan of action to combat desertification in the Syrian Arab Republic which was presented to the Syrian Prime Minister and Minister of Environment in December 1987. In 1987 the Arab Fund for Economic and Social Development in Kuwait has shown increased interest in environmental implications of economic and social development; it convened a panel on the subject with a key-note speaker from the International Institute for Environment and Development who introduced the report of the World Commission on Environment and Development.

38. A significant development in 1987, which reflects UNEP catalytic role in the region, was the agreement of the Kuwait Planning Institute, a Pan-Arab regional institution for economic and social planning, to introduce environmental considerations as an integrated part of its training programme. The consultation which took place in Kuwait in November 1987 involved representatives from the Arab Fund for Economic and Social Development and UNDP, in addition to UNEP and the Planning Institute.

39. UNEP/ROWA initiated contacts in 1987 with the Organization of the Islamic Conference in Jeddah and three areas were identified for collaboration: desertification; training in natural resources management and environmental impact assessment of major development programmes; and, environmentally sound technologies.

Non-Governmental Organizations (NGOs)

40. NGOs played a leading role in stimulating public interest in and concern for the environment in developed and developing countries even before the establishment of UNEP, and the numbers of such NGOs are continuously increasing. UNEP attaches great importance to co-operation with NGOs, as it is through them that environmental concerns and activities reach to the grassroots level. The importance the Governing Council attaches to co-operation with NGOs was reflected in its decision 13/13, in which it urged the

Executive Director "to improve and make better use of the mechanisms by means of which the Environment Programme in consultation with Governments, utilizes the capacities of non-governmental organizations". The Council reaffirmed this position in its decision 14/8 of July 1987. Thirty-one international NGOs attended the fourteenth session of the Governing Council as observers.

41. The Nairobi-based Environment Liaison Centre (ELC), which co-ordinates a network of over 6,000 NGOs dedicated to the protection and improvement of the environment, is one of the prime channels through which UNEP works with international, regional and national NGOs networks. ELC keeps the NGO community informed about UNEP through its bimonthly *Ecoforum* and its quarterly *News Alert*. Since its inception in 1974, ELC has been receiving support from UNEP and during 1987 was responsible for three of UNEP's ongoing projects.

42. NGOs figure prominently in the implementation of UNEP's programme. During 1987, for example, UNEP had 16 ongoing projects with International Union for Conservation of Nature and Natural Resources, three with the World Resources Institute, three with Scientific Committee on Problems of the Environment, and others with International Institute for Applied Systems Analysis, the International Institute for Environment and Development, the International Board for Plant Genetic Resources, the International Centre of Insect Physiology and Ecology, the International Training Centre for Water Resources Management, and the World-Wide Fund for Nature, to name but a few.

43. In 1987, UNEP continued to support the African NGOs' Environment Network (ANEN), the main focal point of co-ordination between over 280 African NGOs in 29 countries. During the year under review, UNEP made special efforts to strengthen ANEN's machinery for the exchange and dissemination of information and experience in Africa. Collaboration between the ANEN and UNEP resulted in an educational and training workshop organized by ANEN in September 1987 in Nairobi, the purpose of which was to strengthen the capacity of African NGOs to carry out anti-desertification activities and projects. ANEN is also now represented in all four committees established by the African Ministerial Conference on the Environment.

44. Collaboration with the Arab Office for Youth and the Environment continued in 1987. UNEP supported an information awareness project involving the publication of an Arabic newsletter and pamphlets and assisted in organizing a training workshop in Cairo in February 1987 for some 50 young Arab journalists from 10 Arab States; UNEP contributed staff, an exhibition, printed and audio-visual information material for the workshop.

45. In North America, the role of NGOs in the environmental field continued to expand in 1987. NGOs held a large number of meetings at which UNEP participated with a view to increasing NGO awareness in North America of the international dimensions of environmental problems and to eliciting NGO support for the Environment Programme. Among the major NGOs meetings at which UNEP was represented during 1987 were the following:

The World Federation of Engineering Organization's Conference (May 1987, Vancouver, Canada), which adopted a code of ethics that might serve as a mode for other environmentally sensitive professions;

The Rene Dubos Forum (New York, May 1987), at which the Executive Director was presented with the Rene Dubos Only One Earth Award, on the occasion of the fifteenth anniversary of the Stockholm Conference;

The Globescope Conference (Sun Valley, Idaho, October 1987), which was sponsored by several governmental and non-governmental organizations, including UNEP, and serves as an educational forum for citizens across the USA and Canada at which major current issues linking the region to the rest of the world are discussed;

The North American Conference on Christianity and Ecology (North Webster, Indiana, August 1987), whose purpose is to bring the moral and ethical dimension to the fore in the international community's work in the environmental field;

The Fourth World Wilderness Conference (Denver, Colorado, September 1987), attended by 600 delegates from 60 countries and which, *inter alia,* discussed the launching of a world conservation bank and a world conservation services; and

The International Forum on Environment and Development (New York, October 1987), held simultaneously with the UN General Assembly's discussion of the report of the World Commission on Environment and Development.

46. In addition, "Adopt-a-Village", a Canadian NGO, and Codel (Co-ordination in Development) a United States NGO, attended as observers the second session of the African Ministerial Conference on the Environment (Nairobi, June 1987) with a view to exploring ways and means whereby North American NGOs could support and participate in UNEP's village strategy under the Cairo Programme for African Co-operation. On that occasion, the Adopt-a-Village group mounted an exhibition of artworks by Native American artists, depicting village life in Africa.

47. Through its Regional Office for Europe, UNEP collaborated with, and provided financial assistance to, the Friends of the Earth organizations in Spain and Portugal in order to assist them in carrying out a systematic study of the wetlands and their bird populations along the Atlantic littorals of the Iberian peninsula. The Spanish and Portuguese NGOs hope that the study will be used as a basis to draw up future national nature reserve plans in the two countries within the framework of their participation as members to the Ramsar, Bonn and Bern conventions.

48. Co-operation with NGOs in Asia and Pacific led to a meeting in New Delhi during October 1987 to form a network of the numerous NGOs engaged in anti-desertification activities in the region. UNEP is working with other UN agencies to develop the new network. Twenty-seven NGOs in eight countries (Fiji, India, Malaysia, Nepal, Philippines, Papua New Guinea, Sri Lanka and Thailand) were provided free binoculars and other equipment such as telescopes, tripods, tape-recorders, T-shirts and life size bird posters that were given free to the UNEP Regional Office for Asia and the Pacific by the Wild Bird Association of Japan (obtained through a public campaign in Japan with the Citizen's Recycling Association) and Suntory Ltd.

49. Assistance was provided by UNEP in 1987 through the Press Foundation of Asia to facilitate exchange of printed material and radio programmes among communicators. A network of national focal points for the exchange of environmental newsclippings as well as reports on topical environmental events in the region was also established with the support of UNEP.

50. UNEP provided a catalytic input into a conference held in 1987 in the Thai House of Parliament, organized jointly by the Government and voluntary organizations on sustainable development. The Conference generated great interest among decision makers from government agencies, NGOs, universities, monks, village headmen and politicians. This was the first time in Thailand that eight major NGOs involved with social welfare, women, youth, girl guides, nature conservation, agriculture and rural development

collaborated with the House of Parliament, Office of the National Environment Board, and the Environmental Research Institute of the Chulalongkorn University, to exchange information and experiences on the present environmental and natural resource problems that Thailand is facing and discuss the co-operative measures that need to be taken to alleviate them.

51. UNEP also assisted the Asian Mass Communication Research and Information Centre (AMIC) at Singapore in the planning and implementation of a three-country (Indonesia, Philippines and Thailand) research project on using traditional media to convey environment-oriented messages. The report prepared by AMIC will be useful to other countries and institutions looking into the use of alternative media for development-oriented communication.

ENVIRONMENTAL OUTREACH

52. In 1984, UNEP began to implement a strategy of environmental outreach in order to pursue its mandate to engender a better understanding of the central role of global environmental issues in the broader economic and social context. This programme was designed to develop new constituencies and strengthen existing ones to create greater awareness about environmental issues and about UNEP, its global concerns and activities, and its mandate to deal with environmental issues. Of course, one of UNEP's most important "outreach" activities concerns its co-operation with NGOs which has been described in the preceding paragraphs. A brief description of some of the other outreach activities carried out during 1987 is presented below.

Follow-up to World Industry Conference on Environmental Management

53. Following the recommendations of the World Industry Conference on Environmental Management (WICEM), sponsored with UNEP assistance in 1984, the UNEP Industry and Environment Office established direct links between developed and developing countries, and these links were strengthened during 1987. At the request of concerned Governments, two Japanese experts carried out accident and hazard prevention diagnostics in an Indian chemical factory, and a French expert co-operated with Algeria in the formulation of an industrial waste management policy. With the help of Sweden, a network for industrial environmental management has been set up in Asia. As a first step, seven Governments have undertaken a co-ordinated research programme on industrial pollution control, with a focus on the pulp and paper industry, involving 11 projects. Further, two consultants were seconded full-time to the Industry and Environment Office by the French chemical and petroleum industries, and the International Primary Aluminium Industry Association (IPAI), Nippon Light Metal and Alcan agreed to share with UNEP the cost of one senior industry liaison officer.

54. UNEP also supported and participated in the European Conference of Industry and Environmental Management, held at Interlaken, Switzerland in October 1987. The Conference was a regional follow-up to WICEM. In North America, UNEP met regularly with representatives of the Chemical Manufacturers' Association, the International Business Council and the United States Council for International Business to follow up WICEM and to update industry and specific UNEP programme developments of particular interest to the private sector.

Follow-up to the Inter-Parliamentary Conference on Environment

55. On 26 February 1987, senior parliamentarians from 18 countries of the Inter-Parliamentary Union (IPU) convened a two-day meeting at UNEP Headquarters to discuss progress in the implementation of the recommendations of the Inter-Parliamentary Conference on Environment, held in Nairobi in November 1984. The parliamentarians agreed on a number of important measures and discussed how to further the implementation of the recommendations.

56. In 1987, under a memorandum of understanding between UNEP and the IPU, and working in conjunction with the International Council on Environmental Law (ICEL), UNEP started production in 1987 of the newsletter *Environmental Notes for Parliamentarians.* The newsletter is to be produced ten times per year for the next two years.

57. As a further follow-up to the Conference, UNEP's Regional Office for Latin America and the Caribbean, in co-operation with the Latin American Parliament and the Senate of the United Mexican States, and in consultation with IPU, convened in March 1987 the First Inter-Parliamentary Conference on the Environment in Latin America and the Caribbean. This Conference was the first of an intended series of conferences on the environment involving the legislative branches of the countries of the region. During the course of the Conference, the state of the environment in the region was analyzed, as well as prevalent environmental approaches, trends and perspectives. The Conference also focused on existing environmental policies and the participation of the legislative branches of the Government of the region in the field of environmental protection and improvement. The participants adopted a Declaration on the Preservation of the Environment in Latin America and the Caribbean, and approved a set of recommendations with a view to strengthening environmental protection at national, regional and international levels.

National Committees for UNEP

58. National Committees for UNEP are being formed in a number of countries with encouragement from UNEP, but to a larger extent, they are emerging as a spontaneous movement in the countries concerned, with UNEP encouragement. Both types of organizations tend to have their own individual structure and aims, reflecting national priorities and cultures while sharing the common goal of supporting UNEP, its aims and its work programme as an organization within the UN system, and its need to increase public awareness of environmental issues. To date, there are 12 countries where steps have been taken to form such national committees, but most notable progress has been made in the Federal Republic of Germany, Kenya, the United Kingdom and the United States. In 1987, consultations on the formal establishment of national committees for UNEP, were held with Canada, Côte d'Ivoire, France, Ireland, Italy, Jamaica, the Syrian Arab Republic and Thailand.

59. The Friends of UNEP in the United States is not so much a national committee, as a network of individuals throughout the country working to secure greater support in the United States for the aims and work of UNEP. It distributes a nation-wide newsletter, which has gained significant influence.

60. The Federal Republic of Germany is the first European country to establish a national committee for UNEP, the focal point being the *Deutsche Stiftung fuer Umweltpolitik,* a non-profit organization located in Bonn. The main objective of the Committee is to create a greater awareness of world, regional and national environmental concerns, particularly those being addressed by UNEP, and to undertake fund-raising activities to finance

environmental activities, including those of UNEP. The first full meeting of the Committee was held in Bonn in 1987.

61. The formal launching of the Kenyan National Committee for UNEP was presided over by the Kenyan Minister of Environment and Natural Resources on 24 March 1987. This is the first national committee for UNEP in Africa. The committee will function under the umbrella of the Kenya Environment Secretariat and is expected to become a model for subsequent African Committees. The principle objective is to support the work of UNEP and to broaden its base in Kenya. Hence, a concerted effort is being made to heighten public awareness of local and regional environmental problems as well as prospects for their solutions.

62. In the United Kingdom, a proto-committee has been formed under the aegis of the International Institute for Environment and Development to draw up statutes for a more widely based committee and a work programme designed to integrate ongoing work on environmental subjects in the United Kingdom with the ongoing and planned work of UNEP. The first full meeting of an enlarged committee is expected to be held in June 1988.

Youth

63. The positive responses received from youth world-wide to the challenge of the Executive Director in his 1985 World Environment Day message and the welcome accorded the 1986 Environmental Youth Agenda encouraged UNEP to continue in 1987 the long process by which UNEP is hoping that youth will become partners with UNEP in its efforts to protect and enhance the environment.

64. UNEP adopted in 1987 an internal two-year comprehensive work plan on co-ordination of the contribution of youth to sustainable development which has the following aims: to reinforce channels of communication between UNEP and youth groups in order to strengthen and, where necessary, create environmental awareness; to promote action towards environmental protection; and, to encourage support for UNEP among young people by establishing regional youth focal points.

65. Twelve youth leaders, two each from Europe, North America, Africa, West Asia, Latin America and the Caribbean, and Asia and the Pacific, are to act as "ambassadors" for UNEP, relaying up-to-date environmental information to youth organizations throughout their region and informing UNEP of the environmental activities undertaken by young people in their areas. The twelve were selected by the directors of UNEP's respective regional offices as influential youth leaders.

66. During World Environment Day 1987, a workshop on youth and the environment was organized in Nairobi with 200 participants from secondary schools and universities. The report of the workshop under the title "Youth Speaks to Youth" will be available by the end of March 1988.

67. During the fourteenth session of the Governing Council, UNEP organized a display on youth and environment. The exhibition featured posters, photographs, brochures, magazines and newsletters received from youth organizations which highlighted youth activities in environmental protection. Further, a slide presentation and discussions on youth responsibilities for the "common future" was organized during the session. The aim of the programme was to draw the attention of Governing Council participants, NGOs, youth organizations and the press to the important section of the report of the World Commission on Environment and Development dealing with youth participation in environment and development.

68. During the biennium ending in 1987, UNEP produced 40 information packs, targeted at educators and young people aged between 9 and 14, covering such topics as soils, trees and fuelwood, population growth, pests and pesticides, water and health, nutrition, wetlands and coral reefs, etc. These packs have been distributed in 42 countries in several languages and are being used as an information source for new publications, for inclusion in existing publications, as teaching aids and as a base for radio and television programmes in Asia, the Middle East and Eastern Africa.

69. During 1987 a number of major youth organizations, including the World Assembly of Youth, the World Federation of Democratic Youth, the World Association of Girl Guides and Girl Scouts, the World Organization of Scouts Movement, and the World Young Women's Christian Association paid special attention to the environment. Some of these organizations devoted a special issue of their magazines to the environment.

70. UNEP was invited to, and took an active part in, the Twenty-sixth World Conference of the World Association of Girl Guides and Girl Scouts (WAGGGS), which took place in Njoro, Kenya, from 24 July to 4 August 1987. At the Conference, UNEP prepared an exhibition displaying UNEP's work in outreach programmes to youth, children and women. UNEP held discussions with representatives of over 60 national organizations inquiring about their curriculum and their training programmes to ascertain whether they included an environmental and conservation component. UNEP's Global 500 award was presented to WAGGGS by His Excellency President Daniel arap Moi of Kenya, in the colourful opening ceremony of the Conference.

71. The Conference's workshop produced several recommendations on conservation, encouraging UNEP and WAGGGS to co-operate in producing an environmental programme for use as a training tool for WAGGGS, including a global framework for a series of national environment proficiency badges. WAGGGS also agreed to propagate the report of the World Commission on Environment and Development by suggesting to the regions that they organize seminars to study the report with a view to incorporating its content within the Girl Guides/Girl Scout programme.

Women

72. The UNEP Senior Women Advisory Group on Sustainable Development, which had been established by UNEP in 1985 at the World Conference to Review and Appraise the Achievements of the UN Decade for Women, met at the fourteenth session of the Governing Council and decided, as a first step, to regionalize their activities and to convene in 1988 an African Women's Assembly on Sustainable Development in support of the Cairo Programme for African Co-operation.

73. UNEP's involvement in women's issues gave impetus to the International Union for Conservation of Nature and Natural Resources (IUCN) to promote the integration of women in the Second World Conservation Strategy through a workshop on women and the World Conservation Strategy, which was held in November 1987 and resulted in concrete recommendations for action. UNEP took an active part in the workshop and supported the participation of the presiding officer and several members of UNEP's Senior Women Advisory Group on Sustainable Development.

74. Also in 1987, the Governing Council, by its decision 14/9 B, decided that the topic of the 1988 state-of-the-environment report should be "the public and the environment, with special emphasis on the role of women".

The Global 500

75. In 1987, UNEP initiated a new environmental achievements recognition programme by announcing 91 awards in 43 countries for "outstanding environmental achievements". UNEP called its award list the "Global 500", because the scope is global and UNEP intends to select and recognize 500 such individuals and organizations during the five-year period 1987-1991. More than 450 nominations of environmental activists from 70 countries were submitted for the first awards. Those honoured by UNEP ranged from NGOs, village project leaders, to scientists and government and industrial officials all over the world. The initiative attracted considerable media and political attention.

76. The awards for 1987 were announced on the eve of World Environment Day, on 5 June, at UNEP's headquarters and at national ceremonies elsewhere. UNEP subsequently published a "who's who" booklet with names, addresses and brief descriptions of the work of the 1987 award winners.

COMMITTEE OF INTERNATIONAL DEVELOPMENT INSTITUTIONS ON THE ENVIRONMENT (CIDIE)

77. The eighth session of CIDIE, which was created in 1980, was held at the headquarters of the International Fund for Agricultural Development (IFAD) in Rome in March 1987. The Committee conducted its annual review of progress by the member institutions in implementing the CIDIE Declaration of Principles. Satisfaction was expressed at the sustained progress achieved by member institutions.

78. A revised version of the report, "Action and inter-action on environmental matters—the history and potential of CIDIE", and a report on proposed patterns for integrating environmental concerns in economic development activities were presented, after which there was a discussion of the issues raised. It was decided to establish a task force to formulate a final version of the report for acceptance and publication. The task force would also examine the five-year programme of work, aimed primarily at the exchange of information and co-ordination among CIDIE members, as contained in the proposal from the secretariat and developed further in the report. While discussing a report on the Talloires Seminars, the CIDIE members agreed that in the case of development aid programmes and projects co-financed by them, they could and should influence the consideration of environmental problems in development programmes and plans.

79. Papers on cost-benefit analysis and environmental accounting, presented by the UNEP representative, were discussed briefly and it was agreed that they be discussed in-depth at the next CIDIE meeting scheduled to be held in June 1988. During 1987, the Central American Bank for Economic Integration (CABEI) and the Nordic Investment Bank (NIB) formally signed the Declaration of Environmental Policies and Procedures relating to Economic Development, becoming respectively the thirteenth and fourteenth members of CIDIE.

CLEARING-HOUSE

80. In June 1987, the Governing Council of UNEP adopted decision 14/6 on the Clearing-house, confirming that the clearing-house function of UNEP should continue. In its role of

clearing-house, UNEP assists developing countries in formulating policies, programmes and projects to improve the environment, and advises these countries how best to obtain technical and financial assistance to support their environmental activities, and assists them in obtaining donor participation in those activities.

81. In its decision, the Council also decided that the main focuses of clearing-house activities should be: (a) to strengthen the capacity of developing countries to promote sustainable development by supporting policy planning and institution building; and (b) to support a limited number of regional programmes. These two priorities do not exclude utilizing the clearing-house approach for other types of assistance to developing countries such as short-term *Ad Hoc* consultancies, training, or operational projects undertaken with technical and financial support from donors. But in the course of 1987, clearing-house operations gave greater emphasis to the two priorities identified by the Council. Additionally, the operations have been linked much more closely than in the past to the activities of the Programme units and regional offices of UNEP. Indeed, preparation of projects requiring external assistance to developing countries has involved substantial expenditure from the Environment Fund, as well as staff time, particularly for projects falling under the Cairo Programme for African Co-operation (see below).

82. The Clearing-house has supported the preparation of the Zambezi Action Plan (ZACPLAN) by securing expertise from donors and maintaining contacts with Governments having expressed an interest in providing financial or technical assistance to the Plan. An international agreement on ZACPLAN was signed in May 1987, and the Council of SADCC approved ZACPLAN as a regional programme in July 1987 (see chapter III, paras. 190-191 below). The Clearing-house discussed possible follow up to ZACPLAN with 8 Governments and aid agencies during consultations in October and November 1987, and continued to work with the SADCC secretariat and several Governments on the modalities of financing and implementation of ZACPLAN.

83. During 1987, as a follow-up to the African Ministerial Conference on the Environment (AMCEN), 25 African Governments prepared projects related to one of the central recommendations of AMCEN which requested each African country to set up three pilot projects of environmentally sound development at village level and, for countries in the arid and semi-arid zone, one pilot project in a pastoral area. UNEP, using its regular funds and funds obtained through the Clearing-house, was able to assist 10 countries (Egypt, Ethiopia, Mali, Senegal, Sudan, Tanzania, Uganda, Zambia, Zimbabwe, Zaire) in this project preparation.

84. In conformity with the recommendations of the World Commission on Environment and Development and the Environmental Perspective, UNEP is focusing its efforts on assisting developing countries in applying the four basic instruments of assessment, planning and policies, legislation, and awareness to achieve environmentally sound and sustainable development. In 1987, projects were prepared, on the requests of Governments, for the promotion of all four instruments, with concentration on African countries where most requests for assistance originated. UNEP began mobilizing support for these activities in 1987 with a view to starting operations in 1988. Assistance began in 1987 to the Yemen Arab Republic, with financial support from the Federal Republic of Germany, on institution-strengthening; this project led to a significant aid commitment in principle by another donor. Preparatory missions to several other countries also took place during 1987. Throughout the year, UNEP continued to follow the preparation of the Botswana National Conservation Strategy and supported, with funding from Sweden, the holding in 1987 of two district seminars on desertification control.

85. In 1987, UNEP responded to a request from China for assistance in drawing up a programme for water pollution control in the historic city of Shaoxing, in Zhejiang

province. A group of experts from the city, province, and national administrations worked with a team assembled by UNEP composed of UNEP staff members and experts seconded by the Governments of Denmark, Finland, France and the United States. The group prepared and approved a programme of action to curb pollution of the city's ancient canals, the implementation of which will require external assistance and the Clearing-house will assist in this endeavour also.

86. Two projects prepared and submitted by UNEP to AGFUND were approved by AGFUND during the course of 1987, namely: a pilot project for utilizing locally adapted genetic resources, renewable energy, underground water, and soils for food and fodder production in the arid area of East Oweinat in Egypt; and the improvement of food safety and drinking water quality in Bahrain.

87. Thirteen projects were submitted to the Consultative Group for Desertification Control (DESCON) at its sixth meeting in Geneva, in March 1987, and follow-up consultations with donors were arranged in Chile, Rwanda, Swaziland, and the Yemen Arab Republic.

88. A project on coastal zone planning and management in Mozambique prepared jointly in 1987 by the Government of Mozambique, UNEP and IUCN was reviewed favourably for assistance by Norwegian authorities.

89. A continuation of the programme on the establishment of national soil reference collections, implemented with support from the Government of Netherlands, has resulted in assistance to Brazil, Ecuador, Indonesia, Mali, Peru, Sri Lanka and Venezuela, and the holding of an international training course for African and Latin American participants. In 1987, under an agreement with the Government of the Federal Republic of Germany, UNEP approved a project under which two regional seminars on hazardous wastes management are to be held in the first half of 1988, one in the Asia and Pacific region and the other in the Latin America region.

90. During 1987, UNEP Clearing-house staff visited Denmark, Finland, the Federal Republic of Germany, Italy, Japan, the Netherlands, Sweden and the European Economic Community and discussed co-operation under UNEP's clearing-house function. Finland and the Federal Republic of Germany agreed to extend their financial support to the activities of the Clearing-house under trust fund arrangements.

Notes

1 The report was submitted to the Governing Council at its first special session in March 1988 as document UNEP/GCSS.I/5.

2 By its resolution 42/187, the General Assembly "welcomed" the report of the World Commission and took action on it (see chapter IV).

3 The General Assembly, by its resolution 42/186, subsequently adopted the Environmental Perspective (see chapter IV).

4 UNEP/GC.14/12, para.4.

5 UNEP/GC.14/4/Add.4.

6 UNEP/GC.14/12, para.6.

Chapter III

THE ENVIRONMENT PROGRAMME

Environment and development
Environmental awareness
Earthwatch
Oceans
Water
Terrestrial Ecosystems
Arid and semi-arid lands ecosystems and desertification control
Health and human settlements
The arms race and the environment
Ecological security
Regional and technical co-operation

THE ENVIRONMENT PROGRAMME

1. Despite modifications and changes designed over the years to adapt the Programme to changing requirements, the basic structure of the Programme remains the triangular form adopted at Stockholm, i.e. three separate, yet mutually supportive clusters of activities, each feeding into and drawing from the other two clusters of the Programme. The three clusters are: environmental assessment (Earthwatch); environmental management; and support measures.

2. Although the administrative framework of the Programme corresponds to the triangular arrangement outlined above, the reporting on programme activities throughout this chapter follows the structure of the original programme budget for 1986-1987, as approved by the Governing Council at its thirteenth session in 1985.[1] At that time, the programme budget document did not, for various reasons, follow the administrative structure of the programme. Although the pattern of reporting may thus give rise to some confusion, it was felt necessary to retain the framework of the programme budget document approved by the Council. As indicated in the 1986 Annual Report, it is hoped that this situation will be redressed in next year's Annual Report, as it will follow the structure of the approved 1988-1989 programme budget[2], which was modelled more closely after the actual administrative structure of the Programme.

3. Unfortunately, the way in which a report is framed can lead to distortions of the actual picture. And this holds true for the description of the salient features of the Programme of UNEP during 1987, as contained in the following pages.

4. First, the very fact that the narrative is bound by a 12-month period can give a false and misleading impression. In any given year, the report resembles its predecessor: meetings held, papers published, new projects approved, old projects completed, pilot projects established, etc. And in the midst of this rather repetitious narrative will be one or two descriptions of activities that have caused considerable stir within the environmental community. Undoubtedly, the UNEP activity that generated the greatest number of headlines in 1987 was the successful conclusion of the Montreal Conference, leading to the Montreal Protocol on Substances that Deplete the Ozone Layer. But the groundwork for the Montreal Protocol was laid by UNEP well over a decade ago! Even before the advent of the first *Annual Report* in 1982, the Programme Performance Report contained accounts of expert meetings, publications and other activities which at that time elicited little enthusiasm or response. But those meetings and publications prepared the way first for the Vienna Convention (in 1985) and then for the Montreal Protocol in 1987. In short, an annual report cannot trace the long development of any given activity; at best, it presents a cross-section of the activities being undertaken at any given time. Let us hope that the numerous papers, publications and meetings described in the following pages lead to other breakthroughs such as the Montreal Protocol.

5. Second, the reporting necessarily follows an administrative structure and any such structure is compartmentalized. By way of example, many important activities, including not only the Montreal Protocol, but also the approval by the Governing Council of the Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes, as well as the Council's adoption of the London Guidelines for the Exchange of

Information on Chemicals in International Trade, are reported on under the budget subline entitled "Environmental Law and Machinery". This may lead to the impression that these activities were supported and conducted exclusively by one unit within the Programme. Nothing could be further from the truth. Environmental assessment, particularly through GEMS, has provided and continues to provide invaluable scientific inputs to the work on the ozone layer; IRPTC contributes its experience and knowledge to the work on chemicals and hazardous wastes. Other units and parts of the secretariat also co-operate. It is only through these combined efforts, cutting across administrative lines, that advances are achieved.

6. Lastly, space does not permit a complete presentation of all the activities undertaken by the UNEP Programme in 1987. The very fact of choosing to highlight some activities while neglecting to mention others may give a distorted view of the Programme, though every effort has been made to provide representative examples of UNEP's work during the year under review. To complete the picture, the present chapter should be read in conjunction with the *Report on New Projects—1987* and the UNEP *Evaluation Report—1987.* Further, the reader is referred to annexes III and IV of the present report, which contain a comprehensive listing of all UNEP publications and papers and meetings, respectively, in 1987.

7. A word about evaluation and follow up: Last year, in the *1986 Annual Report,* a significant portion of the introduction to this chapter was devoted to a description of the internal evaluation exercise carried out by UNEP. This exercise, however, did not stop with 1986. All projects approved by UNEP in 1987 had a follow-up component integrated into their work plans. Moreover, follow-up in 1987 to some 1986 projects started to yield results. Some 15 training programmes that UNEP had carried out in 1986 were followed up by the secretariat's sending questionnaires to the 200 trainees one year after they had completed their training. The questionnaires aimed basically at assessing whether the objectives of the training courses had been met, in short, at appraising the benefits of the training to the country of the trainee. Analyses of completed questionnaires helped improve the contents of UNEP training courses, as well as to refine the methods by which trainees were selected (see *Evaluation Report 1987,* p.66, for more detailed information).

8. Planning, implementation, follow-up and evaluation ... Then the cycle begins anew, using the evaluation of previous experiences in the planning of new projects. By emulating our successes and analyzing and correcting our failures we can, we believe, make the activities of the Programme even more effective in the future than they have been in the past.

ENVIRONMENT AND DEVELOPMENT (Budget line 21)

9. The heading of this budget line, "Environment and development" is perhaps less forceful than the expression found time and again in the *Report of the World Commission on Environment and Development* (WCED): "sustainable development". But the intent and meaning are identical. Yet how can decision-makers and development planners ensure that the projects and programmes they are embarking upon will indeed be sustainable and lead to true, balanced development? In each instance, not only must systematic consideration be given to environmental factors, but the environmental implications of alternative courses of action must be analysed.

10. At worst, no thought whatsoever is given to the possible environmental impacts of a given development project. Even when such an analysis is attempted, it is all too often an isolated study which fails to incorporate the composite impact and ignores the cumulative effect of several such development projects on a given society in a specific area. There are

tools available to help overcome such shortcomings; these include environmental impact assessment, social cost-benefit analysis, environmental accounting and integrated physical, environmental and economic planning. But a wide gap remains between theoretical knowledge of such tools and their utilization in development policy and planning.

11. A major objective of UNEP under this programme, therefore, is to refine and develop further methodological guidance for the systematic consideration of environmental aspects in development decision-making and administration. Additionally, UNEP is attempting to make such guidance available directly to those who need it most—decision-makers and development planners. Primary emphasis, of course, goes to meeting the needs of the developing countries to strengthen their national, institutional and human resource capabilities in this area. UNEP also seeks to promote consideration of the environment in international economic co-operation, particularly trade and investments, and in development assistance. One must never forget that sustainable development is needed in all countries, whatever their degree of industrialization or the nature of their socio-economic problems.

12. This budget line is divided into six sublines (a) Integrated approach to environment and development; (b) integration of environment in development planning and activities (c) Energy (d) Industry and transportation (e) Environmental law and environmental machinery; and (f) Natural disasters.

Integrated approach to environment and development (Budget subline 2101)

13. Development cannot be sustainable unless it is firmly rooted in environmental knowledge. Although such knowledge increases daily and becomes daily more readily available, the social and economic implications of environmental change remain far from explicit. Major economic decisions—budget allocations, taxation, price and trade policies—therefore continue to be taken without information and analysis of their effect on the environment. Despite growing environmental awareness and information on environmentally sound technological alternatives, the appraisals on which development projects, programmes and policies are based rarely specify environmental implications. This failure can create environmental problems which, in turn, generate new social and economic dilemmas.

14. Under this subprogramme, UNEP seeks to break this kind of vicious circle by encouraging the development and application of methodologies and procedures that permit a systematic consideration of environmental concerns in socio-economic policy and planning, as well as in the administration of development. To this end, UNEP employs the synthesis and dissemination of available methodologies; their testing and application in selected case study situations; technical consultations with Governments for establishing procedures and measures to put the methodologies they need into practice; and training programmes at all levels in the use of tools for incorporating environmental objectives systematically into decision-making on development.

15. During the year under review, UNEP continued to work with the Government of Australia and the East-West Center towards applying social and environmental cost-benefit analysis to dryland degradation and rehabilitation. This work is part of the follow-up to the International Conference on the Economics of Dryland Degradation and Rehabilitation, convened in Canberra in 1986 jointly with the Government of Australia, the Commonwealth Secretariat and the East-West Centre (see *Annual Report 1986,* chap. IV, para. 17).

16. The Commonwealth Secretariat, USAID, NORAD and the African Development Bank jointly supported a UNEP workshop, held in Nairobi in 1987, which convoked dryland experts, as well as economic planners from African countries, as part of the

preparation of an executive management guide, a technical manual and a case study reader on the application of economic analysis to dryland degradation and rehabilitation. In 1987 UNEP published an illustrated guide on the subject and had it distributed widely to Governments, NGOs and international development institutions, including UNDP country offices.

17. Integrated physical planning is another tool for sustainable development. Two earlier undertakings in this field, one with the UN Centre for Regional Development, Nagoya, Japan, the other with the Organization of American States, concluded in 1987 with publications. The four volumes on *Environmental management for local and regional development,* which UNEP and the United Nations Centre for Regional Development (UNCRD) produced in collaboration with the Government of Japan in 1987, encompass guidelines and case studies on land use planning in India, Japan, Mexico, Papua New Guinea, the Republic of Korea, Thailand and the United Republic of Tanzania. These volumes were distributed to government planning departments. A report prepared by the OAS and UNEP in collaboration with the Government of Peru during the year under review concentrated on baseline data and analyses and general guidelines for physical planning, illustrating in particular how to minimize conflicts in the use of natural resources. The Central Selva of Peru was selected for this study, as the region exemplifies humid tropical conditions in Latin America.

18. UNEP's continuing collaboration with IUCN resulted in 1987 in a draft report containing guidelines and case studies on integrating conservation objectives in development programmes, which is being revised with a view to publication. The report includes case study analyses of the Arenal-Tempisque Irrigation Project in Costa Rica and the Korangi Creek Development in Pakistan. Further technical work to clarify the economic rationale of specific conservation objectives in the design of the selected development programmes is, however, necessary. One result of this initiative has been a series of baseline assessment surveys carried out in the Korangi-Phitti Creek, Pakistan. It is hoped that the UNEP/IUCN report and the subsequent surveys will lead to the comprehensive planning of environmental management measures for that region.

19. As part of its testing and application of methodologies for developmental decision-making, UNEP continued the work it had begun in 1986 with the Government of Jamaica to demonstrate the viability of a package of environmental management measures in the Hope River watershed. Apart from testing appropriate technologies for soil conservation and water management, the project is intended to provide a model for the use of environmental impact assessment and social cost-benefit analysis in decision-making based on a comparison among several possible courses of action. Although many Governments are conducting environmental impact assessments of major development projects, these assessments tend to remain isolated from those addressed to the social and economic feasibility of the projects. There is an urgent need, therefore, to promote combined application of the techniques of environmental impact assessment and social cost-benefit analysis in the project appraisal process. Such techniques should also be applied to area development programmes and to macro-economic policies.

20. At the request of the Government of Nepal, UNEP held preliminary consultations in 1987 with the Government's National Planning Commision to decide upon a joint activity for establishing methods and procedures to allow for systematic consideration of environmental objectives and concerns in development planning and administration. As a follow-up to the Arab Ministerial Meeting on Environment and Development held in Tunis in October 1986, UNEP and the Arab Planning Institute, Kuwait, held preliminary consultations in 1987 concerning the joint preparation of technical materials for the region

and of a regional training programme for development planners on consideration of the environment in economic planning.

21. To help Governments deal effectively with the policy sources of environmental problems associated with agricultural development, UNEP worked, in 1987, in collaboration with the World Food Council (WFC) to develop recommendations relating the environmental management of agriculture to food security for adoption by the World Food Council.

Integration of environment in development co-operation activities (Budget subline 2102)

22. As a first step in building institutional capacities to enable the developing regions to provide training in analytical methods for considering environment in development decision-making, UNEP, in co-operation with the Podjadjaran University of Bandung, Indonesia, initiated in 1987 the preparation of technical materials to be used in a training seminar for countries of the Asia and Pacific region. The first seminar will be held in 1988 and will focus on the application of environmental impact assessment to project appraisal, bearing in mind the specific major environmental problems of the region.

23. The case study papers on Socio-Economic Evaluation of Natural Resources Conservation and Use in Planned Economies are being used by UNEP in collaboration with the USSR Commission for UNEP, the USSR State Planning Committee (GOSPLAN), and the International Institute for World Economics of the Council for Mutual Economic Assistance (CMEA) to prepare materials for a training workshop on the application of methods to integrate environmental considerations in national development planning. The training materials, of significance for development planners, will be published for wider use.

24. As part of its effort to demonstrate not only the social desirability but the economic viability of projects designed to protect and improve the environment, UNEP continued its collaboration with ECLAC during 1987 in preparing pre-feasibility reports for five selected case study situations in Argentina, Ecuador, Chile, Honduras and Peru. Developed in close collaboration with the Governments concerned, these reports will be presented for inclusion in national development plans, as well as to elicit financing by regional or international development institutions.

25. UNEP, which provides the secretariat for the Committee of International Development Institutions on the Environment (CIDIE), convened the eighth meeting of the Committee at the Headquarters of the International Fund for Agricultural Development in Rome in March, 1987 to review progress made by member institutions during the preceding year in implementing policies and procedures designed to incorporate environmental aspects into their programmes. The Committee appointed a Task Force to finalize the draft of a five-year programme of work; it also agreed to intensify information exchange among its member institutions to make innovative ideas and procedures widely available. Two new institutions, the Central American Bank for Economic Integration and the Nordic Investment Bank, became members of CIDIE, bringing the total membership to 13 in addition to UNEP itself. During the year under review, the World Bank also introduced a number of organizational reforms aimed at streamlining and strengthening consideration of the environment in its development assistance programmes.

Energy (Budget subline 2103)

26. The world energy situation did not change dramatically in 1987, as oil prices remained more or less stable. In developing countries, the most pressing problem continued to be the

unsustainable use of biomass resources, leading to deforestation and desertification. Indoor air pollution from cooking stoves still affects over half a billion people. In the industrialized countries, the main problems still arise from the continued use of fossil fuels, among them, the acidification of the environment. Many impacts of energy use have transboundary effects, which complicate its management. In both industrialized and developing countries, the use of fossil fuels constitutes a major threat to the atmosphere, leading to changes in climate.

27. Comparing the risks posed by different energy systems has proved to be difficult. The *Report of the World Commission on the Environment and Development* (WCED) and the *Environmental Perspective to the Year 2000 and Beyond* confirmed that the full integration of environmental factors into energy policy and planning is a pressing need. This consideration will increasingly shape UNEP strategy in the years to come. Consequently, during 1987, UNEP continued its three-pronged strategy: making available information on the environmental impacts of energy systems; providing guidance to Governments on the incorporation of environmental considerations into energy policy; and supporting field projects to promote environmentally sound satisfaction of energy needs in developing countries.

28. In the first area, a new project was started with the Beijer Institute of Stockholm, Sweden on the environmental impacts of biomass energy systems. Under this project, information about the different environmental impacts of biomass energy systems will be updated. Additionally, guidance will be provided as to how these various systems can best be managed. The project will produce materials for three different readerships: a technical study for professionals, a brief policy document for decision-makers; and a popular book for the general public.

29. To apply the results of such impact studies practically, UNEP initiated in 1987 the preparatory phase of a project to be undertaken jointly with the IAEA and WHO to assess and manage the health and environmental risks of energy and other complex industrial systems. During 1987, the three sponsoring agencies contacted all their member States to determine the level of interest in such activities. The response was overwhelmingly positive. Missions to Thailand and the Philippines began work in 1987 on potential case studies in those countries. The project team also secured the co-operation of a number of other UN agencies and international organizations.

30. The two projects on the environmental impacts of fuelwood utilization in rural areas, in Brazil and Bolivia, as well as in Kenya, were nearing completion in 1987. The Brazil-Bolivia project, it was found, had not been adequately prepared, especially in respect of involving the local communities. This shortcoming underscores the need for close co-operation between experts and members of the community from the preparation of each field project through its implementation and monitoring.

31. In 1987, UNEP was engaged in developing new field projects for implementation during the 1988-1989 biennium. The experiences of the various renewable energy centres supported by UNEP over the past 10 years will be taken a step further: new objectives stress the actual demonstration at the local level of how a particular rural community can develop a strategy to satisfy its energy requirements in environmentally and economically sound ways, relying as much as possible on traditional and locally available knowledge, social organization and technologies. Preparations were made to initiate, under the Cairo Programme for African Co-operation, one such project in Sudan, while an energy dimension was also developed for inclusion in the ongoing UNEP integrated pilot project on environmental management and the protection of Andean ecosystems in Cajamarca, Peru, in the context of forest activities (budget subline 6102).

32. In the near future, more and more countries are expected to exploit their low-grade fossil fuel deposits, among them, peat, lignite and oil shales. Given the potential environmental impacts associated with the utilization of these substances, a training course on their sound environmental management was held by UNEP in December 1987 in the USSR for professionals from energy ministries in developing countries.

33. During the year under review, UNEP kept abreast of developments in the energy sector world-wide. A formal contribution was prepared and delivered to the United Nations Conference on the Promotion of International Co-operation for the Peaceful Uses of Nuclear Energy, held in Geneva in March 1987, and to the 21st International Scientific Forum on Fueling the 21st Century, held in Moscow in October 1987. In November, UNEP also presented a lecture to the World Bank Economic Development Institute seminar on energy planning, held in Nairobi.

34. In the recent past, co-operation with other UN organizations has been limited to co-operation on specific energy projects, such as the Inter-agency Project on Risk Management with IAEA and WHO. In the future, UNEP expects to be more active in the co-ordination of energy-related activities among the different UN bodies. During 1987, a number of contacts were initiated for developing more formal mechanisms for co-operation, particularly with a view to incorporating environmental criteria into the work of these organizations on energy.

Industry and transportation (Budget subline 2104)

35. It is now recognized that industrialization and environmental preservation are not only essential, but compatible: development will fail unless it is built on firm ecological foundations. As more and more countries are compelled to face the consequences of failing to incorporate industrial environmental management into industrial development, the feeling that pollution control is a luxury that they cannot afford is rapidly disappearing. However, lack of information and trained personnel remains a problem and UNEP has a major role to play in helping to solve this problem.

36. During 1987, UNEP continued to promote the transfer of information and the sharing of knowledge and experiences through technical reviews and guidelines, the *Industry and Environment* review and its query-response service. Those activities were carried out in close co-operation with the support of industries and Governments.

37. Technical reviews and guidelines are designed to describe technologies in use in various industrial sectors, their environmental impact, the appropriate technologies to prevent or suppress pollution (clean, lowand non-waste technologies) and discharge standards and regulations in force in various countries. These materials address Governments, NGOs and industrial managers and provide them with the background information necessary to help them make sound environmental decisions. The technical reviews and guidelines distributed by UNEP in 1987 covered the aluminium, iron and steel industries, drilling muds, diesel vehicles, and transportation. A low- and non-waste technology update has been published. Work was also carried out on petroleum refineries and terminals and on non-ferrous metals, and a technical manual on hazardous waste management was prepared in co-operation with the World Bank and WHO; all these materials will be distributed in 1988.

38. Four issues of the *Industry and Environment* review, each of which focuses on a central theme, were published in 1987. The main themes of the review in 1987 were environmental management in the petrochemical industry, environmental management of small- and

medium-scale industries, the working environment and emerging technologies. Articles by Government officials, industrial managers, scientists and representatives of non-governmental organizations shared the results of research and experience, and present emerging technologies and future perspectives. Important events around the world in the field of the industrial environment were featured as well. A forum for the exchange of ideas, each issue of the review reaches some 5,000 readers in 160 countries.

39. With the support of its data base, library and its network of academic industrial and government contacts, the UNEP Industry and Environment Office responds to specific requests for technical information on the industrial environment. Between 1986 and 1987 240 major technical queries were received and answered, in addition to simple daily requests for information.

40. In 1987, UNEP disseminated the proceedings of the seminar on clean technologies, organized with the Federal Republic of Germany in Karlsruhe, and the proceedings of the UNEP/ECLAC/Geplacea Workshop on agricultural residues in Latin America and the Caribbean. It sponsored, together with other public and private institutions and firms, the European Conference on Industry and Environment Management, which was held in Interlaken in October 1987.

41. In 1987 UNEP, with the support of the International Iron and Steel Institute, the Japan Iron and Steel Federation, and the Japanese Government, convened a training workshop on environmental management in the iron and steel industry in Tokyo. A training workshop on hazardous waste management, held in co-operation with ECLAC and supported by the Federal Republic of Germany, also took place in 1987 in Buenos Aires.

42. With the co-operation of several employers' associations, ILO and UNEP jointly launched training activities for employers: in 1987, seminars were held in India and the Philippines. A variety of teaching materials have been developed as part of these activities, which will be expanded to include Africa and Latin America in 1988 and 1989 (see also Environmental Training, budget line 3102).

43. Following the recommendations of the World Industry Conference on Environmental Management, UNEP established a variety of contacts between industrialized and developing countries: during 1987, two Japanese experts carried out diagnostic surveys on accident and hazard prevention in an Indian chemical factory, and a French expert worked in Algeria on the formulation of an industrial waste management policy. With the help of Sweden, a network for industrial environmental management was set up in Asia during the year under review. Seven Governments of the region undertook in 1987 a co-ordinated research programme on industrial pollution control, with a focus on pulp and paper industry, involving 11 projects. In addition, two consultants were seconded full-time to the UNEP Industry and Environment Office by the French chemical and petroleum industries and the International Primary Aluminium Industry Association, while Nippon Light Metal and Alcan shared with UNEP the cost of one senior industrial liaison officer.

Environmental law and environmental machinery (budget subline 2105)

44. 1987 was a banner year for UNEP in environmental law. The most significant event was the adoption and signature by 24 countries and the European Economic Community of the Montreal Protocol on Substances that Deplete the Ozone Layer. The Protocol amplifies

the Vienna Convention for the Protection of the Ozone Layer by controlling both chlorofluorocarbons and halons, compounds that deplete the stratospheric ozone layer, increasing the likelihood that more ultraviolet sunlight will filter through the stratosphere and cause increased skin cancer and eye damage to humans and harm to plant and animal life. The Protocol signed in Montreal, which has been circulated to all Governments and concerned organizations, is the first truly global agreement on environmental protection and the first that is pre-emptive in nature: it anticipates the management of a world problem before that problem becomes an irreversible crisis.

45. The Montreal Protocol, which is expected to enter into force on 1 January 1989, will first freeze the production of the controlled substances, namely CFC-11, -12, -113, -114, -115 and Halon-1211, -1301 and -2402, at their 1986 level within one year of the date of entry into force. The Montreal Protocol sets 50 per cent reductions in production and consumption of chlorofluorocarbons by mid-1998, but allows limited production increases to meet basic domestic needs. Beginning in 1992, the consumption of halons will be frozen at 1986 levels. Developing countries will have 10 years to comply with the provisions concerning freezes and reductions. They may also ask other countries or UNEP for technical assistance to implement or participate in the Protocol. The Montreal Protocol will enter into force when 11 countries, representing two thirds of the 1986 estimated global consumption of controlled substances, ratify the instrument.

46. The Vienna Convention for the Protection of the Ozone Layer, which underlies the Montreal Protocol, was signed by 27 Governments and the EEC and had at the end of 1987, been signed by 14 Governments and ratified, accepted, or acceded to by another 16 Governments (see Fig.1.). This represents a marked increase over 1986 ratification statistics.

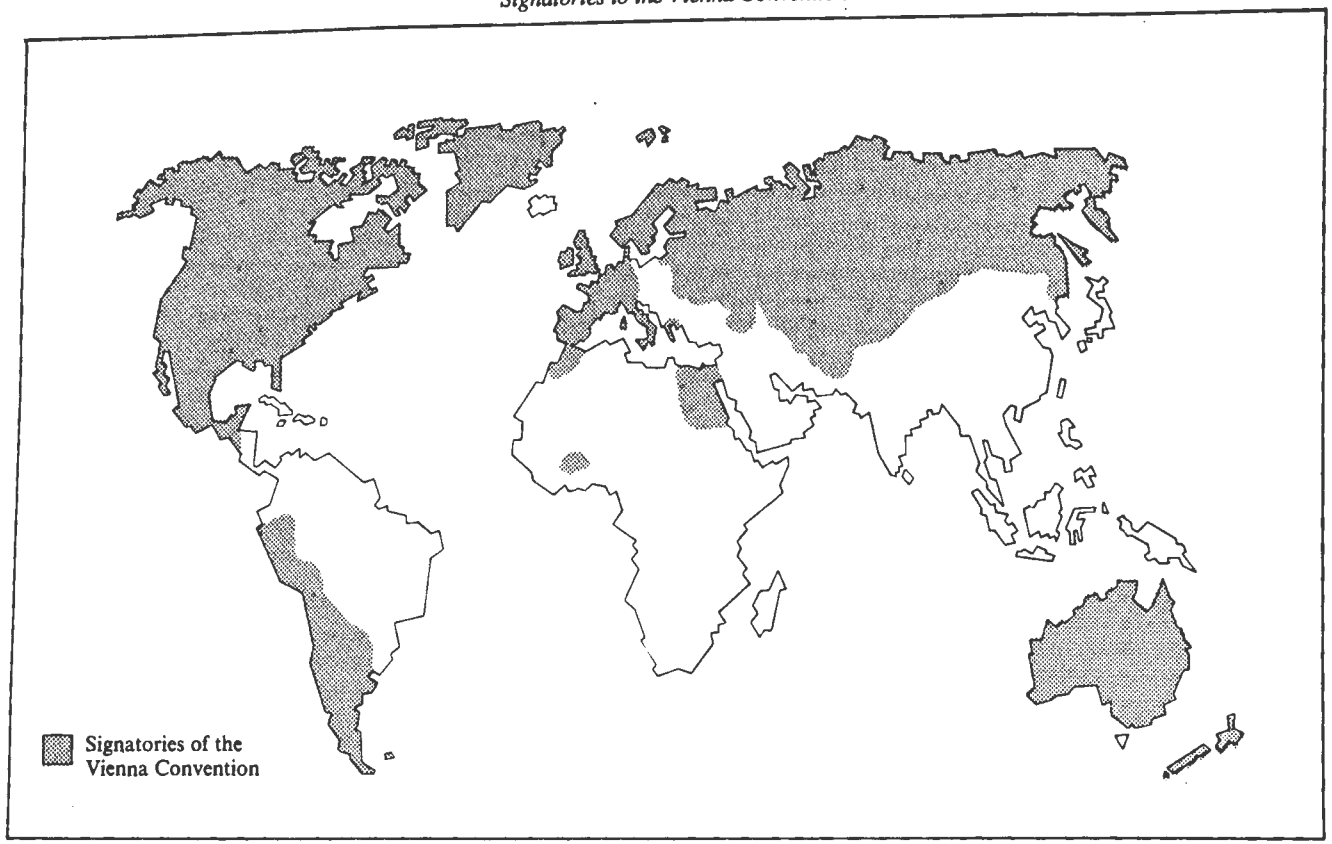
47. Promoting the development and adoption of new environmental agreements and encouraging the honouring of existing international instruments constitute only a part of UNEP work in the field of environmental law. The development and promotion of guidelines and principles that address specific environmental problems are other important aspects of this work. In 1987, the Governing Council approved the Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes and adopted the Goals and Principles of Environmental Impact Assessment, as well as the London Guidelines for the Exchange of Information on Chemicals in International Trade. These instruments, too, have been circulated to all Governments and concerned organizations.

48. Work continued throughout 1987 in each of these fields, as well as in others. In accordance with Governing Council decision 14/30, UNEP began in 1987 to develop a global convention on the control of transboundary movements of hazardous wastes. The organizational meeting of the working group on this subject was held in Budapest in October 1987.

49. In accordance with Governing Council decision 14/27, an advisory panel on the development of prior informed consent and other modalities to supplement the London Guidelines for the Exchange of Information on Chemicals in International Trade was convened in December 1987. UNEP work in this field is being undertaken in close consultation with representatives from Governments, the UN agencies concerned, and other international organizations, governmental and non-governmental.

Figure 1

Signatories to the Vienna Convention



50. In the area of preservation of biological diversity, UNEP, in accordance with Governing Council decision 14/26, began in 1987 to examine whether a global convention was needed in this field and, if so, what its possible content should cover (see also Wildlife and Protected areas, budget subline 6105.) With regard to industrial accidents, UNEP continued to consult with Governments and international organizations on the need for the further development of global conventions on early notification and assistance and the feasibility of elaborating such instruments.

51. Comments were solicited from Governments and organizations to ascertain progress in implementing the 1985 Montreal Guidelines for the Protection of the Marine Environment Against Pollution from Land-Based Sources. Progress in the area of regional seas conventions and protocols is reported below under Regional seas (budget subline 5102).

52. Work also commenced in 1987 on a project relating to the transfer of information to developing countries on environmental legislation in CMEA countries. Under this project, a compendium of environmental legislation and machinery in CMEA countries is to be produced for distribution to legislative drafters and administrators in developing countries, together with a computerized data base on environmental legislation in the CMEA countries. The first meeting of the Advisory Panel on this project was held in Moscow in December 1987.

53. In response to Governing Council decision 14/1 (C) (III), UNEP, in co-operation with the Inter-Parliamentary Union (IPU), developed in 1987 a brief newsletter entitled *Environmental Notes for Parliamentarians.* With the help of IUCN and the Environmental Law Centre in Bonn, the newsletter is being produced and distributed on a regular basis.

54. Other work of UNEP in the field of environmental law involved collating and disseminating current information about the global status of environmental law and assisting the Governments of developing countries, in particular, in the formulation of national environmental legislation and machinery. In 1987, in response to many requests for technical assistance, UNEP, through its Clearing-house, developed a programme for providing both policy and legislative technical assistance.

55. A revised and updated version of the *Register of International Treaties and Other Agreements in the Field of the Environment* was prepared in 1987. *Selected Multilateral Treaties in the Field of the Environment* has been updated and negotiations are currently under-way for the publication of this new edition.

Natural Disasters (Budget subline 2106)

56. In accordance with Governing Council decision 11/7, the Executive Director continued to exercise maximum restraint in allocating resources to this area. Consequently, no new activities were undertaken.

ENVIRONMENTAL AWARENESS (Budget line 31)

57. Given its breadth and complexity, this programme comprises four budget sublines: (a) Environmental education; (b) Environmental training; (c) Public information; and (d) State of the environment and environmental data.

Environmental education (Budget subline 3101)

58. Anything having to do with the future of mankind must, by definition, address itself to those who will be living that future. If we cannot give our children our dreams, we can and must transmit to them all the knowledge, understanding and skills we have toiled to acquire since human beings first began consciously to modify the environment. Implicit in the monumental task of laying the basis for sustainable development locally, nationally and world-wide is the education of the children and youth of today for this challenge. Education for sustainable development means that humankind must be made aware of environmental problems and the possibilities of solving them, of how the changing state of the environment affects human well-being and, conversely, how every detail of human life-styles affects that environment.

59. Consequently, each UNEP action in the field of environmental assessment, management, development or enhancement—whether it involves soil, water, air, wildlife, mineral resources, energy, oceans, deserts, forests, human settlements or industries—must have an educational dimension: environmental information for the public at large, environment education in classrooms at all levels, and general and specialized training in all the broad environmental areas indicated above.

60. In fulfilling their responsibilities as co-ordinators and implementors of environmental education activities in the UN system, UNEP and Unesco have developed the joint International Environmental Education Programme. Created in 1975, the Programme has become the major international vehicle for the promotion of environmental education at the local, national, regional and global levels. During 1987, 17 workshops and seminars were held in various regions to further both the incorporation of an environmental dimension into educational systems and the training of teachers, teacher-trainers and curriculum developers to do so.

61. Ten years after the first world Intergovernmental Conference on Environmental Education (held at Tbilisi, USSR), Unesco and UNEP organized the International Congress on Environmental Education and Training, which took place at Moscow in August 1987. Attended by more than 300 specialists from 100 countries, as well as observers from such international organizations as IUCN, the Congress reviewed progress and trends in environmental education since Tbilisi and considered the state of the environment and its educational and training implications, as well as relations between the environmental and scientific aspects of intergovernmental programmes and their educational and training implications. Examining the successes and failures of the last 10 years, the Congress planned for the next 10 years in broad terms and adopted an *International Strategy for Action in the field of Environmental Education and Training for the 1990s.*

62. For immediate use, UNEP, in co-operation with IUCN and the International Youth Federation, published and distributed widely in 1987 two studies on conservation education prepared as a follow-up to the International Youth Year. Entitled *World Conservation Strategy—a manual for youth environmental projects* and *Youth in environmental action—an international survey,* both publications promote and encourage the involvement of young people in action to restore and improve the environment.

63. UNEP also gave support to the African Association for Literacy and Adult Education (AALAE) for the production of a manual entitled *Environmental education through adult education* to help train adult educators to recognize problems and possibilities in the environment. The priority themes include environmental health, agroforestry and rural development, population, industry and urban development.

Environmental training (Budget subline 3102)

64. Environmental training is both general and specialized. General training attempts to build awareness of the environment and to develop individual or corporate capabilities to deal with environmental concerns. The target group for such training includes policy makers and planners, engineers, architects, industrialists, trade unionists and agriculturists—all of whom take decisions, large or small, that affect the environment. Specialized training seeks to perfect the problem-solving skills of professionals whose work intrinsically involves the environment in one way or another, among them, hydrologists, agronomists, oceanographers, toxicologists, and landscape designers, to name only a few. In all instances, a key objective is to introduce or strengthen the concept that the environment and natural resources require integrated management. The annual international post-graduate course on resource management and environmental impact assessment in developing countries continued in 1987 to be organized jointly at the Technical University of Dresden by UNEP, Unesco and the German Democratic Republic. To date, 10 years after the first course was given, a total of 162 participants from 50 developing countries—professionals in such areas as sanitation, wildlife, lake and river basin management, agriculture and soil rehabilitation, pollution control and urban planning—have taken part in these courses and have been awarded post-graduate diplomas. The participants, government-nominated key personnel, emerge better prepared to influence the decision-making process in their respective countries. The selection committee for the 1987-1988 candidates decided to establish a new balance between environmental administrators and environmental scientists in favour of the former, owing to their multiplier effect.

65. To complement the activities of the Environmental Training Network for Latin America and the Caribbean, UNEP launched three new training networks in 1987, one each in the regions of Africa, Asia and the Pacific, and West Asia. Countries in those regions will now be able to shape co-operative programmes in environmental training. During the first phase of these projects, several centres of excellence will be identified and selected in each region to catalyse training activities and provide support for other institutions.

66. A workshop convened at UNEP headquarters in October 1987 provided a forum for 36 high-level officials from African ministries of planning and the environment to discuss means of achieving sustainable development through rational environmental action. The workshop not only strengthened links among the participants and, consequently, their respective Governments, but also between the participants and the technical regional co-ordination units set up in accordance with the Cairo Programme for African Co-operation.

Public Information (Budget subline 3103)

67. UNEP celebrated its 15th anniversary in 1987 on World Environment Day (WED), 5 June. This event was doubly significant, since it also marked the launching of the UNEP Global 500 awards that honour environmental achievements around the world. In the course of celebrations held at UNEP's Nairobi headquarters on 4 June, 13 Global 500 laureates were personally honoured for their achievements before an audience of more than 500 distinguished guests. The laureates ranged from Dr. Gro Harlem Brundtland, the Prime Minister of Norway and Chairman of the World Commission on Environment and Development, who was also her country's first Environment Minister, to Mrs. Lily Veniselos of Greece, who has campaigned to protect the breeding ground of the Caretta Marine Turtles, and Mr. Sekkou Zouha, a Moroccan forester who kept sand dunes in check in the Draa Valley by providing seedlings, maintaining plantations and undertaking other soil conservation works. Another 78 laureates were entered formally on the Global 500 honour roll. The following day, the Sasakawa Prize was awarded jointly to Professors Elisabeth Mann-Borghese and Nicholas Polunin for their distinguished contributions to environmental conservation. The Global 500 award-holders honoured earlier led round-table debates and discussions on their approaches to environmental improvement around the general theme, "The Ingredients of Success". These events attracted substantial coverage in the press and on radio and television in many countries and across several continents. Global 500 award ceremonies will become an integral part of WED activities during the next few years.

68. To increase press coverage of WED and Governing Council events, the annual UNEP Seminar for Environmental Journalists was scheduled in 1987 to coincide with them. The seminar, which brought together 19 leading newspaper, radio and television journalists from 14 countries, included a field visit to desertification control projects in Ethiopia and generated extensive environmental coverage. Widespread interest in the seminar led to the visit of a *Suisse Romande* television team to make an environmental film for broadcast on the occasion of the *Comptoir Suisse* in September 1987. UNEP also collaborated with the Unesco Harare office in providing staff experts to a similar seminar for Southern African news agency heads and chief editors in October. As in 1986, substantial press and other media coverage resulted from these activities.

69. The work of UNEP's Information Service yielded generally progressive results during 1987. Media liaison was systematized and, during the year, the News and Data Team issued 128 press releases and statements in English. The channels for press relations provided by services such as UNIC, the Inter-Press Service and the Press Foundation of Asia continued to carry a large flow of material originating from UNEP. The radio service produced a series of 15-minute programmes entitled *UNEP in Action.*

70. The appearance of *UNEP Profile,* a four-colour brochure in English describing the scope of UNEP and its achievements, added significantly to the organization's promotional resources in print: further editions in all UN languages, as well as Japanese, were prepared for release in 1988.

71. The Environment Briefs, a series of compact papers on environmental issues, were launched in 1987 in English, French and Spanish: The inaugural series dealt with six issues: environmental problems related to atmospheric pollution; desertification; tropical forests; hazardous chemicals; oceans; and fresh water. Demand for these Briefs necessitated a reprinting in 1987. Moreover, during the year, UNEP undertook preparations for four new titles covering, respectively, soils, food security, industry and the Convention on International

Trade in Endangered Species of Wild Fauna and Flora (CITES), all of which are scheduled to appear in late 1988. The major users of these materials are non-governmental organizations, the communications media and schools.

72. Books published or brought to the final stages of production during 1987 included 10 technical or semi-technical titles that emerged from substantive programme activities—among them, the volume *Sustainable development: constraints and opportunities,* and six more promotional or descriptive products such as the *Profile.* For the first time, a sales catalogue of UNEP publications was produced and distributed.

73. During the year under review, a gradual revision of policy towards editorial selection, production, marketing of publications and improved targeting of the publications intended for free distribution began. A thorough revision of the organization's mailing lists was undertaken and an Editorial Committee was established to complement the activities of the Publications Board and to work with the Board towards improving editorial and cost-benefit standards of UNEP work in print. Contacts made at the 1987 Frankfurt Book Fair with trade publishers offer prospects of increased and rationalized trade co-publishing during the coming biennium.

74. Six issues of *UNEP News* and four of *The Siren* appeared during 1987 in English, French and Spanish, although the distribution of the former encountered delays in languages other than English owing to the lack of typesetting facilities. To eliminate such delays, both periodicals have been adapted for production on a desktop publishing system, which has accelerated production in all languages.

75. Highlights of UNEP audio-visual work in 1987 included four large photographic exhibitions; screenings in connection with the 14th session of the Governing Council and WED; and a major exhibition in Lausanne, Switzerland organized by UNEP's Regional Office for Europe, to mark the European Year of the Environment. Three television spots were produced on the occasion of the fourth All Africa Games, held in Nairobi, and broadcast daily during the month of August 1987. The Television Trust for the Environment (TVE) produced a one hour video programme on the ozone layer entitled "A Hole in the Sky". It also organized a television debate with UNEP's Executive Director on the environmental impacts of development projects during the "Eurovision" Series in July 1987.

76. Under its Outreach project, UNEP began in 1987 to approach more systematically its contacts with special constituencies—among them, youth groups, women's groups, parliamentarians, religious organizations and industrialists. Not all these target groups received equal attention during the year, but progress was made on each front. UNEP adopted in 1987 an internal two-year comprehensive work plan called "Co-ordination of the Contribution of Youth to Sustainable Development". Twelve youth leaders, selected by the respective UNEP Regional Directors, are now relaying up-to-date information to youth organizations throughout their region. Under the Outreach Network, some 40 information packages targeted to educators and young people have been produced and distributed in 42 countries. They are used as teaching aids and for radio and television programmes.

77. One of the most interesting initiatives was UNEP's participation in the World Conference of Girl Guides and Girl Scouts, held in Kenya in July. This enormous youth movement has begun working with UNEP to knit environmental concerns into its own merit achievement award system. In 1987, UNEP continued to support the African NGOs Environment Network (ANEN), the main focal point of co-ordination with over

280 African NGOs in 29 countries. The Nairobi-based Environment Liaison Centre continued to issue a bi-monthly bulletin, *Ecoforum*, and a quarterly, *News Alert*, both of which are distributed to a network of 6000 NGOs. In February 1987, senior parliamentarians from 18 countries of the Inter-Parliamentary Union (IPU) convened a two-day meeting at UNEP Headquarters. A newsletter for parliamentarians *Environmental notes for parliamentarians* was launched in November 1987. The Federal Republic of Germany became the first European country to establish a national committee for UNEP; its first meeting was held in 1987. Kenya has also established a national committee for UNEP; the Kenyan Minister of Environment and Natural Resources presided at its inauguration in March 1987.

INFOTERRA (Budget subline 3104)

78. UNEP has sought to facilitate the international exchange of environmental information through INFOTERRA, the International Environmental Information System, established in 1977, which is now the world's largest environmental information system. Decentralized in structure, INFOTERRA has for the past decade promoted the strengthening of national information infrastructure, and thus self-reliance, through the establishment of INFOTERRA National Focal Points in the participating countries. In each participating country, environmental institutions able and willing to provide their expert knowledge—INFOTERRA Sources—have been identified and included in the INFOTERRA data base (INFOTERRA International Directory of Sources). Regional exchanges and the pooling of resources have been promoted through the establishment of INFOTERRA Regional Service Centres. Leading institutions in major areas of environmental concern—INFOTERRA Special Sectoral Sources—have been enlisted to assist in providing information, particularly to INFOTERRA users in developing countries.

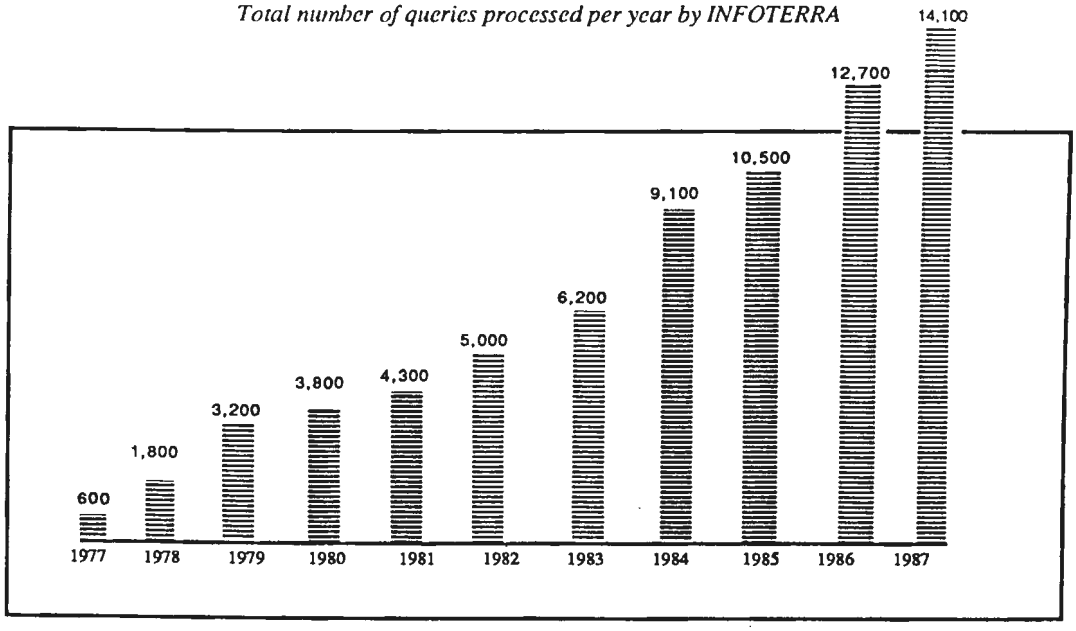
79. The INFOTERRA Programme Activity Centre (PAC) co-ordinates all these activities through four networks: the first which is composed of 133 National Focal Points, the second of 5,524 INFOTERRA Sources, the third of 6 Regional Service Centres, and the fourth of 24 Special Sectoral Sources. To date, in 11 years of operation, the system has provided answers to some 70,700 environmental queries from 114 countries on nearly 1,000 subjects at a very low cost—often no cost—to the user. Figure 2 shows the rate of this growth. Fourteen UN and other international organizations (which have registered 123 INFOTERRA Sources) and a great number of NGOs have co-operated in this work.

80. Since its creation, INFOTERRA has undergone a number of modifications, the most important of which was its expansion beyond the original concept of referral only to the actual delivery of information. This was achieved without costly duplication of effort by linking the existing information resources within countries to form national environmental information systems with INFOTERRA as a core activity; by regionalization and the sharing of resources through the network of INFOTERRA Regional Service Centres mentioned above; and by improving the use of expertise in specialized institutions to meet the priority information needs of users, especially in developing countries, through the network of INFOTERRA Special Sectoral Sources.

81. However, the rapid evolution of information technology during the last decade has brought about fundamental changes in the flow of scientific and technical information. The most important developments in modern information technology involve the creation of data bases in all the major fields of science and technology; the widespread use of computers for information storage and retrieval; and the rapid, cost-effective development of telecommunications networks (including satellite communications) for data transfer. Yet while these changes have created new opportunities, they have simultaneously produced a

Figure 2

Total number of queries processed per year by INFOTERRA



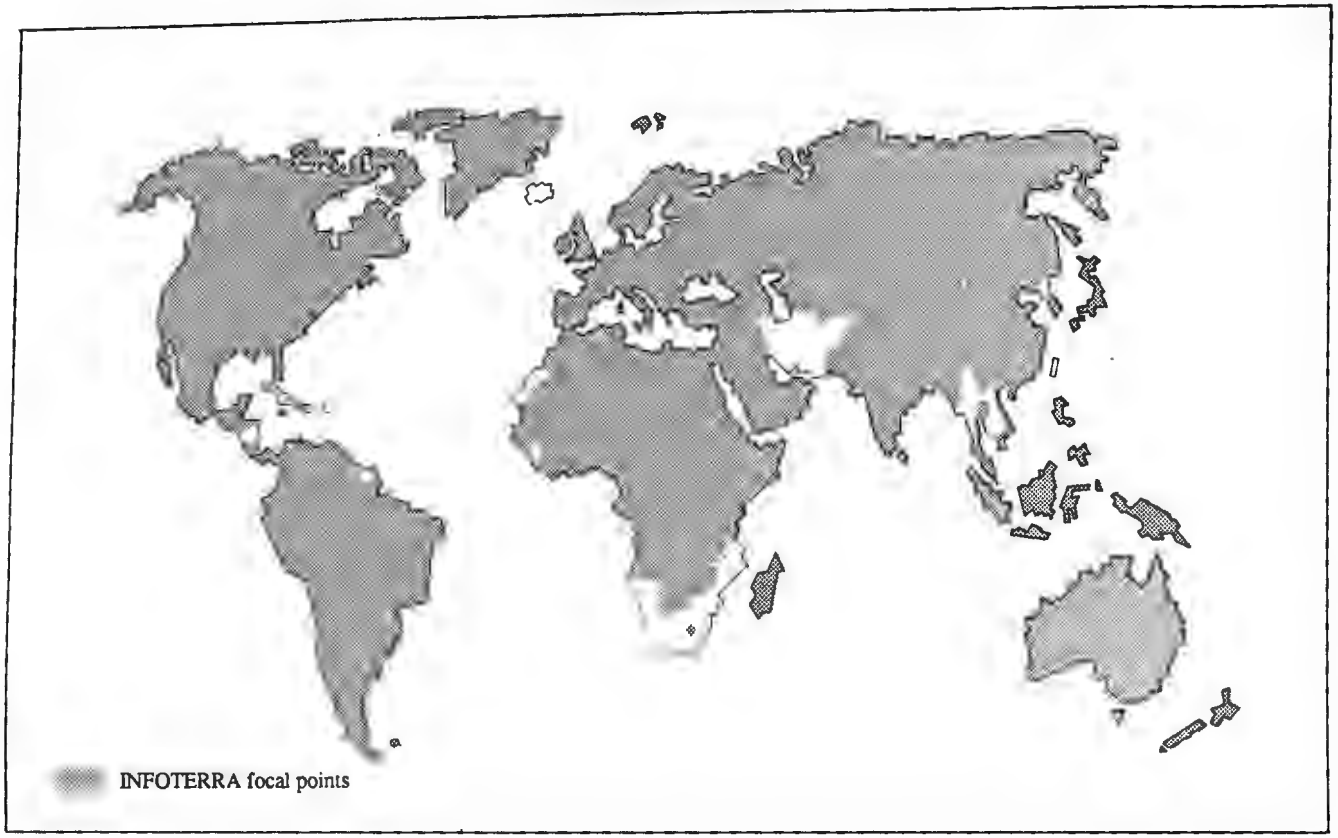
major problem in the development of the system: the need for the use of modern information technology. The responsibility for the operations of national INFOTERRA focal points rests with the participating Governments. Where the Government funding necessary to obtain even the minimum equipment required—a micro-computer, telex/telefax, and a photocopier—is lacking, as is often the case, UNEP can do little to help. The INFOTERRA system as a whole will be able to achieve its objectives only when all National Focal Points are able to function effectively.

82. Despite the difficulties mentioned earlier, INFOTERRA substantially expanded its world-wide communications web during 1987. Nine new Special Sectoral Sources were added, bringing the total to 24; one new Regional Service Centre for Arabic-speaking countries was established, bringing the total to six, and the number of INFOTERRA Sources was increased by 112, bringing the total to 5,524. Four new countries joined the INFOTERRA network, resulting in a total of 133 (see Figure 3). The emphasis on improved user services has resulted in 13,300 queries answered in 1987, an increase of 10 per cent over 1986. More than half these queries came from developing countries and the vast majority of them, 72 per cent, were answered by publications, copies of laws on particular subjects, and specially prepared reports or bibliographic information from relevant data bases. Seventy-eight per cent of the users termed the information provided by INFOTERRA "useful" or "very useful".

83. To consolidate and develop the global INFOTERRA network further, a meeting of the INFOTERRA Advisory Committee, held in April in Canberra, Australia, and a concurrent meeting of the managers of the INFOTERRA Regional Service Centres produced a series of recommendations for immediate INFOTERRA development, as well as blueprints for INFOTERRA's work over the next biennium and decade. Among the major recommendations are the following: the "twinning" of National Focal Points in developed and developing countries; the establishment of an INFOTERRA Trust Fund to explore the

Figure 3

INFOTERRA network



possibility of extra-budgetary funds for technical assistance; an examination of technical needs by all the National Focal Points to quicken communication; and strengthening the existing links among the partner countries. The first meeting of INFOTERRA focal points in all the industrialized countries, held in Athens in November 1987 discussed improving the information flow among these nations and strengthening exchanges between Eastern and Western European National Focal Points. The participants also proposed measures for the implementation of the recommendations of the Canberra meeting.

84. The training of INFOTERRA National Focal Point staff from developing countries continued during 1987. Given the high turnover of such staff and the introduction of a microcomputer version of the INFOTERRA data base, training has become an increasingly significant activity. Two courses on basic INFOTERRA operations were held in 1987: one for English and French-speaking staff, in Nairobi in June, another for Spanish-speaking staff, in Santiago in October. A course on the application of microcomputers in processing scientific and technical information was given in Moscow in November for the staff of those National Focal Points which have converted their data base to microcomputers. An INFOTERRA regional seminar for National Focal Points and members of the Gulf Co-operation Council (GCC) was held in Kuwait in December. Members of INFOTERRA/PAC also visited several focal points to assist in various ways, especially in computerizing operations.

85. The INFOTERRA publication programme continued in 1987 with a new and updated edition of the *INFOTERRA International Directory of Sources*, along with a separate *Cumulative Index*. The first edition of a desk-top reference tool for decision-makers entitled the *INFOTERRA World Directory of Environmental Expertise* was also issued during the year under review. Other publications in 1987 included a special directory on *Man and the atmosphere* and the first volume of the *Exchange of environmental experience*, a new series intended to disseminate widely significant new research and development results which have come to INFOTERRA notice through its network partners. The INFOTERRA Programme Activity Centre has also collaborated with the Advisory Committee for the Co-ordination of Information Systems (ACCIS) in the compiling of the *ACCIS Guide to United Nations Information Sources on the Environment*, scheduled for publication in the spring of 1988.

86. Throughout the year, INFOTERRA maintained close contact with the UN and other relevant information systems. In particular, all information concerning the previously registered sources from the UN system has been revalidated, updated and included in the new *INFOTERRA International Directory*. In addition, new INFOTERRA Special Sectoral Sources have been established at such institutions as the International Occupational Safety and Health Information Centre (CIS) of ILO, the International Center for Living Aquatic Resources Management in the Philippines, the International Environmental Bureau in Switzerland, IUCN, the Australian Institute of Marine Science, the Tata Energy Research Institute in India, and the Water and Sanitation for Health Project (WASH) in the USA.

87. 1987 also witnessed the consolidation of a number of key developments. The most significant of these was the conversion of the INFOTERRA data base for microcomputer use and for on-line searches (made possible by a Japanese Government grant) and the widespread introduction of new technology, such as the use of telefacsimile equipment, in INFOTERRA work. As indicated above, the development of the INFOTERRA network has also been mapped to the year 2000 with particular emphasis on the directive of decision 14/18 of the Governing Council on the use of environmental information systems for sustainable development.

88. Environmental legislation has been a subject area of priority concern for INFOTERRA. This is an area in which numerous requests for information are received from both

developing and industrialized countries. For this reason, as far back as 1975, INFOTERRA began assisting IUCN to develop its Environmental Law Information System (ELIS) as a user-oriented service and source of information on legislative matters for INFOTERRA users. This close co-operation between IUCN/ELIS and UNEP/INFOTERRA has continued throughout the years, and ELIS was one of the first of the 24 Special Sectoral Sources designated by UNEP to assist INFOTERRA.

89. In addition, the INFOTERRA network of information sources comprises some 200 institutions dealing with various aspects of environmental legislation. These INFOTERRA sources, together with ELIS, have provided environmental legal information to decision-makers and other INFOTERRA users in response to more than 2,500 queries to date. Several countries adopted new environmental legislation and regulations, in areas such as transport or pesticide control, based on information received from INFOTERRA.

90. Most recently, following an INFOTERRA request, ELIS has prepared and made available to the INFOTERRA Regional Service Centre in Moscow a computerized directory of its data bases in order to facilitate the use of its considerable legal information resources by INFOTERRA users in CMEA countries and elsewhere.

State of the environment and environmental data (Budget subline 3105)

91. The Executive Director's 1987 report on the state of the environment[3] was the second state of the world environment presentation in UNEP history. The first such survey had been issued in 1982 to mark the 10th anniversary of the Stockholm Conference.

92. The 1987 report focused largely on the changes in the different components of the environment, in particular on the interactions among the processes of those components. The report covered first, environmental quality, comprising air quality and atmospheric issues; water quality; the marine environment; land; and terrestrial biota. Turning to development and environment, the report examined population growth; human settlements; transport and tourism; agriculture and food production; industrial development; and energy. The third and final section dealt with environmental protection measures, discussing public perception and attitude; national responses to environmental problems; and international responses.

93. In addition to this global report, two national state-of-the-environment reports covering Kenya and Qatar were published in 1987 with UNEP assistance. UNEP also provided support for the drafting of national reports on Bahrain, Indonesia, Nepal, Thailand and Zimbabwe during the year; all five were submitted to the Governments of the respective countries for clearance. Work plans for six other national reports to cover Argentina, Ethiopia, Jamaica, Malaysia, Oman and Zambia were initiated. Taken together, all these reports from developing countries are expected to make a significant contribution to the balance of geographical reporting on the environment and to the updating of the report on the state of the world environment envisaged for publication in 1989 in accordance with section B of Governing Council decision 14/9.

94. Additionally, during the year under review, the 1988 state-of-the-environment report was outlined and drafted for review. It will be the first of the series devoted exclusively to the public and the environment and will place particular emphasis on the role of women in environmental matters.

Library and Documentation Centre

95. As the Library is an information support unit for the entire secretariat its collection of books, periodicals and reports reflects the environmental, scientific and social subjects of concern to UNEP. The information contained in the Library's collection is catalogued or indexed for staff members to aid them in analysing trends, assessing problems and promoting activities which will lead to environmentally sound development. In addition, the Library is a depositary library for the documents of the UN (in most language versions), and maintains significant collections of the documents of the specialized agencies of the UN system. It also acts as both an INFOTERRA source and user of its network.

96. While the Library's largest user is the UNEP staff, it also provides assistance to the Nairobi-based Permanent Missions, UN organizations, other international organizations and research institutes and the University of Nairobi. In 1987, 19,972 user visits were recorded. The Library's reference staff handled 3,959 inquiries and 7,815 items were taken out on loan.

97. A computer-based bibliographic information system was installed in 1987. Its three data bases are EPLIB, the main data base and extension of the Library's card catalogue; EPPER, a listing of all periodicals and serials held by the Library; and EPDOC, a data base designed to provide bibliographic access to UNEP intergovernmental and working group documents, among others. The system uses the software developed by Unesco, which is also used by the programme activity centres of GEMS, INFOTERRA, the Desertification Control Programme, the Information Service, the Mediterranean Action Plan (MAP) Co-ordinating Unit in Athens and the UNCHS (Habitat) Library.

98. During the year, the Library catalogued 1,143 items and maintained 749 current periodical subscriptions (of which only 298 were paid for by UNEP). The Library has introduced a programme for the selective dissemination of information, whereby staff members are regularly sent copies of articles of interest appearing in any of six scientific journals. Thus, for example, the GEMS staff received copies of all articles on acid rain and climatic change. This service has been well received by staff members and is an attempt on the part of the Library to be more actively involved in the provision of information. A total of 625 articles was circulated in 1987.

99. Co-operation and co-ordination of collections and services between the UNCHS (Habitat) and UNEP Libraries continued. In addition, the Library provided assistance, advice or training for 78 librarians or information personnel from Government institutions in library or data base management. While most were from Africa, all the other regions were represented as well.

EARTHWATCH (Budget line 41)

100. Earthwatch is the environmental assessment arm of UNEP. Its activities have taken on increasing significance during the last eight years, largely owing to two alarming discoveries: the depletion of the ozone layer, which shields this planet from the more dangerous forms of radiation generated by the sun; and the climatic changes arising from burning of fossil fuels; the uncontrolled release of waste gases into the atmosphere and the destruction of forests,—all of which are rapidly pushing global temperatures upwards, a phenomenon that will almost certainly change social and economic patterns over the face of the globe. Earthwatch may help Governments and people to cushion the impacts of many of

the changes resulting from these destabilizations of the environment, for a prerequisite to corrective action is sound scientific knowledge.

101. Composed of three administratively separate units (Programme Activity Centres)—GEMS, INFOTERRA, and IRPTC—Earthwatch operates through the continuous sharing of activities and constant exchange of views along the lines developed during the last three years. Outer Limits has been incorporated into the GEMS Programme Activity Centre, where it dovetails with other GEMS climate-related activities. Similarly, the Environmental Data Unit has been merged within GEMS/PAC so that the tasks of this Unit, including the production of the Environmental Data Report, are now integral functions of GEMS. This restructuring has resulted in greater efficiency, as data are the very soul of the assessment process and, after suitable analysis and interpretation, they are used to produce the technical and other assessments for which Earthwatch is responsible.

102. Ensuring the comparability and compatibility of environmental data has always been a preoccupation of Earthwatch, for it is almost impossible to produce useful global, regional and national assessments without harmonizing data that come from different and often disparate sources. Fortunately, this problem has now become widely recognized; in its decision 14/24, the Governing Council called upon countries to seek ways of strengthening Earthwatch to ensure the harmonization of environmental data and environmental measurements. Such strengthening will have enormous practical applications in the future, since it will facilitate the application of Earthwatch assessments both in the formulation of legal instruments and for realistic management. In this respect also, the steady rise in the importance of the GRID element of GEMS has highlighted further the need and usefulness of applying what we learn through the assessment process for the benefit of humankind.

GEMS: The Global Environment Monitoring System (Budget subline 4101)

103. The GEMS mandate calls for co-ordinating the collection of data at global, regional and national levels and, most importantly, to make this information readily available to those responsible for management of the environment and natural resources.

104. In the area of data collection, a major 1987 effort for improving the harmonization of environmental measurements took the form of a meeting held in Munich in December, at which it was agreed to develop a project for improving harmonization techniques in selected subjects, initially water quality and soil degradation, with a view to achieving a wider exchange and comparison of environmental data.

105. The seven closely related areas of concentration within GEMS are: (a) renewable resource monitoring; (b) climate-related monitoring; (c) health-related monitoring; (d) long-range transboundary pollution monitoring; (e) integrated monitoring; (f) oceans monitoring; and (g) GRID, the Global Resource Information Database.

Renewable resource monitoring

106. The need for reliable information on soil degradation has led GEMS to collaborate with the International Soil Reference and Information Centre (ISRIC) and FAO in a global assessment of soil degradation. The scale for the global assessment will be 1:10,000,000, large enough to point to areas where measurements must be taken immediately. Parallel to this assessment, in an initial test area in South America, the first steps in the establishment of a global soil and terrain database will be taken at a much more detailed scale (1:1,000,000). National institutions will gather and assemble the necessary information for this exercise.

Funds permitting, the entire planet will eventually be covered at this level of detail as the need for information on soil degradation is fundamental for any decisions on land management.

107. The GEMS project on Ecological Monitoring of Land Degradation being implemented by ONERN, the Oficina Nacional de Evaluación de Recursos Naturales, on the eastern slopes of the Peruvian Andes, continues to provide local management bodies with a unique and timely picture of production systems, land use changes and land degradation processes in the 8,000 square kilometer study area. The GEMS philosophy of strengthening local institutions has worked very well in the case of Peru. When the project closes in mid-1988, Peru will have a fully operational monitoring unit, run by national professionals, and ONERN is hoping to expand this monitoring effort into a country-wide resource monitoring network.

108. The use of the USA National Oceanic and Atmospheric Administration Very High Resolution Radiometer (NOAA VHRR) for estimates of vegetation cover continues in co-operation with the International Livestock Centre for Africa. The intention is ultimately to develop an efficient early warning system for the onset of drought conditions that would give Governments and aid agencies alike sufficient advanced warning to make plans for appropriate and timely relief operations. Work during 1987 showed that the vegetation index, derived from the NOAA satellite data, was greatly influenced by the tree cover rather than by tree greenness, and that this index was therefore more sensitive in the dry than in the wet season. Work on other aspects of the use of the vegetation index will continue in 1988.

Climate-related monitoring

109. This section will be dealt with under Outer Limits, budget subline 4102.

Health-related monitoring

110. During 1987, an analysis was carried out of results of the three GEMS monitoring networks (air, water, food) covering largely the decade 1975-1984. In a global monitoring programme, it is very difficult to include more recent information, since the data from national authorities become available only some time after they have been collected; more time is then required for their compilation, verification and analysis. A summary of the findings for each of the networks is presented below.

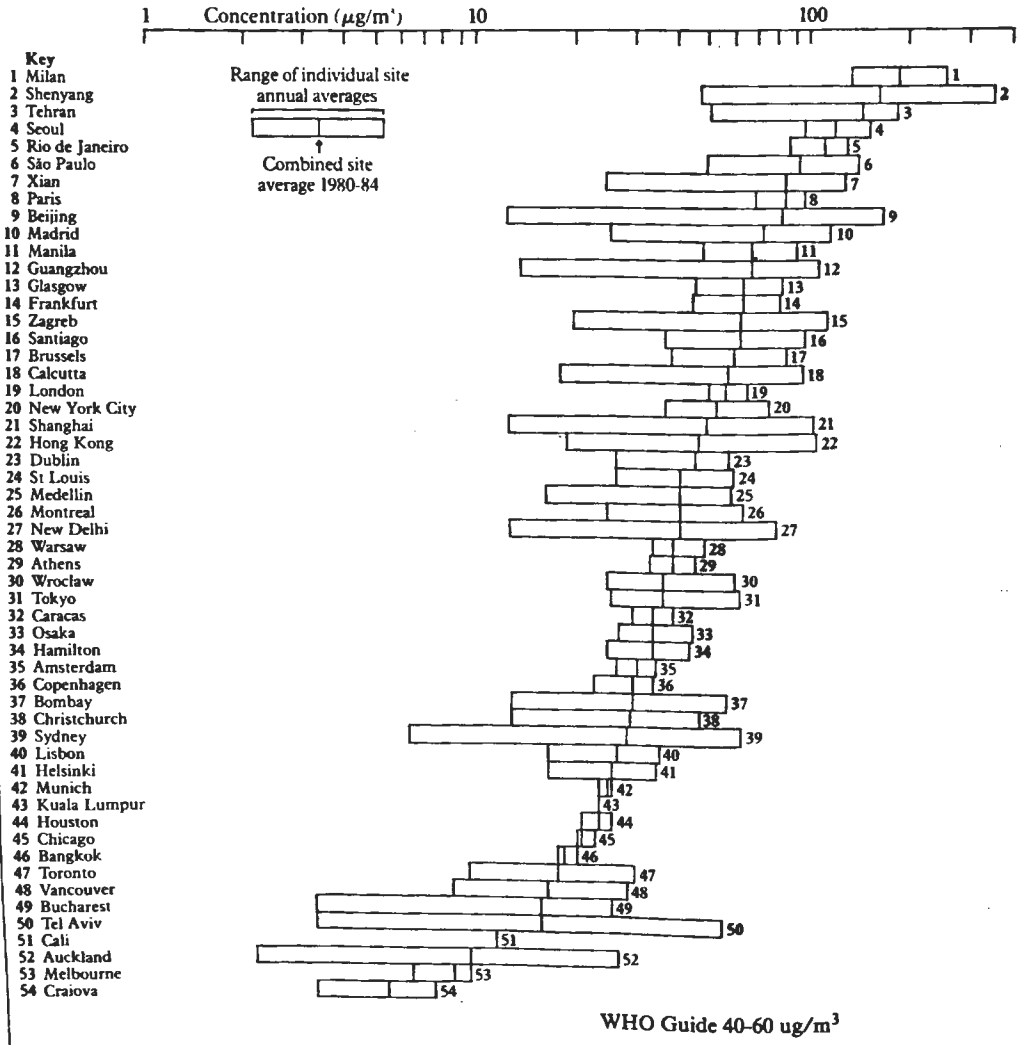
111. *The GEMS air monitoring network:* Some 50 countries participate in this network, involving approximately 170 monitoring sites for air pollution (in 1987, a station in Sierra Leone was added). Annual averages for sulphur dioxide and suspended particulate matter in the air for most of the cities participating in the network are shown in Figures 4 and 5. WHO has established health-based guidelines for both pollutants. In the case of sulphur dioxide the guidelines specify that levels up to the range of 40 to 60 ug/m3 are, in general, not harmful to health. Above this level, however, effects on health can occur with increasing frequency and severity as the concentrations increase. For suspended particulate matter, the guidelines specify levels of 60 to 90 ug/m3 as the range above which deleterious effects occur.

112. As the cities of the network were selected to achieve global representation, it was estimated when data were extrapolated that 600 million people live in areas where average sulphur dioxide pollution exceeds the WHO-recommended guidelines. The number of people living in areas where suspended particulate matter (SPM) exceeds the guidelines was estimated to be over a billion.

Figure 4

Summary of the annual SO_2 average in the cities monitored by GEMS/Air, 1980-1984

Shown is the range of annual values at individual sites and the composite five-year average for the city

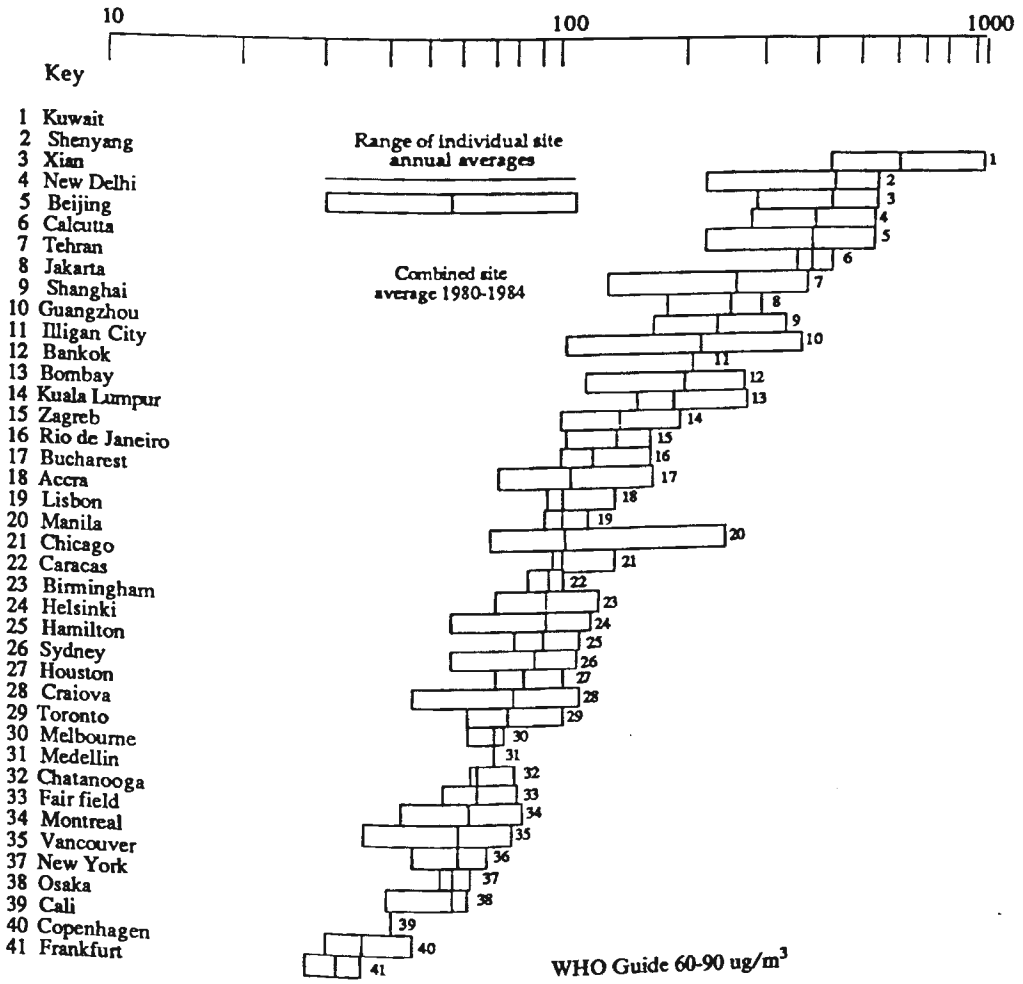


Source; Global Pollution and Health. UNEP/WHO 1987

Figure 5

Summary of the annual SPM averages in the cities monitored by GEMS/Air, 1980-1984

Shown is the range of annual values at individual sites and the composite five-year average for the city



Source; Global Pollution and Health. UNEP/WHO 1987

113. *The GEMS water monitoring network:* This network consists of a total of 344 stations, comprising 240 river stations, 43 lake stations and 61 groundwater stations. In 1987, six major rivers were added to the network, among them the Niger. India opened seven new monitoring stations and Indonesia eight. The GEMS water network collects data on a series of different measures of water quality, including faecal coliforms and dissolved oxygen (an indication of sewage contamination), nitrates and phosphates (whose high levels are caused mainly by municipal waste and run-off from agricultural areas), as well as measurements of different chemical substances in water, such as heavy metals and organic trace elements. Results for sewage contamination, shown in Table 1, prove that the problem is common to all regions: North America, Central and South America, Europe and Asia. No data have been reported for Africa, but the little information available reveals the pattern of other regions. Since water is treated in Europe and North America, the high levels of some contaminants present no health risk, but this is not normally the case elsewhere in the world. High coliform counts are undoubtably a factor that contributes to the high rates of infant morbidity and mortality, due to diarrhoea and other gastro-intestinal infections.

Table 1

Faecal coliforms in GEMS rivers

Number of faecal coliforms per 100 ml	Number of rivers in each region*			
	North America	Central & South America	Europe	Asia and Pacific
10	8	0	1	1
100	4	1	3	2
1,000	8	10	9	14
10,000	3	9	11	10
100,000	0	2	7	2
	0	2	0	3
Total number of rivers	23	24	31	32

*No data from Africa reported.

114. Nitrogen and phosphate levels of polluted rivers are in all cases well above natural levels in unpolluted rivers. The European rivers have the highest average levels, as Table 2 shows. As a result, eutrophication is now endemic in many rivers in Europe, thus increasing costs for waterworks.

Table 2
Level of nitrogen in GEMS rivers

World region	Ammonia (μg/l)*	Nitrates (μg/l)*
All GEMS rivers outside Europe	70	250
European GEMS rivers	210	4,500
Natural average for unpolluted rivers	15	100

*On the basis of nitrogen content

115. Table 3 shows predictions of future availability of water resources for human use, assuming that water consumption per person will remain unchanged. The water availability in Europe, already limited, will be only slightly reduced. In Asia, however, because of high population increases, it will be almost halved; there will be even less water available per person in Asia than there is per person in Europe today. The average water availability per person in Africa will be reduced to approximately the present European level with catastrophic depletions in the dry areas of the continent. Deterioration in water quality is already a major consequence of the reduction in the availability of water per person during the dry seasons in many African countries. Clearly, sewage, industrial waste water and drinking water supplies within Africa will have to be extensively treated and purified, as they are in European and North American countries today.

Table 3
Availability of water resources for human use

World region	Mean annual flow of rivers (m^3/sec)	Per caput river flow (m^3/year) 1970	2000
North America	191,000	19,000	15,000
South America	336,000	54,400	26,000
Africa	136,000	12,000	5,500
Europe	100,000	4,800	3,950
Asia	435,000	6,550	3,550

116. *The GEMS food monitoring network.* This network comprises 35 countries. (See Figure 6). In 1987, programmes in China, Indonesia, Jordan and Thailand were strengthened. The level of pesticides, industrial chemicals and natural toxins in foods varies with each foodstuff, time of year and region. The best estimates of human exposure and of

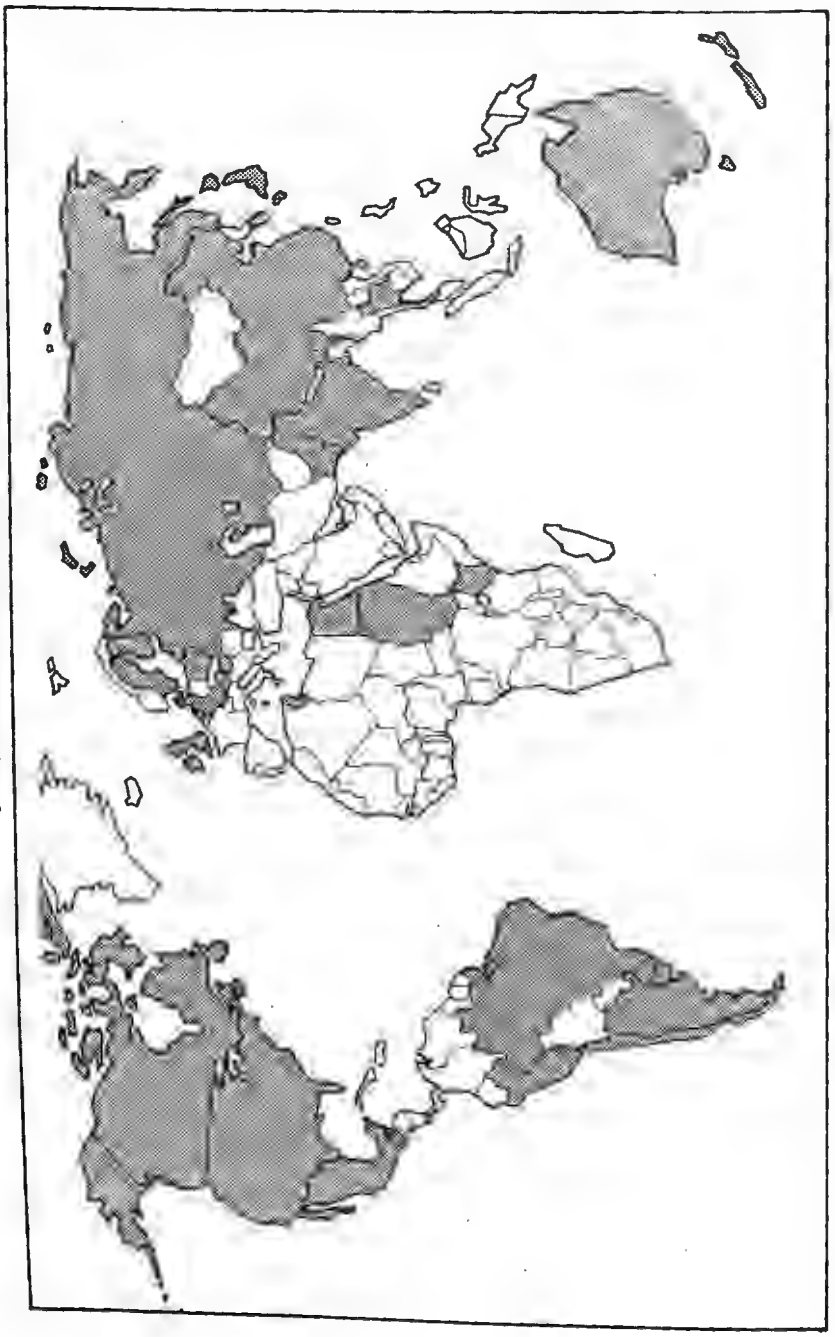


Figure 6

Participating countries in GEMS/Food project

potential health risk are measurements of contaminants in the total diet. For all the contaminants examined, it was established that the measured levels in comparison with the WHO guidelines are very low. As to trends, data derived mainly from developed countries show that intake of organochlorine pesticides such as DDT and of PCBs are declining. Further data are required to determine trends in other contaminants, such as cadmium.

117. The implementation of the HEALs (Human Exposure Assessment Locations) programme is progressing well. In 1987, three new countries—Brazil, China and India—were added to the programme. The internationally co-ordinated quality assurance exercises for nitrous oxide, lead/cadmium and DDT/HCB have been completed.

Long-range transboundary pollution monitoring

118. While the first phase of long-range transboundary air pollution assessed the effects of acidifying deposition on forests in the ECE countries and recommended guidelines for a unified methodology of sampling, analysis and assessment of damage, the second phase concentrates on monitoring damage to forests in the region, applying the methodology developed during the first phase. Under the joint UNEP/ECE project on assessment and monitoring of air pollution effects on forests in the ECE region, the first large-scale survey of forest damage attributed to air pollution in Europe was completed in 1987. The report, prepared by programme co-ordinating centres in Czechoslovakia and the Federal Republic of Germany, compares and analyzes data from 16 European countries. A follow-up survey is now under way. In June-July 1987, forestry experts from 23 countries participated in a field training course sponsored by UNEP/ECE in the Black Forest area of the Federal Republic of Germany to test and harmonize methods of damage identification and assessment. The results and conclusions of the forest damage surveys will be submitted to the Executive Body for the Convention on Long-Range Transboundary Air Pollution, which is currently considering international measures to control nitrogen oxide emissions, now regarded as a key factor in air pollution damage to forests in Europe and North America.

Integrated monitoring

119. Integrated monitoring could be considered an ideal form of environmental monitoring, because it looks at pollutants and ecosystems together. Data from an ongoing GEMS integrated monitoring project in southern Chile show that the levels of pollutants in this remote site are lower than anywhere so far measured in North America. The general methodology developed has provided the data-gathering and analytical tools and procedures for expanding the approach to other ecosystems with higher levels of harmful environmental agents.

120. To study the possibility of expanding activities into a global network, a meeting was held in 1987 with the CMEA member countries, which carry out integrated monitoring activities in various stations in Eastern Europe. The experts agreed that a global network was necessary, and steps will be taken to implement such a network linking existing GEMS and CMEA stations. The countries of the ECE region are also considering the establishment of an integrated monitoring network which will concentrate on impact level studies. Modalities for co-ordination between the ECE network and that of UNEP/CMEA are now being explored. Ways of relating the terrestrial integrated monitoring network to integrated ocean monitoring will also be sought.

Oceans monitoring

121. The oceans component of GEMS is handled by the UNEP Oceans and Coastal Areas Programme Activity Centre (OCA/PAC). Close co-operation between this Centre and

GEMS continued during 1987. Of particular interest are the links among the six climate impact studies in southeast Asia and the examination of the effects of potential sea level rise in the Mediterranean Sea, as well as in some areas of the Pacific, which will affect deltas and coastal cities. Ways of starting global ocean monitoring based on the recommendations of the Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP) are being examined and work is nearing completion on an assessment of the state of the ocean; 15 regional reports will be considered by an expert group in late 1988.

GRID, the Global Resource Information Database

122. GRID, the Global Resource Information Database, was established within GEMS in 1985 in response to the need to have basic environmental data—on soils, forests, hydrology, vegetation, land use, climate and pollution—more readily available, especially in developing countries, to both national and international environmental decision-makers and managers.

123. GEMS, for example, has been accumulating data within its global networks for over a decade. Each GEMS database is necessarily managed by a different co-operating agency, often on a different computer system and in a different file format. Such differences can hamper efficient use of the data, and are not, of course, unique to GEMS. The proliferation of computerized databases over the last decade everywhere in the world has virtually created a data Tower of Babel. UNEP, like the rest of the world, requires a data management system capable of integrating environmental data which exist in varying formats from many sources, among them, reports, statistical tables, maps, aerial photographs and satellite imagery.

124. One of the best ways to integrate environmental data is with reference to geographical location. Most, if not all, resource management and land use planning problems, questions and decisions refer to particular places on the Earth's surface. This fact, perceived on urban scales in the 1960s, led to the development of the Geographic Information System (GIS) computer-based technology.

125. Global application of GIS technology within GEMS was proposed by UNEP consultants in 1981. Given UNEP needs in the light of current hardware and software technology, an *Ad Hoc* expert group convened to establish the feasibility of the proposal concluded that the establishment of a Global Resource Information Database (GRID) was feasible and necessary.

126. A pilot phase of GRID was therefore initiated in March, 1985, to develop methods to demonstrate the feasibility and utility of a global resource data management system. The pilot phase of GRID concluded on 31 December 1987. More than two dozen global and regional environmental datasets have been incorporated into the system and co-operative pilot projects with a number of countries and international organizations have shown the utility of GRID data and GIS techniques.

127. Additional third world professionals were trained in 1987 in the Swiss-sponsored UNEP/UNITAR GRID training course, and many more are acquiring hands-on experience in co-operative, national-scale case studies. During the pilot phase, a number of GRID trainees and their parent agencies were put in direct contact with bilateral donors to supply GIS hardware and software or provided with sources of further training and technical backstopping.

128. At the request of the Ministry of Environmental Protection, Government of Uganda, UNEP and Ugandan experts built an environmental database within GRID. Typical GIS applications were undertaken to illustrate the range of possible analyses. For example, area-specific crop potentials were delineated by combining ecological suitability (available

moisture, soil type, altitude and temperature) with the known requirements for particular cash crops. This permitted modelling and mapping of the potentials for various crops over the entire country. Other analyses illustrated the likely impact of climate change (temperature increase) on crop potentials; potential competition between cash crops; erosion hazards; and changes in land use—forest to agriculture, agriculture to bush, agriculture to rangeland, etc.—from 1973 to 1986, using satellite imagery. These preliminary analyses have been used to: (a) illustrate the magnitude and location of potentials and problems at national scale; (b) demonstrate the possibilities of the GIS approach for serving land use planning and environmental management; (c) provide a basis for stratification for subsequent, more detailed analysis of critical areas and problems; (d) provide subject matter for training Ugandans in GIS technology; (e) create interest among bilateral donors to provide Uganda with the technology necessary for a national GIS capability.

129. Two operational centres, or "nodes" have been established: GRID-Nairobi at UNEP Headquarters in Kenya and GRID-Geneva in Switzerland. The US National Aeronautics and Space Administration (NASA) Earth Resources Laboratory in Slidell, Mississippi, serves as a *de facto* technical backstopping node in the USA. In 1987, the Government of Thailand offered to host a regional node for the Southeast Asia and the Pacific in Bangkok, and steps are currently under way to create such a node—the first, it is hoped, of several such centres to serve particular regions with training, data analysis services and up-to-date environmental data. Attention is now being turned—by means of high-level and technical missions, case study applications and regional briefings—to the Latin American, Carribean and West Asian Regions, in the anticipation that suitable locations for GRID compatible centres will be identified during the 1988-1989 biennium.

130. In September 1987, GEMS convened an *Ad Hoc* group of specialists to evaluate the technical status of GRID computer systems and software, to assess current and medium-term needs in the light of the experience gained during the GRID pilot phase, and to recommend necessary changes in system configuration. The group concluded, first, that GRID is currently operating at the forefront of GIS technology, owing to the quality of the staff and the software; and, second, since hardware is becoming old and consequently incurring heavy costs in repairs and maintenance, with no room for growth and adaptation to new technological developments, most of the core hardware should be replaced with low-cost, micro-computer based systems. This change was begun before the end of the year and is expected to be completed by mid-1988.

131. The results of the pilot phase therefore clearly indicate that the implementation of an operational GRID is feasible and necessary: both the *Report of the World Commission on Environment and Development* and the ICSU International Geosphere-Biosphere Programme (IGBP) Planning Group on Global Change have cited GRID as "an example of the type of database that is needed" in these times when harmonization of environmental data is imperative.

Outer Limits (Budget subline 4102)

132. The emission of gases that contaminate the atmosphere, such as carbon dioxide and those that deplete the ozone layer, constitutes one of today's major long-term environmental problems. Such emissions are upsetting the global radiation balance and are likely to cause a change in the global climate—the greenhouse effect—that will affect all geographic regions and every environmental sector. Moreover, the emissions that deplete the ozone layer diminish the protection it provides against ultraviolet radiation and lead to serious health hazards, as well as the destruction of some plant and animal species, including some marine life. Increased radiation affects not only living beings; it also damages certain industrial products, especially plastics, and contributes to photochemical pollution in urban areas.

Risks to the ozone layer

133. The adoption of the Montreal Protocol on substances that deplete the ozone layer, discussed above under Environmental Law and Environmental Machinery (see paras. 44 to 45), represents one of the most significant co-operative achievements of Governments, the international community and UNEP for the protection of the human race from adverse environmental effects caused by man. GEMS played an important role in providing the scientific and technical information to participants, both prior to and during the Conference, about substances that destroy the ozone layer. Assessments by the Co-ordinating Committee on the Ozone Layer (CCOL) were provided to the *Ad Hoc* Working Group of Legal and Technical Experts, generally known as the "Vienna Group", for the preparation of a protocol on substances that deplete the ozone layer.

134. In a continued effort to provide the best scientific information to the Vienna Group and to policy makers to enable them to elaborate an acceptable protocol to the Vienna Convention, UNEP organized in April 1987 an *Ad Hoc* Scientific Meeting to compare model generated assessments of ozone layer change for various strategies for CFC control. The meeting provided the Vienna Group with assessments of the implications for the atmosphere of a range of CFC control strategies; assessments based on analysis by different models employing identical scenarios; and evaluation of the differences, similarities, and reliability of model results through intercomparison by experts. The meeting showed that effective ozone layer protection required stringent emission control which would have to be applied to a wide range of ozone destroying substances. These and other observations provided by the *Ad Hoc* Scientific Meeting were accepted by the Vienna Working Group and used in the elaboration of the control measures adopted under the Montreal Protocol.

135. Concern still remains over the seasonal Antarctic Ozone Hole. A major scientific expedition to the region generated important new understanding of the phenomenon.

Global climate change

136. If greenhouse gases continue to be emitted at current rates, their concentration in the atmosphere will be equivalent to a doubling of preindustrial levels of carbon dioxide by the early part of the next century. This could result in a global mean temperature rise of between 1.5 and 4.5 degrees Celsius by the year 2030—an increase with serious implications for all life on Earth. Two of the most significant impacts will be a rise in sea level and radical shifts in crop patterns.

137. Climate change cannot be prevented. But its effects can be blunted. UNEP's approach to this issue has therefore focused on three major themes: the search for means to delay or reduce climate change; to explore ways of mitigating or diminishing the impacts of such a change; and to find the best means to prepare society and Governments to adapt to its consequences.

138. In pursuing this, UNEP has taken full advantage of the expertise existing within the UN family, notably the World Meteorological Organization. Intergovernmental and non-governmental organizations, particularly ICSU, and a number of national institutions have also co-operated closely with UNEP. One example of the utilization of national expertise concerns sea level rise: UNEP and the Government of the Netherlands signed a Memorandum of Understanding to co-operate in a project on the Impact of Sea Level Rise on Society. Initiated in November 1987, the project will develop an inventory of those regions most vulnerable to sea level rise, and will undertake in-depth studies in the Netherlands and in selected vulnerable developing country regions.

139. The *World Glacier Inventory* has been completed and is scheduled for publication during the first quarter of 1988 with UNEP support. It is a major baseline against which the global effects of atmospheric warming can be monitored. A companion work, the *Fifth Volume of the Fluctuation of Glaciers,* will be published with the *Inventory.*

140. A training course on Background Air Pollution Measurements, held in Budapest, Hungary from 15 August to 12 September 1987 and attended by eight participants from developing countries, acquainted experts from third world countries with the measurement and interpretation of data from the Background Air Pollution Monitoring Network (BAPMoN). Further extensive discussions were held with the BAPMoN Data Centre (Ashville, North Carolina, USA) on the feasibility of issuing a catalogue of available BAPMoN data. Within the Climate-Related Monitoring Programme, the *Global Climate System (Autumn 1984—Spring 1986)* was printed and distributed widely. The publication, which gives an overview of the predominant weather systems that operated during the period, is indispensable to meteorologists and climatologists. The publication programme for the *Climate System Monitoring* monthly bulletins was maintained and the issues were widely distributed to various institutions, including national weather services. The special reports in these bulletins on drought in Africa and Latin America, El Niño and Southern Oscillation (ENSO) were particularly useful in facilitating the monitoring of climate anomalies.

141. In addition, UNEP examined, in conjunction with the International Institute for Applied Systems Analysis (IIASA), the *Policy-Oriented Assessment of the Impact of Climate Change,* a study that focuses on bridging the gap between policy needs and research outputs in the area of climate change. A variety of human activities were examined, including agriculture, water resources, marine fisheries and forest management. Recommendations were made for the improvement of climate impact assessment to meet the needs of policy-makers and advisers more effectively. The findings and recommendations were published in June 1987 and distributed widely to scientific institutions and other bodies.

142. As part of a programme to inform the general public on the climate change issue, UNEP published in 1987 a popular account of greenhouse gases as a volume of the UNEP/GEMS Environment Library Series. Under the same programme, an audio-visual kit, consisting of cassettes and slides for distribution to schools and other educational institutions, was prepared by IIASA in 1987 on behalf of UNEP. The kit treats the most salient issues related to the emission of greenhouse gases, their possible effect on climate, and the impact of a changed climate on socio-economic systems in a simple manner.

143. A project for the development of policies to respond to climate change brought together eminent scientists, policy-makers and political figures to exchange views on the climate change issue. The first stage, a workshop, held in Villach, Austria during September 1987, examined technically feasible options for averting or adapting to climate change. The project's second phase, a workshop held in Bellagio, Italy in November 1987, attempted to map a new management agenda, taking account of the Villach findings. The Villach workshop discussed the feasibility of options for reducing emissions of greenhouse gases, particularly carbon dioxide. These options included immediately stopping deforestation and embarking on massive reforestation; improving end use energy efficiency by 50 per cent; altering the present mix of fossil fuels to a mix of those emitting the lowest amounts of carbon dioxide; and replacing fossil fuels with alternative energy sources, such as hydropower, nuclear, tidal, solar or hydrogen energy.

144. The Bellagio dialogue helped scientists appreciate the obstacles faced by policy-makers and simultaneously enabled the policy-makers to appreciate the scientific aspects of

the problem. The results of the two-stage workshop constitute a major input for a high-level international meeting on the changing atmosphere scheduled for mid-1988 in Canada.

145. One of the recommendations of the International Conference on the Assessment of the Impact of CO_2 on Climate Variations, held at Villach in 1985, was that regional assessments of the possible impacts of climate change should be undertaken. The European Workshop on Interrelated Bioclimatic and Land Use Changes, convened at Noordwijkerhout in October 1987 at the initiative of the Government of the Netherlands and co-sponsored by UNEP, among others, responded directly to this recommendation and was the first organized in a regional context. It examined the socio-economic impacts on various aspects of human activities and socio-economic systems in Europe that may result from a changed climate.

146. In addition, the Climatic Research Unit of the University of East Anglia undertook on behalf of UNEP a state-of-the-art report on sea level changes and tropical storm frequency. All aspects of rising sea level were considered in great detail in a workshop organized during September 1987. The conclusions of this workshop, scheduled for publication in 1988, are essential to the co-operative programme between UNEP and the Netherlands on the Impact of Sea Level Rise on Society.

147. During 1988 and 1989, the socio-economic implications of climate change in Southeast Asia will be examined, as well as policy responses to these impacts. Consequently, 1987 witnessed preparatory negotiations with the Governments of Indonesia, Malaysia and Thailand. An expert meeting on socio-economic impacts and policy responses resulting from climate change, held in Bangkok in December, urged that the Southeast Asia study be an integrated one, encompassing agriculture, fisheries, settlements and marine ecosystems, including sea level.

The World Climate Impact Studies Programme (WCIP)

148. 1987, eight years after the creation of the World Climate Impact Studies Programme (WCIP), witnessed significant consolidation in the science of climate impact assessment. The study of regional climatic impacts possibly associated with the El Niño phenomenon, continued in accordance with the recommendations of the 1985 workshop on the subject (see *1985 Annual Report,* chap. IV, para. 144), including such wide-ranging anomalies as droughts in Africa and Australia, poor fish catches in Chile, reduced crop yields in China, heat waves in the USA and flooding in the USSR.

149. In addition, two important projects came to a successful completion during the year. The first was the IIASA/UNEP project on integrated approaches to climate impact studies, which examined the relationship between climate variability and food production in climatically-sensitive regions of the globe. The project sought to relate climate to food production in two broad zones: cool temperate and cold zones; and semi-arid zones. In the cooler zone, case studies were conducted in Saskatchewan (Canada), Finland, Iceland, Japan and in the Leningrad, Perm and Central regions of the European USSR. In the semi-arid zone case studies on the vulnerability to drought were conducted in southeast Australia, northeast Brazil, the central Sierra of Ecuador, central India and in the Stavropol and Saratov Regions of the European USSR.

150. A study on reducing the vulnerability of food systems to climate in north-east India was also concluded during 1987. Implemented by UNEP, the UN Research Institute for Social Development and the Centre for Regional, Ecological and Science Studies in Development Alternatives, this project generated new data on the impact of climate variations on crop yields, providing valuable information to agricultural planners in the

region. Apart from the traditional crop/climate relation studies for the area, this project also introduced a new approach to climate studies in that it assessed the perception of climatic hazards by a sample of rural communities through an extensive questionnaire system. The results of this project are expected to be published during the second half of 1988.

151. The Inter-Agency Group on Agricultural Bio-meteorology (IGAB) has continued to focus attention on the socio-economic consequences of agricultural alternatives provided by existing climatic conditions in the low-land humid tropics of South America. One significant event in 1987 of this UNEP-supported activity, begun in 1985, was a workshop on techniques used in agroclimatic studies in the humid tropics, organized in Quito, Ecuador, in March. The final outputs of this project, including the proceedings of the March workshop, will be available by mid-1988.

152. Destructive land use, overgrazing and deforestation are rapidly changing land surface properties. The Committee on Space Research (COSPAR) and the International Association of Meteorology and Physics (IAMAP) are managing the International Satellite Land Surface Climatology Project (ISLSCP), in which UNEP plays an important role. ISLSCP addresses techniques for monitoring changes in land surface properties using remote sensing. During the year under review, the main activity sponsored by UNEP was a workshop at Yalta, convened at the invitation of the Government of the USSR, at which scientists developing ISLSCP techniques shared USSR experience in remote sensing. The workshop will result in the development of a USSR experiment using the ISLSCP approach. Other regional workshops will open the way to the use of remote sensing techniques in monitoring land surface characteristics in African and other climate-sensitive areas of the world.

153. A reliable and sound database is a prerequisite to any climate impact studies. As a contribution to the implementation of the decisions of the African Ministerial Conference on the Environment, UNEP, in conjunction with WMO, embarked in 1987 on a project to improve the database of a number of African countries. The project will provide facilities for the storage of climate data on microfilm and the training of specialists in data storage and retrieval.

Assessment (Budget subline 4103)

Monitoring and assessment

154. The Monitoring and Assessment Research Centre (MARC) continues to serve as an important focus for environmental pollution assessment, helping to bridge the gap between monitored data and the assessments of impacts on human populations. Highlights of work conducted in 1987 include a significant contribution to the UNSCEAR assessment of radiation exposures resulting from the Chernobyl accident; finalization of the first environmental data report presented to the Governing Council at its 14th session[4] and the compilation of data for the 1989 environmental data report; the computerization of data used in the environmental data reports; evaluation of GEMS monitoring data; an analysis of the GEMS urban air monitoring network supplementing the data on sulphur dioxide and suspended particulate matter with information on nitrogen oxides, lead and carbon monoxide; publication of reports dealing with hexachlorobenzene and zinc, and pesticides in aquatic environments and terrestrial ecosystems; and the organization of a major international seminar entitled "Environmental Problems, Priorities and Actions". The visiting scientist programme continued, hosting two scientists from China. MARC also hosted an International Programme for Chemical Safety (IPCS) meeting in which the criteria document on dioxines and furanes was completed.

155. The IUCN Conservation Monitoring Centre (CMC), an element of GEMS, continued to gather data on the status of rare and endangered species of plants and animals, parks and protected areas, and trade in animal products. Much of the data, particularly those relating to trade, were provided to the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) to help in determining quotas under that Convention. During 1987 it became apparent that more practical use could be made of much of the CMC data if the databases were presented in a different format. Accordingly, considerable attention has been given to possibilities for redesigning several of the major databases. As CMC will move from its present site in Cambridge (UK) during 1988, the period of settling into its new home will be a good time to introduce some of the proposed changes.

156. A comprehensive and unique database on cetaceans (whales, dolphins and porpoises) has been completed. Before final publication in the form of a Red Data Book, it will undergo extensive and rigorous review because of the controversial and emotional reactions to the topic.

Biogeochemical cycles

157. The year 1987 saw the first international initiative aimed at a fuller understanding of the Earth as an interconnected whole. The International Geosphere-Biosphere Programme (IGBP) will build on the foundations that other international research programmes have laid and utilize their continued findings. The initiative for IGBP was based on a study carried out under the auspices of ICSU. IGBP is a separate entity that interacts with other related programmes such as the World Climate Research Programme, the International Lithosphere Programme, and the Man and Biosphere Programme. IGBP is intended to serve as a connective matrix linking activities of related programmes and filling the gaps between them. It will also initiate a set of new activities directed at understanding the key interactions that link the various components of our planet's system in an effort to fill the critical gaps in our knowledge of their functions. Topics suggested for early study in IGBP include biogeochemical cycles; thus during 1987, UNEP, co-operating with the IGBP through SCOPE, started three new projects in co-operation with SCOPE in the field of biogeochemical cycling: one project each in the fields of carbon cycling; sulphur cycling; and the cycling of phosphorus.

158. A number of issues currently being discussed relate directly to the sulphur cycle, among them, acid precipitations and acidification of inland lakes. All these problems have become increasingly apparent because the speed of transformations within the sulphur cycle has increased dramatically owing to human perturbations. Three aspects of the sulphur flux in particular are attracting increasing interest: wetlands, lakes and the drainage water from mineral deposits. These aspects were the subjects of preparatory work during 1987 which will culminate in three international workshops to be held in 1988 and 1989, resulting in a SCOPE/UNEP synthesis report to be published at the end of 1989.

159. The first joint workshop between the Carbon and Sulphur Units, which took place in Texel, the Netherlands, in September 1987, dealt with the interactions between the carbon and sulphur cycles in lakes and estuaries.

160. In 1987, SCOPE and UNEP established a new project on the phosphorus cycle, which is a logical follow-up to that on the nitrogen cycle, as well as to the ongoing SCOPE projects on the carbon and sulphur cycles. By establishing linkages with carbon, nitrogen and sulphur cycling, the phosphorus cycling project will develop a basis for analysing global change in the biosphere. Phosphorus occupies a key place among the major nutrients

because of its relative scarcity and its essential role in energy transformations in all life forms.

161. UNEP also supported the convening in Delhi in February 1987 of the second SCOPE international workshop on the geochemistry modelling and global cycling of trace metals in developing and developed countries The purpose of this workshop was to examine, in detail, the local and regional fluxes of trace metals with special emphasis on arsenic, cadmium, lead and mercury, as these four metals are major health hazards. Particular attention was devoted to developing countries, notably the non-industrialized nations. Comparisons of environmental pathways, sources and sinks and "on residence" times were also made.

Bioproductivity

162. The eighth UNEP training course on bioproductivity assessment was held at the Plant Physiology Laboratory of the National Botanical Research Institute, Lucknow in January 1987, co-sponsored by the Commonwealth Science Council, the Indian Government Department of Science and Technology, and its Council for Scientific and Industrial Research. Additional assistance for lecturers' travel expenses was provided by the US Department of Agriculture and the Austrian Bundesministerium fur Wissenschaft und Forschung. A total of 25 students took part in the course and were encouraged to keep in touch afterwards.

163. The first such course, sponsored by UNEP, was held in 1983 at Madurai, India, and provided an example of the multiplier effect of these courses. Since that first course, three similar national training courses have been held in Madurai, 12 doctorates and 15 Master's degrees in photosynthesis and bioproductivity have been awarded, and the receipt of over $900,000 in support from national and international agencies has been reported.

164. An *Ad Hoc* Expert Group Meeting was held at UNEP Headquarters, Nairobi, in December 1987 to determine the future orientation of UNEP activities in the field of bioproductivity, in particular with regard to the interrelationship between enhanced atmospheric carbon dioxide and increased rates of photosynthesis and bioproductivity.

OCEANS (Budget line 51)

165. Owing to the oceans' vastness, the complexity of their functions and the need for far greater synthesized knowledge, UNEP focuses its work on the marine environment in three areas, each of which has its own budget subline: (a) Global marine environment; (b) Regional seas; and (c) Living marine resources.

Global Marine Environment (Budget subline 5101)

166. In 1987, UNEP continued to carry out a global evaluation of the state of the art of coastal modelling; a review of the state of the marine environment; an assessment of the long-term ecological consequences of low-level marine contamination and a review of carcinogens and nutrients as marine pollutants. In collaboration with Intergovernmental Oceanographic Commission, (IOC) and WMO, UNEP is also examining the relationship between ocean dynamics and climate changes, particularly the impacts of projected sea level and temperature rise in the Mediterranean, the South Pacific, the Caribbean, the South Asian Seas, the East Asian Seas and the South-east Pacific regions.

167. Under UNEP co-ordination and with the support of all the sponsors of the Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP), work also continued during 1987 on the preparation of a second review of the health of the oceans. Drafts of 15 regional reports were prepared, covering: the Mediterranean; the South-east Pacific; the East Asian Seas; the South Asian Seas; the Red Sea; the Caribbean; West and Central Africa; the South Pacific; Eastern Africa; the Kuwait Action Plan region; the Black Sea; the South-west Atlantic; the Artic; the Antarctic; and the North Pacific.

168. Through GESAMP, UNEP continued its work on the integrated global ocean monitoring programme, the first attempt to link marine biology, geology, chemistry and physical oceanography on a world-wide scale. UNEP activities during the year under review included the assessment of the state of the marine environment and of its resources; of the sources and trends of pollution; and the impact of pollution on human health, marine ecosystems and tourism. The data obtained through this assessment, it is hoped, will be universally compatible and thus contribute to the work of GEMS. UNEP has also been working on a set of reference methods and guidelines for marine pollution studies in co-operation with a sister UN agency, the IAEA International Laboratory of Marine Radioactivity, which is responsible for the technical co-ordination of the development, testing and intercalibration of reference methods. To date, some 60 reference methods and 10 reference materials have been produced in co-operation with a number of interested organizations.

Regional seas (Budget subline 5102)

169. Despite the fundamentally global character of the oceans' problems, UNEP has chosen to work towards their solution through regional programmes, so that a common policy, strategy and methodology can be adapted to each region's particular needs. An illustrative overview is provided in Figure 7.

170. *The Mediterranean.* Twelve years after the adoption of the Mediterranean Action Plan (MAP) or the "Blue Plan", the draft protocol on the protection of the Mediterranean Sea against pollution engendered by the exploration and exploitation of the continental shelf, as well as the sea-bed and its sub-soil, was elaborated by the secretariat and recommended by the Contracting Parties for review in preparation for consideration of the text by a Plenipotentiary Conference in 1989. A detailed MAP programme calendar for 1986-1995 was approved by the Contracting Parties. Selection criteria and an initial list of 100 coastal historic sites of common Mediterranean interest were also prepared. The Priority Actions Programme of the UNEP Mediterranean Office has developed further its networks of projects and institutions in several areas: a regional programme on seismic zones has attracted the necessary outside financing and programmes on aquaculture and soil erosion have been developed. The scope of action of the Regional Activity Centre for Specially Protected Areas is illustrated by Figure 8. During the year under review, draft versions of the *Directory of marine and coastal protected areas of the Mediterranean region* and *Guidelines for the selection, establishment, management and notification of information on marine and coastal protected areas of the Mediterranean* were prepared in co-operation with IUCN.

171. The Mediterranean Pollution (MED POL) national monitoring programmes covered 13 countries by the end of 1987, and approximately 100 research institutions participate in their research component. The Guidelines and the calendar for 1986-1995, covering the implementation of the Protocol on Land-Based Sources of Pollution, which includes lists of prohibited substances and those that require special care, were approved. The pollution of the Mediterranean by mercury and mercury compounds was assessed, as was microbial

Figure 7

UNEP's Regional Seas Programme

UNEP's ten regional seas programmes have enlisted over 120 countries and a network of some 250 national organizations in a strategy to protect coastal waters worldwide. The map gives details of the nine action plans, eight conventions and fifteen protocols and agreements adopted by 1987, and of the South Asia Action Plan expected in 1989. More than 30 global and regional organizations, including co-operating United Nations agencies, share in these achievements.

1. MEDITERRANEAN ACTION PLAN, February 1975

Convention adopted in Barcelona in February 1976, in force 1978. Ratified by seventeen countries and the EEC. Four protocols—on the prevention of pollution by dumping (1976) and from land-based sources (1980); on co-operation in cases of emergency (1976) and on specially protected areas (1982).

2. ACTION PLAN FOR THE PROTECTION AND DEVELOPMENT OF THE MARINE ENVIRONMENT AND THE COASTAL AREAS OF BAHRAIN, IRAN, IRAQ, KUWAIT, OMAN, QATAR, SAUDI ARABIA AND THE UNITED ARAB EMIRATES, April 1978

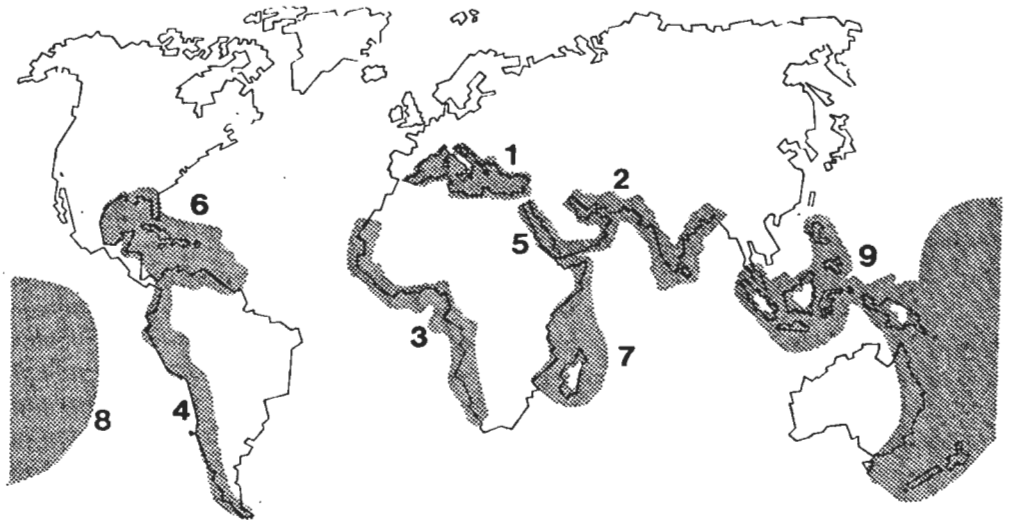
Convention adopted in Kuwait in April 1978, in force 1979 and ratified by eight countries. Protocol on co-operation in pollution emergencies (1978).

3. ACTION PLAN FOR THE PROTECTION AND DEVELOPMENT OF THE MARINE ENVIRONMENT AND COASTAL AREAS OF THE WEST AND CENTRAL AFRICAN REGION, March 1981

Convention adopted in Abidjan in March 1981, in force 1984. Ratified by seven countries and also signed by six countries. Protocol on co-operation in pollution emergencies (1981).

4. ACTION PLAN FOR THE PROTECTION OF THE MARINE ENVIRONMENT AND COASTAL AREAS OF THE SOUTH-EAST PACIFIC, November 1981

Convention adopted in Lima in November 1981, in force 1986. Ratified by four countries and also signed by one. Three agreements or protocols—on co-operation in pollution emergencies (1981, 1983) and on preventing pollution from land-based sources (1983).



5. ACTION PLAN FOR THE PROTECTION OF THE MARINE ENVIRONMENT AND DEVELOPMENT OF COASTAL AREAS IN THE RED SEA AND GULF OF ADEN, February 1982

Regional Convention adopted in Jeddah, February 1982, in force August 1982. Ratified by four countries and also signed by three countries. Protocol on co-operation in pollution emergencies (1982).

6. ACTION PLAN FOR THE CARIBBEAN ENVIRONMENT PROGRAMME, April 1981

Convention adopted in Cartagena de Indias, March 1983, ratified by ten countries and also signed by six countries and the EEC. Protocol on co-operation in combating oil spills (1983).

7. ACTION PLAN FOR THE PROTECTION AND DEVELOPMENT OF THE MARINE AND COASTAL ENVIRONMENT OF THE EASTERN AFRICAN REGION, June 1985

Convention adopted in Nairobi, June 1985. Signed by four countries and the EEC. Two protocols—on protected areas and wild flora and fauna (1985) and on co-operation in pollution emergencies (1985).

8. ACTION PLAN FOR MANAGING THE NATURAL RESOURCES AND ENVIRONMENT OF THE SOUTH PACIFIC REGION, March 1982

Convention adopted in Noumea in November 1986 and signed by seven countries. Two protocols—on co-operation in pollution emergencies (1986) and on the prevention of pollution by dumping (1986).

9. ACTION PLAN FOR THE PROTECTION AND DEVELOPMENT OF THE MARINE AND COASTAL AREAS OF THE EAST ASIAN SEAS REGION, October 1981

Preparation of conventions and protocol is under discussion.

SOUTH ASIAN SEAS ACTION PLAN

Under preparation.



pollution of shellfish and shellfish-growing waters and pollution by petroleum hydrocarbons. Measures were adopted to prevent mercury pollution by setting effluent standards, as were environmental quality criteria for shellfish waters, and guidelines were established for co-operation in combating marine oil pollution in the region.

172. *Kuwait Action Plan (KAP) region.* The fifth meeting of Council of the Regional Organization for the Protection of the Marine Environment (ROPME), held in October 1986, had requested UNEP assistance in the work of the Scientific Review Committee set up to evaluate completed and ongoing KAP projects, in the formulation of concrete recommendations on future development of ROPME activities and in an overall evaluation of ROPME's programme, based on the immediate needs of the region. In response to this request for assistance, UNEP carried out several activities with ROPME during 1987.

173. The causes of fish and dolphin mortalities in ROPME sea areas were studied by a group of regional experts, which included one identified by UNEP, which proposed remedial measures, and a report was prepared. As a first and essential step towards the establishment of a central data bank for the region, a UNEP-nominated expert assisted ROPME in identifying its data management requirements and possible management procedures and in developing a computer facility at the ROPME secretariat. In addition, UNEP provided assistance in planning and convening the ROPME workshop on coastal area development, held in Kuwait in August 1987, and supported four senior experts who presented case studies from other regions—the Mediterranean, the East Asian Seas, the Caribbean and the South Pacific.

174. UNEP also continued throughout 1987 to co-ordinate the IAEA assistance to ROPME in the intercalibration of analytical methods, marine pollution monitoring, the identification of unknown halogenated hydrocarbons and the mercury survey in fish and sediments. Moreover, on request from countries of the region, UNEP provided technical assistance on an *Ad Hoc* basis to strengthen the research capabilities of the region, as well as expert advice to enable KAP countries to face other environmental problems. In view of the postponement of the sixth meeting of the ROPME Council, UNEP held a joint programming session with the secretariat of ROPME in November 1987 to identify areas of continued co-operation and to decide upon the modalities of undertaking joint activities.

175. *Wider Caribbean.* The UNEP Regional Co-ordinating Unit for the Wider Caribbean was formally established in Kingston, Jamaica, on 11 May 1987. As 11 Governments had ratified or acceeded to the Convention for the Protection of the Marine Environment of the Wider Caribbean and its Protocol Concerning Co-operation in Combating Oil Spills, the Convention and its Protocol entered into force on 11 October 1986. The Fourth Intergovernmental Meeting was held in Guadeloupe in October 1987 and identified four projects of regional significance: co-ordination and common costs; environmental management of coastal and terrestrial environments; assessment and control of marine pollution; and environmental training, education and public awareness. These four large projects, each comprising a number of individual target activities, were approved for immediate implementation. The development of protocols to the Convention regarding land-based sources of pollution and specially protected areas and wildlife and the extension of the Protocol on Oil Pollution to other hazardous substances are to be developed in 1988.

176. *West and Central Africa region.* The monitoring of pollution in the marine environment of the West and Central African region continued to develop during 1987. Equipment, fellowship and attendance at meetings were financed for laboratories and scientists of the region. However, the establishment of the Regional Co-ordination Unit in Abidjan has been delayed, owing to the inadequate balance of the Trust Fund.

177. *Eastern African region.* Comoros, France, Kenya, Mozambique, Somalia and Tanzania informed UNEP during 1987 that they were in the process of ratifying or acceding to the Convention for the Protection, Management and Development of the Marine and Coastal Environment and the two Protocols, respectively, concerning Protected Areas and Wild Fauna and Flora and Combating Marine Pollution in Cases of Emergency in the Region. The Regional Trust Fund, established for the implementation of the action plan, was made operational by the French Government deposit of US$62,500. UNEP provided *Ad Hoc* technical advice on environmental issues to Mauritius, Mozambique, Somalia and Tanzania. A network of institutions collaborating in the implementation of the action plan is under development.

178. *East Asian Seas region.* A meeting of experts on the control of oil pollution in the East Asian Seas region, held at Bali, Indonesia in October 1987, reviewed the existing and ongoing research, management and legislative activities relevant to the control of oil pollution in the region and advised on future activities within the framework of the East Asian Seas Action Plan to impose effective control on oil pollution in co-operation with the oil industry of the region. The meeting, co-hosted by the Office of the State Minister for Population and the Environment of Indonesia and the ASEAN Council on Petroleum (ASCOPE), put forward 23 recommendations for oil pollution control measures in the region.

179. The second meeting of experts on the East Asian Seas Action Plan was held in Bangkok towards the end of 1987. Attended by 17 experts from Indonesia, Malaysia, Philippines, Singapore and Thailand, and nine observers from eight international, intergovernmental and regional organizations, the meeting's major achievements were the final draft of the report on the state of the marine environment in the East Asian Seas region; the endorsement of the outline of the report on the implications of expected climatic changes in the region; and the analysis of immediate, short-term and long-term environmental problems of the region, as well as their possible solutions. The experts agreed that the destruction of coral reef and mangrove ecosystems was the gravest regional concern, followed by sewage, industrial and oil pollution.

180. *Red Sea and Gulf of Aden.* A government expert meeting concerning co-operation in combating marine pollution emergencies in the Gulf of Aden, held in Djibouti in October and co-sponsored by UNEP and IMO, adopted a project for the establishment of a sub-regional centre in Djibouti for stockpiling equipment and material for combating oil pollution. UNEP and IMO are following up the recommendation of the meeting, which requested assistance in seeking appropriate sources of funding to support the project. At the same time, further consultations took place with the Arab League Educational, Cultural and Scientific Organization (ALECSO) and the Programme for the Environment of the Red Sea and Gulf of Aden (PERSGA) concerning co-operation with UNEP in the protection of the marine environment and the management of the coastal zone of the region.

181. *South Pacific region.* Eleven Governments have signed the Convention for the Protection of the Natural Resources and the Environment of the South Pacific and its associated Protocols, while one country has completed the process of ratification. The implementation of the Action Plan continued under the direction of the South Pacific Commission (SPC) with 28 ongoing projects in the areas of watershed management, inland water quality, coastal water quality and pesticides. In the latter half of 1987, UNEP signed a new project document with SPC covering 12 activities in the fields of environmental education, awareness, training and information—a significant development in the expansion of UNEP/SCP co-operation, which has hitherto been concerned largely with environmental monitoring and control.

182. *South-east Pacific.* The Convention on the Protection of the Marine Environment and Coastal Area of the South-east Pacific, its supplementary Agreement and Protocols have entered into force. The initial phase of the regional marine pollution research and monitoring programme is nearing successful completion and plans are under way for the implementation of a second long-term phase. A detailed contingency plan to combat pollution in cases of emergency is now operational, with stockpiles of equipment, trained personnel and a clear definition of lines of command and communication. Implementation of the Action Plan has continued under the responsibility of the Permanent Commission for the South Pacific (CPPS).

183. *South Asian Seas region.* A meeting of focal points to consider the adoption of the South Asian Seas Action Plan was held in Bangkok in December 1987. Bangladesh, India, Maldives, Pakistan and Sri Lanka participated in analysing environmental problems, reviewing progress in the implementation of the priority activities recommended earlier, and drafting an Action Plan for the protection and management of the regional marine and coastal environment. Institutional and financial arrangements required for the implementation of the Action Plan were not, however, agreed upon. The meeting decided to recommend only that the regular periodic intergovernmental meetings of high-level government representatives from each of the five countries continue to be the sole authority to determine the content of the regional programme, to review its progress and to approve its work plan and budget.

184. *South-west Atlantic.* In accordance with the wishes of the Governments of the region, no activities were conducted in 1987. However, as part of GESAMP efforts to prepare a second comprehensive review of the health of the oceans, a regional report for the South-west Atlantic was drafted.

185. *Inter-regional co-operation around Africa.* The First African Ministerial Conference on the Environment (AMCEN) established a Committee on Seas to facilitate the implementation of the UNEP Regional Seas Programmes for West and Central Africa, East Africa, the African component of the Mediterranean Sea, and the Red Sea and Gulf of Aden. Composed entirely of African experts, the Committee held its first meeting in Algiers in May and adopted its terms of reference, priority activities, work plan and timetable and proposed a budget for the period 1987-1988, all of which were endorsed by the AMCEN at its second session in Nairobi in June 1987. UNEP serves as the secretariat of the AMCEN Committee on Seas; its work includes the preparation of an inventory of expertise available at African institutions competent in the field of marine environment.

Living marine resources (Budget subline 5103)

186. The Global Plan of Action for the conservation, management and utilization of marine mammals was the centre of concentration during 1987. The designation of the Indian Ocean as a sanctuary for whales was re-assessed positively at a scientific meeting jointly organized by the International Whaling Commission (IWC), UNEP and the Government of the Seychelles. The training of graduate students and scientists in marine mammal conservation activities were initiated in the context of the Regional Seas Programme. The distribution of information about ongoing marine mammal projects, including public awareness materials such as booklets, posters, stickers and newsletters continued world-wide during the year under review.

WATER (Budget line 52)

187. A component of the general UNEP policy to promote sustainable development, the UNEP programme for the environmentally sound management of inland waters (EMINWA) was launched in 1985 within the framework of this programme (see *1986 Annual Report,* chap. IV, para. 165). The first priority is to help countries sharing a common river basin to develop their water resources in a sustainable manner and in harmony with one another—a goal that has much in common with the UNEP Regional Seas Programme, which has succeeded in developing action plans for 10 regional seas, including some whose bordering nations were actually in conflict.

188. The EMINWA programme deals with three types of inland water systems: rivers, lakes and aquifers. Each of these can be either national or international. To demonstrate its approach towards sustainable development of basins, UNEP aims at least one action plan for each type of inland water system.

189. Three phases are envisaged for each EMINWA regional programme. First, the countries involved formulate an action plan for the environmentally sound development of their common water resources. This phase usually starts with the organization of a working group of experts nominated by the relevant ministries of the basin countries. Through a diagnostic study carried out by these experts, the current status of the ecology and environmental management of the basin is assessed. As a second phase, an action plan is developed to solve the problems in the basin. To implement the action plan, the necessary legal and institutional arrangements are developed—typically, a convention, agreement or resolution on the establishment and management of a rivers, lakes or aquifers authority. Finally, the action plan is carried out through a series of projects financed either by the basin countries or donors, usually a combination of the two.

190. The initial activity of the EMINWA programme, which began in 1985, has been UNEP's formulation of an Action Plan for the Zambezi basin. In January 1987, the Working Group of Experts on the Zambezi River System held its third meeting at Gaborone to finalize the draft of a diagnostic study on the present state of ecology and environmental management in the Zambezi River System, as well as the Zambezi Action Plan (ZACPLAN) for the environmentally sound management of the common river system. In the preparation of ZACPLAN, the Resident Representatives of UNDP in the basin countries were briefed on the ongoing activities in order to make use of their potential co-ordination role at the country level.

191. At the Conference of Plenipotentiaries on the Environmentally Sound Management of the Common Zambezi River System, held in Harare in May 1987, ZACPLAN was adopted by five basin countries—Botswana, Mozambique, Tanzania, Zambia, Zimbabwe, and Angola. The South West Africa People's Organization (SWAPO) also supported the Plan. Representatives of the Southern African Development Co-ordination Conference (SADCC), UNEP, FAO, Unesco, the World Bank, WHO, WMO, UNDP, WFP, international NGOs and 10 donor countries attended the Conference as observers. It was agreed that ZACPLAN would be a SADCC programme. Consequently, the institutional and financial arrangements for implementing ZACPLAN were left to the SADCC Council of Ministers.

192. The SADCC Council of Ministers, which met in July at Lusaka, decided that ZACPLAN implementation would be undertaken by the SADCC Co-ordination Unit of Soil and Water Conservation and Land Utilization at Maseru, Lesotho.

193. The preparation of an action plan for the Lake Chad Basin was initiated in 1987. The Lake Chad Basin is the largest inland drainage basin in Africa with an area of 2,335,000 square kilometres covering parts of Cameroon, the Central African Republic, Chad, Niger, and Nigeria. The waters of the basin have been increasingly exploited during recent years, as all the riparian States have mounted development projects in agriculture and industry that utilize the basin's water resources. However, as the surface and water volume of the Lake Chad Basin have decreased tremendously since the early 1970s, the activities planned for the development of the area have met with difficulties. The action plan consequently aims at sustainable development in the Basin: protecting the environment of Lake Chad by providing a comprehensive plan for the environmentally sound management of the entire area of the Lake.

194. Preparatory work for other action plans was also carried out during the year under review. Preliminary discussions began on the formulation of an action plan for the Nubian Sandstone Aquifer, which covers parts of Chad, Egypt, Libya and Sudan. The capacity of the aquifer is generally regarded as enormous, but the data so far collected in the basin are insufficient to assess precisely its capacity and recharge rate. Therefore, a major activity of the action plan could be the development of a better monitoring scheme in the basin, which might include standardization in the presentation of data to be acquired in each basin country. The preparation of action plans for the Lake Managua (Nicaragua) and the Orinoco-Apure River (Venezuela) is also being discussed.

195. The formulation of methodologies and guidelines for environmentally sound management of water resources is one of the major components of the EMINWA programme. The implementation of the UNEP/Unesco project on integrated environmental evaluation of water development progressed satisfactorily during the year. A third meeting of the Scientific Expert Group was held in Paris in September 1987 to finalize the Methodological Guidelines for the Integrated Environmental Evaluation of Water Resources Development, which is scheduled for publication during the first half of 1988 in English, French and Spanish.

196. In view of the growing economic, social and environmental interdependencies across frontiers, industrialized countries will have to intensify their endeavours to ensure the sustainable and equitable use of waters they share and to combat or prevent transboundary water pollution. In co-operation with ECE, UNEP worked throughout 1987 on the development of a code of conduct for the prevention and management of accidental pollution of transboundary inland waters, which is to be approved by the ECE Committee on Water Resources and agreed and observed by ECE Governments. The draft code of conduct may also be useful in other geographical regions with similar problems and could be used to train relevant professionals on the prevention and management of accidental pollution of international water systems. Some of the aspects of the code of conduct, such as the installation of gauging stations and the development of basin-wide information networks, will be used by UNEP to facilitate the implementation of action plans on inland water systems in third world countries.

197. Recognizing the critical relationship between environmental quality water resources and related land use development implies formulating methods by which decision-makers, when considering trade-offs between different development objectives, can select the best options for water resources development. The creation of user-friendly programmes for microcomputers for identifying and evaluating environmentally sound water and land-related development plans and projects can enhance such decision-making immensely. UNEP and IIASA began working in 1987 on such decision-support systems and their application to the analysis of water projects. A manual and computer programmes will be

developed in 1988. The methodologies will be applied to two international river basins: one in Africa, the Zambezi, the other in Europe, the Danube.

198. The prolonged effect of acid rains contributes to a lowered pH in fresh water reserves and seriously endangers aquatic organisms (see Fig. 9). Also, eutrophication is becoming a serious problem in many lakes. To combat these problems, UNEP co-operated with the Shiga Prefectural Government of Japan in establishing the International Lake Environment Committee (ILEC), and this co-operation has resulted in a joint project, which began in 1987, on promotion of environmentally sound lake management. This project is to have two major outputs: a set of guidelines on lake management; and the organization of three workshops for decision-makers and professionals from developing countries on environmentally sound lake management.

199. Education and training are essential to the successful implementation of the EMINWA programme. Consequently, the programme includes the following three major components: development of standard training materials—a basic textbook, curricula and syllabi—on the environmentally sound management of water resources; the organization of training courses, seminars and workshops; and the establishment of a specialized network of training institutes.

200. In addition to the training materials being developed jointly with ILEC on the environmentally sound management of lakes, UNEP and the International Training Centre for Water Resources Management (CEFIGRE) began in 1987 preparing training materials on the management of river basins. The structure of these materials was determined at the first meeting of the Working Group on Training Materials for the Training Courses on Environmentally Sound Management of Water Resources held at Sophia Antipolis, France, in September 1987. The materials are scheduled for completion in late 1988 and for publication in English and French in early 1989.

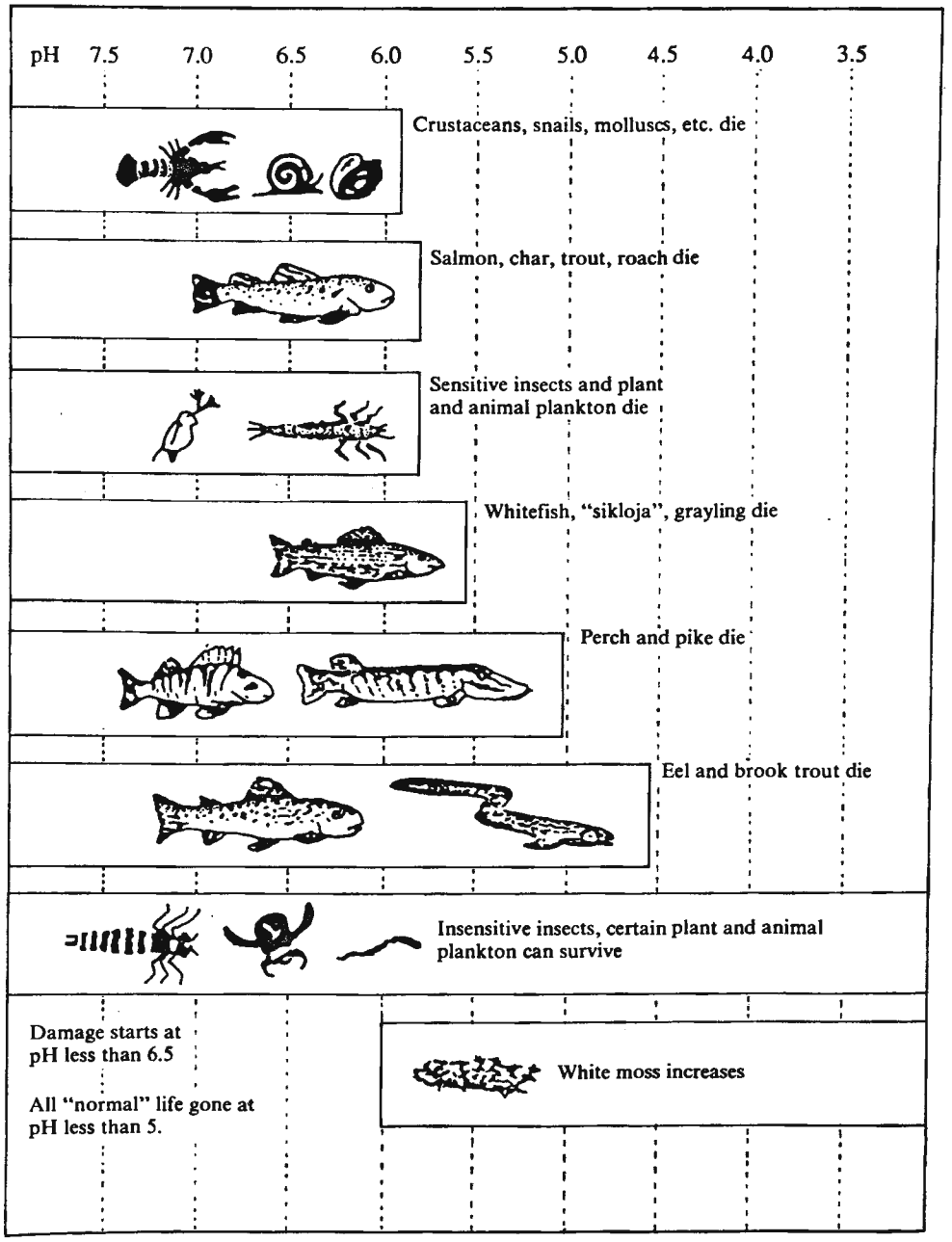
201. One of the UNEP targets to be achieved by 1992, includes specialized training in environmentally sound management of water for 100 professionals from developing countries, most of them decision-makers in the field. Under a UNEP/CEFIGRE project, three training courses were organized in 1987: two courses on the environmentally sound management of water resources were held at Arusha, Tanzania, in September 1987 and at Bujumbura, Burundi, in November 1987, respectively, and a third, on rural water supply and sanitation, was held at Sophia Antipolis, France, in November 1987.

202. In co-operation with Unesco, UNEP published in 1987 *Methodological Guidelines for the Integrated Evaluation of Water Resources Development* as basic material for high-level training schemes. Also during the year, a model syllabus for high-level training programmes was prepared jointly by UNEP and Unesco. The training course on environmentally sound management of water resources in East Africa, convened at Kisumu, Kenya, jointly by UNEP and the International Association of Hydrological Sciences (IAHS) in October, was attended by professionals from the region, especially the Lake Victoria basin. The course was geared to facilitating planning for integrated development and served as a basis for the possible development of the Lake Victoria action plan requested by the basin countries.

203. To stimulate analytic insights into the long-term environmental and economic implications of present policies and management approaches to land and water ecosystem and wildlife in Eastern and Southern Africa, particularly for agricultural development, a seminar on land and water ecosystems management was organized jointly by the Economic Development Institute of the World Bank and UNEP at Nairobi in October 1987. UNEP provided both the seminar leaders and logistic support.

Figure 9

The Sensitivity of aquatic organisms to lowered pH in fresh water



204. In accordance with the Cairo Programme for African Co-operation, the AMCEN Committee on River and Lake Basin met at Harare in March 1987. The meeting adopted the Committee's specific terms of reference, its workplan and budget for 1987 and 1988, and selected 14 priority subregional activities for implementation during the next few years—one of which, of course, is ZACPLAN. The Committee also recommend that African countries of other subregions consider the ZACPLAN approach as one of the possible models for promoting sustainable development in international and national water systems.

205. Subsequently, the first meeting of the Regional Co-ordination Unit of the AMCEN Water Resources Network was held at Cairo in October 1987 to discuss the organizational and operational arrangements for the Network, as well as its activities, which include: the specification of its terms of reference; the establishment of the national focal point in every participating country; the promotion of co-operation with other UN organizations, IGOs and NGOs; and the role and functions of the Network Management and Planning Group. The detailed programme of work of the Network for 1988 and 1989 was also developed and adopted by the meeting.

206. As a component of the UNEP umbrella project, strategic resource planning in Uganda, UNEP experts visited Uganda in January and July-August 1987 to make preliminary assessments and evaluations of the country's water resources. The mission report suggested giving high priority to the establishment of a reliable database for environmentally sound water resources development.

207. To investigate the problem of vast tracts of acid sulphate soils in the Mekong Delta, UNEP began in 1987 a project on ecologically sound development of water and land resources in the Mekong Delta, in co-operation with the Government of Vietnam, the Mekong Secretariat and UNEPCOM. Problems related to water management and the agricultural utilization of acid sulphate soils frequently occur in deltaic areas in the tropics, especially in South-east Asia. As the usual method of improving such soils, adding lime, is not feasible over large areas because of the vast quantities needed, simpler methods, such as the application of integrated water and land management strategies, should be investigated.

208. A global assessment of the state of the environment of inland water systems is another major component of the EMINWA programme. Development of *The State of the World Lakes* was initiated by UNEP in 1987, in association with ILEC. This collection of data will comprise limnological and socio-economic information on the present state of 200 lakes in the world. The first interim report is scheduled for publication in early 1988 with data and preliminary assessments on at least 50 large lakes.

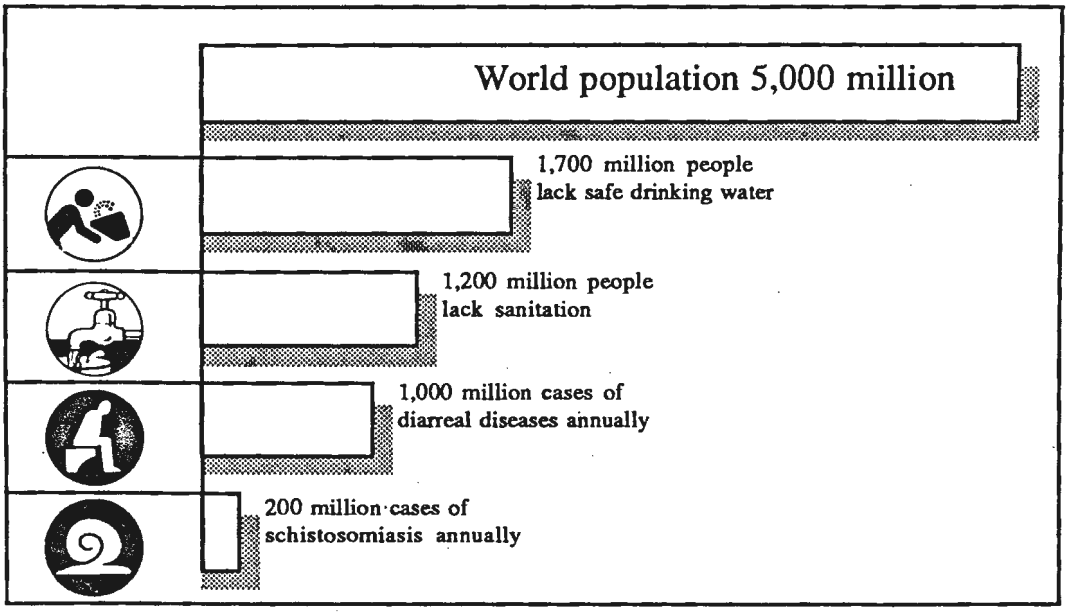
209. At the fifth meeting of the UNEP Advisory Group on Water Resources, held at Vienna in November 1987, the Group reviewed the implementation of UNEP activities related to water in 1986-1987. It noted with appreciation the progress of ZACPLAN and suggested that UNEP maintain its direct involvement in the Plan to demonstrate the EMINWA approach in an international river basin. The Group also discussed the formulation of UNEP activities with regard to the impact of climate change on water resources and suggested that research be conducted on the possible shift of climate belts and its effects on the pattern of water use, so that climate change could be taken into consideration in the development of criteria for water management systems.

210. A third meeting of the Working Group on Large Scale Water Development Projects was convened at Laxenburg, Austria, in November 1987. In accordance with the recommendation of the second meeting, the Group reviewed the draft of the *Synthesis Report on Guidelines for Sustainable Water Management,* which are scheduled to be completed and published in 1988.

211. UNEP participated in the fifteenth meeting of the Steering Committee for Co-operative Action of the International Drinking Water Supply and Sanitation Decade (IDWSSD) held at Santo Domingo, Dominican Republic, in November 1987. The Committee reviewed the accomplishments of the Decade and discussed the follow-up activities. Despite what has been achieved to date, dirty water is still the world's major cause of disease. More than a third of the world's population does not have safe drinking water; a quarter lacks sanitation. This leads to a thousand million cases of diarrhoea a year—4.6 million children—and more than 200 million cases of the parasitical disease schistosomiasis as illustrated in Figure 10.

Figure 10

World population affected by lack of safe drinking water



TERRESTRIAL ECOSYSTEMS (Budget line 61)

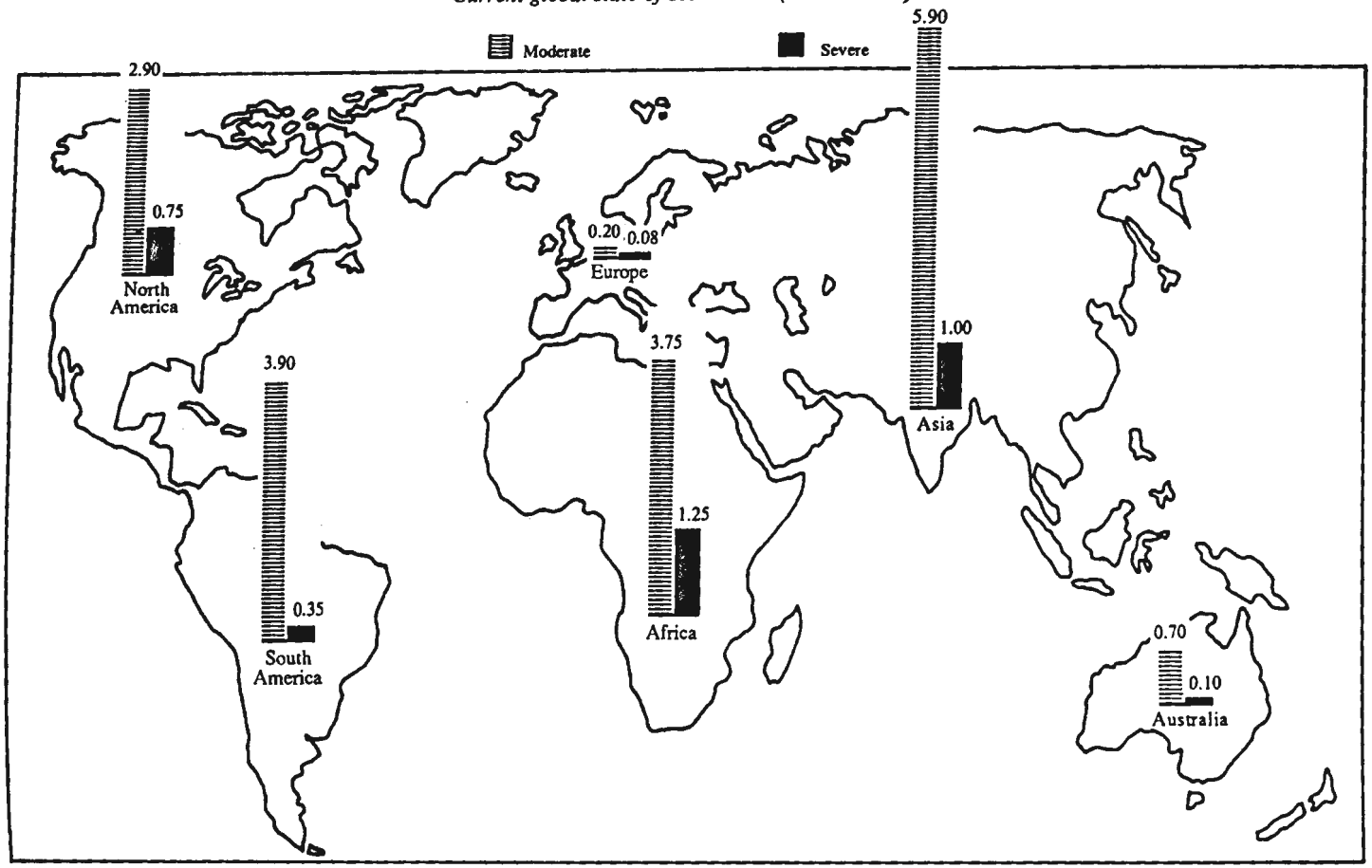
212. The terrestrial ecosystems budget line comprises seven budget sublines: (a) Soils; (b) Tropical forests; (c) Other ecosystems; (d) Management of agricultural chemicals and residues; (e) Wildlife and protected areas; (f) Genetic resources; and (g) Lithosphere.

Soils (Budget subline 6101)

213. Soil degradation, including wind and water erosion, salinization, alkalization, acidification and soil pollution, is one of the major global environmental crises. Of all these factors, water erosion is the most serious and widespread, accounting for more than 90 per cent of the current rate of soil erosion world-wide. Figure 11 shows that more than 80 per cent of all soil erosion is taking place in the continents of developing countries; Asia, for example, has lost approximately 6.9 million square kilometres.

Figure 11

Current global state of soil erosion (millions km²)



214. Soil erosion rates alone, however, are not always the best indicators of productivity damage. They can only direct the attention of the general public, students and political officials to the places where problems exist. Relating soil loss to productivity decline is difficult and, until recently, received little attention. Although no comprehensive surveys of the scale of crop loss due to soil erosion exist, scattered reports build up an alarming image. Ethiopia, for example, loses approximately one to three billion tonnes of fertile soil every year—a loss equivalent to approximately 1.5 million tonnes of grain annually, which, in turn, amounts to all the food relief shipped to Ethiopia in 1985. According to 1986 FAO calculations, Zimbabwe is losing 1.5 million tonnes of nitrogen, 15.6 million tonnes of organic matter and 0.24 million tonnes of phosphorus annually as a result of erosion, a cost of about US$1.5 billion per year. It is significant that these losses take place largely in communal holdings.

215. In May 1987, UNEP convened an *Ad Hoc* expert group meeting to advise on the feasibility and methodology of global soil degradation assessment and its effect on land productivity. The meeting helped finalize a joint UNEP/International Soil Reference and Information Centre (ISRIC) project on global assessment of soil degradation, which, by 1990, is to produce a general study summarizing the current rate and status of soil degradation world-wide, accompanied by a 1:15M map. It will also produce detailed assessments of soil degradation in selected priority areas, accompanied by 1:1M maps for planning and management purposes, as well as an operational manual and the training of more than 20 specialists in the methodology of a unified global soil degradation assessment.

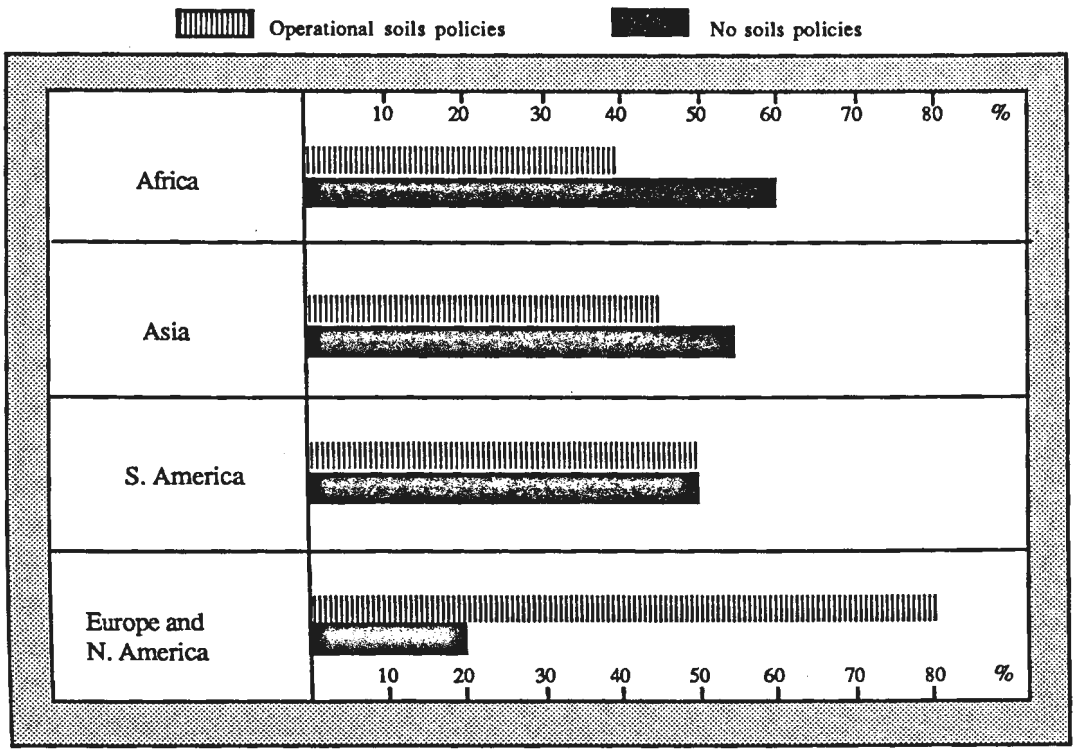
216. Perhaps the greatest obstacle to achieving soil conservation is the general inability to protect the environment as a whole. In part, this stems from inadequate legislation and inadequate enforcement of existing laws; poor organization; the shortage of trained personnel, information and technology; and the lack of financial and moral support for conservation due to ignorance of both the needs and the benefits of sustainable development. During 1987 UNEP conducted a survey through INFOTERRA concerning national soils and land use policies and the extent to which these policies were operational; 59 countries responded to the queries. In Europe and North America, 82 per cent of the countries responding had soils policies which were firmly adhered to; among the non-industrialized countries which replied, approximately 55 per cent had no operational national soils and land use policies, with African countries ranking the lowest (see Figure 12).

217. One of the major elements of the Plan of Action for the Implementation of the UNEP World Soils Policy was a project formulated in 1987 by UNEP, in co-operation with FAO, to lend advisory services to Governments for the formulation and implementation of national soils policies. Sudan and Uganda will be the first countries to receive such assistance. This project, it is hoped, will contribute towards the creation of national capabilities for the rational use of soils compatible with the wise use of other natural resources on a sustainable, productive basis.

218. Other projects aimed at putting the World Soils Policy into force involve promoting the rational use of soils in fragile ecosystems. Three projects formulated in 1987, for instance, concentrate on the watershed of the Mona River in Jamaica to protect soils against degradation, to provide sustainable systems of agriculture and to train the local personnel in the techniques of environmentally sound watershed management. Another project concentrates on initiating strategies for soil management and improved farming methods in fragile mountain ecosystems. Guidelines were produced in 1987 for the application of integrated land/soil management in mountain ecosystems, based on a project jointly sponsored by UNEP, the Government of Bulgaria, the USSR National Commission for UNEP

Figure 12

Countries with or without operational land use and soils policies



(UNEPCOM) and the International Centre for Integrated Mountain Development (ICIMOD); the target group is planners in developing countries. Another activity of this project was an ICIMOD/UNEP/UNEPCOM expert workshop on model curricula and training for soil erosion control and watershed management, held in Kathmandu, Nepal and Dushambe, USSR in July 1987, attended by 20 participants from the Hindu Kush-Himalaya Region, which examined 12 case studies from Bulgaria, China, India, Nepal, Pakistan and the USA. The workshop designed and developed model curricula and training programmes for soil erosion control and watershed management in mountain ecosystems aimed at decision-makers, professionals, technicians and community leaders.

219. In Africa, within the framework of the resolutions of the African Ministerial Conference on the Environment and the UN General Assembly resolution on the UN Programme of Action for African Economic Recovery and Development, 1986-1990, the first meeting of the Regional Co-ordination Unit of the Soils and Fertilizers Network took place in Accra in October 1987, sponsored by UNEP, FAO and the Government of Ghana. The meeting discussed organization of work, operational arrangements, programmes and activities, the promotion of joint activities with interested UN and other organizations and the financial aspects of the Network. Further discussions on joint activities were later held with FAO at its Rome headquarters and at its Regional Office in Accra and the activities of the Soils and Fertilizers Network were planned within the joint FAO/UNEP programme on soil conservation strategy for Africa.

Figure 13



A MESSAGE FROM THE UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)

220. Within the AMCEN programmes on pilot villages and stock-raising zones, field missions to Ethiopia, Sudan, Uganda and Zaire resulted in the preparation during the first half of 1987 of fully-fledged project documents aimed at the rehabilitation of the environment and planning for sustainable development in these countries. Seeking to alleviate food crises in Africa, UNEP assisted the Sixth General Conference of the Association of Faculties of Agriculture in Africa on Food Security in Africa, held in November 1987 at Lomé, by supporting the participation of seven deans of African faculties of agriculture and by presenting a paper entitled "Land for food security in Africa". Collaborating with the Economic Development Institute of the World Bank, UNEP also organized in Nairobi in October 1987 a seminar on management of land and water ecosystems in Eastern and Southern Africa for 29 planners and decision-makers, which sensitized the participants to the long-run environmental and economic implications of present policies and management approaches to land and water resources, particularly for agricultural development.

221. Through UNEP's Information Service, an environmental message on the subject of soil erosion was printed on the back of school notebooks intended for local school children in Kenya (see Figure 13).

Tropical forests (Budget subline 6102)

222. Governments, IGOs, NGOs, scientists and political figures have been concentrating their attention on the situation of tropical forests for at least two decades. The need for new agricultural lands, the effects of logging, forest fires, development schemes and the increased need for firewood, timber and other forest products have placed immense pressures on natural tropical forest ecosystem. Moreover, in too many cases, tropical forest areas have been considered as no man's or everyone's land: confusion as to ownership has led to their use as areas for new settlement schemes for landless farmers. The current global distribution, extent and vegetation types of tropical forests are shown in figures 14, 15 and 16.

223. The situation as assessed in 1981 indicated a total loss of more than 11 million hectares per year. Efforts are being now made in collaboration with FAO to develop updated assessments whose results should be available in 1992. These assessments will derive from modern satellite imagery, ground-based information and national inventories. Forests produce a wealth of goods and services beneficial to our human society (see Figure 17).

224. Increasing the afforestation capacities in developing countries to provide timber and firewood and to relieve the pressure on natural forest ecosystem is an urgent task. Concurrently, major efforts should be developed to protect samples of the remaining tropical ecosystems so as to ensure the survival of the invaluable genetic material they contain. The African region is reportedly losing more than 3.6 million hectares of its tropical forests per year and is able to plant only 125,000 hectares per year. It is clear that with a population which is projected to double in the next 22 years, the situation will be far worse in the near future. Some countries in the region rely on firewood for more than 80 per cent of their total energy requirements. In South America, Brazil alone is losing more than 2.5 million hectares of tropical forests per year, but is able to replace only 450,000 hectares annually, and even that replacement consists primarily of fast-growing exotic species which do not restore or recreate the natural ecosystem.

Figure 14

Distribution of tropical forests

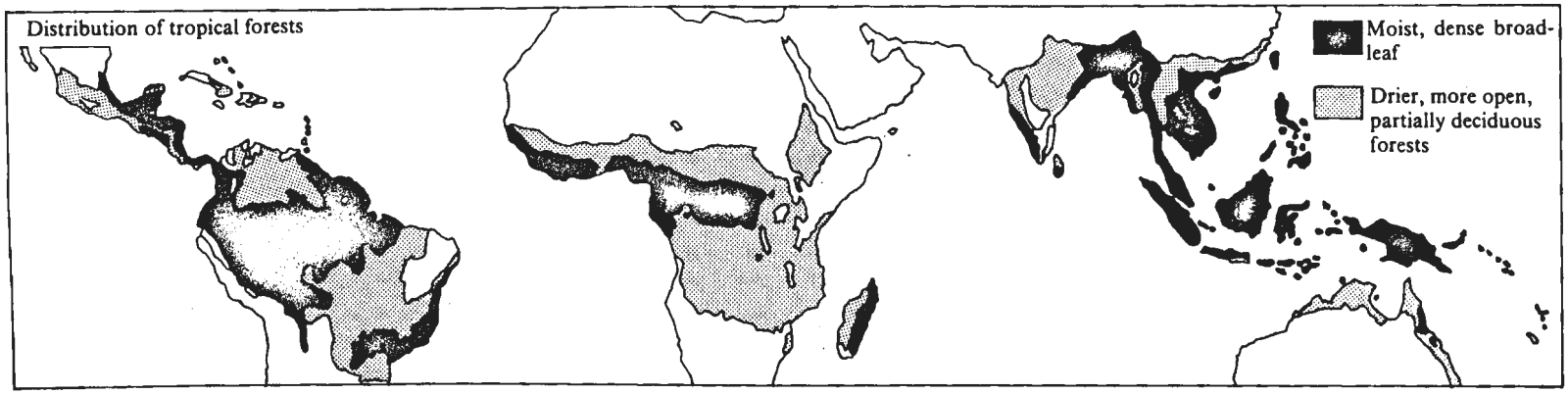


Figure 15

Extent of tropical forests

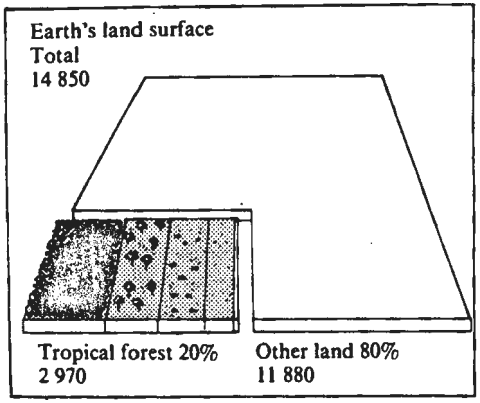


Figure 16

Major vegetation types of tropical forests

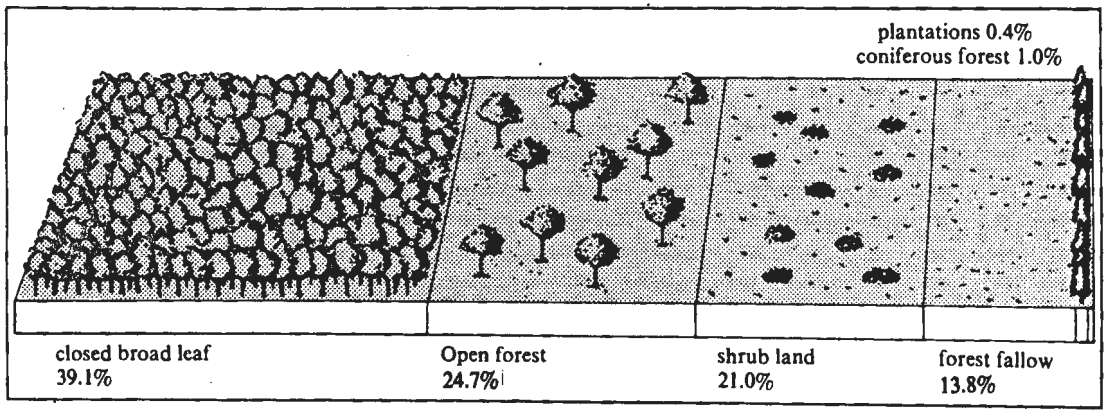
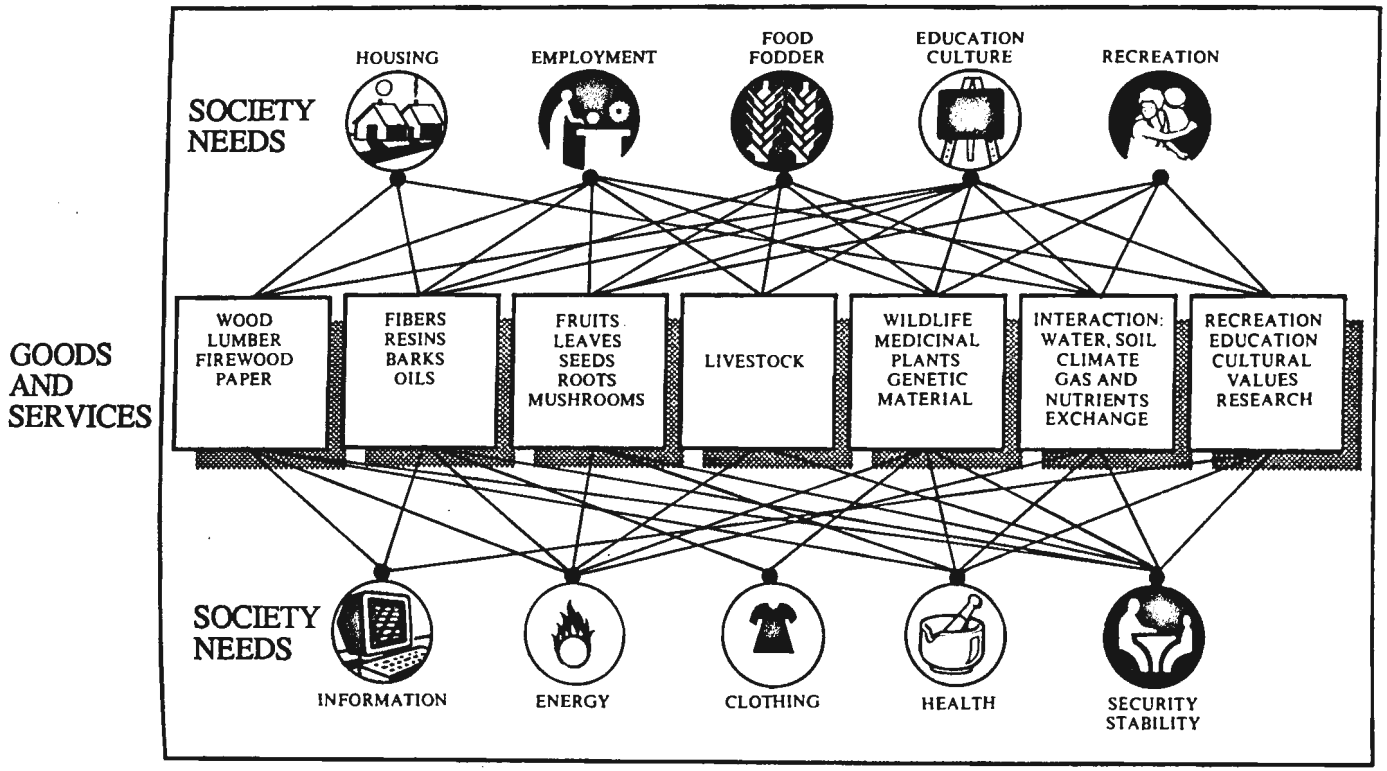


Figure 17

Forest products and their relation to the needs of human society



225. To follow up activities initiated by GEMS, UNEP, in collaboration with UNEPCOM, organized in Moscow in August-September 1987 a workshop on the application of remote sensing techniques to forestry for Spanish-speaking countries. The workshop was attended by 20 participants from 11 countries of the Latin America and Caribbean region, with lecturers invited from FAO, IUCN, the Netherlands and Peru.

226. UNEP activities on *in-situ* conservation of forest genetic resources, developed in collaboration with FAO, focused mainly during 1987 on reinforcing the capacity of developing countries to conserve indigenous forest genetic resources. Pilot projects were launched in Cameroon, Malaysia and Peru. *In situ* conservation has now become a regular feature of the FAO Forestry Programme.

227. The project for collaboration with IUCN in the conservation of tropical forest ecosystems is now nearing its end; the paper on methodology to tap genetic resources was completed in 1987, with publication scheduled for 1988. The paper on bioenergy was published in 1987; copies are available from IUCN. A document entitled "Transmigration and the environment in Indonesia: the past, present and future" was also issued in 1987.

228. UNEP has participated actively in the implementation of the Tropical Forestry Action Plan (TFAP) co-ordinated by FAO. During 1987, UNEP contributed to the analysis of the regional approach of TFAP for Latin America and the Caribbean and supported an expert on ecosystem conservation for the TFAP mission to Peru, co-ordinated by the Canadian International Development Agency (CIDA). UNEP was also represented at the two meetings in 1987 of the advisory group of experts of the donor community, where it advocated reinforcing the ecosystems aspects of the TFAP, considering sustainable development in forestry activities and ensuring NGO and grass-roots participation in the country missions.

229. UNEP maintained throughout 1987 contacts with many of the countries in which tropical forests are located in order to discuss possibilities of reinforcing governmental capacities to protect these ecosystems. As a result of these informal consultations, some countries which are major consumers of tropical forest resources were contacted in 1987 to discuss different forms of collaboration with UNEP. Even though their response has been slow, some preliminary results should be obtained in early 1988. An expert meeting on the varied options for supporting the establishment and management of protected areas and on the state of knowledge for assessing the real value of forests is scheduled to take place in 1988 in Nairobi.

230. In accordance with AMCEN directives, the African Committee on Forest and Woodlands met in Kinshasa, Zaire in March 1987 and proposed guidelines for the implementation of the Conference recommendations related to reafforestation and forestry, research. In addition, the *Centro Agronomico Tropical de Investigación y Enseñanza* (CATIE), with the support of UNEP, identified projects for the national management of tropical and sub-tropical forest ecosystems in El Salvador, Honduras, Mexico, Nicaragua, and Panama, while developing the management plan for the Rio Macho Forest Reserve in Costa Rica.

231. Concerned by the potential effects of forest destruction on the rising levels of CO_2 in the atmosphere and aware of the need to analyse the role reafforestation may play in fixing large amounts of carbon, UNEP has begun collecting information on the subject from a variety of sources. In this connection, it should be remembered that massive forest degradation, which has become world-wide, began in the Northern Hemisphere during the sixteenth century.

Other ecosystems (Budget subline 6103)

232. UNEP has been actively involved since early 1975 in developing approaches to the integrated management of mountains and highlands ecosystems. Through collaboration with Unesco in the Andean region, with IUCN in the preparation of guidelines, with UNEPCOM in the Himalayas (see para. 218 above) and in Peru under the integrated pilot project on environmental management of Andean ecosystems (supported by a Trust Fund from the Federal Republic of Germany), much valuable knowledge and experience has become available. Through the project in Cajamarca, Peru, farmers have been mobilized to participate in training courses, the building of the necessary premises, simple irrigation networks, afforestation schemes, soils and water conservation programmes, rescuing traditional Andean technologies and developing working methodologies that could be replicated in other regions of the country and in other Andean countries. During the year under review, more than 20 project counterparts received in-service training, while all the experts involved in the project have also been giving lectures in co-operation with the University of Cajamarca. In addition, the project involves broadcasts on the local radio programme, *Tierra y Pueblo,* oriented towards isolated farmers in the northern Peruvian Sierra. Every possible channel is being used to share ecological, botanical, meteorological and socio-cultural data.

Management of agricultural chemicals and residues (Budget subline 6104)

233. Pollution of the agro-ecosystem by chemical pesticides and fertilizers continues, despite efforts by UN bodies and NGOs to improve pest and vector control, to intensify information exchange on banned or severely restricted chemicals and to undertake practical implementation of the articles of the International Code of Conduct on the Distribution and Use of Pesticides. Simultaneously, registration and quality control procedures for pesticides are increasingly being adopted in the developing countries. However, despite these efforts, large parts of the African continent continue to suffer the scourge of locusts.

234. Under the UNEP umbrella project for Strategic Planning in Uganda, two consultants spent the first three months of 1987 in the tsetse-affected areas of Uganda to define the general extent of human sleeping sickness and 'nagana' (animal trypanosomiasis); compiling an inventory of existing tsetse control operations; carrying out a census of the animals, particularly in the livestock industry; examining the land use policies applied in the areas that may already have been cleared of tsetse; and determining the implications of all this for the ecologically sound rural development of the country. A number of project proposals have ensued.

235. During the year, FAO and UNEP held consultations for the nomination of scientists to the next FAO/UNEP Panel of Experts on Integrated Pest Control (IPC), a group which advises the executive heads of FAO and UNEP on the promotion of integrated pest control methods and strategies in developing countries. The new Panel, which first met in Rome in September 1987, is a more interdisciplinary group than its predecessor, comprising agronomists, entomologists and plant pathologists. It began by recommending the expansion of the Panel even further to include representatives of such disciplines as anthropology and agricultural economics so as to enhance its effectiveness and visibility. The Panel also considered new approaches to promoting and implementing integrated pest control programmes in the various developing regions and identified the crops to be accorded priority for IPC demonstration. To assist the FAO and UNEP secretariats in day-to-day work on integrated pest control, the Panel drafted guidelines for the formulation, implementation and evaluation of integrated pest control programmes and

will become more actively involved in actual FAO/UNEP work in this area, paying field visits on behalf of both organizations to review the progress of various projects.

236. During 1987, two consultants continued with the field evaluation of the FAO/UNEP Global Programme on the Implementation and Development of Integrated Pest Control in Agriculture mentioned in the *1986 Annual Report* (chap. IV, para. 198). Their report will provide both organizations with recommendations for further collaboration in agricultural pest control to be implemented with the help of the FAO/UNEP Panel of Experts on Integrated Pest Control. In 1987, too, a new film entitled *Profit from poison,* produced by the Television Trust for the Environment, started to bring to the attention of a wide-ranging audience the deleterious effects of pesticide handling, transportation and use.

237. The proceedings and papers of the Seventh International Congress of Protozoology, held in Nairobi in June 1985 (which UNEP supported by financing the participation of 17 scientists from developing countries) were available to UNEP in 1987.

238. The series of training courses formerly provided by UNEP/International Centre of Insect Physiology and Ecology (ICIPE) on components essential for ecologically sound pest and vector management systems was continued during 1987 with bilateral assistance from the Canadian International Development Research Centre. This series of courses is designed to acquaint young scientists from developing countries, who are beginning their careers, with current advances in environmental pest and disease vector control strategies and methods. An average of 25 participants have received training at ICIPE every year since 1977. Under a joint FAO/UNEP project for the promotion of appropriate procedures to minimize the use of pesticide application in favour of non-chemical methods and strategies, another group of 21 plant protection extension specialists from Argentina, Bolivia, Brazil, Chile and Peru underwent training at the Ministry of Agriculture and Livestock in Paraguay.

Wildlife and protected areas (Budget subline 6105)

239. The loss of biological diversity, all of it irretrievable, is rapidly becoming one of the foremost international environmental issues, as indicated in the *Environmental Perspective to the Year 2000 and Beyond* and in the *Report of the World Commission on Environment and Development.* The millions of existing species and their genetic materials are essential to sustainable development, notably in their contribution to agriculture, forestry, industry and human health, as well as in the environment as a whole. Even if the precise functions of some biological resources are not yet known, they play a crucial role in the bioproductivity of ecosystems and in the maintenance of their ecological processes. The conservation of the world's biological diversity can be accomplished only through international co-operation and with financial support from the international community, and UNEP is currently reviewing the possibilities of rationalizing international and national activities in this field. In keeping with Governing Council decision 14/26, UNEP is also examining the desirability of an umbrella convention for the conservation of biological diversity, the possible form of such a convention, and the various elements which it might include. (See also Environmental Law and Environmental Machinery, budget subline 2105).

240. Although the world's wildlife represents a multi-faceted resource—a vast reservoir of products, actual and potential, all of which can contribute directly to human welfare—wild animals and plants and their habitats are being destroyed or depleted at an alarming rate. Nearly one-quarter of the world's plant species are at risk of extinction during the next century because of the destruction and degradation of the Earth's vegetation. This loss of biological diversity is due mainly to the increasing demands of the growing human

population on natural resources and habitats to realize short-term economic gains, even at the expense of long-term productivity. The problems posed by the destruction of ecosystems and the rapid decline and disappearance of species call for comprehensive programmes integrated into national development planning and aimed at the conservation of the widest possible biological diversity—that is to say, the full range of the world's animal and plant species. Such programmes must include the establishment of areas in which representative biological communities can be protected and managed in their entirety. UNEP has approached this problem by promoting the establishment of protected areas; encouraging Governments to apply to non-protected lands the conservation principles outlined in the World Conservation Strategy (WCS) and the World Charter for Nature; and promoting the formulation and implementation of regional and national conservation strategies for integration into national development plans.

241. The first priority in this effort, as stated by the *Report of the World Commission on Environment and Development* and the *Environmental Perspective to the Year 2000 and Beyond,* is to place the problem of threatened ecosystems and disappearing species on political agendas as a major resource issue. The international ramifications of the whole question of biological diversity, as well as those of actions at the national level, require thorough analysis to obtain a firm international commitment to the conservation of biological diversity.

242. During 1987, the Ecosystem Conservation Group (ECG—comprising UNEP, FAO, Unesco and IUCN) continued its review of the status of implementation of the World Conservation Strategy and the formulation of national conservation strategies. Since its establishment by UNEP in 1975, the Group has provided a forum for co-operation and co-ordination among the major international organizations dealing with the problems of nature conservation and natural resources management and has helped to reduce duplication. Thus the Group's existence has helped to ensure a system-wide response in this area of the environment programme, thereby extending the catalytic role of UNEP.

243. The World Conservation Strategy itself is now under review in order to prepare a new updated and expanded edition, WCS-2, and ECG will work towards its implementation. In the seven years since the launching of WCS at the global level, considerable progress has been made. It has inspired many national conservation strategies, more of which are being prepared, and has provided a widely accepted framework for the conservation of biological diversity for sustainable development.

244. A dramatic example of the role of the WCS comes from Uganda, where, during 1987, UNEP and the Government worked together within the WCS framework to improve the natural resource situation in a country ravished by war. A comprehensive overview of the current state of the individual resource components, including wildlife and protected areas and wetlands and fisheries in Uganda was prepared in 10 separate volumes under the UNEP project for strategic resource planning in that country. Each volume discusses the issues concerning the management of the resource to which it is devoted and puts forth recommendations for its restoration and conservation.

245. In Mauritius, the Government has undertaken the difficult task of saving its endemic plants from extinction. At the request of the Government, UNEP sent in 1987 a consultant who made recommendations for further conservation measures and support for the few remaining indigenous forests and endemic plants of Mauritius, which are in great danger of being annihilated by animals introduced from other parts of the world. Another example comes from Ghana, where a Conference on Resource Conservation for Ghana's Sustainable Development was held in Accra in April 1987, to begin the preparation of a National Conservation Strategy. The conference was organized by the Environmental Protection

Council, with UNEP as the supporting agency, and the European Year of the Environment Committee provided funds through UNEP for the development of the Strategy. An important event for living resource conservation in the Arctic was the convening of the Inuit Regional Conservation Strategy Steering Committee in Vancouver, British Columbia, Canada in May 1987, which reviewed progress, including the expansion of the two IRCS databases on plants and animals of the Arctic and agreed to finalize the second phase of the Strategy, scheduled for completion during the summer of 1989. In Latin America and the Caribbean, another example of co-operation in the conservation of biological diversity was the formulation of joint FAO/UNEP activities during 1987, which will help strengthen national capabilities for managing wildlands, protected areas and wildlife and for utilizing the full potential of wild plants and animal resources on a sustainable basis for regional economic and social development.

246. Throughout 1987, in co-operation with IUCN, UNEP continued supporting the assessment of distribution and abundance of wildlife species, including mammals, birds, amphibians and reptiles, insects and plants—among them, those of economic value. UNEP has also continued its support for the conservation of representative biotic communities by supporting inventories of habitats and their conservation status. The reviews of the protected areas systems and the extent of coverage of the main natural vegetation types in the Afrotropical and Indo-Malayan realms, for instance, are expected to stimulate action at the national level. Figure 18 shows the various types of protected areas on the African continent. Continued UNEP support to the Man and the Biosphere programme of Unesco included during 1987 the expansion and improvement of the existing international biosphere reserve network through the establishment of operational biosphere reserves in selected representative areas of the world's biogeographic provinces, the preparation of their management plans and training activities for the implementation of the Action Plan for Biosphere Reserves.

247. UNEP supported and participated in the Fourth World Wilderness Congress, held in Denver, USA in September 1987, which emphasized the many close interrelationships between the conservation of nature and the development of natural resources. One of the objectives was to alert the public to the major issues in world-wide conservation; an extensive press and media outreach effort was launched. As a result of the Congress, work is now in progress on several new initiatives: the feasibility of a World Conservation Banking Programme is being explored; a new World Conservation Service is being pursued with initial emphasis on a communication/information exchange facility; and an inventory of global wilderness areas has been undertaken. In addition, the Denver Declaration for Worldwide Conservation has been entered into the Congressional Record of the US Congress and into the permanent records of the United Nations.

248. An event of major importance for the conservation of wildlife in Africa, in which UNEP participated, was the International Symposium on Wildlife Management in Sub-Saharan Africa, which took place in Harare in October 1987. Organized jointly by the International Foundation for the Conservation of Game (IGF) and the International Council for Game and Wildlife Conservation (CIC), in co-operation with FAO under the patronage of World Heritage Convention, the Symposium adopted 13 recommendations for the promotion of rational and sustainable utilization of wildlife resources for consideration by the Ministers responsible for wildlife conservation in countries of the region.

249. In view of the massive over-exploitation of wildlife for international trade, UNEP has supported the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) since its entry into force in July 1975. States Parties to the Convention now number 96. UNEP provides the CITES secretariat, which offers technical and scientific

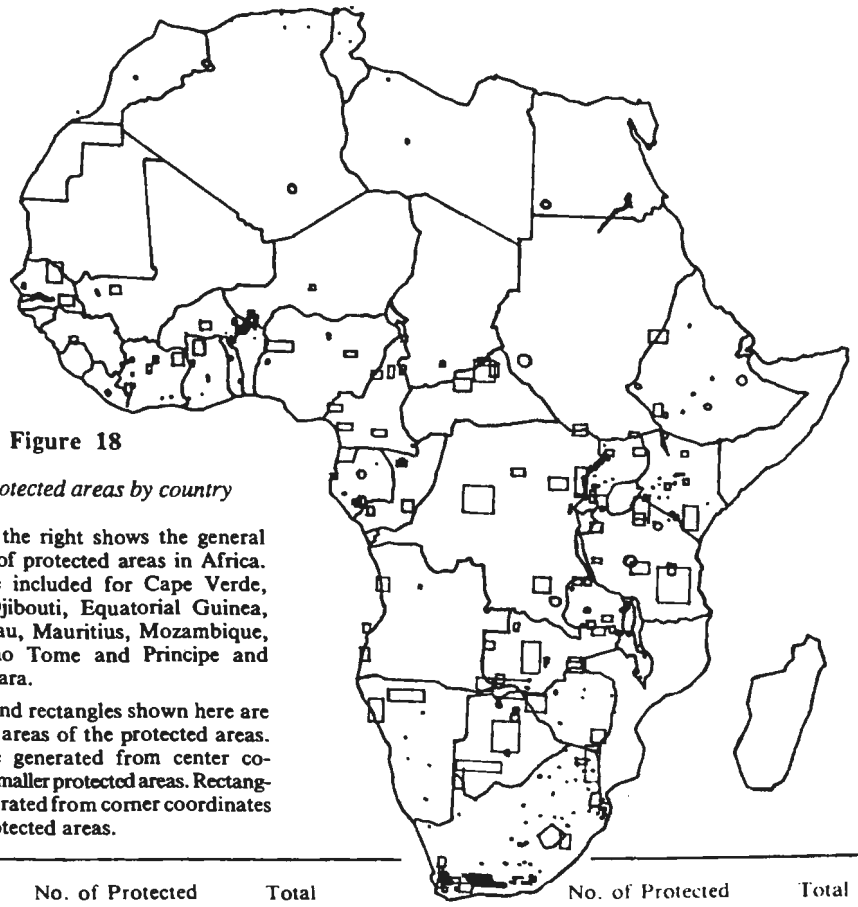


Figure 18

African protected areas by country

The map to the right shows the general distribution of protected areas in Africa. No sites are included for Cape Verde, Comoros, Djibouti, Equatorial Guinea, Guinea Bissau, Mauritius, Mozambique, Reunion, Sao Tome and Principe and Western Sahara.

The circles and rectangles shown here are equal to the areas of the protected areas. Circles were generated from center coordinates of smaller protected areas. Rectangles were generated from corner coordinates of larger protected areas.

Country	No. of Protected Areas	Total (Sq. Km.)	Country	No. of Protected Areas	Total (Sq. Km.)
Algeria	8	4,725	Mauritania	2	14,830
Angola	4	15,160	Morocco	6	2,851
Benin	2	8,435	Namibia	8	95,194
Botswana	8	99,342	Niger	3	3,720
Burkina FASO	6	6,890	Nigeria	4	9,601
Cameroon	9	16,923	Rwanda	2	2,620
Central African Republic	7	39,040	Senegal	7	21,743
Chad	1	1,140	Seychelles	1	350
Congo	10	13,531	Sierra Leone	1	980
Cote D'Ivoire	10	19,580	Somalia	1	3,340
Egypt	5	6,161	South Africa	82	55,469
Ethiopia	9	17,675	Sudan	4	21,990
Gabon	6	17,530	Swaziland	3	355
Ghana	8	11,751	Tanzania	15	106,018
Guinea	1	130	Togo	6	4,630
Kenya	20	30,623	Tunisia	4	460
Lesotho	1	68	Uganda	15	13,250
Liberia	1	1,307	Zaire	9	88,270
Libya	3	1,550	Zambia	19	63,590
Madagascar	26	10,143	Zimbabwe	13	27,509
Malawi	9	10,669	TOTAL	365	877,902
Mali	6	8,761			

support and advice relating to the international trade in wildlife. The *Identification Manual for Endangered Species,* prepared and published by the UNEP/CITES Secretariat, is the basic tool used by customs officers all over the world. The UNEP/CITES Secretariat also convened a number of successful regional seminars to discuss the problems of enforcing CITES regulations in their respective States and made a series of recommendations to improve enforcement procedures for consideration by the Parties at the Sixth Meeting of the Conference of the Parties to the Convention, held in Ottawa, Canada in July 1987.

250. The conservation of migratory species requires the concerted action of all States which exercise jurisdiction over any part of their range. Parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS) have committed themselves to protect those endangered migratory species listed in Appendix I of the Convention. They are also encouraged to conclude and implement formal conservation agreements with other range States to improve the conservation status of species listed in Appendix II. The Convention provides a framework for co-ordinated research and conservation measures, such as habitat protection and hunting regulation under regional and/or species-specific Agreements. At present, Agreements are being developed for European species of Chiroptera, Western Palearctic populations of *Ciconia c. ciconia,* Western Palearctic waterfowl and North and Baltic Sea populations of small cetaceans. Twenty-six experts and representatives from potential range states for European species of Chiroptera met in London in November 1987 to consider the text of the draft agreement. The Secretariat of the Convention is provided by UNEP and operates from Bonn with financial support from UNEP and the Government of the Federal Republic of Germany, as well as the contributions from the other Contracting Parties. During 1987, Mali, Tunisia and Pakistan became parties to the Convention, bringing the total membership to 25.

251. Since many species of waterfowl are migratory, the Convention is of capital importance to wetland and waterfowl conservation under the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (the Ramsar Convention), the world's oldest conservation treaty. Within the consultative framework of the Ecosystem Conservation Group, co-operation under the Ramsar Convention was reviewed, including joint initiatives for the Third Meeting of the Conference of the Contracting Parties to the Wetlands Convention, held in Regina, Canada, May—June 1987. UNEP and other international organizations participated with representatives of 47 countries. UNEP also provided travel support for the participation of delegates from developing countries. Delegates urged that greater attention be given to the world's wetlands, including marshes, river deltas and lakes, in countries as far apart as Argentina, Botswana and Greece.

252. The Regina meeting also established a Standing Committee to assist in the implementation of the Ramsar Convention. As of December 1987, the Ramsar Convention had 45 Contracting Parties and the Ramsar List of Wetlands of International Importance includes 383 designated sites covering approximately 27 million hectares—a significant increase in the application of the Convention.

253. Among its ongoing conservation activities, UNEP, in co-operation with IUCN and the International Waterfowl Research Bureau (IWRB) and Unesco, has devoted considerable effort to promoting the implementation of the Ramsar Convention. Notable co-operative examples include the preparation of the Directory of Neotropical Wetlands (UNEP and IUCN) and the preparation by UNEP, IUCN and SCOPE in 1987 of a *Directory of African Wetlands.*

254. UNEP also continued during 1987 to assist Governments in Africa to improve the management skills of junior, middle and high-level staff of wildlife and national park resource management organizations through a UNEP Wildlife Management Fellowships

Programme under which trainees, largely from African countries, attend courses at the Garoua, Cameroon and Mweka, Tanzania colleges for wildlife management.

Genetic Resources (Budget subline 6106)

255. With support from UNEP, the International Board for Plant Genetic Resources (IBPGR) initiated in 1987 a programme for the ecogeographical surveying of the wild relatives and primitive cultivars of crop plants threatened with extinction in priority areas in developing countries, their collection and *ex-situ* and *in-situ* conservation. UNEP also continued its support to the international programme for the exploration, collection, evaluation and conservation of crop plant and tree genetic resources co-ordinated by IBPGR (see also *1986 Annual Report,* chap. IV, paras. 212-220).

256. Throughout the year, the regional environmental Microbiological Resources Centres (MIRCENs) in Brazil, Egypt, Guatemala, Kenya, Senegal and Thailand continued to carry out a number of UNEP-supported pilot projects for the application of microbial resources in appropriate technologies for environmental management—at the same time providing fellowships and on-the-job training to nationals from developing countries.

257. With support from UNEP and the full participation of the national coffee industries, the Guatemala MIRCEN has developed an environmentally sound integrated technology for the bioconversion of the potentially polluting coffee processing by-products (waste water and pulp) into biogas, animal feed and biofertilizers. Pollution problems associated with coffee processing effluents in coffee areas in Guatemala reached the point where civil authorities had to close some coffee *beneficios* because of the high contamination level. A coffee processing waste water treatment pilot plant (anaerobic digester) was installed and successfully operated in a Guatemala coffee mill in Santa Rosa for biogas production during 1987. The anaerobic reactor discharge was used to grow water hyacinths to reduce its organic matter content before discharge into the river. Used for demonstration purposes, this pilot plant resulted in the MIRCEN's being awarded contracts to build similar plants in different coffee areas in Guatemala and to develop a full-scale anaerobic coffee processing treatment plant in Jinotepe, Nicaragua.

258. The Guatemala MIRCEN is also screening programmes for the bioconversion of coffee pulp by solid state fermentations with fungal strains into useful products that can be used as ingredients in concentrate formulations for animal feed so as to liberate equivalent amounts of cereal grains, largely corn, for human consumption.

259. The Bangkok MIRCEN, supported by UNEP and the Japanese Association of Industrial Fermentation, has been equally active, attempting to solve the disposal problem of accumulating surplus cassava root and solid wastes and related environmental hazards now facing Thailand—which ranks second among the world producers of cassava—and to promote the application of appropriate biotechnologies. The Centre has developed a system for pilot-scale production of fuel ethanol from cassava and the by-products of its processing. Some 1,500 litres of anhydrous alcohol per day is being produced, using locally isolated microbial strains, and improvement of the yield is under way. In 1987, the alcohol produced was used as a gasoline substitute for the production of Benzohol, which is now available at three government petrol stations for use by government vehicles. As the Thailand Petroleum Authority has been requested to allow the use of Benzohol throughout the country, the project will be vastly expanded for replication.

260. The Dakar, Nairobi and Port Alegre MIRCENs, and Sudan continued, with support from UNEP, to collect, evaluate, preserve and periodically test *Rhizobium* strains, as well as to produce, control quality and distribute legume inoculants on a pilot scale. These activities

also included training and mounting publicity campaigns. The production of a legume inoculant, NITROFIX, by the Nairobi MIRCEN will be increased to meet the needs of small farmers. Increased awareness of NITROFIX as an alternative to the costly and potentially polluting chemical fertilizers for certain legumes stemmed from demonstrations in farmers' fields, training centres, the Nairobi International Shows and those of the Agricultural Society of Kenya.

261. During 1987, UNEP continued to support the activities of the Cairo and Nairobi MIRCENs for the control of pests and vectors by biological means. Some 23 strains of locally isolated *Bacillus thuringiensis* were found active against the larvae of four mosquitos (*Aedes aegypti, Anopheles arabiensis, Anopheles gambia* and Culex pipiens) under laboratory conditions. The insect rearing capabilities of both MIRCEN laboratories were strengthened and testing of active strains in the field has been initiated.

262. The International Microbial Strain Data Network (MSDN), initially conceived by UNEP in 1982, has become partially operational. Its secretariat has been established and is housed by the Biotechnology Centre at Cambridge University. The Network comprises information nodes throughout the world, whose data is held in a central directory from which scientists can locate microbial strains or cultured cell lines with specific characteristics for biotechnological applications. The Network also facilitates communication among microbiologists, cell biologists and other scientists world-wide. A number of training activities for young scientists from developing countries on the use of MSDN have been organized by the secretariat, with UNEP support.

Lithosphere (Budget subline 6107)

263. During the period under review, progress continued on the UNEP/Unesco/USSR project on geology and environment. The International Scientific Council on Geology and Environment Problems, which held its third session in Moscow in November 1987, finalized the manuscript of three booklets which will be published in 1988 under the general title *Geology and environment.* These booklets describe the methodologies for predicting environmental changes in the hydrological and geological conditions of the lithosphere under the impacts of mining and the development of water resources, and include guidelines for land use planning in accordance with geological conditions.

ARID AND SEMI-ARID LANDS ECOSYSTEMS AND DESERTIFICATION CONTROL (Budget line 62)

264. The growing awareness of desertification as a serious threat to the life support systems for humanity has not been matched by a decrease of desertification as the factors contributing to it, mainly over-exploitation and mismanagement of the natural resource base, continue virtually unabated. While awareness of the desertification problem and organizational efforts to deal with it have grown since 1977, they have not increased on a scale commensurate with the magnitude of problem. Inadequate technical and financial resources allocated to corrective measures against desertification also remain a major constraint. The problem of un-awareness is linked to lack of information on desertification and its methods of control.

265. UNEP has responded to these constraints by making a concerted effort in building a Desertification Information System (DESIS) which presently consists of databases on institutions dealing with desertification; UN system desertification control projects; a

compendium of technical information on wind erosion control; and a desertification thesaurus. A plan was initiated in 1987 to assist NGOs and desert research institutes in establishing information systems compatible with UNEP's GRID and DESIS systems. A UNEP-supported project was launched in 1987 in co-operation with the International Institute for Environmental Development (IIED) and the African NGOs Environmental Network (ANEN) to set up a research and information network of NGOs in the Sudano-Sahelian countries. A continuing programme of gathering, analysing and disseminating desertification-related information should have an impact on the implementation of the Plan of Action to Combat Desertification (PACD), as the potential users become aware of the availability of this information.

266. In Africa, the problem of desertification has grown in acuteness in the same proportions as its external debt problem, which stands today at $200 billion at a time when Africa is involved in the implementation of Africa's Priority Programme for Economic Recovery (APPER) and the United Nations Programme of Action for African Recovery and Development 1986-1990 (UNPAAERD). The Assembly of Heads of State and Government of the Organisation of African Unity on Africa's Debt Crisis which took place on 1 December 1987 in Addis Ababa, called upon the international community to suspend debt repayments during the remaining period of UNPAAERD.

267. UNEP was able to respond modestly to this grave crisis by assisting African countries in the formulation of pilot projects for villages and stock-raising zones under the Cairo Programme for African Co-operation. Ten countries were helped during 1987 to formulate project proposals which address the problems of environmental degradation and food production.

268. A complete and detailed account of UNEP's work in 1987 in this area will be found in the Executive Director's report to the Governing Council at its 15th session on the implementation of the Plan of Action to Combat Desertification.[5] Figure 19 shows the locations of UNEP's on-going desertification projects in 1987.

HEALTH AND HUMAN SETTLEMENTS (Budget line 71)

269. Given its scope and complexity, this budget line, like several of those which precede it, is divided into sublines: (a) Environmental health; (b) the International Register of Potentially Toxic Chemicals (IRPTC); (c) Working environment; and (d) Human settlements.

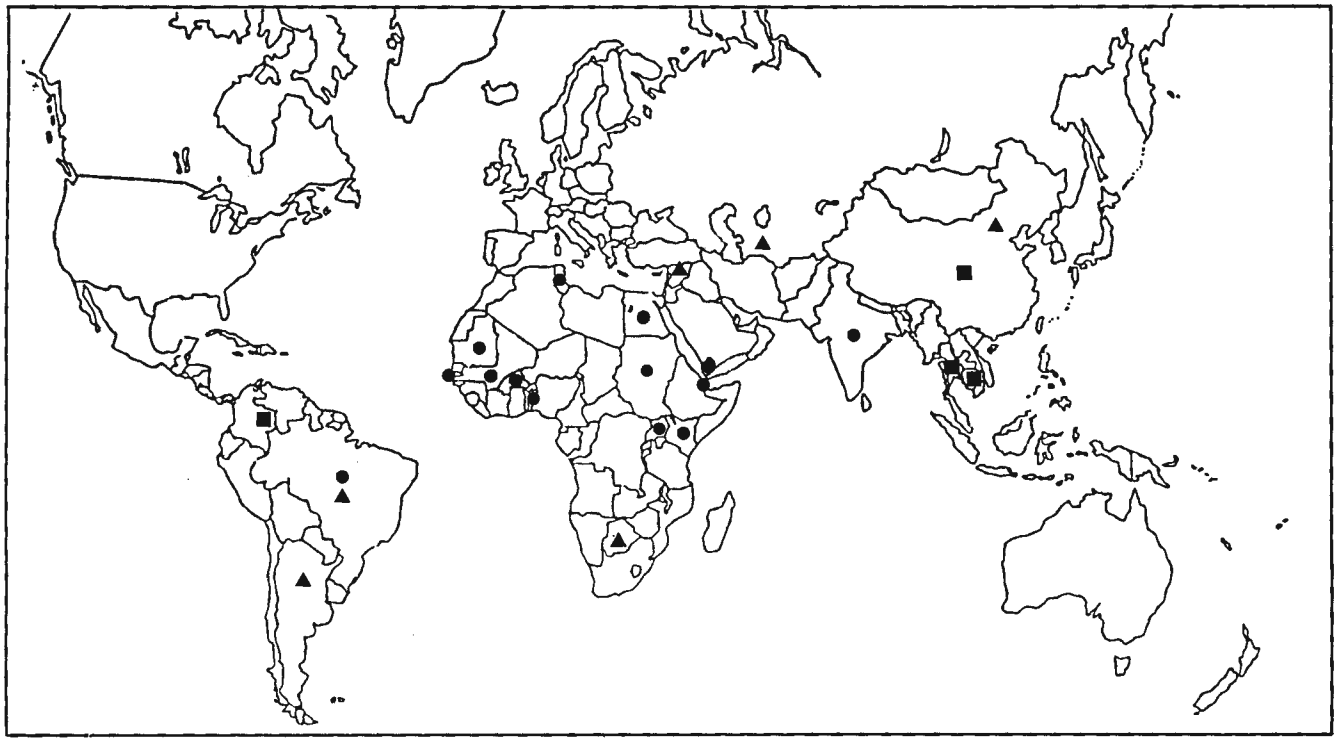
Environmental Health (Budget subline 7101)

270. A vast number of pollutants—chemical, physical and biological— continue to create serious hazards for human and environmental health. The recognition, evaluation and assessment of the risks of exposure to such agents are essential. In general, physical pollutants tend to concern the industrialized countries, anxiety about chemical agents is universal; and biological agents continue to trouble developing countries, as they cause some of the most serious tropical diseases. Today, in a number of countries, for example, malaria is resurging, principally because of the intensity of water resource development in the search for increased food production. As all major species of the malaria vector have become resistant to pesticides, control by environmental management is becoming a necessity in every area where water resources are being developed.

271. To help create a multisectoral approach to water-borne disease vector control, a workshop on research and training needs for such control in riceland agroecosystems of

Figure 19

Location of UNEP's on-going Desertification Projects



● FIELD PROJECTS (Benin, Brazil, Burkina Faso, Djibouti, Egypt, Gambia, India, Kenya, Senegal, Sudan, Tunisia, Uganda, Mali, People's Democratic Republic, Yemen)

▲ TRAINING COURSES FOR DESERTIFICATION CONTROL (Argentina, Brazil, Botswana, Syria, Turkuman USSR, China)

■ DC/PAC DESERTIFICATION TV DOCUMENTARIES (Colombia, China, Thailand, Vietnam)

developing countries was held at the International Rice Research Institute (IRRI), Manila in March 1987. Supported by IRRI and the US Department of Agriculture Riceland Mosquito Management Programme as part of the programme of work of the FAO/UNEP/WHO Panel of Experts on Environmental Management for Vector Control (PEEM), the workshop also reviewed current knowledge of vector-borne disease problems as they relate to rice production in developing countries.

272. The seventh session of PEEM, held at FAO in September 1987, discussed the effects of agricultural development and changes in agricultural practices on the transmission of vector-borne diseases, concentrating in particular on information requirements of vector control operations and the techniques applicable to them. As to the information requirements, the Panel concluded that they should cover physical aspects of changes in land use; demographic changes; vector and disease identification; and guidance on better interaction between Governments and NGOs. In respect of applicable techniques, the Panel recommended the introduction of high-yield varieties, such as new hybrid strains of rice, in appropriate situations and information on the rehabilitation and improvement of the existing large water schemes, as well as on means of setting up small irrigation projects. The Panel also made recommendations to the secretariats of the three participating organizations on ways by which PEEM might become more field-oriented so that the extensive information so far collected might be effectively applied. Finally, the meeting called for closer collaboration between PEEM and the FAO/UNEP Panel of Experts on Integrated Pest Control.

273. The eighth meeting of the PEEM Steering Committee, hosted by the WHO Regional Office in Manila in March, considered five proposed subjects for the technical discussion of the eighth PEEM session, scheduled for Nairobi in September 1988, and selected the topic "Education, training and information exchange for the planning, design and implementation of environmental management for vector control". Accordingly, the Committee recommended that the *PEEM Newsletter,* which is published in English, French and Spanish and widely distributed through UNEP, FAO and WHO channels, be improved by the inclusion of a regular section on the activities of PEEM collaborating centres. It was also decided to designate the Tenessee Valley Authority of the USA and the Institute for Land Improvement and Water Management, Zurich, as PEEM collaborating centres.

274. The Second FAO/UNEP/WHO International Conference on Mycotoxins was held in Bangkok, Thailand in the autumn of 1987, and attended by delegates from 33 countries and six international organizations. UNEP supported the participation of 10 representatives of developing countries, all of whom presented papers on mycotoxin control problems in their respective nations. Most of these UNEP-supported participants had been trained in UNEP courses on mycotoxin control. The meeting made several requests for future collaboration with UNEP, notably in the areas of training, laboratory equipment and legislation.

275. A joint UNEP/WHO Workshop on Chemical Hazards for African Countries, with the support of the League of Arab States and the Commonwealth Secretariat, held in Nairobi in September 1987, reviewed and assessed the magnitude of chemical hazards in Africa and the current status of the capabilities of African countries to deal with such hazards. Delegates from 23 countries and representatives from FAO, UNCHS (Habitat), UNDP, Unesco and the African Development Bank attended. The workshop also explored possibilities for co-operation between individual countries and on a regional basis with the involvement of the UN system and identified priority areas for action. Of the 13 recommendations put forward, the most prominent called for: consideration of all chemicals of environmental relevance by the networks established under the Cairo Programme; compliance with the articles of the FAO International Code of Conduct on the

Distribution and Use of Chemicals; and full implementation of the London Guidelines for the Exchange of Information on Chemicals in International Trade.

276. In addition, a joint UNEP/WHO/USSR/India travelling seminar on environmental management measures for vector control, the first of its kind, was held in the USSR (at Moscow and Tbilisi) in November and in India (at New Delhi and Nainital) in December 1987. Aimed at providing the 14 participants with a forum for the discussion of the promotion, planning, organization and evaluation of environmental management measures for the control of disease vectors in water resources development projects, the seminar included the presentation of country papers and field visits to irrigation schemes and dams. In India, participants were able to observe how farmers themselves carried out environmental management measures for mosquito control—for example, the use of Gambusia fish—in various parts of the vast valley facing the Himalayas. A general working document for this seminar entitled "Environmental management of disease vectors—case studies on disease vector control through environmental management in water resources development projects: parts A and B" was prepared by the Blue Nile Associates of Foxboro, Mass., USA.

277. Nine new Environmental Health Criteria (EHC) documents, which evaluate the hazards of exposure to chemical pollutants for both human health and the environment, were produced and published by WHO during the reporting period under the auspieces of the joint ILO/UNEP/WHO International Programme on Chemical Safety (IPCS). Such documents provide a basis for regulatory activities.

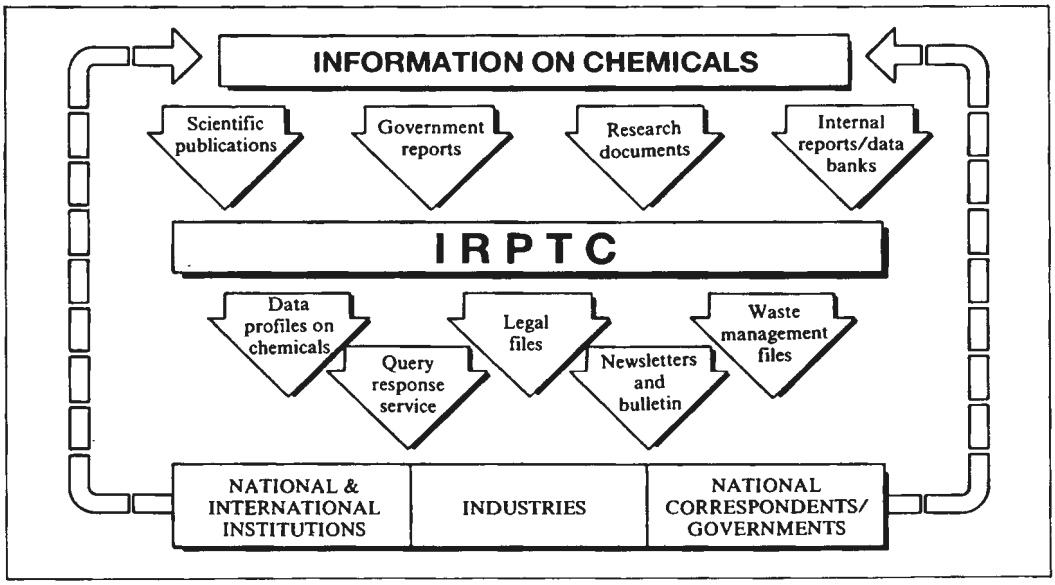
The International Register of Potentially Toxic Chemicals (IRPTC) (Budget subline 7102)

278. Although chemicals have been used for centuries in many traditional crafts and trades, their production on a world-wide industrial scale is a relatively recent historical phenomenon that has inevitably involved massive problems of storage, transport, handling and disposal—and hence vastly increased risks to workers, the population at large and the environment. There is therefore an urgent need to intensify and strengthen the exchange of information on chemicals in international trade and to improve chemical safety at the country level. IRPTC, as the UNEP information exchange network on chemicals, continued its activities in this field throughout the year under review. Its main objective, since its inception in 1976, has been to facilitate access to information on chemicals for hazard assessment, risk evaluation and their subsequent elimination or control, involving partners in Governments, research establishments, international organizations, NGOs and industry. The way in which IRPTC works is illustrated in Figure 20.

279. During the first 10 years of its existence, IRPTC organized a global network of 117 National Correspondents from 109 countries for the exchange of information on chemicals. The pattern of distribution of National Correspondents is shown in Figure 21. It established working relationships with other international organizations and programmes, in particular the International Programme on Chemical Safety, and with national network partners in 18 countries, as well as with NGOs and industry. Within UNEP, it has close working contacts with GEMS, INFOTERRA, the Environmental Health Unit, the Environmental Law and Machinery Unit and the Industry and Environment Office. It has developed computerized central files on chemicals of international concern, including information on national regulations and international recommendations for the control of chemical hazards. It has also developed a library and documentation service which has acquired access to major bibliographical and other information systems and it operates a query-response service. In addition, IRPTC publishes three bulletins annually in four

Figure 20

The Way in which IRPTC Works



The main steps involved in IRPTC's work are:

1. Choosing chemicals on which information is to be collected.
2. Selecting and validating the information received
3. Entering the data into the data bank.
4. Presenting the data in a concise and useful form.
5. Distributing the information to those who need and request it.

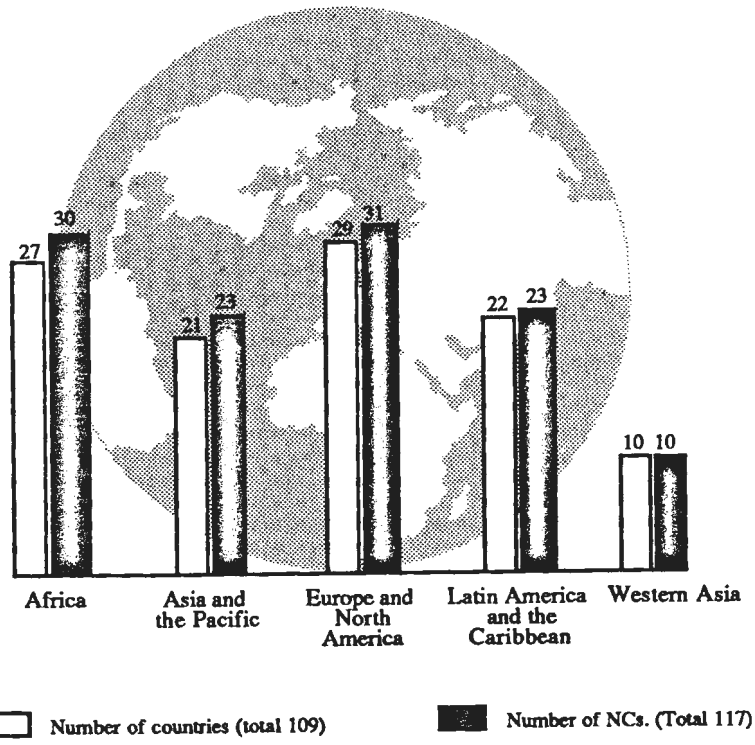
languages and has issued several technical data compilations on chemicals, as well as a list of environmentally harmful chemical substances, processes and phenomena of global significance.

280. IRPTC has played an active role in collecting and disseminating national information on bans and severe restrictions for the use and handling of chemicals and in developing guidelines for the exchange of information on chemicals in international trade and the environmentally sound management of hazardous wastes. It also provides training and technical assistance to developing countries for the establishment of national information systems and the optimal use of international and national chemical reviews, criteria documents and data profiles in chemical safety programmes at the country level.

281. The expanding computerized central files of IRPTC currently cover some 600 chemicals of international concern. During 1987, work by IRPTC and its network partners focused on the updating of the files containing data on chemical analysis, treatment and disposal methods and environmental toxicity. The results of recent hazard assessments and risk evaluations by international expert groups have been entered into the data bank. Further improvements were introduced in the Instruction Manual for data profile development to assist contributing network partners in selecting high-quality data on

Figure 21

Patterns of distributon of IRPTC National Correspondents



chemicals from scientific and technical literature and in describing their toxic effects. A data profile reader's manual is also being finalized for publication; it incorporates the comments received from network partners and selected users.

282. Technical work with the National Correspondent of Canada to make the IRPTC data files available for use on minicomputers neared completion during 1987. Several files were transferred to network partners in Latin America and Asia. A pilot project is also under way to provide national users from Government institutions in Canada with access to the files through a national telecommunication network. A feasibility study on modalities for IRPTC data transfer to its world-wide network partners has been completed with support from the Government of the Netherlands. The IRPTC Legal File for 560 chemicals from the IRPTC working list of chemicals, which was updated with the assistance of National Correspondents and completed during 1986, was published and distributed in 1987. The complete Legal File now contains information on approximately 6,500 chemicals provided by 47 countries and six international organizations; the File continues to expand and is accessible on line world-wide from the Environmental Chemicals Data and Information Network (ECDIN) of the Commission of the European Communities (CEC) as a result of an agreement between UNEP and the Commission.

283. Close co-operation was initiated in 1987 with network partners from Canada, France and the Federal Republic of Germany for the exchange of toxicity and legal data for

chemicals in computerized form. Further co-operative projects were completed with national network partners from Canada, the Netherlands and Switzerland for the collection of toxicity and environmental data on pesticides widely used in developing countries, as well as on flame-retardant and other industrial chemicals.

284. During 1987, a joint study continued with CEC on the identification and description of substances to which workers are exposed at the workplace and which are easily absorbed through the skin. IRPTC also continued to co-operate with OECD in a project to improve access to unpublished information on chemicals and dissemination of information circulated under the OECD complementary information exchange procedure. In addition, IRPTC participated actively in the OECD Workshop on Existing Chemicals, held in Ottawa in November 1987, aimed at improving international co-operation in the assessment and control of hazards posed by chemicals.

285. Joint work with ILO to update and develop further the ILO data base on occupational exposure limits for airborne toxic substances from 20 countries neared completion during 1987; a publication of the data base is foreseen for the first half of 1988.

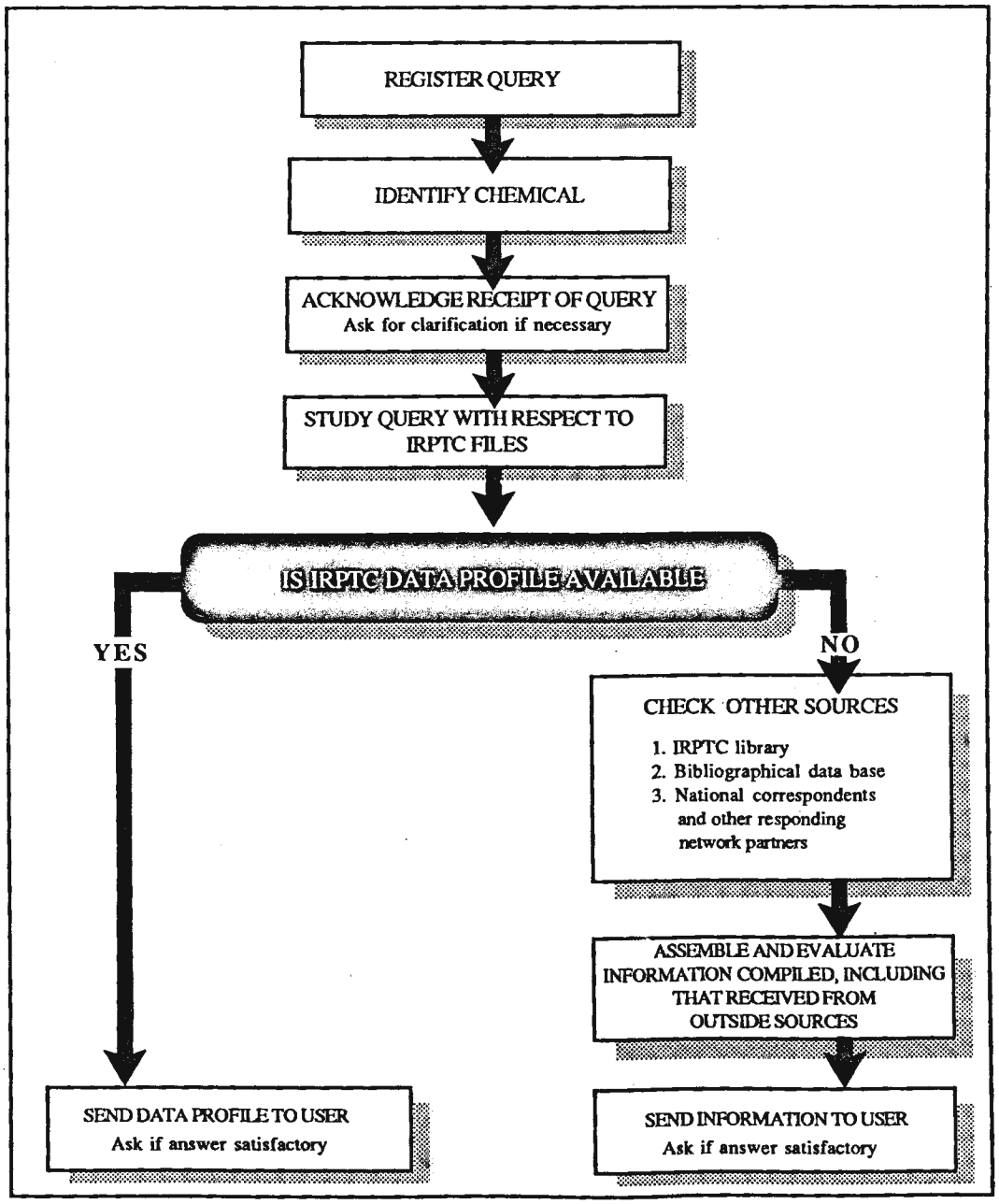
286. Throughout 1987, IRPTC continued to participate actively in the work of the International Programme on Chemical Safety (IPCS) through the collection, selection and evaluation of data on chemicals for inclusion in Environmental Health Criteria documents and the Health and Safety Guidelines on chemicals. The Register staff also took part in several task group meetings; in expert meetings for the harmonization of approaches to toxicity testing and the risk assessment of chemicals as practised in OECD and CMEA countries (held in Geneva in May); for the ranking of chemicals for inclusion in the Environmental Health Criteria documents and Health and Safety Guides (held in the Federal Republic of Germany in October); and in meetings for the dissemination of the results of hazard assessments and risk evaluations carried out by such groups. The Registry of Chemicals Currently being Tested for Toxic Effects (CCTTE) was updated on the basis of reports received from National Correspondents and published again jointly with IPCS in February and October 1987. A new data base on national chemical reviews was prepared for inclusion in the October issue of the Registry.

287. During 1987, the Query-Response Service of IRPTC continued to answer questions on chemicals from national authorities, universities and research institutes industry, NGOs and interested individuals. The working of IRPTC's query-response service is illustrated in Figure 22. Although the numbers of queries received in 1987 roughly equalled those received in 1986, the number of chemicals per query increased significantly during 1987. Of the queries received in 1987, 44 per cent came from developing countries. Interest in agrochemicals accounted for 41 per cent of the queries, while approximately 25 per cent concerned regulatory measures and national and international recommendations for control of hazards from specific chemicals. IRPTC continued to answer queries which had been received by IPCS and INFOTERRA, for which the Register functions as a Special Sectoral Source of information. In several cases, IRPTC called upon its National Correspondents, as well as on other network partners, including specialized institutions, individual experts and chemical companies, to help answer queries.

288. In co-operation with the Government of the USSR, IRPTC continued the preparation and publication in English and Russian of the series *Scientific Reviews of Soviet Literature on Toxicity and Hazards of Chemicals,* which by the end of 1987 totalled 112 issues in both English and Russian. The joint IRPTC/USSR project also included the preparation of an international survey on the use of classification systems for chemicals, based on their toxicity and hazards. As of 1 December 1987, 98 respondents from 74 countries and 9 international and intergovernmental organizations had provided detailed information on

Figure 22

The Working of the IRPTC Query-Response Service



experience with such systems. The survey will be distributed to participants in a workshop to be convened in Leningrad in early 1988. In addition, the updated version of the English/Russian *Glossary of Selected Terms in Preventive Toxicology,* discussed by an international expert meeting held in Moscow in 1986, was finalized in 1987.

289. In response to Governing Council decision 12/11, IRPTC prepared an updated version of the report on the List of Environmentally Harmful Chemical Substances, Processes and Phenomena of Global Significance on the basis of comments received from Governments, international organizations, industry and NGOs. The List, which had been revised with the aid of other UNEP units, IPCS and expert consultants, was submitted to the Governing Council at its fourteenth session in 1987.[6] Its discussion led to the adoption of decision 14/32, which requested, among other things, that the report be referred to Governments, relevant international organizations, industry and NGOs for further study and action as appropriate and that a progress report on the implementation of the recommendations included in the list be available to the Council at its next regular session in 1989. This would include a study on the feasibility of adding to the list a small number of globally significant chemical substances, processes and phenomena. Work on this study began in 1987.

290. In February 1987, the *Ad Hoc* Working Group of Experts for the Exchange of Information on Potentially Harmful Chemicals in International Trade, in particular pesticides, held its third session in London, during which it finalized its work on the Guidelines for the Exchange of Information on Chemicals in International Trade, which were subsequently adopted by the Governing Council at its 14th session in decision 14/27. IRPTC actively participated in the preparation and proceedings of the *Ad Hoc* Working Group and continued to carry out the Notification Scheme for Banned and Severely Restricted Chemicals. As of 15 December 1987, 69 countries had designated national authorities for participation in the implementation of the London Guidelines. IRPTC continued to receive national notifications of control action to ban or severely restrict the use of handling certain chemicals from designated national authorities and disseminated such information to other designated national authorities. Work was also initiated in IRPTC to assist in the implementation of Governing Council decision 14/27 on the environmentally safe management of chemicals, in particular those that are banned and severely restricted in international trade (see para. 49 above).

291. IRPTC continued to participate in updating the UN Consolidated List of Products Whose Consumption and/or Sale have been Banned, Withdrawn, Severely Restricted or not Approved by Governments. An updated database on chemical products and on chemicals in consumer products was made available to the UN Secretariat by IRPTC during November 1987. IRPTC also maintained close contacts with other international organizations, including FAO, GATT and WHO, as well as CEC, CMEA, and OECD, related to the exchange of information on chemicals in international trade, so as to strengthen international co-operation and to prevent unnecessary overlapping and duplication of efforts.

292. The Governing Council, at its 14th session, approved the Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes in its decision 14/30. Work towards development of a global convention on the control of transboundary movements of hazardous wastes, towards which IRPTC has contributed, has been initiated at the request of the Governing Council (see para. 48 above).

293. IRPTC also participated in preparing and conducting a UNEP/WHO workshop on chemical hazards for African countries, held in Nairobi in September 1987, which took steps

towards assessing the magnitude of chemical hazards in Africa and national capabilities to deal with these hazards as a basis for identifying priorities for action.

294. In 1987, in co-operation with the Government of the USSR and IPCS, IRPTC organized a third training course in preventive toxicology, this one concerning industrial and household chemicals, in Moscow and Leningrad for 16 participants, largely from developing countries. IRPTC also supported an IPCS training course on Toxicology and Chemical Safety in Rural Environments: Health Aspects of Pesticide Use, held in Kiev, Kishinev and Odessa for 13 participants from several developing countries. In addition, in close co-operation with the Federal Health and Environmental Authorities of the Federal Republic of Germany, IRPTC organized a study meeting for participants from 13 developing countries on state control of hazardous chemicals as practised in that country, financed by government funds.

Working environment (Budget subline 7103)

295. During 1987, the joint ILO/WHO/UNEP project on organizational patterns and institutional arrangements for occupational health and safety at the national level continued to be implemented by ILO and WHO without UNEP involvement or support.

Human settlements (Budget subline 7104)

296. The year 1987 was designated as International Year of Shelter for the Homeless (IYSH), during which the community of nations placed special emphasis on the shelter needs of the poor, numbering some 1 billion people world-wide. Scores of Governments reviewed their shelter strategy and established a firmer national basis for the improvement of housing and related facilities. An increasing number of people in slums and squatter settlements were provided with basic services, water supply sanitation and waste disposal.

297. For its part, UNEP contributed to the objectives of IYSH through a number of activities. One of the themes of World Environment Day 1987 was the environmental aspects of sheltering the homeless. A variety of media packages were prepared and distributed to mark the occasion. The central message of all the activities was that the link between environment and human settlements development should be strengthened.

298. UNEP also organized a special training course in the USSR for 15 national IYSH focal points in April 1987, which provided practical information on how to integrate environmental concerns into human settlements planning. The report of the training course and some of the working papers have been integrated into a manual. The report itself has been distributed to all the IYSH focal points throughout the world.

299. The 10th Session of the Commission on Human Settlements, which commemorated the establishment of Habitat in 1977, was held in Nairobi in April 1987. UNEP took this opportunity to highlight the relationship between human settlements and the environment. The Executive Director of UNEP gave an address on the subject and UNEP issued a special publication on that occasion containing his collected statements, *One Earth, One Home.* A substantive paper entitled "Environment and shelter—more than a roof", which highlights an ecological approach to human settlements planning and management, was also issued.

300. During the year under review, the first phase of the project on the health aspects of planning and managing human settlements, carried out jointly with WHO, was successfully completed with the publication of seven guideline documents dealing with various aspects of health and human settlements development.

301. Efforts to improve waste management in human settlements have continued to attract UNEP attention. A demonstration project on waste-water treatment from food processing establishments, undertaken in collaboration with several institutes in the Federal Republic of Germany, was completed in Mexico City. In addition, preparations were made for a small-scale demonstration project, also supported by the Federal Republic of Germany, on harnessing gas from land-fill sites in Nairobi. This project is similar to one undertaken by the Federal Republic of Germany in Freetown, Sierra Leone.

THE ARMS RACE AND THE ENVIRONMENT (Budget line 81)

302. The end of 1987 saw the completion of the fifth and last major book produced under the Swedish International Peace Research Institute (SIPRI)/UNEP programme. As of January 1988, the programme on the arms race and the environment will have a new venue and will be jointly financed by the International Peace Research Institute, Oslo (PRIO) and UNEP. The book, entitled *Cultural norms, war and the environment,* will be available early in 1988. The volume is an outgrowth of a symposium convened by SIPRI in co-operation with UNEP in Stockholm in March 1987.

303. The principle that the right of belligerents to use means of injuring the enemy is not unlimited has been established in international law since the Hague Convention of 1899. More recently, one of the 1977 Protocols to the Geneva Convention prohibits nations from employing methods or means which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment. *Cultural norms, war and environment* is largely devoted to examining what this concepts actually means; where cultural norms conflict with constraints on the use of military force and a respect for nature; how malleable all such norms are; and the extent of any links between a respect for nature and a disdain for militarism.

304. In short, the symposium resulted in the multi-authored volume examining the role of cultural attitudes towards the environment—past and present—in inhibiting the preparation and conduct of war and suggesting how such norms could be strengthened and developed. It is significant that this book was edited during the year in which the world witnessed a treaty to reduce and eliminate nuclear weapons. There is now renewed optimism that mankind may be spared mass destruction.

305. In its resolution 42/93 on Comprehensive system of international peace and security, adopted on 7 December 1987, the General Assembly added a new dimension to the concept of international peace and security. In paragraph 10 of its resolution, the Assembly considered "That interaction in the ecological sphere should become an integral part of comprehensive international security". Thus, the concept of ecological security gained international recognition in 1987, a concept long advanced by UNEP—for unresolved environmental problems can all too easily lead to international tension and conflict.

REGIONAL AND TECHNICAL CO-OPERATION (Budget line 82)

306. The emphasis of the work carried out by UNEP's Regional Offices is not uniform, nor is there any intention of making it so, owing to the significantly different problems facing each individual region. While certain activities are common to all, the degree of emphasis changes according to local conditions. The co-ordination of intergovernmental efforts to combat acid precipitation will have a higher priority in an industrialized region than in other regions where informing the agricultural sector of the need to prevent soil erosion is perceived as being of major importance. This logic is followed by UNEP and consequently is reflected in the activities reported below.

307. In its capacity as the Secretariat of the African Ministerial Conference on the Environment (AMCEN), UNEP through its Regional Office for Africa continued to assist and co-ordinate the implementation of the Cairo Programme for African Co-operation on the Environment. The AMCEN Committee on Seas met in Algiers from 25 to 27 May 1987, while its Committees on Forests and Woodlands and on Rivers and Lake basins met respectively at Kinshasa from 23 to 25 March 1987 and Harare, 25 to 27 March 1987. During the year under review, UNEP also took measures to establish AMCEN technical co-operation networks on water resources and on soils and fertilizers. The second session of the African Ministerial Conference on the Environment was held in Nairobi in June 1987, moving forward the work of the Cairo Programme.

308. During 1987, advisory services for different environmental problems were provided by UNEP to the following African countries: Algeria, Côte d'Ivoire, Gambia, Guinea, Mauritania, Mauritius, Somalia, Sudan, Swaziland, Uganda, and Zaire.

309. One of the principal channels through which UNEP works with NGOs in the African Region, is the African NGOs Environment Network (ANEN), which has a membership of over 280 African NGOs in 29 countries. During 1987, UNEP made special efforts to strengthen the co-ordinating role of ANEN and to contribute towards the improvement of its information and experience exchange machinery. In close co-operation with the UNEP Regional Office for Africa, ANEN prepared and updated a directory of African NGOs active in the field of environmental management.

310. Through its Regional Office for Latin America and the Caribbean, which provides secretariat support for intergovernmental regional meetings, UNEP, in co-operation with the Government of Uruguay, convened the Fifth Intergovernmental Regional Meeting on the Environment, at the technical and ministerial level, from 6 to 20 April 1987. The following regional programmes are under implementation: (a) development planning and environment; (b) environmental legislation; (c) environmental education; (d) protection and conservation of the natural and cultural heritage and protected areas; (e) natural potential and rational management of tropical and sub-tropical forest ecosystems; and (f) environmental training network.

311. As a follow-up to the UNEP/IPU Conference, which took place in 1984, UNEP's Regional Office for Latin America and the Caribbean, in co-operation with the Latin American Parliament and the Senate of the United Mexican States, and in consultation with the IPU, organized in March 1987 in Mexico City the First Inter-Parliamentary Conference on the Environment in Latin America and the Caribbean. The intention was to make this the first of a series of conferences on this topic, involving the legislative branches of the countries of the region.

312. A seminar on the control of dumping and other waste disposal methods in the Wider Caribbean region was held in Mexico City in September 1987, co-sponsored by UNEP, the International Maritime Organization (IMO), the Intergovernmental Oceanographic Commission (IOC) and the Government of Mexico. The seminar adopted recommendations calling for the development of a co-ordinated approach to research, monitoring and management of wastes and for the consideration of additional specific protocols on incineration and dumping to be added to the Cartagena Convention.

313. The Regional Office for Asia and the Pacific, with funding from the Swedish International Development Authority, undertook the implementation and operation of a network for industrial environmental management (NIEM), beginning with the pulp and paper industry. Twenty-three institutions from 7 countries in the region are now taking part in joint research projects and the sharing of information and data. The Government of the Netherlands provided funds to conduct in 1987 a senior level expert workshop to evaluate the benefits and constraints of the Environmental Impact Assessment (EIA) process in South Asia Co-operative Environment Programme (SACEP) countries and to publish a booklet on using and improving this process. The EIA workshop was hosted by the Government of Sri Lanka. The Wild Bird Association of Japan obtained through a public campaign in Japan, and donated to UNEP, a considerable quantity of binoculars, telescopes and tape recorders and promotional material such as T-shirts and life-size bird posters. This material was distributed by the Regional Office for Asia and the Pacific to 27 NGOs in eight countries: Fiji, India, Malaysia, Nepal, Philippines, Papua New Guinea, Sri Lanka and Thailand.

314. Thirty-nine fellowships were awarded to 11 countries in Asia and the Pacific region. Technical co-operation was extended to 26 activities in the following countries of the region: Bangladesh, Hong Kong, India, Malaysia Philippines, Singapore, Sri Lanka, Thailand, and Vietnam.

315. The Regional Office for West Asia concentrated its activities on raising levels of environmental awareness through a series of interrelated approaches. The establishment of machinery for the decision-making process is a high priority, given the fact that West Asia is undergoing rapid development in which decisions are being taken with comparable speed. As a result, the Regional Office in 1987 continued to foster close relations with universities and other institutes of higher learning; continued its heavy involvement in the creation of national councils on environmental protection; continued working with the Gulf Co-operation Council on strengthening environmental institutions; assisted in developing a state-of-the-environment Report for Bahrain; and provided other assistance to States in the region.

316. Given the number of Arab countries in West Asia, as well as the preponderance of Islam in the region, there are obvious linguistic, cultural and political links with the Arabic-speaking nations of North Africa. The Regional Office for West Asia consequently collaborated closely with the UNEP Arab League Liaison Office in Tunis in preparing proposals for consideration by the Conference of Ministers Responsible for Environment in Arab States, which took place in Rabat in July 1987.

317. UNEP's Regional Office for Europe targets most of its work towards liaison with Governments, intergovernmental organizations and international organizations. Much of the technical and financial support required for implementing UNEP's programme is provided by agencies and institutes from within that region. Staff from the Regional Office represented UNEP in 26 meetings during the year. Through the Regional Office, UNEP in 1987 provided fellowships to eight countries of the region (Bulgaria, Czechoslovakia,

Greece, Hungary, Poland, Portugal, Turkey, and Yugoslavia) so that they could participate in international efforts to promote sustainable development. The Office also assisted UNEP's Clearing-house in mobilizing donor support.

318. The Regional Office for Europe was closely involved in raising levels of public awareness of the environment in the region. Work included liaison with a number of individual countries of the EEC, as well as with the EC Commission, in support of the European Year of the Environment (EYE); jointly sponsoring with the Swiss Government the Worldwide Fund for Nature, and, with the Council of Europe, an environmental exhibition entitled *Voyage au coeur de notre terre* which was visited by 40,000 people; presenting talks at a number of conventions and seminars; and publishing three issues of the *Regional Bulletin for Europe,* which is distributed to government focal points, UN information centres, UN associations, NGOs, the media, UN system focal points and European permanent missions in Geneva.

319. UNEP's New York Liaison Office maintains constant contact with the United Nations Secretariat on all matters concerning the environment and conducts an active and expanding public information programme. Thus, in addition to its heavy involvement in meetings convened by the United Nations in New York, the Liaison Office, and its companion office in Washington, devoted much effort to increasing contacts with the North American NGO community. During 1987, strong emphasis was placed on promoting understanding of the stratospheric ozone issue, which led to the September meeting in Montreal that adopted the Protocol on Substances that Deplete the Ozone Layer. Increased stature and authority have been gained by environmentalist non-governmental bodies in North America under such auspices as the Globescope citizen-education town meetings, the Scientists' Institute for Public Information and the increasing support of religious groups concerned with the moral and ethical gap that exists in humanity's responsibility for the Earth. Staff from the New York and Washington therefore attended symposia, conferences and town meetings on environmental issues and both offices maintained a busy schedule of assisting media researchers and interviewers.

Notes

1 UNEP/GC.13/16.

2 UNEP/GC.14/16.

3 UNEP/GC.14/6.

4 UNEP/GC.14/6/Add.3.

5 UNEP/GC.15/24

6 UNEP/GC.14/19

Chapter IV

INTERGOVERNMENTAL LEGISLATION OF RELEVANCE TO UNEP

UNEP Governing Council
Economic and Social Council
General Assembly

INTERGOVERNMENTAL LEGISLATION OF RELEVANCE TO UNEP

1. During the year under review, the Governing Council of UNEP, the Economic and Social Council and the General Assembly continued to monitor and guide the work of the UNEP secretariat. The relevant legislative measures adopted by these bodies in 1987 are briefly described below.

UNEP GOVERNING COUNCIL

2. After a period of 24 months since its thirteenth session in May 1985 (the Council, in 1983, had decided not to hold a session in 1986), the Council met for its fourteenth session in Nairobi from 8 to 19 June. At that session, the Council adopted 36 decisions, 34 of which were adopted by consensus. The 36 decisions can be divided into three general categories: matters of general policy (1-14); programme matters (15-32); and administrative and financial matters (33-36).

General policy

3. Governing Council decision 14/1 on programme policy and implementation is divided into three sections. In the first, entitled "Policy matters", the Council noted with appreciation the information provided by the Executive Director in his annual and introductory reports and also took note of those resolutions of relevance to UNEP adopted by the General Assembly and the Economic and Social Council in 1986. Turning to the future orientation of the work of UNEP, the Council expressed its appreciation of the internal review carried out by the Executive Director; its view that evaluation was an integral part of the programming process and should utilize a refined methodology prepared in consultation with the partners of UNEP in the United Nations system, as well as with Governments; and its belief that the 10 goals and 20 targets proposed by the Executive Director would be useful inputs for the Council's consideration of the system-wide medium-term environment programme and the environment chapter of the United Nations medium-term plan at its special session in 1988. In the second section of the decision, the Council addressed itself to new UNEP initiatives, notably those on forest ecosystems and on World Environment Day 1987, in particular the establishment of the Global 500.

4. The third section of decision 14/1 concerns international conferences on the environment. With respect to the African Ministerial Conference on the Environment, the Council welcomed the adoption of the Cairo Programme for African Co-operation[1] and requested the Executive Director to provide technical and financial support within available resources to those of its activities selected for priority implementation. Similarly, with respect to the First Arab Ministerial Conference on Environmental Considerations in Development, the Council requested the Executive Director to extend every practical support to the bodies of the Conference and, within available resources, to participate in the follow-up of the implementation of its decisions.[2] Finally, in connection with the *Ad Hoc* Committee to Review the Implementation of the Recommendations of the 1984 Inter-Parliamentary Conference on Environment,[3] the Council requested the Executive Director to improve the

existing international information system sponsored by UNEP, in particular the exchange of information about environmental law adopted at national and international levels, and also appealed to parliamentarians world-wide to intensify their role in strengthening environmental awareness and action.

5. In its decision 14/2, the Council addressed the annual Reports of the Administrative Committee on Co-ordination (ACC)[4] for 1984 and 1985, welcoming the continued co-operation of ACC with UNEP, its endorsement of the Executive Director's proposal that a special session of the Governing Council be held every six years to approve the system-wide medium-term environment programme, its support for the Global Resource Information Data Base (GRID) and its proposal that the ILO prepare a paper examining the issues related to environment and employment. In this decision, the Council also requested the Executive Director to initiate bilateral discussions with the heads of the relevant agencies and bodies of the UN system for improving the role of the Designated Officials for Environmental Matters (DOEM) as the effective co-ordination mechanism in this area. In addition, it asked him to take note of the ACC view that the potential environmental impact of development projects should be analysed as part of the project appraisal process and, lastly, invited the ACC to continue to report annually to the Council on co-ordination in the field of environment and in the implementation of the Plan of Action to Combat Desertification.

6. Noting with satisfaction the first joint progress report of the Executive Directors of UNCHS (Habitat) and UNEP, the Council, in its decision 14/3, requested the Executive Director of UNEP, in consultation with the Executive Director of UNCHS (Habitat) to continue and increase co-operation between the two organizations, both in support of system-wide efforts of mutual interest and on the following four subject areas: assessment of environmental conditions in human settlements; environmental aspects of policies, planning and management of human settlements, both rural and urban; environmentally sound and appropriate human settlements technology; and research, training and the dissemination of information on environmentally sound human settlements planning and management.

7. Decision 14/4 deals with the periodicity and duration of the sessions of the Governing Council, recommending a draft resolution on a biennial cycle of sessions for the consideration of the General Assembly and setting out amendments to the Council's rules of procedure to meet the implications of such a cycle. The Council also decided that the Committee of Permanent Representatives should continue to meet with the Executive Director at least four times a year.

8. Working towards a rationalization of documentation for the biennial cycle, the Council, by its decision 14/5, requested the Executive Director to provide for every future session a single operative document for each substantive agenda item; background documents would be submitted to the Council for information purposes only.

9. Recalling its earlier decisions on the Clearing-house mechanism, the Council, by its decision 14/6, confirmed the continuation of the UNEP Clearing-house functions, deciding that the mechanism should focus on strengthening the capacity of developing countries to promote sustainable development by assisting policy planning and institution-building, as well as by supporting a limited number of regional programmes. In addition, the Council requested the Executive Director to utilize extrabudgetary funds to finance short-term expertise, studies and a limited number of pilot projects and emphasized his advising Governments both on the preparation of programme proposals for which Clearing-house resources are sought and on the identification of possible bilateral and multilateral funding sources. The Council also urged donors to support the operation of the Clearing-house

mechanism and called on Governments and international organizations to support the implementation of proposals it identified. The Council encouraged the Executive Director to consider increasing the number of staff in the Clearing-house and urged donors to supply experienced staff on secondment. Finally, it requested the Executive Director to conduct an external evaluation of the Clearing-house mechanism before its next regular session.

10. On the subject of environment and financial institutions, notably co-operation between UNEP and the Committee of International Development Institutions on the Environment (CIDIE), the Council, in decision 14/7, welcomed the major moves undertaken by the member institutions to integrate environmental considerations into their financial policies and the implementation of their projects, as well as the Committee's decision to seek the co-operation of relevant multilateral development financing institutions and bilateral donor agencies. The Council also urged members of the Committee to continue to co-operate with UNEP in promoting and implementing the provisions of the Declaration of Environmental Policies and Procedures relating to Economic Development[5] and requested the Executive Director to continue to provide the secretariat of the Committee and to assist member institutions in reviewing and improving their environmental policies and procedures aimed at assisting developing countries.

11. In its decision 14/8, on co-operation with non-governmental organizations (NGOs), the Council congratulated the Executive Director on his initiative to honour a number of them by their inclusion in the Global 500 list. It requested that he take steps to ensure that NGOs be systematically involved in all relevant aspects of the UNEP programme, from planning to implementation; that adequate staff resources and flexible procedures be provided for co-operation with NGOs; and that ways be found to expand the small grants scheme, in part through the UNEP regional offices. The Council also asked the Executive Director to work towards the creation of a fund to be financed by foundations to help deserving organizations and individuals. In addition, it requested that the Executive Director work with the Environmental Liaison Centre in regionalizing its activities, in involving its members in the work of UNEP, in ensuring that its members assist each other in as many direct ways as possible, and in regionalizing its small grants scheme. He was asked to continue working with other global NGOs as well, notably IUCN and IIED, and to support the creation and operation of regional networks of NGOs, especially in the developing countries.

12. Decision 14/9, on state-of-the-environment reports, is divided into five sections. In the first, on the 1986 state-of-the-environment report on health and the environment,[6] the Council endorsed the conclusions and recommendations of the report and requested the Executive Director, *inter alia,* to bring those recommendations to the attention of all Governments and relevant intergovernmental and non-governmental organizations and to monitor progress in their implementation. In the second section, on the state of the world environment 1987,[7] the Council noted the report with appreciation, requesting its wider circulation; called upon all Governments, relevant UN bodies and other intergovernmental and non-governmental organizations to improve the quality of the environmental data base, especially the time-series data, and to give high priority to studies aimed at filling the gaps in current knowledge. It also called upon Governments to accord high priority to the development and implementation of various environmental protection measures and to refrain from using chemical and other weapons of mass destruction. Finally, the Council decided that the topic of the state-of-the-environment report for 1988 would be the public and the environment, with special emphasis on the role of women, and that the report for 1989 should be an update of the 1987 report on the state of the world environment, but with a more profound treatment of specific subject and/or geographical areas.

13. In the third section of decision 14/9, concentrating on emerging environmental issues, the Council took note of the report of the Executive Director on the subject,[8] requesting its wider circulation and decided upon two issues, health risks from diesel vehicles and acid fog, for more detailed elaboration in the state-of-the-environment report for 1989. In the fourth section, on environmental events, the Council encouraged the Executive Director to continue his co-operation with the relevant international agencies, bearing in mind that IAEA is the principle agency for nuclear matters within the UN system. It also encouraged him to continue his efforts to pursue these matters with Governments, the UN system and world industry and trade; and to assist Governments on questions related to the identification of industrial hazards, the development of measures to limit the risk of accidental emission of dangerous substances, and early notification and assistance in the event of serious industrial accidents. In the final section, on the state-of-the-environment in developing countries, the Council requested the Executive Director to continue according high priority to assisting developing countries, particularly those which have not yet been able to do so, in the preparation of national state-of-the-environment reports.

14. Environmental impacts of *apartheid* on Black agriculture in South Africa was the subject of decision 14/10, in which the Council called upon all concerned to do their utmost to draw the attention of the White minority régime of South Africa to the long-term environmental impacts of its Black agricultural policies that have seriously jeopardized the chances of environmental repair and rehabilitation on the very limited agricultural lands available.

15. In decision 14/11, on the environmental situation in the occupied Palestinian and other Arab territories, the Council deplored Israel's carrying out measures contrary to Security Council resolution 465 (1980), in particular the confiscation of land and water resources, the establishment of settlements and the destruction of trees and plantations in these territories. It requested the Executive Director to provide assistance to the Palestinian people, particularly the municipalities of the occupied territories, in collaboration with UNDP and in co-ordination with the Palestinian Liberation Organization.

16. In its decision 14/12, on the in-depth study of the United Nations intergovernmental structure and functions in the economic and social fields, the Council adopted for transmission to the Special Commission of ECOSOC a text annexed to the decision entitled "Statement by the Governing Council regarding the objectives envisaged in recommendation 8 of the Group of High-level Intergovernmental Experts to Review the Efficiency of the Administrative and Financial Functioning of the United Nations." In the Statement itself, the Council reaffirmed the unique mandate and functions of UNEP, particularly its system-wide catalytic and co-ordinating role, and pointed to a number of measures already taken for the rationalization of UNEP work. Given its own function as essentially a co-ordinating mechanism, the Council attached great importance to the strengthening of co-ordination under the leadership of the Secretary-General, as well as the provision of support to ACC, stating its belief that the creation of greater responsibility on the part of each body of the United Nations system in integrating environmental considerations into its policies, budget and staffing strategies would strengthen UNEP's ability to catalyse and support environmental activities and sustainable development approaches at the secretariat level.

17. By its decision 14/13, the Council adopted the Environmental Perspective to the Year 2000 and Beyond as providing a broad framework to guide national action and international co-operation on policies and programmes aimed at achieving environmentally sound and sustainable development. The Council annexed to the decision a draft resolution on the subject for consideration by the General Assembly.

18. Similarly, in its decision 14/14 the Council accepted the report of the World Commission on Environment and Development[9] as a guideline to be taken into account in future UNEP work, decided to transmit the Commission's Report to the General Assembly, and recommended a draft resolution on the report to the General Assembly.

19. Decision 14/15, on desertification, falls into four sections, in the first of which, devoted to implementation of the Plan of Action to Combat Desertification (PACD), the Council took note of the reports of the Executive Director on the implementation of the Plan in 1985 and 1986[10]. In the second section, on the implementation of the Plan in the Sudano-Sahelian Region, the Council welcomed the steps taken by UNSO, on behalf of UNEP, towards implementation of the Plan in 22 countries of the Sudano-Sahelian and neighbouring region and also urged the Executive Director and the Administrator of UNDP to intensify efforts to mobilize resources for continued assistance to the countries served by UNSO in combating desertification. In the third section, on national plans of action to combat desertification, the Council recommended that such plans and the nature of their implementation be grassroots-oriented for easier integration into national economic systems. It also requested the Executive Director to apply the criteria for selecting concentration countries flexibly, taking into account regional distribution. In addition, the Executive Director was asked to evaluate the UNEP programme in this field, including the operation of the Consultative Group for Desertification Control and the Special Account to Finance the Implementation of PACD, and to propose modification and redirections, as well as to evaluate the national plans to combat desertification and the feasibility of integrating them into each country's national development plan. Finally, the Council urged UNEP to mobilize more funds through UN organizations and other funding agencies and to work more closely with Governments in planning strategies and specific plans and projects to combat desertification. In the fourth section of this decision, the Governing Council requested the Executive Director to discuss with Governments the feasibility of adopting a new approach which would encourage them and international financing institutions to contribute directly or indirectly to the Special Account to finance the implementation of PACD.

20. Turning to the promotion of the transfer of environmental protection technology the Council, in decision 14/16, encouraged Governments to promote the commercial exchange and transfer of such technology, as well as direct industrial contacts in the field, and also urged Governments and international intergovernmental trade organizations to review terms of trade in pollution control so as to identify and minimize barriers. Governments were also encouraged to share public research and demonstration results and information on non-proprietary environmental protection technology. The Council invited the Executive Director to consult Governments to identify specific technology in the field that is not now available to them, identify the reasons for their being unable to obtain it and submit to the Council a report with recommendations to the relevant bodies for discussing solutions to the factors that impede appropriate transfer. Lastly, the Council invited the specialized agencies and other members of the UN system dealing with problems of technology transfer, particularly UNIDO, UNCTAD and the regional economic commissions, to take account in their respective fields of the promotion of the transfer of environmental protection technology.

21. In its decision 14/17, the Council approved the programme budget of UNEP for the biennium 1988-1989, urging the Executive Director to implement the planned activities on the basis of the priorities indicated in the programme budget.

22. In its decision 14/18, the Council called upon Governments to make full use of the services provided by the International Environmental Information System (INFOTERRA), as well as to strengthen their INFOTERRA focal points. In addition, it requested the

Executive Director to ensure that environmental information systems be utilized fully in UNEP activities, including those pertaining to sustainable development, and asked further that he consider possibilities for strengthening INFOTERRA, taking account of the recommendations of the third meeting of the INFOTERRA Advisory Committee, held in Canberra in April 1987.

23. Turning to the International Register of Potentially Toxic Chemicals (IRPTC) in its decision 14/19, the Council called upon the Executive Director to continue to give the work of IRPTC high priority and upon all Governments, international organizations and industry to maintain their active participation in these activities. It also requested the Executive Director to examine the short- and long-term financial position of IRPTC, including the possibility of extrabudgetary funding, in the light of its expanded responsibilities.

24. Decision 14/20 deals with global climate change. Having noted with satisfaction the importance attached by UNEP to the problem, including its efforts to raise public awareness and assess climate impacts, the Council urged the Executive Director to ensure that UNEP, working in close co-operation with the World Meteorological Organization (WMO) and the International Council of Scientific Unions (ICSU), in particular its Special Committee on Global Change, maintain an active role within the World Climate Programme through fulfilling its central responsibilities for climate impact studies and by ensuring that the World Climate Research Programme include studies on the causes and effects of atmospheric changes, taking account of social and economic aspects. The Council also welcomed the Executive Director's plans to join with WMO and ICSU in convening a second World Climate Conference in late 1989 or early 1990, as well as his support for the World Conference on the Changing Atmosphere: implications for Global Security, being convened by the Government of Canada in June 1988. He was urged to respond positively to the request of the Tenth Congress of WMO that its Secretary-General, in co-operation with the Executive Director of UNEP, explore and, after appropriate consultation with Governments, establish an *ad hoc* intergovernmental mechanism to carry out internationally co-ordinated scientific assessments of the magnitude, timing and potential impact of climate change.[11]

25. In its decision 14/21 on regional and subregional programmes in Latin America and the Caribbean, the Council decided to disseminate and promote the Declaration and recommendations of the First Interparliamentary Conference on the Environment in Latin America and the Caribbean and to continue to give the highest priority to the regional programme of the Environmental Training Network, as well as high priority to the Action Plan for the Protection of the Marine Environment and Coastal Areas of the South-East Pacific and that for the Caribbean Environment Programme for which the Executive Director was requested to continue his support of the Regional Co-ordinating Units. The Executive Director was requested to continue and strengthen the regional and subregional programmes on development planning and environment; the development of environmental legislation and institutional framework; the management of wildlands, protected areas and wildlife; environmental education; and national management of the forest ecosystems of Central America and Mexico and of the South Cone. Governments were encouraged to undertake natural and cultural heritage inventory and accounting systems. The Council also made a number of requests to the Executive Director, among them the following: to support the Contact Group of the UNEP Regional Office for Latin America and the Caribbean; to employ technical advisers and professionals of the countries in implementing the regional seas programmes; to support the Governments of the region in the study of the impact of external debt on environmental policies and administration; to extend and reinforce the Programme of the Environmental Training Network; to advise Governments on obtaining financial resources from the Clearing-house mechanism and other international organizations to support the umbrella projects and the national sub-projects; to take into aecount the

interest of the region in a new programme on the management and utilization of agricultural and agro-industrial wastes; to continue to promote the systematization of environmental legislation national digests and data banks; to give special attention to research programmes on the behaviour of environmental systems and the creation of methodologies for environmental impact assessment and economic analysis; to arrange for the development of simple instructions to prevent the destruction of species or seeds with genetic potential and to ensure that these instructions contain information on freezing, drying and culture methodologies; and, finally, to continue supporting the FAO/UNEP project on the management of wildlands, protected areas and wildlife.

26. The Action Plan for the Environmentally Sound Management of the Common Zambezi River System is the subject of decision 14/22, by which the Council requested that the Executive Director begin consultations with the Governments of the Zambezi basin countries, the Executive Director of SADCC, organizations of the UN system and donor agencies, so that implementation of the Plan might start before the end of 1987.

27. In its decision 14/23, the Council noted with appreciation the report of the Joint Inspection Unit[12] on the contribution of the UN system to the conservation and management of the cultural and natural heritage in Africa.

28. Turning to the improvement and harmonization of environmental measurement in decision 14/24, the Council called upon the Executive Director to initiate action for ensuring co-ordination to this end and also requested him to convene, under Earthwatch auspices, a meeting of experts to consider the best means of achieving progress in this area, including the possibility of instituting a forum for information exchange and consultation.

29. In its decision 14/25, the Council adopted the Goals and Principles of Environmental Impact Assessment.[13] It requested the Executive Director to bring this document to the attention of all States and relevant international organizations, including multilateral development banks, with the recommendation that the Goals and Principles be considered a basis for preparing national measures in the field, as well as for international co-operation, including further international agreements. Therefore, the Council also requested the Executive Director to assist States in implementing the Goals and Principles and to investigate measures for furthering international co-operation in this field, including the application of environmental impact assessment to development projects with possible transboundary environmental effects.

30. On the subject of international conventions on biological diversity, the Council, in decision 14/26, requested that the Executive Director establish an *ad hoc* working group of experts to investigate, in close collaboration with the Ecosystems Conservation Group and other international organizations, the desirability and possible form of an umbrella convention to rationalize current activities in this field and to address other closely related areas.

31. Decision 14/27 highlights the environmentally safe management of chemicals, in particular those that are banned and severely restricted in international trade. In this decision, the Council adopted the London Guidelines for the Exchange of Information on Chemicals in International Trade,[14] deciding that these guidelines should replace the Provisional Notification Scheme for Banned and Severely Restricted Chemicals. It also requested that the Executive Director convene an *Ad Hoc* Working Group of Experts with a view, first, to developing modalities of prior informed consent and other approaches which could supplement the modalities of the London Guidelines and, second, to recommending measures for incorporating the principle of prior informed consent into the Guidelines. It urged States to implement the Guidelines promptly and recommended that they consider, in

addition, other ways of meeting the objectives of the Guidelines. It encouraged States which had not yet done so to designate national authorities to implement the Guidelines, also encouraging developed countries to assist developing countries in obtaining technically qualified personnel to implement the Guidelines and developing countries to utilize fellowship programmes to enhance their capacity to assess risks associated with chemicals. Finally, the Council requested the Executive Director to assist States, particularly the developing countries, in making the arrangements necessary to implement the Guidelines and to take steps to ensure effective co-ordination in this area among all international organizations concerned.

32. In its decision 14/28 on the Protection of the Ozone Layer, the Council, expressing its satisfaction with the *Ad Hoc* Working Group of Legal and Technical Experts for the Preparation of a Protocol on Chlorofluorocarbons to the Vienna Convention, requested the Executive Director to inform the Group that it should consider the full range of potential ozone-depleting substances in determining what chemicals might be controlled under the protocol. It also reiterated the request of the Group to the Executive Director that UNEP arrange for improved calculations of the ozone-depletion potential of substances considered a threat to the ozone layer, quantify the ozone-depletion potential values of alternative chlorofluorocarbon and also quantify the greehouse-warming potential of all these substances. The Council welcomed the invitation of the Government of Canada to host a diplomatic conference on this subject in 1987.

33. Decision 14/29 deals with international conventions and protocols in the field of the environment. The Council called upon all States which have not already done so to sign, ratify and implement the existing instruments in this field to which they are entitled to become parties.

34. By decision 14/30, the Council approved the Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes, as well as the recommendations adopted by the *Ad Hoc* Working Group on the subject.[15] In addition, the Council stressed the need to extend international measures in this field, particularly for the control of transfrontier movements of such wastes, and welcomed the offer of the Government of Hungary to host the organizational meeting of a working group of legal and technical experts with a mandate to prepare a global convention on the control of transboundary movements of hazardous wastes. Further, the Council requested the Executive Director to convene a diplomatic conference in early 1989 for the adoption of a global convention on the subject, welcoming the offer of the Government of Switzerland to host such a conference. Finally, the Council stressed the need for close collaboration among international organizations and institutions involved in the management of hazardous wastes so as to avoid duplication of effort.

35. Taking note of the report of the Executive Director on shared natural resources and legal aspects of offshore mining and drilling in decision 14/31,[16] the Council called upon Governments and international organizations to take further action to implement the principles of conduct in the field of the environment for the guidance of States in the conservation and harmonious utilization of natural resources shared by two or more States, as well as the conclusions of the study of the legal aspects concerning the environment related to offshore mining and drilling.

36. The list of selected environmentally harmful chemical substances, processes and phenomena of global significance was the subject of decision 14/32, by which the Council requested the Executive Director to refer his updated report on the subject[17] to Governments, relevant international organizations, industry and NGOs for further study and action and to obtain their comments on the report and, in particular, on its

recommendations and their implementation. The Council also called on Governments to include in their responses measures adopted or planned to prevent serious impacts on man and the environment of those substances, processes and phenomena and requested the Executive Director to submit an updated report in 1991.

Administrative and financial matters

37. Noting with satisfaction that a total of $17.2 million of additional funds had been raised during the biennium 1985-1986, the Council addressed the issue of additional sources of funding in its decision 14/33 and noted the important role of the Clearing-house as a means of raising such funds. It requested Governments to continue and increase their support by providing additional funds for specific UNEP activities, to encourage individuals, private and public entities and NGOs to do likewise and to support the establishment of national environmental committees in accordance with decision 13/33, paragraph 2 (f), by such means as identifying suitable organizations and individuals to serve as focal points for creating greater awareness of the themes of the Environment Programme, as well as for fund-raising to support its activities. The Council then asked the Executive Director to increase his efforts to raise funds from such non-governmental sources as foundations and industrial corporations; to continue his efforts to secure additional funding for specific activities from other sources, such as the use of national currencies and supplementary staff and consultants; to pursue his efforts with respect to other revenue-producing activities; to promote further the establishment of national environmental committees; and to consider further soliciting the support of internationally known personalities for UNEP activities and concerns and to implement this proposal on a trial basis for a limited number of cases within available resources.

38. Taking note of reports on the management of trust funds and other funds in decision 14/34, the Council expressed its appreciation to Governments that had paid contributions due to the various trust funds on time and urged others to pay such contributions at the beginning of the year to which the respective fund related or earlier. It also confirmed the action of the Executive Director in establishing the Trust Fund for the Convention on the Conservation of Migratory Species of Wild Animals on an interim basis after having obtained the consent of the Secretary-General. The Council then approved the extension of the five general trust funds, subject to the approval of the Secretary-General. The Council also approved, subject to the consent of the Secretary-General, the extension of three general trust funds, should the Governments concerned so request. In conclusion, the Council took note of the technical co-operation trust funds established by the Executive Director under the authority delegated to him by the Secretary-General.

39. In decision 14/35, on programme and programme support costs, the Council noted the concern of the Executive Director that as there had been no increase in contributions to the Environment Fund, he was unable to limit the programme and programme support costs budget to within 33 per cent of the estimated contributions for 1986-1987. The Council approved the revised appropriation for the biennium 1986-1987, as presented by the Executive Director, as well as his proposals to maintain comparability in the presentation of the regular budget and the programme and programme support costs budget for 1988-1989, the latter to be subdivided into the three main sections of executive direction and management, programme costs and programme support. The Council then approved the appropriation for the programme and programme support costs budget for the biennium 1988-1989, requesting the Executive Director to administer the appropriation with the utmost economy and restraint and asking him as well to review the expenditure on regional and liaison offices with a view to reducing their charges against programme and programme support costs.

40. In its last decision, 14/36, on the Environment Fund, the Council expressed its appreciation to Governments that had paid their contributions early in 1986 and 1987, as well as to those that had pledged to contribute at a higher level during those years; urged all Governments to pay their contributions as early as possible in the year for which they were pledged; and appealed to Governments that had not yet made a pledge for 1987 to do so as soon as possible. An appropriation of $60 million was approved for the Fund Programme for 1988-1989 and apportioned by the Council among the various programme components. Reconfirming the authority of the Executive Director to adjust this apportionment by 20 per cent in each budget line, the Council also authorized him to enter into forward commitments for 1990-1991 of up to $16 million for the continuation of approved activities. Lastly, the Council requested that the Executive Director draw up a programme for Fund and Fund reserve activities for 1990-1991 of approximately $65 million, depending on the anticipated level of resources.

ECONOMIC AND SOCIAL COUNCIL (ECOSOC)

41. In accordance with General Assembly resolution 39/217 of 18 December 1984, by which the Assembly set out a biennial programme of work for its Second Committee, ECOSOC was to consider the substance of reports emanating from the UNEP Governing Council only in even-numbered years, while the Second Committee would deal with them in odd-numbered years. Therefore, in 1987 ECOSOC did not enter into a substantive discussion on the reports of the UNEP Governing Council. By decision 1987/170, it merely took note of the report of the Governing Council of UNEP on the work of its fourteenth session, and by decision 1987/171, it took note of the Council report on the implementation of the Plan of Action to Combat Desertification and on the implementation of that Plan in the Sudano-Sahelian region.

GENERAL ASSEMBLY

42. Environment figured prominently in the deliberations of the General Assembly at its forty-second session, held in the autumn of 1987. On the first of the two days of the general debate in Plenary devoted to the environment, the President of the Assembly, Mr. Peter Florin of the German Democratic Republic, characterized the protection of the human environment in the context of continued development and economic growth as one of the most important global problems. Plenary discussion of the environment was dominated by the Environmental Perspective to the Year 2000 and Beyond and the report of the World Commission on Environment and Development, *Our Common Future,* introduced by the Commission's Chairman, Mrs. Gro Harlem Brundtland, Prime Minister of Norway. These two seminal documents drew comment from the President of the Maldives, the prime ministers of India, Zimbabwe and Denmark, the last of whom spoke on behalf of the European Economic Community (EEC), and the Secretary-General of the United Nations and ministers and representatives from 18 other countries. When discussion of the environment moved into the Assembly's Second Committee for four days, more than 80 representatives addressed the subject, several speaking for whole groups of Member States.

43. Altogether, at its forty-second session, the Assembly adopted eight resolutions and three decisions of direct relevance to UNEP.

Resolution 42/182—Protection of the ozone layer

44. In this resolution, the Assembly, noting with satisfaction the work carried out by UNEP for the preparation of a protocol on chlorofluorocarbons to the Vienna Convention

for the Protection of the Ozone Layer, appealed to all States to consider becoming parties to the Vienna Convention as soon as possible. It welcomed the adoption of the Montreal Protocol on Substances that Deplete the Ozone Layer, and appealed to all States that had not yet done so to consider signing the Protocol as soon as possible. It urged all States and regional economic integration organizations to consider becoming parties to the Protocol so as to permit its entry into force in accordance with its article 16. Lastly, the Assembly requested the Executive Director to submit to the Assembly at its forty-fourth session, through ECOSOC, a report on the implementation of this resolution, as well as any further information concerning the Protocol that UNEP might be able to provide.

Resolution 42/183—Traffic in toxic and dangerous products and wastes

45. Sharing the conviction of the Governing Council that problems in this area could not be solved without adequate co-operation among members of the international community and welcoming the convening of a diplomatic conference in Switzerland in 1989 for the adoption of a global convention on control of transboundary movement of hazardous wastes, the Assembly requested the Secretary-General to prepare a comprehensive report for submission at its forty-fourth session on illegal traffic in toxic and dangerous products and wastes, as well as traffic not carried out in compliance with internationally accepted guidelines and principles, and its impact, notably on developing countries. All Governments were invited to co-operate with the Secretary-General in the implementation of this resolution and appropriate bodies of the UN system and NGOs were invited to assist in the preparation of the Secretary-General's report. In conclusion, the Assembly called upon all Governments to co-operate in the prevention and control of illegal traffic in toxic and dangerous products and wastes.

Resolution 42/184—International co-operation in the field of the environment

46. In this "omnibus" resolution, the Assembly noted with appreciation the report of the Governing Council on the work of its fourteenth session and endorsed the decisions it had adopted; it also expressed its appreciation for the work of UNEP during the fifteen years since its establishment and called for further action-oriented co-operation for the protection and enhancement of the environment. Also noted with appreciation was the Governing Council's adoption of the Environmental Perspective to the Year 2000 and Beyond, as well as its acceptance of the report of the World Commission on Environment and Development as a guideline to be taken into account in the future work of UNEP. The Assembly, considering evaluation to be an integral part of the UNEP programming cycle, said that such evaluation should be undertaken using a methodology developed in consultation with UNEP's partners in the UN system and with Governments. Welcoming the annual state-of-the-environment reports, notably that of 1987 on the state of the world environment, the Assembly requested that those reports be disseminated widely and drawn upon fully within the UN system in the preparation of reports on the world economic and social situation. Turning to the problem of global climate change, the Assembly agreed that the Executive Director should ensure that UNEP work in close co-operation with WMO and ICSU and maintain an active, influential role in the World Climate Programme. As to the rationalization of international conventions on biological diversity, the Assembly endorsed the establishment by the Executive Director of an *Ad Hoc* Working Group of Experts to investigate the desirability and possible form of an umbrella convention. It also welcomed the importance given by the Council to forest ecosystems, including the initiative of the Executive Director to pursue collaborative action for the sustainable use and conservation of significant areas of forests and their genetic resources.

47. The Assembly expressed its appreciation for the leading role played by UNEP in: the entry into force of the Agreement on the Action Plan for the Environmentally Sound

Management of the Common Zambezi River System; the adoption of the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region; the entry into force of the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region; and, in particular, the adoption of the Montreal Protocol on Substances that Deplete the Ozone Layer. The Assembly also welcomed the approval of the Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes, along with UNEP efforts to develop a convention on the transboundary movements of such wastes; it supported the Goals and Principles of Environmental Impact Assessment and the recommendations for their application; and welcomed the adoption of the London Guidelines for the Exchange of Information on Chemicals in International Trade, encouraging further steps in this field. The Assembly expressed its satisfaction at the results of the first and second sessions of the African Ministerial Conference on the Environment, the first Arab Ministerial Conference on Environmental Considerations in Development and the fifth Intergovernmental Regional Meeting on the Environment in Latin America and the Caribbean and agreed upon the desirability of creating and operating regional networks of non-governmental environmental organizations, especially in the developing countries. It reaffirmed the need both for additional financial resources from donor countries and organizations to assist developing countries to cope with environmental problems and for developed countries and appropriate organs and organizations of the UN system to strengthen technical co-operation with the developing countries to that end.

48. The Assembly concurred with the Governing Council's decision (14/6) that the UNEP Clearing-house mechanism should focus on strengthening the capacity of developing countries to promote sustainable development. It took note, too, of the Council's decision (14/10) on the environmental impact of *apartheid* on black agriculture in South Africa. Recalling the catalytic and co-ordinating role of UNEP, the Assembly requested that this role be developed further in the light of Council decisions 14/13 and 14/14 and called upon the Designated Officials for Environmental Matters to improve their effectiveness, bearing in mind these Council decisions. The Assembly agreed with the importance attached by the Council to the preparation of the system-wide medium-term environment programme (SWMTEP) for 1990-1995, guided by the Environmental Perspective to the Year 2000 and Beyond, and urged the ACC to develop an effective way of monitoring the implementation of SWMTEP and of evaluating critical SWMTEP programmes involving a number of organizations. Expressing its appreciation to those countries which have contributed regularly to the Environment Fund, the Assembly urged those that have not yet done so to make contributions in 1988 and future years. Finally, the Assembly urged all contributing countries to increase their contributions to the Fund for 1988 and thereafter.

Resolution 42/185—Biennial cycle of sessions of the Governing Council of UNEP

49. In this resolution, the Assembly decided that, beginning in 1989, the regular sessions of the Council would be held only in odd-numbered years and, further, that, beginning in 1988, the Council should hold a special one-week session every six years to consider and approve SWMTEP, as well as to consider the global programme on the environment of the proposed UN medium-term plan. The Assembly also decided that in 1988, the Council should meet to consider and approve the next SWMTEP, as well as appropriate changes to the global programme on the environment of the extended UN medium-term plan, and then, at its regular session in 1989, consider the global programme on the environment of the next UN medium-term plan before submitting it to the Assembly for approval. It requested that the Secretary-General consult with Governments to establish the necessary transitional arrangements for a change in the Council's members' term of office from three years to four, half the membership being elected every two years, and decided that the reports requested of the Council henceforth be submitted biennially instead of annually.

Resolution 42/186—The Environmental Perspective to the Year 2000 and Beyond

50. Recalling its resolution 38/161 of 19 December 1983, by which it had welcomed the desire of the Council to develop the Environmental Perspective to the Year 2000 and Beyond, the Assembly welcomed the Environmental Perspective, as adopted by the Council, as a basis for the further elaboration of UNEP's programme and operations, while acknowledging that different views existed in some aspects. The Assembly noted with appreciation that concepts, ideas and recommendations contained in the report of the World Commission on Environment and Development had been incorporated into the Environmental Perspective. Expressing its appreciation for the efforts of the Governing Council and its Intergovernmental Inter-sessional Preparatory Committee in the preparation of the Environmental Perspective, the Assembly adopted the Perspective as a broad framework for guiding national action and international co-operation for environmentally sound development and specifically as a guide to the preparation of future system-wide medium-term environment programmes and the medium-term programmes of the organizations of the UN system. The Assembly also noted the perceptions generally shared by Governments, as outlined in the Perspective, of the nature of environmental problems, of their relationships to other international problems and of the efforts to deal with them. It welcomed, as the general aspirational goal for world community, the achievement of sustainable development and the rehabilitation of the environment, as well as the other aspirational goals set out in the Environmental Perspective. Agreeing that the recommendations for action contained in the Environmental Perspective should be implemented, the Assembly requested the Governing Council to keep under review the implementation of the long-term environmental actions recommended by the Perspective and identify new environmental concerns that might arise.

51. The Assembly called special attention to the "instruments of environmental action" outlined in the Perspective for use in addressing the problems discussed in earlier parts of the Perspective. It stressed the essential role of UNEP within the UN system in catalysing environmentally sound and sustainable development, agreed that this role should be strengthened and that the resources of the Environment Fund be substantially increased with greater participation. It also endorsed the priorities and functions for UNEP as enumerated in paragraph 117 of the Perspective. It further decided to transmit the Environmental Perspective to all Governments, as well as to the governing bodies of the organizations of the UN system as a broad framework to guide national action and international co-operation on policies and programmes aimed at achieving environmentally sound and sustainable development. The Assembly called upon the governing bodies to take the Environmental Perspective into account in the development of their own medium-term plans and programmes, as relevant to their mandates, and requested those bodies to report regularly to the Assembly on the progress made in achieving environmentally sound and sustainable development. Lastly, the Assembly invited the Council to report to it at its forty-fourth session on the implementation of this resolution and the relevant aspects of the Environmental Perspective.

Resolution 42/187—Report of the World Commission on Environment and Development

52. Recalling that in its resolution 38/161 of 19 December 1983 on the Environmental Perspective, it had welcomed the establishment of a special commission to prepare a report on environment and the global *problématique* to the Year 2000 and Beyond, including proposed strategies for sustainable development, the General Assembly welcomed the report of the World Commission on Environment and Development, noting with appreciation the Commission's important contribution to heightening awareness among decision-makers in both the public and private sectors, as well as the general public, of the necessity of making the transition towards sustainable development. The Assembly agreed

with the Commission, first, that it was imperative to influence the sources of current environmental problems in human activity, notably in the economic sphere and, second, that an equitable sharing of the environmental costs and benefits of economic development between and within countries, as well as for future generations, was a key to achieving sustainable development. The Assembly also concurred with the Commission that the attainment of sustainable development necessarily entailed preserving peace, reviving growth and changing its quality, remedying the problems of poverty and the satisfaction of human needs, and addressing the problems of population growth and of conserving and enhancing the resource base, re-orienting technology and managing risk, and merging environment and economics in decision-making.

53. Deciding to transmit the report of the World Commission to all Governments, as well as to the governing bodies of the organizations of the UN system and inviting them to take account of the analysis and recommendations contained in the report in determining their policies and programmes, the Assembly called, first, upon all Governments to encourage sustainable development and to strengthen the role of their environmental and natural resource agencies in advising and assisting central and sectoral agencies in that task; and, second, upon the governing bodies within the UN system to review their policies, programmes, budgets and activities aimed at contributing to sustainable development. Similarly, it called upon the governing bodies of other relevant multilateral development assistance and financial institutions to make a stronger commitment to sustainable development in accordance with the national development plans, priorities and objectives set by the recipient Governments. The Assembly also requested the Secretary-General, through the appropriate existing mechanisms, including ACC, to review and co-ordinate regularly the efforts of all the organizations and bodies of the UN system to pursue sustainable development and to report thereon to the Assembly through the Governing Council of UNEP and ECOSOC.

54. Stressing the essential role of UNEP in catalysing the sustainable development efforts of the UN system and agreeing with the World Commission on the need to strengthen that role and to enlarge substantially the resources of the Environment Fund, the Assembly considered that the Council should keep under examination the long-term strategies for realizing sustainable development and include the results of its examinations in its reports to the Assembly through ECOSOC. The Assembly agreed that the catalytic and co-ordinating role of UNEP in the UN system should be reinforced in its future work on environmental and natural resource issues.

55. The Assembly reaffirmed the need for additional financial resources to assist developing countries to cope with their environmental problems, as well as the need for developed countries and appropriate bodies of the UN system to strengthen their technical co-operation with developing countries to enable them to solve their environmental problems. It invited Governments, in co-operation with the regional commissions, UNEP and, as appropriate, intergovernmental organizations, to support and engage in follow-up activities at the national, regional and global levels, also calling upon Governments to engage non-governmental organizations, industry and the scientific community more fully in efforts towards sustainable development.

56. The Assembly invited the governing bodies of the organizations of the UN system to report to it through ECOSOC, not later than its forty-fourth session, on the progress made by their organizations towards sustainable development and to make such reports available to the Council at its next regular session. The Council was invited to provide comments on matters concerning progress on sustainable development that fall within its mandate and on the reports of the governing bodies of the organizations of the UN system and other developments for submission to ECOSOC at its second regular session of 1989 and to the

forty-fourth session of the Assembly. The Assembly requested that the Secretary-General submit to it at its forty-third session a progress report on the implementation of this resolution, to be followed by another, consolidated report at its forty-fourth session. It also decided to include in the provisional agenda for its forty-third session a sub-item entitled "A long-term strategy for sustainable and environmentally sound development" under the item entitled "Development and international co-operation".

Resolution 42/188—Countries stricken by desertification and drought in Africa

57. Taking note of the proposals set out in the report of the Secretary-General and of the efforts of the Permanent Inter-State Committee on Drought Control in the Sahel,[18] the General Assembly welcomed the progress made since the establishment of the Intergovernmental Authority for Drought and Development by six East African countries and invited the international community to continue to support the implementation of the Plan of Action of those six countries. It also appealed urgently to the international community, particularly donor countries, while strengthening their support for the UN Programme of Action for African Economic Recovery and Development 1986-1990,[19] to continue to support the Ministerial Conferences for a joint policy to combat desertification, the Permanent Inter-State Committee on Drought Control in the Sahel and the Intergovernmental Authority for Drought and Development. In connection with the implementation of the programme of these two bodies, the Assembly reaffirmed the role of UNSO in the co-ordination efforts of the United Nations and appealed to all Governments to increase their support for this Office.

58. The Assembly welcomed the establishment of the Special Programme for Sub-Saharan African Countries Affected by Drought and Desertification by the International Fund for Agricultural Development. Noting with satisfaction the generosity and solidarity with which the international community had responded to the assistance needs resulting from the emergency in Africa, the Assembly launched a further appeal to all members of the international community, the organs and bodies of the United Nations, regional and subregional financial institutions and NGOs to continue to give their full support in all forms—including financial and technical aid or any other form of assistance—to the development efforts of countries stricken by desertification and drought. Finally, the Assembly requested the Secretary General to submit a report on the implementation of this resolution through ECOSOC for consideration at its forty-fourth session.

Resolution 42/189—Plan of Action to Combat Desertification

59. The four-part resolution corresponds closely to decision 14/15 adopted by the Governing Council in June 1987. In section A, devoted to the implementation of the Plan, the Assembly urged Governments, organizations of the United Nations system and other intergovernmental bodies to intensify their efforts in combating desertification and to continue giving priority to actions recommended in the Plan of Action and by the Governing Council in its decision 14/15. Noting the role played by NGOs in such efforts, the Assembly called upon Governments, organizations of the United Nations system and other intergovernmental bodies to explore all possibilities of increasing their participation in these efforts. The Assembly also urged the Governments of countries affected by desertification to accord sustained priority to medium- and long-term strategies and programmes for combating desertification and to ensure that these are smoothly integrated into their national development plans, as well as the regional programmes to curb environmental degradation. Finally, the Assembly requested the Governing Council to report to it at its forty-fourth session, through ECOSOC, on progress in implementing the measures approved by the Council for enhancing the work of the Inter-Agency Working Group on

Desertification and, further, asked the Council for another report, to be submitted simultaneously, on progress made in the implementation of the Plan of Action.

60. In section B, on the implementation of the Plan in the Sudano-Sahelian region, the Assembly took note of the report of the Executive Director on the subject[20] and noted with grave concern the scope and complexity of the damage caused by desertification in the region, the serious constraints on combating desertification imposed by insufficient financial resources, and the fact that this struggle required financial and human resources beyond the means of the countries affected. Noting, too, the efforts made by UNSO under the joint UNEP/UNDP venture, the Assembly commended both the Executive Director and the Administrator of UNDP and recommended that the Governing Council of UNEP and the Governing Council of UNDP continue, increase and intensify their efforts to mobilize resources for UNSO. Expressing its gratitude to all Governments and all organizations and foundations that had contributed to the implementation of the Plan of Action in the Sudano-Sahelian region, the Assembly again drew the attention of the international community to the pressing need to increase efforts to implement the Plan of Action in the region and urged it to contribute through appropriate means, including the United Nations Trust Fund for Sudano-Sahelian Activities, and to respond favourably to requests for assistance from the Governments of the countries of the region that are most affected. Lastly, the Governing Council was asked to report to the Assembly at its forty-fourth session, through ECOSOC, on the progress made in implementing the Plan of Action in the Sudano-Sahelian region.

61. Section C of the resolution concentrates on financing and other measures in support of the Plan of Action. Taking note of the report of the Secretary-General on the implementation and financing of the Plan,[21] the Assembly urged Governments, bodies of the United Nations system, other multilateral development assistance institutions, NGOs and private foundations to take the decisions necessary for mobilizing the funds required before desertification destroys more arable lands and becomes irreversible. It also urged relevant research institutions, in co-operation with UNEP, to give maximum priority to work in desertification. Taking note of the Governing Council request to the Executive Director to discuss with Governments a new approach to increase contributions to the Special Account to finance the implementation of the Plan of Action to Combat Desertification, the Assembly requested the Executive Director to examine, in the light of Council decision 14/15, ways and means of enhancing the efficiency of the Consultative Group for Desertification Control. The Secretary-General was also requested to keep under review actions at the national and regional levels, as well as the issues concerning the financing of the Plan of Action, and to consult further with interested Governments on the proposals contained in his report.

62. In the final part of the resolution (section D), the Assembly requested that the Secretary-General report to it at its forty-fourth session, through ECOSOC, on the implementation of the earlier sections of this resolution.

Decision 42/442—International ecological security

63. The Assembly decided to defer until its forty-third session consideration of the draft resolution entitled "International ecological security".

Decision 42/433—Consideration of accession by the United Nations to the Convention on Early Notification of a Nuclear Accident, Vienna, 1986, and to the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, Vienna, 1986.

64. In this decision, the Assembly decided to revert to this matter at its forty-third session in the light of additional information to be provided by the Secretary-General, first, on the

declaration to be submitted pursuant to article 12, paragraph 5 (c), of the Convention on Early Notification of a Nuclear Accident and, second, article 14, paragraph 5 (e), of the Convention on Assistance in the Case of a Nuclear Emergency.

Decision 42/448—Election of twenty members of the Governing Council of UNEP

65. By this decision, the Assembly deferred elections to the Governing Council until its forty-third session and extended by one year the term of office of those States members of the Council whose term was due to expire on 31 December 1987. It also requested the Secretary-General to consult with Member States in order to establish transitional arrangements for a change in the term of office of members of the Council from three to four years.

Notes

1 UNEP/GC.14/4/Add.6, annex I.

2 UNEP/GC.14/4/Add.6, section II and annex II.

3 See UNEP/GC.14/4/Add.6, annex III.

4 UNEP/GC.14/8 and UNEP/GC.14/12.

5 UNEP/WG.31/2.

6 UNEP/GC.14/5.

7 UNEP/GC.14/6.

8 UNEP/GC.14/9.

9 UNEP/GC.14/13.

10 UNEP/GC.14/2, chap. IV, paras. 234-253 and UNEP/GC.14/3, chap.IV, paras. 222-257.

11 Resolution 3.20/1 (Cgx) of the Tenth Congress of the World Meteorological Organization.

12 JIU/REP/85/5.

13 UNEP/GC.14/17, annex III.

14 UNEP/GC.14/17, annex IV.

15 UNEP/WG.122/3, annex II.

16 UNEP/GC.14/25.

17 UNEP/GC.14/19.

18 A/41/3460E/1986/96, paras. 53-77.

19 *Official Records of the General Assembly, Thirteenth Special Session, Supplement No. 2* (A/S-13/6).

20 UNEP/GC.13/7/Add.1.

21 A/42/501.

Chapter V

THE ENVIRONMENT FUND

Resources available 1987
Counterpart contributions
Use of resources 1987
The outlook for resources in 1988
The use of resources in 1988-1989
The biennium 1990-1991
Trust funds and other funds

THE ENVIRONMENT FUND

1. This chapter deals primarily with the flow and use of resources of the Environment Fund in 1987. It should be read in conjunction with the *Report on New Projects 1987,* which contains details of new projects approved during the year. This chapter also contains information relating to the management of the trust funds, the Revolving Fund (Information), and funds provided under project counterpart arrangements.

RESOURCES AVAILABLE 1987*

2. The resources available to the Environment Fund in 1987 are set out in the following table:

3. Contributions to the Environment Fund in 1987 were higher than in any of the past five years and are expected ultimately to reach a total of $30.97 million. However, the level of contributions paid in currencies other than United States dollars, when expressed in dollar terms, was some $1.83 million higher in 1987 than it would have been but for the fall in the exchange value of the dollar. Even so, in 1987 15 countries either paid or pledged a contribution to the Fund at a higher level than they had in 1986. Taken together, these 15 countries contributed an additional $1.33 million in 1987. These increases more than offset a cut of $2.39 million in the 1987 contributions of 6 other contributors to the Fund and 11 countries that had paid or pledged a contribution for 1986, but did not do so for 1987. A list of contributions paid to the Environment Fund in respect of 1986 and 1987 is provided in Annex V, table 1.

Table 1
Resources available to the Fund, 1987

	(millions of dollars)		
	CC[a]	NCC[b]	Total
Balance of Fund carried forward from 1986 (including unpaid pledges 1984-1987)	18.85	9.89	28.74
Contributions for 1987 paid by 31 December 1987	25.63	4.44	30.07
Contributions estimated for 1987 but not paid by 31 December 1987	0.86	0.04	0.90
Other income (after providing resources for change in the financial reserve)	1.66	1.97	3.63
Total resources available	47.00	16.34	63.34

* Figures in the text of this chapter are normally rounded and, as a result, they appear not to tally with the totals shown. Such minor deviations are common to normal rounding practices.

a Convertible currencies.

b Non-convertible currencies.

4. Of the total estimated contributions of $30.97 million, $30.07 million had been paid by 31 December 1987, while another $327,490 had been pledged. The remaining $570,032 represented contributions estimated by the Executive Director in respect of countries that had made regular contributions to the Fund in the past and had paid a contribution in 1986. No estimates of contributions have been made in respect of countries that did not pay a contribution for 1986, although a few may yet pay contributions for both 1986 and 1987. Table 2 and Figure 1 show contributions in convertible and non-convertible currencies for the period 1983-1987.

Table 2

Contributions in convertible and non-convertible currencies (including estimated pledges) 1983-1987

(United States dollars)

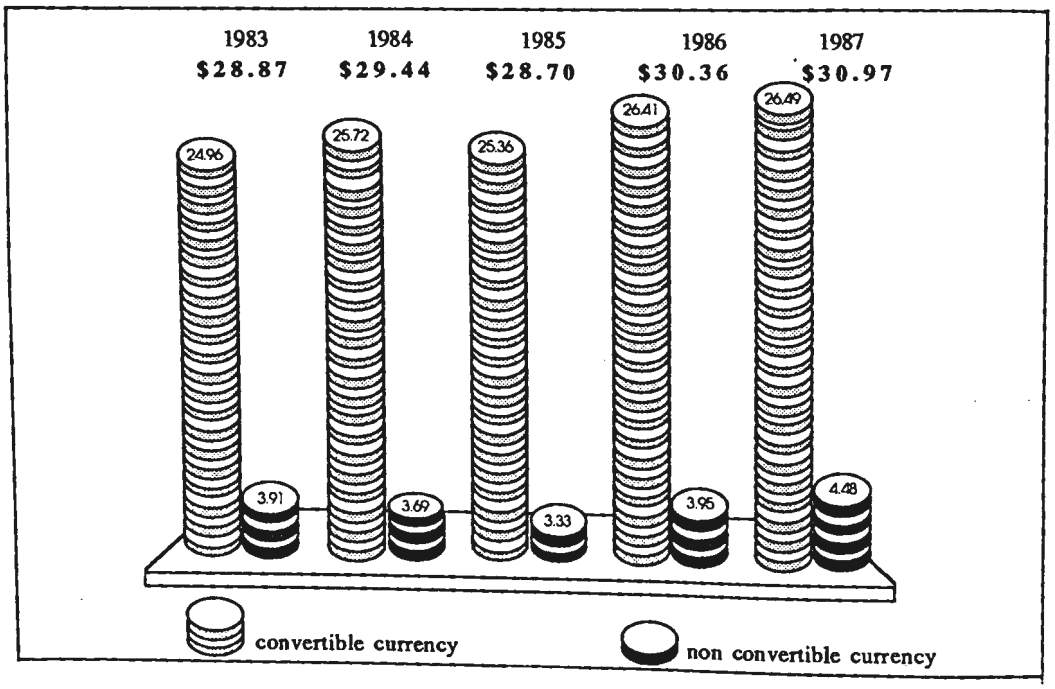
	TOTAL	CC	NCC[a]
1983	28 870 114	24 995 847	3 914 267
1984	29 413 912	25 720 536	3 693 378
1985	28 696 687	25 363 571	3 333 116
1986	30 360 776	26 412 449	3 948 327
1987	30 969 018	26 491 880	4 477 138

a dollar equivalent

Figure 1

Contributions in convertible and non-convertible currency, 1983-1987

(Millions of dollars)



5. A total of 84 countries are expected to contribute to the Fund for 1987, as compared with 92 that are expected ultimately to contribute for 1986. No new countries were added to the contributions list during the year, although one country that had not contributed in 1986 resumed its contributions in 1987.

6. The change in the pattern of contributions in 1987 as compared with 1986 is illustrated in table 3.

Table 3
Contribution patterns, 1986 and 1987

	Number of countries 1987	Total contributions	Change compared with 1986
		(Thousands of US dollars)	
Countries contributing for the first time in 1987	—	—	—
Paid in 1987 and earlier years but not in 1986	1	15	15
Higher level in US dollars	6	4 630	538
Higher level in local currency	8	4 448	781
Same level in US dollars	27	449	—
Same level in local currency	25	13 856	1 744*
Lower level in US dollars	5	6 999	(1 999)
Lower level in local currency	1	1	(1)
Eleven countries pledged nothing in 1987, although pledged or paid in 1986	11	571	(2)
Total	84	30 969	1 076

* Although the level of contribution in local currency terms remained constant, in US dollar terms there was an increase due to exchange rate fluctuations.

7. Not only were contributions in dollar terms higher in 1987, but more contributions were paid earlier in the year, leading to a further improvement in the cash position of the Fund during the early and middle months of the year. In fact, 87 per cent of pledged contributions were paid in the first three quarters of the year, as compared with 76 per cent in 1986 and 41 per cent in 1985. Of the 1987 estimate of $30.97 million, 97 per cent was paid before the end of 1987, so that by end of the year, only $0.90 million of the 1987 estimate was outstanding. This earlier payment of pledges increased the liquidity of the Fund and thereby helped the Executive Director avoid delays in the implementation of programmes, as is

reflected in the level of project expenditure in 1987. The pattern of payments is shown in dollar terms in table 4 and figure 2 and in percentage terms in figure 3.

Table 4
Contribution paid 1983-1987 (cumulative) as at 31 December 1987

(Millions of dollars)

	1983	1984	1985	1986	1987
Paid by 31 March	5.69	7.54	2.70	3.83	5.77
Paid by 30 June	15.87	14.74	10.89	19.85	15.73
Paid by 30 September	21.88	17.74	11.71	22.97	27.08
Paid by 31 December	27.31	20.17	27.12	28.07	30.07
Paid after 31 December	1.56	9.25[a]	1.58[a]	2.29[a]	0.90[a]
Total	28.87	29.41	28.70	30.36	30.97

a Estimate based on payments made after 31 December plus outstanding contributions, pledged or estimated.

Figure 2
Contribution paid 1983-1987 (cumulative) as at 31 December 1987

(Millions of dollars)

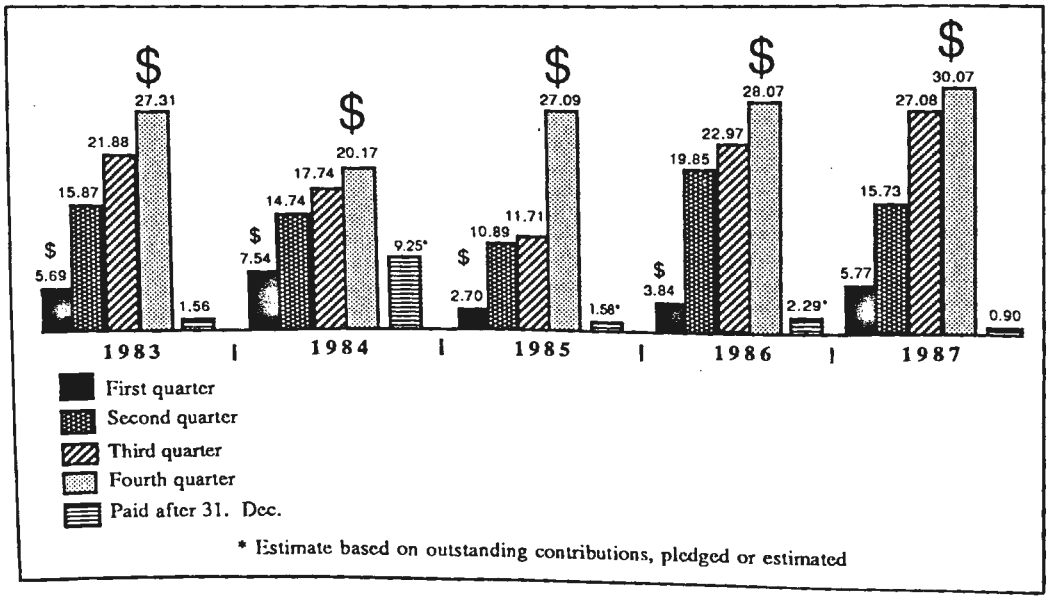
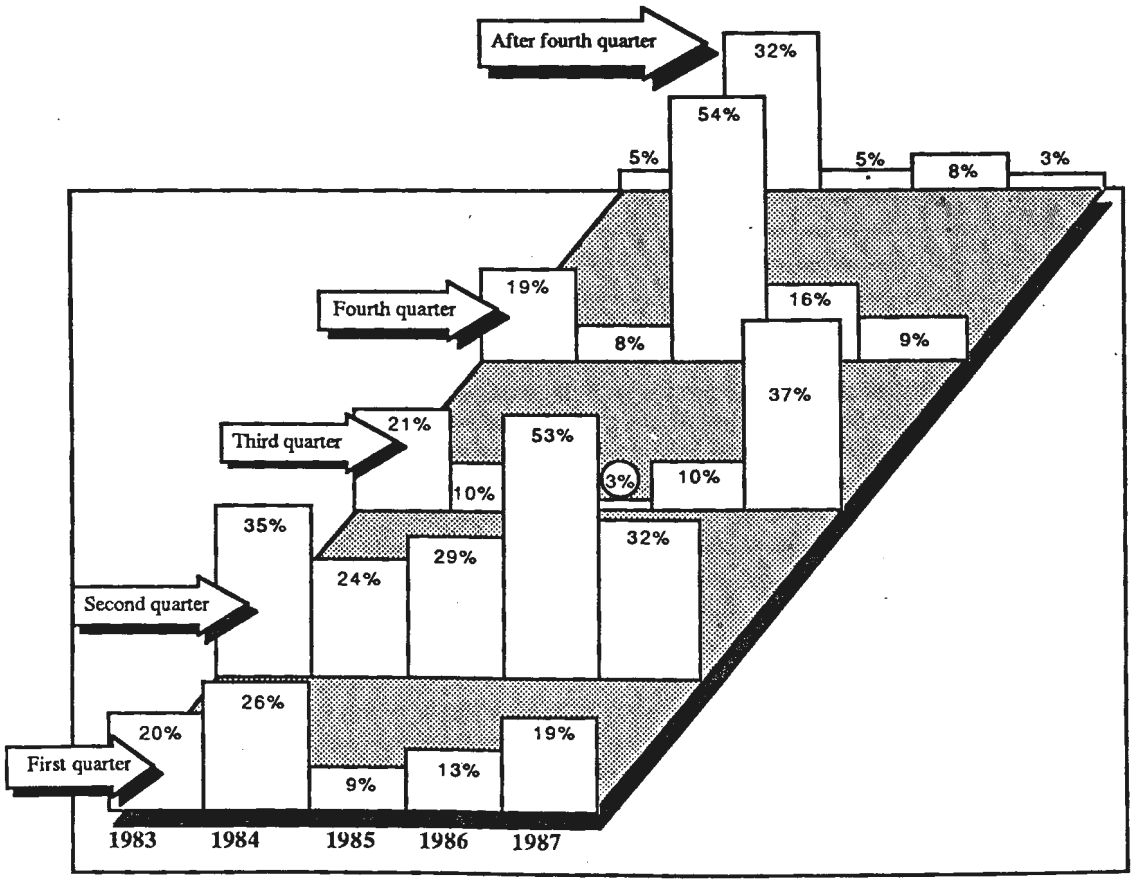


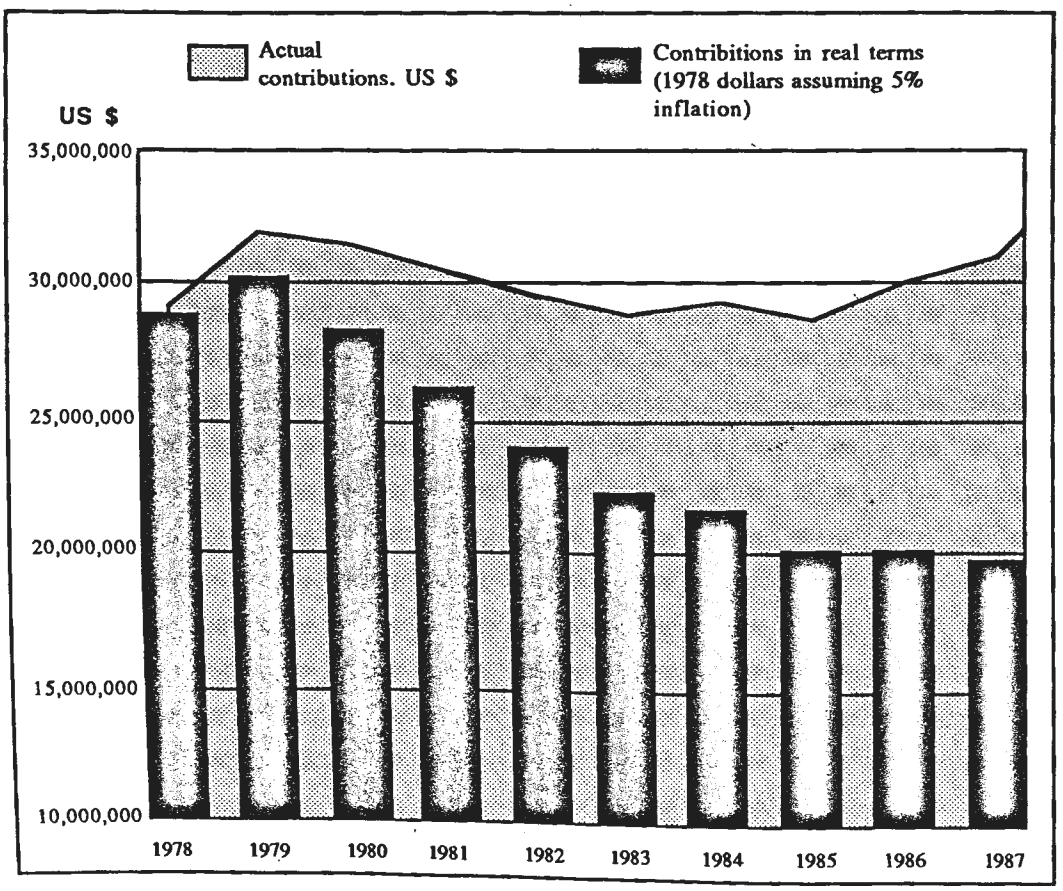
Figure 3
Percentages of contributions received per quarter (1983-1987)



8. While contributions in nominal terms are expected to reach their highest level since 1982, when expressed in real terms, (1978 dollars assuming an average of only 5 per cent inflation per annum), there has been a downward trend in the level of contributions since 1979. Figure 4 shows clearly the decline in real terms based on this very conservative assumption.

Figure 4

*Contributions to the Environment Fund expressed in actual and real terms**



*Amount shown for years 1984-1987 total estimated pledge against which payments are still expected

9. As at 31 December 1987, the outstanding (unpaid) pledged contributions for all years amounted to $0.81 million, an amount which under United Nations accounting practices is included in the balance of the Fund as at that date. In addition, estimated contributions of $0.99 million were also outstanding, making a total of $1.80 million. A summary of the pledged and estimated contributions outstanding at 31 December 1987 is set out in table 5. A detailed list of contributions outstanding as at 31 December 1987 (at the prevailing rates of exchange at that date) is given in Annex V, table 2.

Table 5

Contributions for 1984-1987 outstanding at 31 December 1987

(at rates of exchange prevailing on 31 December 1987)

In respect of years	Number of countries with outstanding contributions still recorded	Total amount of contributions outstanding[a] (US dollars)
1984	6	41 245
1985	12	429 496
1986	16	432 764
1987	29	897 522
Total all outstanding contributions	63	1 801 027

a Including estimated contributions.

COUNTERPART CONTRIBUTIONS

10. Counterpart contributions to specific projects accepted under rule 204.1 of the Environment Fund represent programme resources over and above those contributed to the Environment Fund and its related trust funds. In total, pledges of counterpart contributions increased in 1987 as compared with the previous two years as follows:

	US dollars
1985	1 148 936
1986	1 548 872
1987	2 095 156

11. In paragraph 1 (a) of its decision 14/33, the Governing Council requested Governments to continue and increase their support by way of additional funds for specific activities of UNEP, including those approved in its programme budget. In paragraph 1 (b) of the same decision, the Council requested Governments to encourage individuals, private and public entities and non-governmental organizations to provide similar support. The number of separate contributions received in each year (shown in brackets) and the total sums involved under each of these headings are set out below in table 6.

Table 6
Pledges of Counterpart Contributions to Specific Projects

Source	1985 US$	1985 No*	1986 US$	1986 No*	1987 US$	1987 No*
Governments	838 944	(14)	1 002 358	(12)	1 553 306	(20)
Public entities	—	(—)	134 717	(3)	7 154	(1)
International organizations	83 415	(2)	125 870	(1)	204 637	(2)
Regional banks	—	(—)	90 000	(1)	—	(—)
Private entities	154 495	(16)	146 866	(8)	309 359	(32)
NGOs	72 082	(3)	49 061	(3)	20 700	(3)
Total	1 148 936		1 548 872		2 095 156	

* Number of separate contributions.

12. Counterpart contributions were provided for a range of purposes. The Secretariat of the Convention on International Trade in Endangered Species received contributions for a number of different projects in connection with their work, as did the Mediterranean Action Plan and other specific UNEP programmes. In the last two years, there has been increasing counterpart support for UNEP meetings and workshops. The range of contributions can be seen from table 7 below:

Table 7
Pledges of Counterpart Contributions 1985-1987

Activity	US dollars 1985	1986	1987
CITES	264 077	294 769	626 148
Convention for Migratory Species	57 074	—	4 941
GRID	—	256 210	264 156
Caribbean Action Plan	—	42 125	120 788
Latin American Regional Programme	29 344	68 546	28 000
Mediterranean Action Plan	418 019	400 000	411 154
IRPTC	68 415	109 705	25 120
WCED Report	—	—	154 930
Meetings/Workshops	123 827	235 717	252 419
Industry Office	143 180	106 800	37 500
Others	45 000	35 000	170 000
	1 148 936	1 548 872	2 095 156

13. Annex V, tables 3, 4, 5 and 6 provide the names of individual contributors and the amounts they pledged, as well as details regarding the programming of cash counterpart contributions for the period 1985—1987.

USE OF RESOURCES 1987

Programme and programme support costs

14. Programme and programme support costs as the first charge on the resources of the Environment Fund totalled $11.34 million in 1987 as compared with a total of $10.45 million in 1986, an increase of 8.5 per cent.

15. The Governing Council, in paragraph 2 of its decision 13/35, requested the Executive Director to continue to take all practical steps to reduce the proportion of programme and programme support costs as soon as possible, in accordance with the provisions of Council decision 12/19, in which the Executive Director was requested to attempt to keep these costs within 33 per cent of estimated contributions. In its decision 13/35, paragraph 2, as well as decision 14/35, paragraph 2, however, the Council had noted the concern of the Executive Director that he would not be able to limit these costs to that level in 1984-1985 and 1986-1987, as a consequence of which he was requested in paragraph 8 of decision 13/35 to administer the appropriation for the programme and programme support costs budget for the biennium 1986-1987 with the utmost economy and restraint consistent with the effective implementation of the programme, bearing in mind the request of paragraph 2.

16. In 1987, the $11.34 million total costs of this budget were equivalent to 36.7 per cent of contributions of $30.97 million as estimated in paragraph 3 of this chapter. During the biennium 1986-1987 as a whole, programme and programme support costs totalled $21.80 million, which was equivalent to 35.4 per cent of estimated contributions.

17. This expenditure of $21.80 million represented a saving, however, of $1.48 million as compared with the revised appropriation of $23.28 million, or a saving of $4.41 million as compared with the originally approved appropriation of $26.21 million[1].

18. The increase in programme and programme support costs in 1987, as compared with 1986, was largely due to an increase in salaries and other staff costs, as can be seen from table 8 below. The reason for this increase was an adjustment of salaries in Nairobi and the higher dollar cost of salaries in general.

Table 8

Programme and programme support costs expenditure 1983 to 1987

	1983	1984	1985	1986	1987
		(Millions of dollars)			
Salaries and other staff costs	6.95	7.09	6.90	6.75	7.52
Travel on official duties	0.50	0.58	0.67	0.57	0.55
General operating expenses	1.50	2.05	1.81	2.52	2.65
Other	0.11	0.07	0.12	0.09	0.10
Total, excluding grant to the United Nations Sudano-Sahelian Office	9.06	9.79	9.50	9.93	10.82
Grant to the United Nations Sudano-Sahelian Office	0.40	0.39	0.60	0.52	0.52
Total programme and programme expenditure support costs	9.46	10.18	10.10	10.45	11.34

Fund programme activities-appropriation, apportionment and allocation* 1986-1991

19. The Governing Council, by its decision 13/36, paragraph 8, approved an appropriation of $60 million for Fund programme activities and an appropriation of $2 million for Fund programme reserve activities for 1986-1987. In paragraph 10 of that decision, the Council requested the Executive Director to allocate funds for Fund programme activities in

* Definitions of these and other terms used in documents relating to the Environment Fund are given at the end of this chapter.

1986-1987 so that first-priority activities approved by the Governing Council would be afforded first priority in implementation.

20. As reported in the *1986 Annual Report,*[2] the Executive Director increased the initial allocations for Fund programme activities in 1986-1987 made in 1986 to a total of $53.48 million early in 1987. That figure was equivalent to the level of the priority I programme plus an additional $200,000 for IRPTC allocated in response to Governing Council decision 13/31, which called upon the Executive Director to continue to give high priority to the work of IRPTC and to increase its financial resources from non-convertible currency contributions. During the remainder of 1987, the Executive Director did not increase the overall level of allocations above that level of $53.48 million and did not vary the allocations between budget lines. A comparison of the apportionment of funds within the appropriation for Fund programme activities approved by the Governing Council in decision 13/36 paragraph 9 and the final allocation of funds provided by the Executive Director is set out in table 1 of annex VI both in US dollars and in percentage terms.

21. For reasons explained in the *1986 Annual Report* of the Executive Director, (Part Two, chapter I, paras 17 and 18), expenditure on Fund programme activities in that year was no more than $15.16 million. This meant that of the biennium allocation for 1986-1987, $38.32 million were available for commitment in 1987. There was in addition $1.65 million available from the allocation of $2.00 million for the Fund programme reserve, so that a total of $39.97 million was available for project commitments in 1987. The distribution of this available allocation is set out in table 5 of Annex VI.

22. Towards the end of 1987, the Executive Director made an initial allocation of $51.0 million for Fund programme activities for the biennium 1988-1989, divided equally between the two years of the biennium. This allocation corresponded to the core programme approved by the Governing Council for 1988-1989 in its decision 14/36, paragraph 9. A breakdown of this allocation by budget line as compared with the apportionment approved by the Governing Council in decision 14/36 is provided in Annex VI, table 2.

23. Total commitments for all Fund activities, including Fund reserve activities, incurred before 1987, as well as the additional commitments incurred during that year against the various resource allocations approved for each year, are set out in table 9 below:

Table 9
Total allocations and project commitments 1986-1991

(Millions of dollars)

	Allocations	Commitments incurred before 1987	Commitments approved in 1987	Total commitments as at 31 Dec. 1987
1986	15.51	20.64	(5.13)	15.51
1987	39.97	15.05	15.89	30.94
1986-1987	55.48	35.69	10.76	46.45
1988	26.50	1.21	13.71	14.92
1989	26.50	—	8.77	8.77
1988-1989	53.00	1.21	22.48	23.69
1990-1991	—	—	—	—
Total all years	108.48	36.90	33.24	70.14

Thus, of the total allocation of resources of $55.48 million provided by the Executive Director for 1986-1987, $46.45 million were commited by the end of the biennium. The uncommitted funds of approximately $9 million were made up of approximately $4 million in convertible currency allocations and approximately $5 million in non-convertible currency allocations. These figures represented an undercommitment of some 10 per cent in convertible currency and 36 per cent in non-convertible currency.

24. The earlier payment of contributions to the Environment Fund described in paragraph 7 of this chapter and the consequent improvement in the cash position of the Fund was reflected in the fact that new project commitments totalling $38.37 million covering the years 1987 to 1989 were approved during the year. In 1986, when the cash outlook of the Fund for much of the year was uncertain, the total of commitments approved during the year was by comparison no more than $21.77 million. The commitments approved during 1987 (for all years) by budget line are set out in Annex VI, table 6.

Project Expenditures in 1987

25. Expenditures on Fund programme activities and Fund programme reserve activities totalled $26.32 million in 1987 as compared with $15.51 million in 1986. This marked imbalance in levels of project expenditure was a direct result of the deliberately slower rate of approval of new projects during the first half of 1986 described in the *1986 Annual Report*.[3] Over the biennium as a whole, project expenditures reached a level of $41.83 million, which is close to that which would be expected from an allocation of resources of $55.48 million restricted to the priority I programme approved for 1986-1987 plus $2.00 million for the Fund programme reserve.

26. Non-convertible currency expenditures in 1987 amounted to $5.38 million or 20.4 per cent of the total and convertible currency expenditures amounted to $20.94 million or 79.6 per cent of the total. Details of expenditures in both convertible and non-convertible currencies are set out by budget line in Table 7 of Annex VI.

Non-Convertible Currency Programme

27. Non-convertible currency project commitments amounting to the equivalent of $5.62 million were approved for 1987. The distribution of the non-convertible currency commitments for the period 1986-1991 is shown in table 10 below:

Table 10
Non-Convertible currency commitments 1986-1991

(Millions of dollars)

	Commitments approved before 1987	Commitments approved in 1987	Total commitments as at 31 December 1987
1986	3.78	(0.62)	3.16
1987	3.12	2.50	5.62
Total 1986-1987	6.90	1.88	8.78
1988	0.53	2.27	2.80
1989	—	1.20	1.20
Total 1988-1989	0.53	3.47	4.00
Total All Years	7.43	5.35	12.78

28. Total project commitments in non-convertible currencies for 1987 amounted to the equivalent of $5.62 million, compared to the 1986 non-convertible currency expenditures of $3.16 million. The higher level of commitments approved for 1987 was again a result of the low rate at which new commitments were approved during the first half of 1986. In percentage terms the non-convertible currency programme accounted for 18.2 per cent of total project commitments in 1987, approximately the same proportion as the 1986 non-convertible currency programme at the end of 1986.

29. Thirteen new non-convertible currency projects were approved in 1987 as compared with 17 in 1986. In addition, six projects were approved with some NCC components, although they were financed mainly in convertible currency. As at 31 December 1987 there was a total of 67 projects wholly or partially funded in non-convertible currencies.

30. As indicated above expenditures in non-convertible currencies in 1987 totalled the equivalent of $5.38 million. Details are set out by budget line in Annex VI, table 7. In addition, an amount equivalent to $0.18 million was spent on programme and programme

support costs, making a total expenditure in non-convertible currency equivalent to $5.56 million in 1987 as compared with new contributions equivalent to $4.44 million paid in 1987.

31. While non-convertible currency expenditure exceeded contributions paid, bank balances of non-convertible currency rose from a total equivalent of $8.24 million at the end of 1986 to the equivalent of $9.34 million at the end of 1987. Two factors were involved in this increase. As in 1986[4], the continued fall in the exchange value of the United States dollar against these currencies led to a revaluation of the bank balances by approximately $2.13 million at the end of the year, advances held by implementing organizations at the end of 1987 were lower as compared with those of 1986. A list of non-convertible currency balance is set out below in table 11.

Table 11

Bank balances in non-convertible currencies

(US dollar equivalent)

	31 December 1986	31 December 1987
Convertible roubles[a]	1 787 245	2 691 051
Non-convertible roubles[b]	6 117 776	6 329 522
Bulgarian leva	32 280	218
Chinese yuan	2 512	4 179
Cuban pesos	34 615	35 511
Czechoslovakian korunas	89 608	83 571
German Democratic Republic marks	1 946	68 993
Hungarian forints	18 643	29 813
Polish zlotys	71 229	44 374
Romanian lei	31 994	34 988
Yugoslavian dinars	53 578	17 859
Total	8 241 426	9 340 079

a Roubles which can be converted into dollars in prescribed circumstances.

b Roubles which are wholly non-convertible.

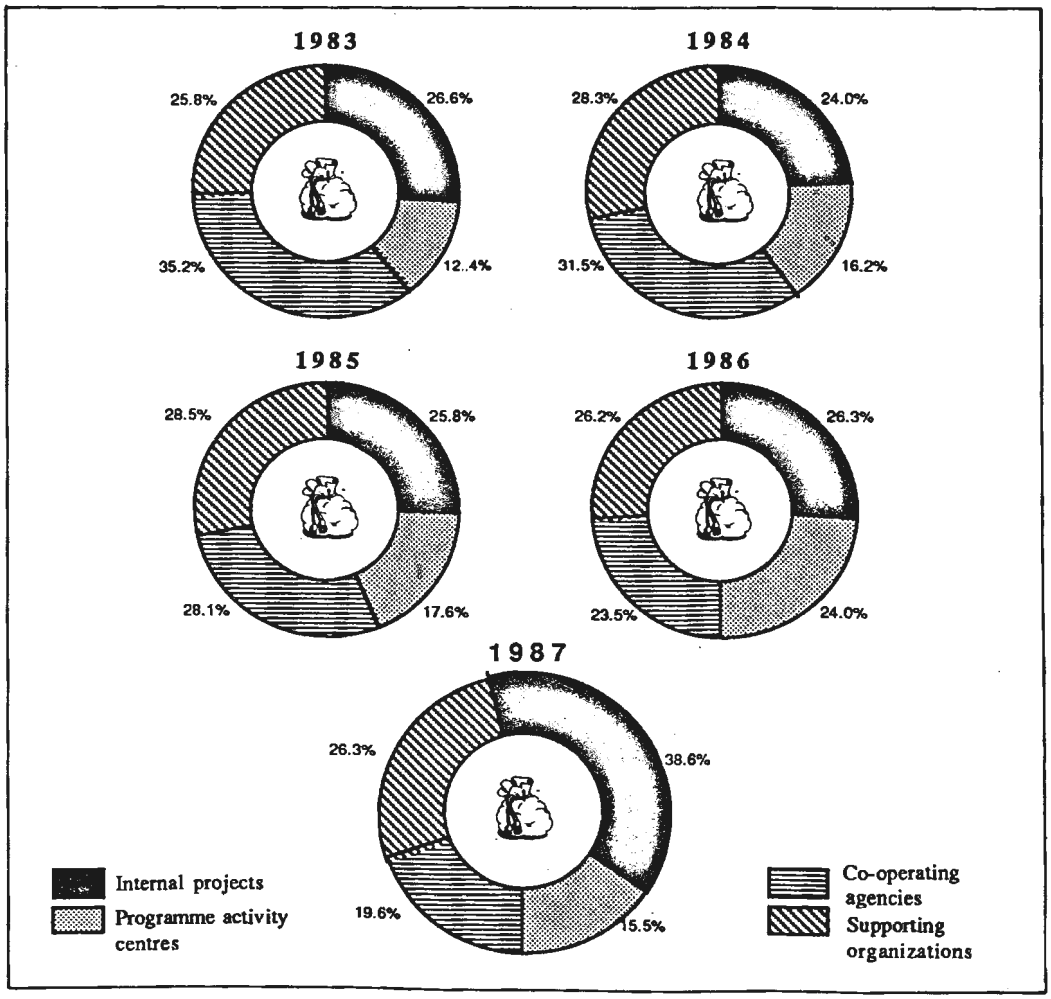
Institutions implementing UNEP projects

32. Details submitted by individual UN bodies and specialized agencies responsible for the implementation of Fund projects in 1986 and 1987 are set out in Annex VI, table 8. Longer-term trends are summarized in Annex VI, table 9. Table 12 below and figure 5 show, in percentage terms, the distribution of expenditures incurred over the period 1983-1987 by each of the main groups responsible for implementing UNEP projects.

Table 12
Summary of expenditures by institutions implementing Fund projects 1983—1987 (percentage)

	1983	1984	1985	1986	1987
Co-operating agencies	35.2	31.5	28.1	23.5	19.6
Supporting organizations	25.8	28.3	28.5	26.2	26.3
Internal projects	26.6	24.0	25.8	26.3	38.6
Programme activity centres	12.4	16.2	17.6	24.0	15.5
Total	100.0	100.0	100.0	100.0	100.0

Figure 5
Distribution of commitments by institutions implementing fund Projects, 1983—1987



33. The above table indicates that the steady decline since 1983 in the proportion of expenditure on Fund programme activities implemented by co-operating agencies in the UN system continued in 1987, dropping to below 20 per cent for the first time. The sharp increase in the proportion of expenditures incurred against internal projects was partly a result of the low level of new commitments approved during 1986, requiring the rephasing of many activities into 1987. Because programme activity centres have become institutionalized, they continued to incur the same level of expenditures during 1986 and 1987. This is reflected in a higher than normal proportion of the overall 1986 expenditures and a decrease in the proportion of PAC expenditures in 1987. This decrease does not represent a drop in absolute terms but is a consequence of the higher overall level of expenditures in 1987. Of the total commitments, 12 per cent was implemented by Governments or governmental organizations as supporting organizations.

Geographical distribution of commitments

34. A geographical analysis of Fund commitments is given in Annex VI, table 10 and in figure 6. In percentage terms, shown by table 13 below, there were slightly lower expenditures on core global projects, while the total of regional projects rose in 1987, reflecting the approval of new projects in the second half of 1986. Most markedly, expenditures on projects in Africa increased as activities in connection with the Cairo Plan of Action were approved and entered into the implementation phase. In absolute terms as shown in table 2 of Annex VI, expenditures on projects increased in all regions.

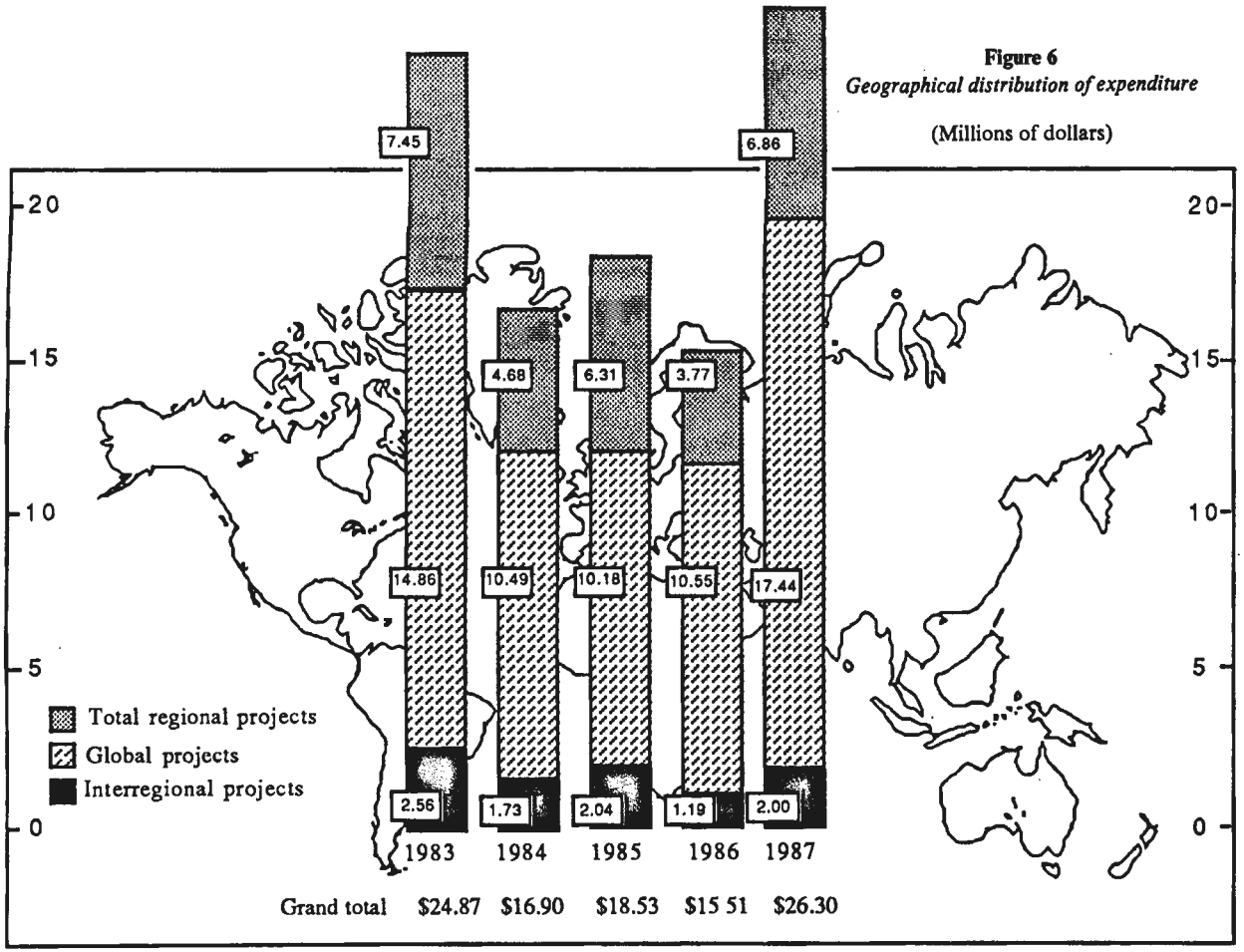
Table 13

Geographical distribution of Fund expenditures by region (percentage)

	1983	1984	1985	1986	1987
Africa	11.79	12.04	12.23	9.23	12.45
Asia	8.48	8.37	8.77	8.75	6.40
Latin America	7.74	5.85	4.81	5.57	5.65
North America	0.12	0.13	0.17	0.07	0.13
Europe	1.84	1.35	0.84	0.68	1.41
Total regional	29.97	27.72	26.83	24.30	26.05
Interregional	10.30	10.24	8.66	7.69	7.60
Global	59.73	62.04	64.51	68.01	66.35
Total	100.00	100.00	100.00	100.00	100.00

Figure 6
Geographical distribution of expenditure

(Millions of dollars)



Number of projects approved

35. In 1987, 75 new projects were approved by the Fund for implementation, as compared with 60 in 1986. Sixty-seven projects were closed during 1987. This large number of closures in 1987 resulted from efforts to close all projects which were not active. The changes in the numbers of Fund projects since 1973 are shown in table 14 below:

Table 14
Number of projects financed by the Fund

	Projects[a] approved during the year	Projects closed during the year	Projects[b] active during the year	Projects[c] open at end of the year
1972-1973	68	—	26	68
1974	126	2	172	192
1975	131	3	249	320
1976	83	88	299	315
1977	73	117	267	271
1978	84	63	287	292
1979	58	99	313	251
1980	64	43	258	272
1981	40	49	261	263
1982	70	41	273	292
1983	44	37	277	299
1984	48	53	254	294
1985	63	62	268	295
1986	60	28	282	327
1987	75	67	290	295

a Defined as projects signed on behalf of the Fund.

b Defined for this purpose as projects for which an expenditure was recorded in the books of the Fund during the year shown.

c Defined as open projects, including completed projects not formally closed.

Fund Programme Reserve

36. As indicated in paragraph 19 above, the Executive Director allocated $2 million for the Fund programme reserve in 1986-1987[5], the full amount of the appropriation approved by the Governing Council. Commitments approved against the programme reserve for the biennium were $1.63 million as at 31 December 1987. Expenditures charged to the Fund programme reserve in 1987 amounted to $0.96 million, while expenditures for the biennium

as a whole totalled $1.31 million. The following four new projects were approved against the reserve in 1987: World Environment Day 1987, NGO data and documentation, International survey of public attitudes to the environmental issues and Implementation of the Cairo Programme for African Co-operation—Phase I.

The balance of the Fund, end 1987

37. On the basis of the expenditures set out in this chapter for the programme and programme support costs budget and for Fund activities, taking into account savings effected by the liquidation of prior years' obligations and adjuments of prior years' income, Fund expenditure in 1987 exceeded income by some $3.03 million, while in 1986 income exceeded expenditure by $6.34 million. This rather dramatic change was again a result of the higher rate at which new commitments were approved during 1987 and the correspondingly higher level of expenditures for Fund programme activities.

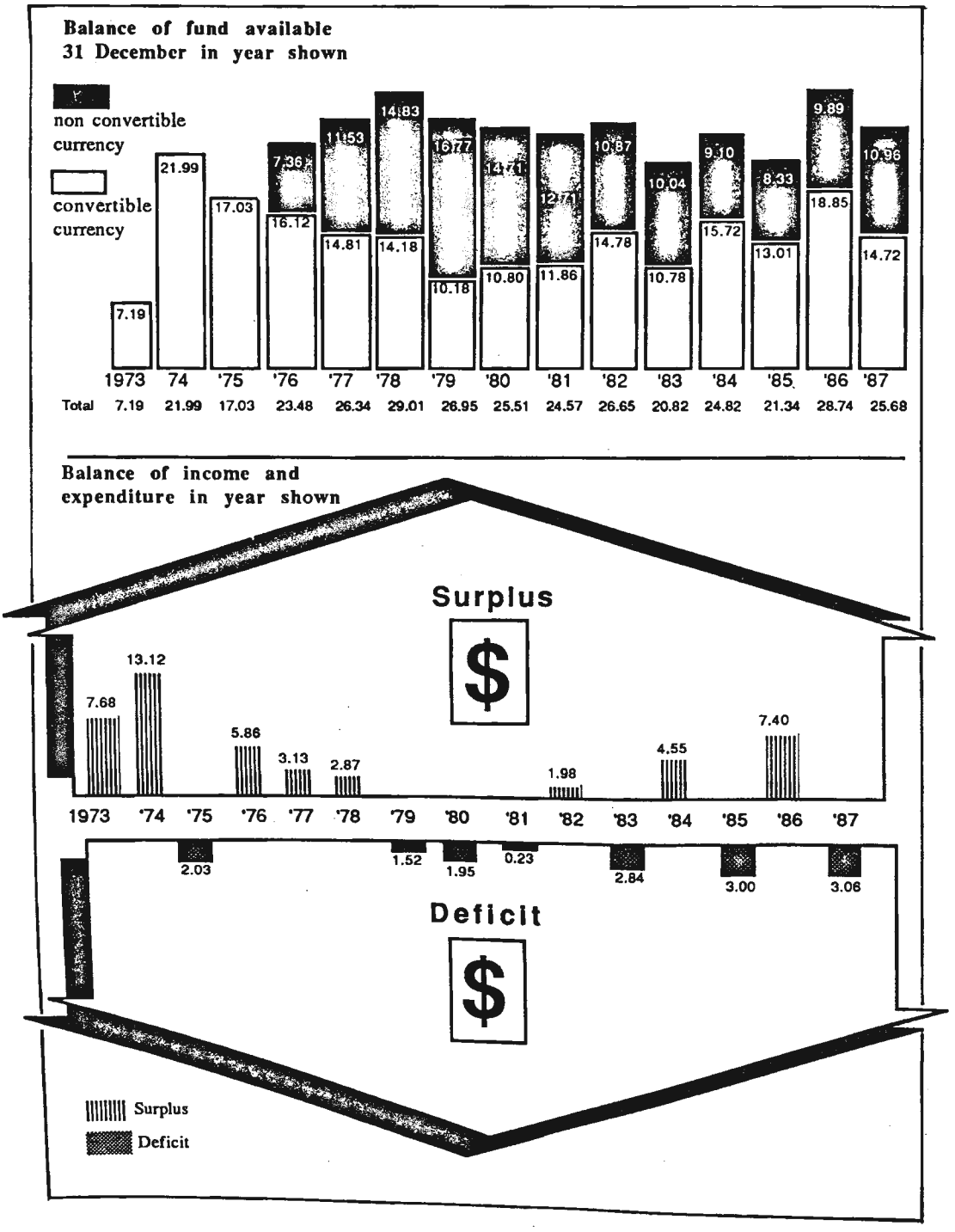
38. The total balance of the Fund at the end of 1987, excluding the financial reserve of $6.62 million, was $25.68 million as compared with $28.74 million at the beginning of the year. The net decrease in the balance of $3.06 million comprised a decrease of $4.13 million in convertible currency and an increase of $1.07 million in non-convertible currency. The increase in the non-convertible currency balance, as indicated earlier, was largely the result of the fall in the exchange value of the United States dollar and the subsequent revaluation of the Environment Fund's non-convertible currency bank balances.

39. Although the excess of expenditure over income in 1987 meant that the balance of the Fund was lower at the end of 1987 than it was at the end of 1986, the balance available at the end of the year (inclusive, though, of the unpaid contributions, which at that date totalled $0.90 million) exceeded the commitments of the Fund at that time for Fund activities in 1988. It was also sufficient in the main to cover commitments for programme and programme support costs in 1988. Figure 7 shows the balance of income and expenditure since the establishment of the Environment Fund.

Figure 7

Balance of income and expenditure since the establishment of the Environment Fund

(Millions of dollars)



THE OUTLOOK FOR RESOURCES IN 1988

40. By the end of April 1988, 44 countries had made firm pledges to contribute to the Environment Fund in 1988 for a total of $23.08 million. Twelve countries pledged contributions at a higher level than they had in 1987. On the basis of contributions paid or pledged in 1987 and other information received by the Executive Director, it is estimated that at least another 28 countries will contribute a further $11.52 million, bringing the 1988 total of contributions up to approximately $34.60 million. The fall in the exchange value of the United States dollar against other currencies in the first quarter of 1988, as in 1987, will increase the dollar value of contributions paid in local currencies, but not to the same extent as it did in 1987. By 30 April 1988, $13.36 million had been paid in contributions to the Fund as compared with $8.51 million at the same time in 1987. This further improvement in the promptness with which pledges are being paid represents a positive response by contributing countries to efforts by both the Executive Director and the Governing Council to encourage countries to make payments early in the year. The early payment of pledges has significantly improved the liquidity of the Fund and should enable the Executive Director to implement the 1988-1989 programme with minimum delay. The Executive Director's estimate of the resources he will have available in 1988 is shown in table 15 below:

Table 15
Estimated resources available to the Fund in 1988 as at 30 April 1988

	Convertible Currency CC	Non-Convertible Currency NCC (Millions of dollars)	Total
Balance of Fund carried forward from 1987 (including unpaid contributions 1984-1987)	14.72	10.96	25.68
Contributions for 1988 paid by 30 April 1988	8.65	4.72	13.36
Contributions pledged for 1988 but not paid by 30 April 1988*	21.10	0.14	21.24
Other income (including adjustment of resources for reduction in Financial Reserve)	2.19	(0.16)	2.03
Total	46.66	15.65	62.31

* Includes confirmed and estimated pledges.

THE USE OF RESOURCES IN 1988-1989

41. On the basis of the foregoing estimate of resources, the Executive Director is planning the following Fund programme for 1988:

Table 16
Fund programme for 1988

	1988		
	CC	NCC	Total
	(Millions of dollars)		
Programme and Programme support costs	11.28	—	11.28
Fund programme activites and reserve activities	24.62	7.78	32.40
Less underspending under the line above	(4.92)	(3.11)	(8.03)
Total expenditure	30.98	4.67	35.65
Balance to be carried forward to 1989	15.68	10.98	26.66

42. While the continuing devaluation of the United States dollar over the past year has resulted in increased income from local currency pledges, it will also result in increased expenditures for those projects and offices using currencies which have strengthened against the dollar and thus offset the rise in income. This trend has created particular difficulties for budget sublines that are used solely to finance institutional projects outside of Nairobi. Two prime examples are IRPTC in Geneva, where the dollar fell by over 16 per cent in 1987, and the Industry and Environment Office in Paris, where the dollar fell by over 12 per cent in 1987. The Executive Director may have to increase the allocation available to some sublines to overcome this problem.

Programme and programme support costs (PPSC)

43. The Governing Council appropriated $25.85 million for PPSC in 1988-1989[6]. The Executive Director, bearing in mind the request of the Council[7] to take all practical steps to reduce the proportion of these costs to 33 per cent of the contributions as soon as possible, has allocated $11.70 million for 1988 representing 33.8 per cent of pledged and estimated contributions.

Balance of the Fund, 1988 and 1989

44. Table 17 shows the flow and use of resources, setting out the actual outcome for 1987 and the projected figures for 1988 and 1989, based on total contributions of $69.20 million in 1988-1989 and an allocation for Fund activities of $53.60 million (including $2.00 million

for the Fund programme reserve). On this basis, some increase in the balance of the Fund in both 1988 and 1989 might be expected. In these circumstances the Executive Director may allocate funds for supplementary activities approved by the Governing Council,[8] although by Decision 14/36, paragraph 12, he was requested by the Council not to do so unless he was convinced that a sufficient balance of convertible currency could be assured at the end of 1989 to enable him to sustain approximately the same level of activities in 1990-1991 as implemented in 1988-1989. In the absence of firm pledges of contributions for 1990-1991, this will be a difficult decision for the Executive Director to implement.

Table 17

Flow and use of resources of the fund-actuals for 1987, projections for 1988 and 1989 as at 31 December 1987

(Millions of dollars)

	1987 Actuals			1988 Projection			1989 Projection		
	CC*	NCC**	Total	CC*	NCC**	Total	CC*	NCC**	Total
Resources									
(a) Balance of Fund on 1 January including unpaid pledges of previous years	18.85	9.89	28.74	14.72	10.96	25.68	15.68	10.98	26.66
(b) Contributions paid by 31 December 1987	25.63	4.44	30.07	—	—	—	—	—	—
(c) Estimated contributions due for years shown	0.86	0.04	0.90	29.75	4.85	34.60	29.75	4.85	34.60
(d) Miscellaneous income	1.48	2.15	3.63	2.00	—	2.00	2.00	—	2.00
(e) Conversion from non-convertible currency balances (PPSC)***	0.18	(0.18)	—	0.16	(0.16)	—	0.16	(0.16)	—
(f) Change in financial reserve	—	—	—	0.03	—	0.03	—	—	—
Total	47.00	16.34	63.34	46.66	15.65	62.31	47.59	15.67	63.26

Table 17 (continued)

	1987 Actuals			1988 Projection			1989 Projection		
	CC*	NCC**	Total	CC*	NCC**	Total	CC*	NCC**	Total
Claims on Resources									
(a) Programme and programme support	11.34	—	11.34	11.28	—	11.28	12.40	—	12.40
(b) Fund programme activities and Fund programme reserve activities (i+ii+iii+iv+v)	25.32	5.62	30.94	24.62	7.78	32.40	20.93	8.30	29.23
(i) Signed commitments Fund programme activities	24.04	5.62	29.66	10.46	2.80	13.26	6.58	1.20	7.78
(ii) Rephasing of commitments from previous years	—	—	—	4.38	0.24	4.62	4.92	3.11	8.03
(iii) Necessary extensions and new projects	—	—	—	8.67	4.65	13.32	8.69	3.93	12.62
(iv) Signed commitments Fund programme reserve activities	1.28	—	1.28	0.27	—	0.27	0.02	—	0.02
(v) Fund programme reserve required	—	—	—	0.84	0.09	0.93	0.72	0.06	0.78
(c) Project commitments to be cancelled or rephased to later years	(4.38)	(0.24)	(4.62)	(4.92)	(3.11)	(8.03)	(4.19)	(3.32)	(7.51)
(d) Total project expenditure (b-c)	20.94	5.38	26.32	19.70	4.67	24.37	16.74	4.98	21.72
(e) Total claims (a)+ (d)	32.28	5.38	37.66	30.98	4.67	35.65	29.14	4.98	34.12
Balance of Fund on 31 December including unpaid pledges	14.72	10.96	25.68	15.68	10.98	26.66	18.45	10.69	29.14

* Convertible currencies
** Non-convertible currencies
*** Programme and Programme Support Costs

THE BIENNIUM 1990-1991

45. The Executive Director does not expect to incur a high level of commitments for activities in 1990-1991 during the 1988-1989 biennium, although some such forward commitments will be necessary. Accordingly, as in the past, he has secured Governing Council approval of a $16 million ceiling to cover forward commitments for 1990-1991 Fund programme activities. As at 31 December 1987 commitments totalling $6,000 had been approved for 1990-1991.

TRUST FUNDS AND OTHER FUNDS

46. At the end of 1987, the Executive Director was responsible for the administration of 22 trust funds established under the rules of the Environment Fund and one special account established by the General Assembly. This was one trust fund more than those administered by UNEP at the end of 1986. A list of these 23 funds including the Special Account to finance the implementation of the Plan of Action to Combat Desertification and the actions taken by the Executive Director with regard to their administration on behalf of the respective contributing Governments, is set out in Annex VII, table 1, of this report. Annex VII, table 2, sets out the principal financial flows in connection with each of these funds. The total income of these varied funds amounted to $8,751,589 in 1987.

47. In almost all cases, the programmes financed from the general trust funds listed were held back by the fact that contributions agreed by Governments were not paid during the year for which they were pledged. The collection of contributions outstanding for these funds became an increasing problem in spite of repeated reminders sent to Governments to secure payment.

48. In the case of the Trust Fund for the Convention on International Trade in Endangered Species (CITES), the delayed payment of contributions, combined with the impact on dollar costs occasioned by the fall in the value of the United States dollar, led to a situation in which there were insufficient funds to pay for the salaries of the staff of the CITES Secretariat. The core secretariat staff was held together only by the Executive Director's advancing funds from the programme reserve of the Environment Fund on the condition that the advance would be repaid when contributions were received in the trust fund. The administration of this Convention is, however, still in jeopardy due to the continued non-payment of outstanding contributions. The amount of $624,666 was outstanding as at 31 December 1987.

49. The regional seas programmes in West and Central Africa and Eastern Africa to be financed through trust funds established by UNEP on behalf of the Parties to these two Action Plans have not yet become operational because the amount of contributions paid has not yet reached the threshhold level necessary to activate expenditures from the trust fund. At the same time, the implementation of the Action Plans for the Protection of the Mediterranean Sea Against Pollution and for the Caribbean Environment Programme was delayed because the contributions were not paid when due.

50. By contrast, contributions to technical co-operation trust funds established under authority delegated by the Secretary-General to the Executive Director, as well as to trust funds financing the attachment of Junior Professional Officers, increased in 1987 over the levels achieved in 1986, reflecting a higher level of support by Governments to programmes administered by the Clearing-house and also to the attachment to UNEP of professional staff financed by Governments through trust fund arrangements (see chap. VI).

Revolving Fund (Information)

51. The Revolving Fund (Information) is used to finance the production and distribution of information materials and to provide a fund to take in revenues earned by UNEP information materials. During 1986-1987, $115,321 was spent out of the Fund and $109,036 was paid into it. Broadly, therefore, the policy of securing a balance of income and expenditure was maintained by charging to the Fund only part of expenditures on information materials that might be recovered through sales. During 1987, a number of publications and product lines such as T-shirts, scarves and neckties printed with UNEP emblems and messages concerning the environment were financed from the Revolving Fund at a cost of $97,935. Income of $28,249 was received from the sale of publications, from royalties and from the sale of product lines. Thus, although 1987 expenditures totalled $97,935 and income amounted to only $28,249, it should be noted that receipts from the United Nations Publications Service now responsible for the sale of many UNEP publications were not reported in 1987 and therefore were not credited to the Fund.

DEFINITIONS

In this document and other documents relating to the Environment Fund, the following definitions are used:

Appropriation	The amount of resources voted by the Governing Council for specific purposes (for a financial period), against which the Executive Director is authorized to incur obligations and make payments for those purposes up to the amount so voted.
Apportionment	The division of the appropriation between different budget lines, as determined by the Governing Council.
Allocation	The assignment in writing of resources from the Fund by the Executive Director, for one or more specific purposes within the appropriation and apportionments determined by the Governing Council.
Commitment	An engagement entered into by the Executive Director, or under authority delegated by him, involving a liability against resources allocated within the appropriation and apportionments determined by the Governing Council.
Expenditure	Total charges incurred against a commitment, whether paid or unpaid.
Covertible Currency or CC	Currencies that can be exchanged and paid immediately into the bank account of the United Nations Environment Programme in New York.
Non-Convertible Currency or NCC	Currencies that can be utilized solely or mainly within the territories of the respective donors and which cannot be exchanged and paid into bank accounts of UNEP, with the exception of convertible portions specifically authorized by the contributing countries.

Notes

1 Decision 13/33 para. 7.

2 *See 1986 Annual Report of the Executive Director,* Part Two, Chapter I, para. 15.

3 *See 1986 Annual Report of the Executive Director,* Part Two, Chapter I, para. 16.

4 *See 1986 Annual Report of the Executive Director,* Part Two, Chapter I, para. 26.

5 Decision 13/36 para. 8.

6 Decision 14/35 para. 6.

7 Decision 14/35 para. 7.

8 Decision 14/36 para. 9.

Chapter VI

THE SECRETARIAT, ITS ORGANIZATION AND PERSONNEL

The secretariat of UNEP
Organization
Recruitment and personnel
Expenditure administered by the secretariat

THE SECRETARIAT, ITS ORGANIZATION AND PERSONNEL

The secretariat of UNEP

1. As in previous years, the secretariat was financed in 1987 mainly from the voluntary contributions to the Environment Fund and from the United Nations regular budget. The Environment Fund finances staff both through the Programme and Programme Support Costs budget (PPSC) and through project budgets. As at 31 December 1987, 82 per cent of the occupied professional posts were financed from these two main sources of funding, as compared with 86 per cent in 1986. This reflects a continuing increase in the use of trust funds and counterpart funds to finance the secretariat. These two latter sources of funding are provided mainly by Governments, but are earmarked for specific projects or purposes.

2. The secretariat comprises staff in the Professional and General Service categories. The Professional posts approved and occupied on 31 December 1987 are shown in table 1 with corresponding figures for 1986. A similar breakdown for General Service staff is provided in table 3.

Table 1
Source of financing for Professional posts

	Number of posts			
	1986		1987	
	Approved	Occupied	Approved	Occupied
Regular budget	51[a]	42[a]	51[a]	43[a]
Programme & programme support costs	101[b]	75[b]	101[b]	69[b]
Environment fund projects:				
(a) PACs	27	21	27	20
(b) Other	23	18	27	24
Environment Fund Total	151	114	155	113

Table 1 (continued)

	Number of posts			
	1986		1987	
	Approved	Occupied	Approved	Occupied
Trust fund projects	13	10	13	13
Junior Professional Officers (JPO) agreements (trust funds)	8[c]	8[c]	15[c]	12[c]
Special account for support to trust funds (SASTF)	7	4	7	7
Activities financed from counterpart contributions	3	3	2	2
Total	233	181	243	190

[a] Including five Field Service posts in the Cable Unit serving all the organizations in the United Nations Office at Nairobi and UNDP.

[b] Including one post on loan to UNCHS.

[c] The figure includes two senior professionals recruited under similar arrangements.

3. The proportion of professional posts funded under the regular budget has declined in recent years. Yet the Executive Director continues to believe that the Environment Fund carries a disproportionate share of secretariat staffing costs. In an attempt to redress this situation in part, the Executive Director, in his regular budget submission for 1988-1989, requested that an additional professional post be financed from this budget, but this request was refused. Moreover, since the Secretary-General of the United Nations has been instructed by the General Assembly to reduce the number of posts financed from the regular budget by 15 per cent overall, given the financial crisis facing the Organization as a whole, the Secretariat in New York is proposing to cut 8 professional posts and 11 general service posts from the regular budget staffing table of UNEP by the end of the current biennium. If these proposals are implemented, their impact will be severe, the more so because they add to the existing high level of vacancies maintained for PPSC posts described below. Such proposals also mean a further move away from the rationale, established at Stockholm in 1972, for a small core UNEP secretariat financed out of the regular budget, with programme support financed out of the Environment Fund.

4. In the current situation, the direct Government financing of posts in UNEP is becoming increasingly significant. At the end of 1987, the financing of 15 Professional posts had been approved by Governments: 12 of these posts had been filled. Agreements have been concluded with four Governments under which they would finance their nationals as Junior Professional Officers (JPOs): four other agreements are under discussion. Agreements have also been concluded with one Government for the provision of senior staff: two other agreements are under discussion.

5. As at 31 December 1987, 22 per cent of the approved professional posts (i.e. 53 posts) were vacant, the same percentage as at the end of 1986. Of these 53 vacant posts, 30 were in fact frozen. While the proportion of vacant Regular Budget posts has remained unchanged since the end of 1986, the proportion of vacant PPSC posts increased from 26 to 32 per cent, out of which 19 were categorized as frozen. This level of vacancies reflects the Executive Director's efforts to keep the PPSC budget as close as possible to 33 per cent of contributions.

6. Although the number of vacant Professional posts at the end of 1987 was higher than at the end of 1986, the number of Professional posts occupied increased by nine over the year. This resulted from a net increase of 10 approved posts in 1987: four project posts and seven JPO posts, balanced by the abolition of one counterpart-funded post.

7. The functions of the Professional staff reflect the broad mandate of UNEP and the necessary administrative support that the organization requires. Table 2 provides an overview of the distribution of the functions of the 190 professional staff members in post as at 31 December 1987.

Table 2

Distribution of Professional Staff by function and source of fun ding (as at 31 December 1987)

	Regular Budget	PPSC	JPO trust funds	SASTF	Fund projects	Trust Fund projects	Activities financed from counterpart contributions	Total
1. Senior management	3	1	—	—	—	—	—	4
2. Regional and Liaison Offices and external relations	4	16	1	—	1	1	—	23
3. Development of programmes*	11	17	8	1	10	6	—	53
4. Environment Fund projects: PAC*	—	—	—	—	12	—	—	12
5 Environment Fund projects: others	—	—	2	—	11	6	1	20
6. Fund management and Clearing-house	1	14	—	3	2	—	1	21
7. Information	1	4	1	—	5	—	—	11
8. Conference services	11	6	—	—	1	—	—	18
9. Administration	12	10	—	3	2	—	—	27
10. Post on loan to UNCHS	—	1	—	—	—	—	—	1
Total	43	69	12	7	44	13	2	190

* PAC staff largely concerned with the development of programmes are included in line 3.

8. The number of occupied posts in the General Service category was 333 out of 376 established posts. Forty-three were therefore vacant as at 31 December 1986 and 31 December 1987. At the same time last year, there were only 17 vacant posts, another reflection of efforts to reduce support costs. Overall, 11 per cent of approved general service posts were vacant as at 31 December 1987.

Table 3
Source of financing of General Service posts[a]

	Number of posts			
	1986		1987	
	Approved	Occupied	Approved	Occupied
Regular budget	60	57	60	52
Programme & Programme Support Costs	211	203	211	195
Environment Fund projects:				
a) PAC			31	28
b) others	67	61	44	33
Environment Fund total	278	264	286	256
Special account for support to Trust Funds	10	10	13	11
Trust Fund projects	7	7	6	6
Activities financed from counterpart contributions	11	11	11	8
Total	366	349	376	333

[a] These figures do not include staff members employed against temporary assistance funds. As at 31 December 1987 there were 38 General Service staff on temporary assistance posts on the UNEP payroll: seven financed by the regular budget, 10 from Programme and Programme Support Costs, 11 from Environment Fund projects and 10 from Trust Funds, etc. This compares with 30 General Service staff members employed against temporary assistance fund as at 31 December 1986; eight financed by the regular budget, nine from Programme and Programme Support Costs and 13 from Trust Funds, etc.

9. Table 4 shows occupied General Service posts by broad occupational grouping. The senior General Service staff have continued to supplement the Professional Staff, thereby enabling the Executive Director to maintain the level of programmes and programme performance with a relatively high professional vacancy rate.

Table 4
General Service staff by occupational grouping

	1985	1986	1987
Administrative, finance, personnel and research assistants	117	124	118
Secretaries and typists	145	142	133
Clerks	45	47	48
Telex/computer operators	8	10	9
Drivers	15	14	12
Messengers	8	12	13
Total	338	349	333

10. In 1985 the ratio of Professionals to Secretaries/Typists was 10:8. At 31 December 1987 it was 10:7. This reduction was partly offset by the procurement of more modern and efficient office equipment, including word processors, and by the Professional staff occasionally carrying out some of their own secretarial tasks. However, this policy cannot continue and the situation will have to be reviewed and corrected.

11. One of the major problems in adhering to the vacancy rate targets for General Service staff has been the necessity of filling essential posts through redeployment. Vacancies that arise from attrition are unevenly distributed among departments; some will therefore have a higher vacancy rate than others and, at the same time, experience difficulties in filling posts that are indispensable to the implementation of the programme through redeployment.

12. Table 5 shows the geographical location of UNEP staff in post at the end of 1987.

Table 5

UNEP Professional and General Service staff by duty station
(as at 31 December 1987)

Duty station	Professional	General Service
Nairobi	137[a]	264
Geneva	13	19
Lausanne	6	7
Athens	6	8
Bangkok	5	6
Paris	4	5
Mexico	3	6
New York	3	6
Bahrain	3	5
Peru	2	—
London	1	—
Vienna	1	1
Washington	1	1
Bonn	1	1
Kingston	2	4
People's Democratic Republic of Yemen	1	—
Tunis	1	—
Total	190	333[b]

[a] Includes one PPSC post on loan to UNCHS.

[b] Excluding 38 General Service staff employed against temporary assistance funds.

ORGANIZATION

13. There were no changes in the organization structure of UNEP in 1987. The Office of the Environment Programme was reorganized in 1986 as outlined in the *1986 Annual Report.* 1987 was a period of consolidation during which the nine core units adjusted to the new arrangements and gained experience in working as interdisciplinary teams, each with the required critical mass of staff and the administrative flexibility to enable it to function efficiently. The Executive Director believes that this new organizational structure lends itself well to the integrated project approach, which is increasingly being pursued.

14. In December 1987 a UNHQ management advisory team visited Nairobi to explore the advisability of consolidating certain administrative services, such as accounting and finances, under the umbrella of the United Nations Common Services, Nairobi. If the proposals made by the advisory team and the proposed abolition of 19 posts financed out of the regular budget are approved, they would involve a further reorganization of UNEP.

15. An organizational chart of the UNEP secretariat appears at the end of this chapter: as compared with that issued in the *1986 Annual Report,* there are no changes.

16. The modernization of the UNEP computer system continued during 1987. The new word processing and computer systems purchased during 1987 were installed during the first quarter of 1988, bringing the total number of work stations to 114. Of these 66, one for every three professionals, can also be used as personal computers. During 1987 "on line" information systems were developed for both project and personnel management. These systems and others will become fully operational during 1988.

RECRUITMENT AND PERSONNEL

17. An analysis by nationality of the 190 Professional staff members from 69 countries occupying posts in UNEP as at 31 December 1987 is set out in annex II to this report. The Executive Director has continued his policy of endeavouring to maintain equitable geographical distribution of staff in UNEP in accordance with General Assembly resolutions, both for regular budget posts strictly subject to geographical distribution and posts funded from other sources. The representation of women in the Professional category has increased. As at 31 December 1987, the percentage of women in professional posts was 23.9 per cent.

18. In light of the financial constraints, the Executive Director has continued to require a high standard of performance from staff in all categories as a condition for extending appointments.

19. During 1987, 24 Professional staff members left the Organization. Seven returned to service with their Governments or academic institutions; three were reassigned elsewhere in the United Nations system; six resigned their posts; three left upon completion of their project assignments; two contracts were not renewed; one staff member retired and there were two deaths in service.

20. The statistics of UNEP staff contained in this chapter do not include five United Nations Volunteers seconded to UNEP from UNDP. These volunteers are recruited by the UNDP Co-ordinator responsible for the administration of this scheme; they are attached to UNEP for periods of two years. They remain under contract to UNDP, with UNEP being responsible for no more than a small part of their expenses. Volunteers are assigned to work in substantive units of UNEP to assist professional staff in accordance with their training and experience. Five additional volunteers were under recruitment.

EXPENDITURE ADMINISTERED BY THE SECRETARIAT

21. The total expenditure administered by UNEP rose from approximately $6 million in 1973 to a peak (in nominal terms) of $53.2 million in 1987. In 1986, expenditures dropped back to a level of $38 million from the previous peak in 1985 as a result of decreased UN regular budget and Fund programme activities expenditures. An analysis of the source of financing of expenditures in 1984 to 1987 is set out in table 6.

Table 6
Expenditure, by source of financing, administered by UNEP

	1984	1985	1986	1987
		(Millions of dollars)		
Regular budget	5.1	4.9	3.9	5.0
Programme and Programme Support Costs	10.2	10.1	10.5	11.3
Fund programme activities	16.9	23.5	15.5	26.3
Trust fund activities	4.5	5.2	5.2	7.2
Special account trust funds	0.4	0.6	0.5	0.7
Counterpart finance	1.3	1.2	2.4	2.5
Revolving Fund (Information)	0.0	0.0	0.0	0.1
Total	38.4	45.5	38.0	53.1

22. In view of the financial situation facing the organization and the United Nations system as a whole, stringent economy continued to be exercised in all expenditures throughout 1986 and 1987, particularly in respect of travel. These issues were discussed in greater detail in chapter V.

ANNEX I

MEMBER STATES OF THE UNEP GOVERNING COUNCIL DURING 1987

Argentina
Australia
Barbados
Botswana
Brazil
Bulgaria
Burundi
Canada
Chile
China
Colombia
Congo
Czechoslovakia
Denmark
Dominican Republic
France
Gabon
Germany, Federal Republic of
Ghana
Greece
India
Indonesia
Iran (Islamic Republic of)
Iraq
Jamaica
Japan
Jordan
Kenya
Libyan Arab Jamahiriya
Malta
Mauritania
Mexico
Netherlands
Niger
Nigeria
Oman
Panama
Papua New Guinea
Poland
Republic of Korea
Senegal
Sri Lanka
Swaziland
Sweden
Switzerland
Syrian Arab Republic
Thailand
Tunisia
Turkey
Uganda
Ukrainian SSR
USSR
United Kingdom
United States
Venezuela
Yugoslavia
Zaire
Zambia

Annex II

DISTRIBUTION OF UNEP STAFF IN THE PROFESSIONAL CATEGORY AND ABOVE BY REGION, NATIONALITY AND LEVEL AS AT 31 DECEMBER 1987[a]

Region and country of nationality	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution[b]	Number	Total
African States					
Algeria	—	—	1 P-2	1	1
Egypt	1 USG, 1 P-5	2	1 P-5, 2 P-4	3	5
Ethiopia	1 FS-3*	1	1 P-5, 1 P-1	2	3
Gambia	—	—	1 P-4	1	1
Kenya	1 D-2, 1 P-5	2	4 P-3, 2 P-2	6	8
Libyan Arab Jamahiriya	1 D-1	1	1 P-4, 1 P-3	2	3
Mali	—	—	1 D-1	1	1
Mauritius	—	—	1 P-5	1	1
Morocco	—	—	1 P-3	1	1
Mozambique	—	—	1 P-3	1	1
Rwanda	—	—	1 P-4	1	1
Seychelles	—	—	1 D-1	1	1
Somalia	—	—	1 P-5	1	1
Sudan	—	—	1 D-2, 1 P-5, 1 P-3, 1 P-2	4	4
Swaziland	1 P-5	1	—	—	1
Tunisia	—	—	1 P-4	1	1
Uganda	1 P-4	1	1 P-3	1	2
Zimbabwe	—	—	1 P-2	1	1
Subtotal		8		29	37

[a] The breakdown by region in this annex does not correspond to that of the United Nations. As membership in the Governing Council is distributed among the five regions listed in General Assembly resolution 2997 (XXVII), it seemed appropriate to present this list in terms of the same regional groupings.

[b] Including staff on Fund posts and all language staff.

* Field service staff.

Region and country of nationality	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution[b]	Number	Total
Asian States					
Afghanistan	—	—	1 P-4	1	1
Bangladesh	—	—	1 D-2	1	1
Burma	—	—	1 D-1	1	1
China	1 P-3	1	1 D-1, 1 P-3, 1 P-2	3	4
India	1 D-2, 1 P-5	2	2 P-4	2	4
Iran (Islamic Republic of)	—	—	1 P-4, 1 P-2	2	2
Japan	1 P-2	1	1 D-1, 2 P-5, 7 P-2	10	11
Kuwait	—	—	1 P-5	1	1
Lebanon	1 P-3	1	—	—	1
Nepal	—	—	1 P-2	1	1
Pakistan	—	—	1 P-3, 1 P-1	2	2
Philippines	1 FS-5*	1	1 P-4	1	2
Singapore	—	—	1 P-4	1	1
Sri Lanka	—	—	1 P-4	1	1
Syrian Arab Republic	—	—	1 L-5	1	1
Turkey	—	—	1 P-4, 1 P-3	2	2
Viet Nam	—	—	1 P-2	1	1
Yemen Arab Republic	—	—	1 D-1	1	1
Subtotal		6		32	38

Region and country of nationality	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution[b]	Number	Total
Eastern European States					
Czechoslovakia	—	—	1 P-4	1	1
Hungary	—	—	1 P-3	1	1
Poland	—	—	1 P-4	1	1
USSR	1 ASG, 2 P-4, 1 P-3	4	1 L-5, 2 P-4, 2 P-3	5	9
Yugoslavia	—	—	1 D-2, 1 P-5	2	2
Subtotal		4		10	14
Latin American States					
Argentina	—	—	2 P-3	2	2
Chile	—	—	2 P-5, 2 P-4	4	4
Colombia	—	—	1 P-3	1	1
Ecuador	—	—	1 P-2	1	1
Guyana	—	—	1 P-4	1	1
Haiti	1 P-2	1	—	—	1
Jamaica	1 D-2	1	3 P-2	3	4
Peru	—	—	1 D-2	1	1
Venezuela	—	—	1 D-1, 1 P-5, 1 P-1	3	3
Subtotal		2		16	18

Region and country of nationality	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution[b]	Number	Total
Western European and other States					
Australia	1 P-4	1	1 P-4, 1 P-3	2	3
Austria	—	—	1 P-4	1	1
Belgium	—	—	1 P-5	1	1
Canada	1 FS-4*	1	1 P-5, 1 P-3	2	3
Denmark	1 P-4, 1 P-3	2	1 P-5, 1 P-2	2	4
Finland	—	—	1 D-1, 1 P-5, 1 P-4	3	3
France	2 P-4	2	2 D-1, 1 P-5, 1 P-4, 2 P-3, 1 P-2	7	9
Germany, Federal Republic of	1 P-5	1	2 P-3, 4 P-2, 1 P-4	7	8
Greece	1 P-5, 1 FS-5*	2	—	—	2
Iceland	—	—	1 P-4	1	1
Ireland	1 FS-5*	1	2 P-3, 1 P-2	3	4
Italy	1 D-1	1	1 D-2, 2 P-4, 1 P-3	4	5
Netherlands	—	—	1 D-2	1	1
Norway	—	—	3 P-2	3	3
Spain	—	—	1 P-3	1	1
Sweden	—	—	2 P-4, 1 P-3, 1 P-2	4	4
Switzerland	—	—	1 P-4, 1 P-2	2	2
United Kingdom	1 P-5, 1 P-2	2	1 D-2, 1 D-1, 1 P-5, 1 P-4, 3 P-3, 1 P-2	8	10
United States	1 ASG, 1 D-1, 1 P-3	3	2 D-1, 5 P-5, 1 P-4, 4 P-3, 2 P-1	14	17
Subtotal		17		65	82
Total		37		152	189[1]

[1] Does not include PPSC post on loan to Habitat which was filled as at 31 December 1987.

Annex III

PUBLICATIONS AND PAPERS ISSUED IN 1987

A. PRINTED PUBLICATIONS

Title	Produced by	Financed by	Languages
	Environment and development (Budget sublines 2101 and 2102)		
Environmental management for local and regional development	UNEP/UNCRD	UNEP/UNCRD	E
Part 1: The Japanese experience			
Part 2: Developing countries perspectives			
Training in environmental planning and management: focus on inland water	UNEP/ILEC/ UNCRD	UNEP/ILEC/ UNCRD	E
Minimum conflict: guidelines for planning the use of American humid tropic environments	UNEP/OAS	UNEP/OAS	E
Drylands dilemma: a solution to the problem	UNEP/Government of Australia	UNEP/Government of Australia	E
	Energy (Budget subline 2103)		
	None		
	Industry and transportation (Budget subline 2104)		
Environmental aspects of transportation in cities: basic guidelines for an environmentally sound transportation system in urban areas	UNEP	UNEP	E (reprint) F
Environmental guidelines for the diesel vehicle	UNEP	UNEP	E (reprint) F
Environmental aspects of alumina production: a technical review	UNEP	UNEP	E
Guidelines for the environmental management of alumina production	UNEP	UNEP	E (reprint) F
Low- and non-waste technology update	UNEP	UNEP	E

Title	Produced by	Financed by	Languages
Final proceedings of the International Symposium on Clean Technologies, Karlsruhe, 7-18 October 1985	BMFT (Federal Republic of Germany)/UNEP	BMFT (Federal Republic of Germany)/UNEP	E
Volume I: Objectives, programme and general statements			
Volume II: Clean technology practices in the Federal Republic of Germany			
Volume III: Country reports—case-studies			
Proceedings of the UNEP/ECLAC regional workshop on agricultural residues in Latin America and the Caribbean	UNEP	UNEP	S
Proceedings of the Multi-regional Training Workshop on Environmental Management of Aluminium Smelters, Dubai City, United Arab Emirates, 8-9 December 1986	IPAI/UNEP	IPAI/UNEP	E
Industry and Environment			
Vol 10 No. 1 "Environmental management of petrochemicals and downstream industries"	UNEP	UNEP	E
Vol 10 No. 2 "Environmental management of small- and medium-scale industries"	UNEP	UNEP	E
Vol 10 No. 3 "The Working environment"	UNEP	UNEP	E
Vol 10 No. 4 "Emerging technologies"	UNEP	UNEP	E
Environmental law and environmental machinery (Budget subline 2105)			
Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes	UNEP	UNEP	ACEFRS
Goals and Principles of Environmental Impact Assessment	UNEP	UNEP	ACEFRS
London Guidelines for the Exchange of Information on Chemicals in International Trade	UNEP	UNEP	ACEFRS

Title	Produced by	Financed by	Languages
Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River System	UNEP	UNEP	EF
Montreal Protocol on Substances that Deplete the Ozone Layer (Protocol to the 1985 Vienna Convention for the Protection of the Ozone Layer)	UNEP	UNEP	ACEFRS
Register of International Treaties and other Agreements in the field of the Environment (updated version)	UNEP	UNEP	ACEFR
Environmental Notes for Parliamentarians (Two issues)	UNEP/ICEL	UNEP	EF
	Environmental education and environmental training (Budget sublines 3101 and 3102)		
Environmental education through adult education: a manual for adult educators, instructors, teachers and social extension workers	AALAE	UNEP/AALAE	E
Connect Volume XII, Nos. 1-3	Unesco	Unesco/UNEP	AEFRS
L'éducation relative à l'environnement: principes d'enseignement et d'apprentissage. Environmental Education Series No. 20	Unesco	Unesco/UNEP	F
Guidelines for the development of non-formal environmental education. Environmental Education Series No. 23	Unesco	Unesco/UNEP	E
	Public information (Budget subline 3103)		
UNEP News, Nos. 13-18	UNEP	UNEP	EFS
The Siren, Nos. 32-35	UNEP	UNEP	EFS
UNEP Profile	UNEP	UNEP	E
Six Environment Briefs:	UNEP	UNEP	EFS
No. 1 The changing atmosphere No. 2 Sands of change No. 3 The disappearing forests No. 4 Hazardous chemicals No. 5 Cleaning up the seas No. 6 Safeguarding the world's water			

Title	Produced by	Financed by	Languages
One home, one earth	UNEP	UNEP	E
Sustainable development: constraints and opportunities	UNEP/ Butterworth UK	UNEP	E
The Lorax	UNEP/ Government of Brazil	UNEP	Portuguese
The Lorax	UNEP/ Government of Bahrain	UNEP	A
Microbial Technologies to overcome environmental problems of persistent pollutants	UNOG	UNEP	E
Towards a Prosperous Planet	UNEP	Government of Sweden	EF
	INFOTERRA (Budget subline 3104)		
INFOTERRA International Directory of sources, sixth edition, Volumes A—C	UNEP	UNEP	EFS
Cumulative index to the INFOTERRA International Directory of Sources, sixth edition, Volumes A—C	UNEP	UNEP	EFS
INFOTERRA World Directory of Environmental Expertise	UNEP	UNEP	EFS
Man and the atmosphere: climate change, ozone layer: sources of information and bibliography	UNEP	UNEP	E
Fire, wood, water; reaping the benefits. (Exchange of Environmental Experience Series, book one)	UNEP	UNEP	E
INFOTERRA Bulletin, Volume IX, Nos. 1-5	UNEP	UNEP	EFRS
	State of the environment and environmental data (Budget subline 3105)		
The State of the World Environment	UNEP	UNEP	ACEFRS

Title	Produced by	Financed by	Languages
	The Global Environmental Monitoring System (GEMS) *(Budget subline 4101)*		
Procedures and methods for integrated global background monitoring of environmental pollution	WMO	WMO/UNEP	E
Environmental Pollution, Monitoring and Research Programme report No. 40—Report of the fourth session of the WMO Commission for Atmospheric Sciences Working Group on Atmospheric Chemistry and Air Pollution	WMO	WMO/UNEP	E
Environmental Pollution, Monitoring and Research Programme report No. 44 —Report of the sixth session of the WMO Executive Council Panel of Experts on Environmental Pollution, Geneva, 5-9 May 1986	WMO	WMO/UNEP	E
Environmental Pollution, Monitoring and Research Programme report No. 45 —Proceedings of the International Symposium on Integrated Global Monitoring of the State of the Biosphere, Volumes I-V, Tashkent, USSR, 14-19 October 1985	WMO	WMO/UNEP	E
Environmental Pollution, Monitoring and Research Programme report No. 49 —Proceedings of the WMO Conference on Air Pollution Modelling and Its Applications, Volume I, Leningrad, USSR, 19-24 May 1986	WMO	WMO/UNEP	E
Environmental Pollution, Monitoring and Research Programme report No. 50 —Provisional daily atmospheric carbon dioxide concentrations as measured at BAPMoN sites for the year 1985	WMO	WMO/UNEP	E
Environmental Pollution, Monitoring and Research Programme report No. 51 —Report on the NBS/WMO Expert Meeting on Atmospheric Carbon Dioxide Measurement Techniques	WMO	WMO/UNEP	E
BAPMoN Newsletter, No. 2	WMO	WMO/UNEP	

Title	Produced by	Financed by	Languages
Man and the composition of the atmosphere	WMO	WMO/UNEP	E
The Global Climate System (Autumn 1984-Spring 1986)	WMO	WMO/UNEP	E
Climate system monitoring monthly bulletin, January-December 1987 (12 issues)	WMO	WMO/UNEP	E
Forest damage and air pollution: report on the 1986 forest damage survey in Europe	ECE/UNEP	ECE/UNEP	E
Setting environmental standards: guidelines for decision-making	WHO	WHO/UNEP	E
Global pollution and health	WHO	WHO/UNEP	E
GEMS/Food Programme report 1986-1987	WHO	WHO/UNEP	E
GEMS/Water operational guide	WHO	WHO/UNEP	E
GEMS/Water data summary 1982-1984	WHO	WHO/UNEP	E
IUCN Directory of Afrotropical Protected Areas	IUCN	IUCN/UNEP	E
Madagascar: an environmental profile	IUCN	IUCN/UNEP	E
Directory of wetlands of international importance	IUCN	IUCN/UNEP	E
Sentinel Volume 4, Nos. 1-3	MARC	UNEP/WHO	E
Environmental data report	MARC	UNEP	E
MARC Report No. 39—Pesticides in the aquatic environment	MARC	UNEP	E
MARC Report No. 40—Terrestrial ecosystems and biome types	MARC	UNEP	E

Title	Produced by	Financed by	Languages
	Outer limits (Budget subline 4102) *Assessment (Budget subline 4103)*		
Planning for drought: towards a reduction of societal vulnerability	Institute of Agriculture and Natural Resources, University of Nebraska/UNEP	UNEP/University of Nebraska	E
Assessment of Ozone Layer Modification and Its Impacts Bulletin No. 9	UNEP	UNEP	E
	Global marine environment (Budget subline 5101)		
Determination of DDTs and PCBs in selected marine organisms by capillary column gas chromotography. Reference Methods for Marine Pollution Studies, No. 40	IAEA	UNEP/FAO/IOC/ IAEA	E
Guidelines for the determination of riverine inputs of contaminants to estuaries. Reference Methods for Marine Pollution Studies, No. 41	IAEA	UNEP/IOC/IAEA	E
Test of the acute lethal toxicity of pollutants to marine fish and invertebrates. Reference Methods for Marine Pollution Studies, No. 43 (Draft)	IAEA	UNEP/FAO/IAEA	E
Estimation of the toxicity of pollutants to marine phytoplanktonic and zooplanktonic organisms. Reference Methods for Marine Pollution Studies No. 44 (Draft)	IAEA	UNEP/FAO/IAEA	E
Comparative toxicity test of water-soluble fractions of oil dispersants to marine organisms. Reference Methods for Marine Pollution Studies No. 45 (Draft)	IAEA	UNEP/FAO/IAEA	E

Title	Produced by	Financed by	Languages
The determination of methylmercury, total mercury and total selenium in human hair. Reference Methods for Marine Pollution Studies. No. 46 (Draft)	IAEA	UNEP/WHO/IAEA	E
Bibliography of Marine Ecosystems in Pacific Islands. UNEP Regional Seas Directories and Bibliographies Series	FAO	UNEP/University of Guam	E
Catalogue of publications: Oceans and Coastal Areas, No. 3	UNEP	UNEP	E
	Regional Seas (Budget subline 5102)		
Research on the toxicity, persistence, bio-accumulation, carcinogenicity and mutagenicity of selected substances. Final reports of principal investigators. MAP Technical Reports No. 10	UNEP/FAO	UNEP/FAO	EFS
Rehabilitation and reconstruction of Mediterranean historic settlements MAP Technical Reports No. 11	UNEP	UNEP	EF
Water resources development of small Mediterranean islands and isolated coastal areas. MAP Technical Reports No. 12	UNEP	UNEP	EF
Medwaves (bimonthly newsletter on the Mediterranean Action Plan)	UNEP	UNEP	EF
Status of regional agreements negotiated in the framework of the regional seas programme	UNEP	UNEP	E
Action Plan for the Caribbean Environment Programme: a framework for sustainable development	UNEP	UNEP	E
Directorio de Centros de Investigación Marina: Pacífico Sudeste. UNEP Regional Seas Directories and Bibliographies Series	UNEP	UNEP/CPPS	S
Directory of Coral Reef Researchers in the Pacific. UNEP Regional Seas Directories and Bibliographies Series	FAO	UNEP/FAO/ University of Guam	E

Title	Produced by	Financed by	Languages
Environmental case-studies —South Pacific	SPC	SPREP/SPC/ UNEP	EF
Environment Newsletter (quarterly newsletter of the South Pacific Regional Environment Programme)	SPC	SPC/SPREP/ UNEP	E
Directory of Organizations and Organizational Units Co-ordinating or Contributing to the Co-ordination of the Action Plans related to the Regional Seas Programme. UNEP Regional Seas Directories and Bibliographies Series	UNEP	UNEP	E
Environmental problems of the South Asian Seas region: an overview. UNEP Regional Seas Reports and Studies No. 82	UNEP	UNEP	E
Coastal and marine environmental problems of Somalia. UNEP Regional Seas Reports and Studies No. 84 (and annexes)	UNEP/ESCWA/ FAO/Unesco/ IMO/IAEA/ IUCN	UNEP	E
Guidelines to environmental impact assessment in developing countries. UNEP Regional Seas Reports and Studies No. 85	UNEP	UNEP	EFS
The East Asian Seas Action Plan: evaluation of its development and achievements. UNEP Regional Seas Reports and Studies No. 86	UNEP	UNEP	E
Environmental impact assessment in the United Arab Emirates. A case-study: Ruwais and Zirku industrial areas. UNEP Regional Seas Reports and Studies No. 87	UNEP/IMO/ ROPME	UNEP/ROPME	E
	Living marine resources (Budget subline 5103)		
	None		
	Water (Budget line 52)		
Training in environmental planning and management: focus on inland waters	UNCRD/ ILEC	UNEP/UNCRD/ ILEC	E

Title	Produced by	Financed by	Languages
	Soils (Budget subline 6101)		
	None		
	Tropical forests (Budget subline 6102)		
Transmigration and the environment in Indonesia: the past, present and future	IUCN	UNEP/IUCN	E
	Other ecosystems (Budget subline 6103)		
	None		
	Management of agricultural chemicals and residues (Budget subline 6104)		
Progress in protozoology	Pergamon Press	UNEP	E
Irrigation and vector-borne disease transmission	The International Management Institute	FAO/UNEP/ WHO	E
Cours de formation d'auto-dépendance en gestion des parasites dans les tropiques: Phase I—Afrique	Regional Centre for Training in Plant Protection Yaoundé, (CREFPHY)	UNEP	E
	Wildlife and protected areas (Budget subline 6105)		
Conservation with equity: strategies for Sustainable development: proceedings of the Conference on Conservation and Development: Implementing the World Conservation Strategy	IUCN/UNEP	UNEP	E
Review of the protected areas system in the afrotropical realm, maps 3.1-3.5	IUCN/UNEP	UNEP/IUCN	E
Action strategy for protected areas in the afrotropical realm	IUCN/UNEP	UNEP/IUCN	E
Review of the protected areas system in the indo-malayan realm, maps 3.1-3.6	IUCN/UNEP	UNEP/IUCN	E

Title	Produced by	Financed by	Languages
Un sistema de áreas silvestres protegidas para el Gran Chaco	FAO/UNEP	UNEP/FAO	S
Informe del taller sobre conservación *in situ* de recursos genéticos	FAO/UNEP	UNEP/FAO	S
Identification manual for endangered species	UNEP/CITES/ CITES Parties	UNEP/CITES/ CITES Parties	E
Directory of CITES Management and Scientific Authorities	UNEP/CITES	UNEP/CITES	EFS
Resolutions of the Conference of the Parties to the CITES Convention	UNEP/CITES	UNEP/CITES	EFS
Traffic Bulletin, Volume 8 No. 4;	Wildlife Trade	UNEP/CITES, TRAFFIC USA	E
Vol. 9, Nos. 1-3	Monitoring Unit, UNEP/CITES	People's Trust for for Endangered Species	E
Flora, Fauna y áreas silvestres Year 1, Nos. 1-3 and Year 2, Nos. 4-5	FAO/UNEP	UNEP/FAO	S
Nature et faune, Volume 1, No. 1 and Volume 2, Nos. 1-2	FAO/UNEP	UNEP/FAO	F
Proceedings of the Third Meeting of the Conference of the Contracting Parties to the Ramsar Convention	Ramsar Convention Bureau	Ramsar Convention Bureau	E
Proceedings of the Extraordinary Conference of the Contracting Parties to the Ramsar Convention	Ramsar Convention Bureau	Ramsar Convention Bureau	EF
Directory of Ramsar sites	Ramsar Convention Bureau	Ramsar Convention Bureau	E
Pachyderm (newsletter of the African Elephant and Rhino Specialist Group), Nos. 7-8	IUCN	IUCN/UNEP	E
IUCN Species Survival Commission newsletter, Nos. 8-9	IUCN	IUCN/WWF/UNEP	E

Title	Produced by	Financed by	Languages
	Genetic resources (Budget subline 6106)		
Microbial technologies to overcome environmental problems of persistent pollutants	UNEP	UNEP	E
Nairobi MIRCEN newsletter, Volume 10, Nos. 1-2	Nairobi MIRCEN	Nairobi MIRCEN/ UNEP	E
La revue du MIRCEN de l'Afrique de l'Ouest, Volume 4, No. 1	Dakar MIRCEN	Dakar MIRCEN/ UNEP	F
The Cairo MIRCEN catalogue of strains, second edition	Cairo MIRCEN	Cairo MIRCEN/ UNEP	E
Conserving and managing biological diversity: what the United Nations Environment Programme is doing	UNEP	UNEP	E
Animal genetic resources information, No. 6/87	FAO	FAO/UNEP	E
Animal genetic resources: strategies for improved use and conservation	FAO	FAO/UNEP	E
	Lithosphere (Budget subline 6107)		
Man's dependance on the earth	UNEP/Unesco	Unesco	E
	Arid and semi-arid lands ecosystems and desertification (Budget line 62)		
Land use policy: special issue on desertification Volume 4, No. 4	Butterworth	UNEP	E
Desertification Control Bulletin Nos. 14-15	UNEP	UNEP	E
Rolling back the desert: 10 years after UNCOD	UNEP	UNEP	E
Les plantations sylvo-pastorales dans la zone aride de Tunisie. Notes techniques du MAB, 18	Unesco/UNEP	UNEP	F
Proceedings of the international training course on rainfed agriculture and soil conservation in dry zones	UNEPCOM	UNEP	EF

Title	Produced by	Financed by	Languages
	Environmental health (Budget subline 7101)		
Environmental Health Criteria No. 57:Principles of toxicokinetic studies	WHO	ILO/UNEP/WHO	E
Environmental Health Criteria No. 58: Selenium	WHO	ILO/UNEP/WHO	E
Environmental Health Criteria No. 59: Principles of evaluating health risks during infancy and early childhood: the need for a special approach	WHO	ILO/UNEP/WHO	E
Environmental Health Criteria No. 6O: Principles for the assessment of neurotoxicity associated with exposure to chemicals	WHO	ILO/UNEP/WHO	E
Environmental Health Criteria No. 61: Chromium	WHO	ILO/UNEP/WHO	E
Environmental Health Criteria No. 62: 1, 2 dichloroethane	WHO	ILO/UNEP/WHO	E
Environmental Health Criteria No. 63: Organo-phosphorous insecticides: a general introduction	WHO	ILO/UNEP/WHO	E
Environmental Health Criteria No. 64: Carbamate pesticides: a general introduction	WHO	ILO/UNEP/WHO	E
Environmental Health Criteria No. 65: Butanols	WHO	ILO/UNEP/WHO	E
Environmental management of disease vectors: case-studies on Disease Vector Control through environmental management in water resources development projects, sections A, B	WHO	UNEP/WHO	E
	International Register of Potentially Toxic Chemicals (IRPTC) (Budget subline 7102)		
IRPTC Bulletin, Vol. 7, No. 3	Government of the USSR/UNEP	UNEP	R
IRPTC Bulletin, Vol. 7, No. 4	UNEP	UNEP	FS
IRPTC Bulletin, Vol. 8, No. 4	UNEP	UNEP	EF

Title	Produced by	Financed by	Languages
Data profiles for 600 chemicals (completion/updating)	UNEP	UNEP	E
IRPTC Legal File, 1986	UNEP	UNEP	E
Scientific reviews of Soviet literature on toxicity and hazards of chemicals Nos. 104-112	Government of the USSR/UNEP	UNEP	ER
	Working environment (Budget subline 7103)		
	None		
	Human settlements (Budget subline 7104)		
Improving environmental health conditions in low income settlements: a community-based approach to identifying needs and priorities WHO offset publication No. 100	UNEP/WHO	UNEP/WHO	E
	The Arms Race and the environment (Budget line 81)		
Cultural norms, war and the environment	UNEP/SIPRI	UNEP/SIPRI	E
	Regional and technical co-operation (Budget line 82)		
	None		

B. MAJOR STUDIES, PAPERS AND REPORTS

Title	Produced by	Financed by	Languages
	Environment and development (Budget sublines 2101 and 2102)		
Putting life into development	UNEP/IUCN	UNEP/IUCN	E
Summary record of the eighth session of the Committee of International Development Institutions on the Environment	UNEP/CIDIE	UNEP/CIDIE	E
The Environmental dimension in development strategies: limitations and prospects	UNEP/ECLAC	UNEP/ECLAC	ES
Progress report on the project on development planning and the environment (PR-3)	UNEP/ECLAC	UNEP/ECLAC	ES
Draft pre-feasibility reports: pilot projects:	UNEP/ECLAC	UNEP/ECLAC	S
(a) Programa Nacional para la Conservación de la Infra-estructura (Argentina)			
(b) Desarrollo Regional Aprovechamiento Múltiple de los Recursos Generados en Torno al Complejo Colbún-Machicura-Pehuenche (Chile)			
(c) Utilización de Recursos Naturales Marginales en la Región de Magallanes (Ecuador)			
(d) Proyecto de Desarrollo Rural Integrado, Región Sur de Honduras (Honduras)			
(e) Recuperación e Innovación Productiva en Ambientes Andinos (Peru)			
	Energy (Budget subline 2103)		
None			

Title	Produced by	Financed by	Languages
	Industry and transportation (Budget subline 2104)		
	None		
	Environmental law and environmental machinery (Budget subline 2105)		
Report of the Working Group of Experts on Environmental Law: second session on environmental impact assessment (UNEP/WG.152/4)	UNEP	UNEP	AEFRS
Report of the third session of the *Ad Hoc* Working Group of Experts for the Exchange of Information on Potentially Harmful Chemicals (in particular Pesticides) in International Trade (UNEP/WG.155/6)	UNEP	UNEP	AEFRS
Report of the first session of the *Ad Hoc* Working Group of Legal and Technical Experts for the Elaboration of a Protocol on the Control of Chlorofluorocarbons to the Vienna Convention for the Protection of the Ozone Layer (Vienna Group) (UNEP/WG.151/L.4)	UNEP	UNEP	EFRS
Report of the second session of the *Ad Hoc* Working Group of Legal and Technical Experts for the Elaboration of a Protocol on the Control of Chlorofluorocarbons to the Vienna Convention for the Protection of the Ozone Layer (Vienna Group) (UNEP/WG.167/2)	UNEP	UNEP	EFRS
Report of the third session of the *Ad Hoc* Working Group of Legal and Technical Experts for the Elaboration of a Protocol on the Control of Chlorofluorocarbons to the Vienna Convention for the Protection of the Ozone Layer (Vienna Group) (UNEP/WG.172/2)	UNEP	UNEP	EFRS
Seventh Revised Draft Protocol on 'Chlorofluorocarbons' 'Certain Ozone-Depleting Substances' (UNEP/IG.79/3/Rev.1)	UNEP	UNEP	ACEFRS

Title	Produced by	Financed by	Languages
Results of the meeting of the *Ad Hoc* Committee to Survey Progress Made in Implementing the Recommendations of the 1984 Inter-Parliamentary Conference on the Environment (UNEP/IPU-1/Inf.5)	IPU/UNEP	IPU/UNEP	EF
Compilation of information supplied by national groups to the *Ad Hoc* Committee to Survey Progress Made in Implementing the Recommendations of the 1984 Inter-Parliamentary Conference on the Environment (ENVIRON/86/R-1)	IPU/UNEP	IPU/UNEP	EF
Addendum to the compilation of information supplied by national groups to the *Ad Hoc* Committee to Survey Progress Made in Implementing the Recommendations of the 1984 Inter-Parliamentary Conference on the Environment (ENVIRON/86/R-1/Add.1)	IPU/UNEP	IPU/UNEP	EF
Progress made in implementing the recommendations of the Inter-Parliamentary Conference on the Environment (ENVIRON/86/R-2)	IPU/UNEP	IPU/UNEP	EF
Preliminary draft recommendations for submission to the *Ad Hoc* Committee in Nairobi to Survey Progress Made in Implementing the Recommendations of the 1984 Inter-Parliamentary Conference on the Environment (ENVIRON/86/R-3)	IPU/UNEP	IPU/UNEP	EF
Participation of States in global conventions on protection of the environment and in regional seas conventions adopted under the auspices of UNEP (UNEP/IPU-1/Inf.2)	UNEP	UNEP	E
New directions of environmental legislation and administration in developing countries (UNEP/IPU-1/Inf.3)	UNEP	UNEP	E
First Draft Convention on the Control of the Transboundary Movements of Hazardous Wastes (UNEP/WG.180/2)	UNEP	UNEP	EFRS

Title	Produced by	Financed by	Languages
Report of the organizational meeting of 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 (UNEP/WG.180/3)	UNEP	UNEP	EFRS
Draft discussion document No. 1: definitions of prior informed consent and other modalities to supplement the London Guidelines for the Exchange of Information on Chemicals in International Trade (UNEP/WG.184/3)	UNEP	UNEP	E
Environmental education and environmental training (Budget sublines 3101 and 3102)			
Report of the International Congress on Environmental Education and Training (Moscow, 17-21 August 1987) in *Connect,* Volume XII, No. 3, September 1987	UNEP/Unesco	UNEP/Unesco	AEFRS
International Strategy for Action in the field of Environmental Education and Training for the 1990s	UNEP/Unesco	UNEP/Unesco	E
Report of the environmental awareness-building workshop for personnel of African ministries of planning and the environment (26-30 October 1987)	UNEP	UNEP	E
Report of the training workshop on environmental education and resource management in African tertiary-level institutions (23-27 November 1987)	GTZ	GTZ/UNEP/ Unesco	E

Title	Produced by	Financed by	Languages
	Public information *(Budget subline 3103)*		
	None		
	INFOTERRA *(Budget subline 3104)*		
	None		
	State of the environment and environmental data *(Budget subline 3105)*		
	None		
	The Global Environmental Monitoring System (GEMS) *(Budget subline 4101)*		
GEMS Sahel Series, No. 1: Introduction au projet écosystèmes pastoraux saheliens	UNEP	UNEP	F
GEMS Sahel Series, No. 3: Utilisation d'un avion léger dans l'inventaire et la surveillance continue des écosystemes pastoraux saheliens	UNEP	UNEP	F
GEMS Sahel Series, No. 5: Télédétection de la production des paturages	UNEP	UNEP	F
GEMS Sahel Series, No. 6: Inventaire des ressources en eau au Ferlo	UNEP	UNEP	F
GEMS Sahel Series, No. 7: Végétation ligneuse sahelienne	UNEP	UNEP	F
GRID Information Series, No. 7: GIS applications within GRID: an atlas of African watersheds and slope categories	UNEP	UNEP	E
GRID Information Series, No. 8: Uganda case-study; a sampler atlas of environmental resource datasets within GRID (reissued under GRID Case Studies Series)	UNEP	UNEP	E

Title	Produced by	Financed by	Languages
GRID Information Series, No. 9: GRID pilot project: an interim status report	UNEP	UNEP	E
GRID Information Series, No. 10: UNEP/UNITAR training programme in geographical information systems in the field of environment	UNEP	UNEP	E
GRID Information Series, No. 11: An assessment of GEMS global monitoring networks: data management and linkages to GRID	UNEP	UNEP	E
GRID Information Series, No. 12: Report of an *Ad Hoc* expert workshop on GRID systems and software (Nairobi, 14-18 September 1987)	UNEP	UNEP	E
GRID Information Series, No. 3: Guidelines for the development of GRID-compatible national GIS	UNEP	UNEP	E
GRID Case-Study Series, No. 1: Uganda case-study:a sampler atlas of environmental resource datasets within GRID	UNEP	UNEP	E
GRID Case-Study Series, No. 2: African elephant database project: final report	UNEP	UNEP	E
	Outer limits (Budget subline 4102)		
Report of the *Ad Hoc* meeting to compare model-generated assessments of ozone layer change for various strategies for CFC control	UNEP	UNEP	E
	Assessment (Budget subline 4103)		
	None		
	Global marine environment (Budget subline 5101)		
	None		

Title	Produced by	Financed by	Languages
	Regional seas *(Budget subline 5102)*		
	None		
	Living marine resources *(Budget subline 5103)*		
	None		
	Water *(Budget line 52)*		
Draft Agreement on the Action Plan for the Environmental Management of the Common Zambezi River System, (UNEP/IG.78/3)	UNEP	UNEP	E
Diagnostic study on the present state of ecology and the environmental management of the common Zambezi river system, UNEP/IG.78/Background paper 1	UNEP	UNEP	E
Final Act of the Conference of Plenipotentiaries on the Environmental Management of Common Zambezi River System, (Harare, 26-28 May 1987)	UNEP	UNEP	E
	Soils *(Budget subline 6101)*		
Report of the *Ad Hoc* expert group meeting on the feasibility and methodology of global soil degradation assessment	UNEP	UNEP	E
Proceedings of the first meeting of the Regional Co-ordination Unit of the Soils and Fertilizers Network (SOFERNET) of the African Ministerial Conference on the Environment (Accra, 19-21 October 1987)	UNEP	UNEP	E

Title	Produced by	Financed by	Languages
Draft revised guidelines on application of integrated land/soil management in mountain ecosystems	Government of Bulgaria/ UNEPCOM/UNEP	UNEP	E
	Tropical forests (Budget subline 6102)		
Rain-forest regeneration and management: report of the workshop in Guri, Venezuela (24-28 November 1986)	Unesco	UNEP/Unesco/ IUBS	E
Preliminary paper on compensation for the establishment of protected areas within tropical forest ecosystems	CEMN	UNEP	E
	Other ecosystems (Budget subline 6103)		
	None		
	Management of agricultural chemicals and residues (Budget subline 6104)		
Lecture Notes: Training for Self-Reliance in Ecological Pest Management in the Tropics (Phase I—Africa)	CREFPHY	UNEP	E
	Wildlife and protected areas (Budget subline 6105)		
Strategic resource planning in Uganda: wildlife and protected areas	UNEP	UNEP	E
Strategic resource planning in Uganda: fisheries	UNEP	UNEP	E
Strategic resource planning in Uganda: wetlands	UNEP	UNEP	E
Report and Action Plan for the Estancia Cariman, Matto Grosso do Sul, Brazil	UNEP	UNEP/ R. Klabin	E
Report on collections and multiplication of rare endemic plant species of Mauritius	UNEP	UNEP	E

Title	Produced by	Financed by	Languages
Register of operations which breed specimens of species included in appendix I in captivity for commercial purposes	UNEP/CITES	UNEP/CITES	EFS
Observaciones sobre la situación actual del Picaflor Rojo de Juan Fernández	FAO/UNEP	UNEP/FAO	S
La situación del bosque de Coihué, Rauli y Roble en la Reserva Forestal, Parque Nacional Lanín, Argentina	FAO/UNEP	UNEP/FAO	S
Manejo de recursos naturales de areas silvestres protegidas (San Carlos de Bariloche, 25 January-13 February 1987)	FAO/UNEP	UNEP/FAO	S
Taller internacional sobre manejo de áreas silvestres protegidas fronterizas (Panama, November 1986)	FAO/UNEP	UNEP/FAO	S
Manejo de fauna silvestre y desarrollo rural (Information on seven species of Latin America and the Caribbean)	FAO/UNEP	UNEP/FAO	S
World Resources Report 1988-1989: chapter on wildlife and habitat	WRI/UNEP	UNEP/WRI	E
List of Wetlands of International Importance	Ramsar Convention Bureau	Ramsar Convention Bureau	EF

Genetic resources
(Budget subline 6106)

None

Lithosphere
(Budget subline 6107)

None

Arid and semi-arid lands ecosystems and desertification
(Budget line 62)

Action plan for Gombe village, Uganda	Norconsult	UNEP	E

Title	Produced by	Financed by	Languages
Action plan for Butaleja village, Uganda	Norconsult	UNEP	E
Action plan for Ruhaama pilot stock-raising zone, Uganda	Norconsult	UNEP	E
Feasibility study on ecological and economic rehabilitation of semi-arid stock-raising zones in Sudan: the Wadi El Muqqadam case	IES/University of Khartoum	UNEP	E
Study on stock-raisers: Qoz-Rajab area	IES/University of Khartoum	UNEP	E
Study on stock-raisers: Abu Rumeila	IES/University of Khartoum	UNEP	E
An appraisal of desertification problems in arid areas of Sind Province, Pakistan and strategy for the preparation of an action plan by Sind Arid Zone Development Authority (SAZDA), with the assistance of UNEP, to combat them	Consultant	UNEP	E
Arid land development and the combat against desertification: an integrated approach	UNEPCOM/UNEP	UNEP	EFR
Principles and methods of shifting sands fixation	UNEPCOM/UNEP	UNEP	EF
	Environmental health (Budget subline 7101)		
Report of the sixth session of the FAO/UNEP/WHO Panel of Experts on Environmental Management for Vector Control (PEEM)	WHO	FAO/UNEP/ WHO	E
PEEM newsletter, Nos. 16-17	WHO	FAO/UNEP/ WHO	EFS
Ecology of rodents associated with ricefields and their implications for public health	WHO	FAO/UNEP/ WHO	E

Title	Produced by	Financed by	Languages
Strategies for vector-borne disease control in rice production systems in developing countries: arboviruses other than Japanese encephalitis	WHO	FAO/UNEP/ WHO	E
Strategies for vector-borne disease control in rice production systems in developing countries: Japanese encephalitis	WHO	FAO/UNEP/ WHO	E
Malaria and rice: strategies for control	WHO	FAO/UNEP/ WHO	E
Control of the *Schistosoma japonicum* snail intermediate host in riceland agroecosystems	WHO	FAO/UNEP/ WHO	E
A malaria epidemic caused by *Anopheles hudlowi* in East Java in 1933	WHO	FAO/UNEP/ WHO	E
Proposed curriculum and syllabus on disease vector management in water resources development projects for inclusion in engineering courses	WHO	FAO/UNEP/ WHO	E
The Riceland Mosquito Management Program (RMMP)—five years of progress and product	WHO	FAO/UNEP/ WHO	E
Vector-borne diseases problems associated with rice cultivation and their control in South-east Asia	WHO	FAO/UNEP/ WHO	E
Environmental management for the control of ricefield-breeding mosquitoes in China	WHO	FAO/UNEP/ WHO	E
Tropical rice agro-ecosystems: characteristics, distribution, and future trends	WHO	FAO/UNEP/ WHO	E
Planning, design, and operation of rice irrigation schemes: their impact on mosquito-borne disease hazards	WHO	FAO/UNEP/ WHO	E
Planning, design, and operation of rice irrigation schemes: their impact on schistosomiasis	WHO	FAO/UNEP/ WHO	E

Title	Produced by	Financed by	Languages
Malaria vectors associated with rice culture in South-east Asia and the Western Pacific	WHO	FAO/UNEP/ WHO	E
The impact of rice cultural practices on mosquito vector propagation	WHO	FAO/UNEP/ WHO	E
Control of the *Schistosoma mansoni* and *S. haematobium* snail intermediate hosts in rice fields	WHO	FAO/UNEP/ WHO	E
The Indonesian experience in schistosomiasis control	WHO	FAO/UNEP/ WHO	E
Water management in rice cultivation and its relation to mosquito production in Japan	WHO	FAO/UNEP/ WHO	E
Schistosomiasis in the context of rice production systems in developing countries and strategies for its control	WHO	FAO/UNEP/ WHO	E
Integrated mosquito vector control in large-scale rice production systems	WHO	FAO/UNEP/ WHO	E
Integrated mosquito control in small-scale rice production systems	WHO	FAO/UNEP/ WHO	E
Ricefields, vectors and vector-borne diseases: an assessment of the problems and priorities	WHO	FAO/UNEP/ WHO	E
	International Register of Potentially Toxic Chemicals (IRPTC) *(Budget subline 7102)*		
IRPTC data distribution feasibility study	UNEP	Government of the Netherlands	E
International Registry of Chemicals Currently Being Tested for Toxic Effects Tested E): February 1987; Tested r 1987 Tested Tested	UNEP	UNEP/ILO/WHO	E
selected environmentally il chemical substances, processes and phenomena of global significance (UNEP/GC.14/19)	UNEP	UNEP	ACEFRS

Title	Produced by	Financed by	Languages
	Working environment (Budget subline 7103)		
	None		
	Human settlements (Budget subline 7104)		
Urbanization and its implications for child health: potential for action	UNEP/WHO	UNEP/WHO	E
Child survival in or near cities: interventions for a healthier environment	UNEP/WHO	UNEP/WHO	E
Community interventions for insect and rodent control: training kit for community workers	UNEP/WHO	UNEP/WHO	EF
	The arms race and the environment (Budget line 81)		
	None		
	Regional and technical co-operation (Budget line 82)		
	None		

Annex IV

MEETINGS HELD IN 1987

A. EXPERT GROUP MEETINGS

Title	Venue and dates	Financed by	Organized by
	Environment and development (Budget sublines 2101 and 2102)		
Technical co-operation for integration of environmental considerations in development projects and programmes in Latin America and the Caribbean:			
Workshop I	Honduras, 30-31 March	UNEP/ECLAC	ECLAC
Workshop II	Ecuador, September	UNEP/ECLAC	ECLAC
Regional workshop on economics of dryland degradation and rehabilitation	Nairobi, 20-23 January	UNEP/Government of Australia	UNEP/Government of Australia
Eighth session of the Committee of International Development Institutions on the Environment (CIDIE)	Rome, 23-26 March	UNEP	UNEP
	Energy (Budget subline 2103)		
	None		

Title	Venue and dates	Financed by	Organized by
	Industry and transportation (Budget subline 2104)		
Expert group meeting on the Environmental impact of metal finishing	Paris, 17 November	Participants	UNEP
Expert group meeting on industrial accidents	Paris, 16-18 November	UNEP and Participants	UNEP
	Environmental law and environmental machinery (Budget subline 2105)		
Working Group of Experts on Environmental Law—second session on environmental impact assessment	Geneva, 12-16 January	UNEP	UNEP
Third session of the *Ad Hoc* Working Group of Experts for the Exchange of Information on Potentially Harmful Chemicals (in particular Pesticides) in International Trade	London, 4-10 February	UNEP/Government of the United Kingdom	UNEP/Government of the United Kingdom
Ad Hoc Committee to Survey Progress Made in Implementing the Recommendations of the Inter-Parliamentary Conference on the Environment	Nairobi, 23-27 February	UNEP/IPU	UNEP/IPU
Second session of the *Ad Hoc* Working Group of Legal and Technical Experts for the Elaboration of a Protocol on the Control of Chlorofluorocarbons to the Vienna Convention for the Protection of the Ozone Layer (Vienna Group)	Vienna, 23-27 February	UNEP	UNEP

Title	Venue and dates	Financed by	Organized by
Third session of the *Ad Hoc* Working Group of Legal and Technical Experts for the Elaboration of a Protocol on the Control of Chlorofluorocarbons to the Vienna Convention for the Protection of the Ozone Layer (Vienna Group)	Geneva, 27-30 April	UNEP	UNEP
Advisory Panel of Experts on Industrial Accidents	Nairobi, 1-3 June	UNEP	UNEP
Informal consultations toward the elaboration of a protocol on the control of chlorofluorocarbons to the Vienna Convention for the Protection of the Ozone Layer	Brussels, 29-30 June	UNEP	UNEP
Legal Drafting Group of the *Ad Hoc* Working Group of Legal and Technical Experts for the Elaboration of a Protocol on the Control of Chlorofluorocarbons to the Vienna Convention for the Protection of the Ozone Layer	The Hague, 6-8 July	UNEP/ Government of the Netherlands	UNEP/ Government of the Netherlands
Preliminary session to the Conference of Plenipotentiaries on the Protocol on Chlorofluorocarbons to the Vienna Convention for the Protection of the Ozone Layer	Montreal, 8-11 September	UNEP/Government of Canada	UNEP/Government of Canada
Conference of Plenipotentiaries on the Protocol on Chlorofluorocarbons to the Vienna Convention for the Protection of the Ozone Layer	Montreal, 14-16 September	UNEP/Government of Canada	UNEP/Government of Canada

Title	Venue and dates	Financed by	Organized by
Organizational meeting of 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	Budapest, 27-29 October	UNEP/ Government of Hungary	UNEP/Government of Hungary
First meeting of the Advisory Panel for the Council for Mutual Economic Assistance (CMEA) project on environmental legislation and machinery in East European countries	Moscow, 7-11 December	UNEP/Government of the USSR	ELC/CMEA
Advisory Panel of Experts in Preparation for the First Meeting of the *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	Geneva, 14-16 December	UNEP	UNEP
	Environmental education and environmental training (Budget sublines 3101 and 3102)		
International Congress on Environmental Education and Training	Moscow, 17-21 August	Unesco/UNEP	Unesco/Government of the USSR/UNEP
	Public information (Budget subline 3103)		
None			

Title	Venue and dates	Financed by	Organized by
	INFOTERRA (Budget subline 3104)		
	None		
	State of the environment and environmental data (Budget subline 3105)		
	None		
	The Global Environmental Monitoring System (GEMS) (Budget subline 4101)		
International planning meeting on the Climate System Monitoring Project (including monitoring aspects of global change)	Washington DC, 14-18 December	UNEP/WHO	WMO
Working Group on UNEP/WHO/GEMS Air Monitoring Assessment and European Plan of Action	Langen, Federal Republic of Germany, 2-6 February	UNEP/WHO	WHO
Meeting with United States Environmental Protection Agency staff and WHO consultants to review GEMS/Air data storage and analysis	Research Triangle Park, USA, 8-11 September	UNEP/WHO	WHO
Meeting of participants in the HEALs project to review and finalize NO_2 protocol	Tokyo, 23-27 March	UNEP/WHO	WHO
Meeting of HEALs co-ordinators	Geneva, 5-8 October	UNEP/WHO	WHO
Joint FAO/WHO consultation to finalize guidelines for predicting dietary intake of pesticide residues	Geneva, 5-8 October	UNEP/WHO	WHO

Title	Venue and dates	Financed by	Organized by
	Outer limits *(Budget subline 4102)*		
	None		
	Assessment *(Budget subline 4103)*		
	None		
	Oceans *(Budget sublines 5101, 5102, 5103)*		
Group of Experts on Standards and Reference Materials (GESREM)	Paris, 9-12 February	IOC/IAEA/UNEP (OCA/PAC)	IOC
Conference of Plenipotentiaries on Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African region	Abidjan, 16-23 March	UNEP (OCA/PAC)	UNEP
Expert meeting on urban waste management	Split, Yugoslavia 1-2 April	UNEP (MEDU) (PAP/RAC)	UNEP
Meeting of experts on control of oil pollution in the East Asian Seas region	Bali, 19-23 October	UNEP (OCA/PAC)	UNEP
Second meeting of experts on the East Asian Seas Action Plan	Bangkok, 30 November — 4 December	UNEP (OCA/PAC)	UNEP

Title	Venue and dates	Financed by	Organized by
	Water (Budget line 52)		
Third meeting of the Working Group of Experts on the Zambezi River System	Gaborone, Botswana, 20-23 January	UNEP	UNEP
First meeting of the Committee of River and Lake Basins of the African Ministerial Conference on Environment	Harare, 25-27 March	UNEP	UNEP
Conference of Plenipotentiaries on the Environmental Management of the Common Zambezi River System	Harare, 26-28 May	UNEP	UNEP
First meeting of the Working Group on Training Materials for the Training Courses on Environmentally Sound Management of Water Resources	Sophia Antipolis, 2-4 September	UNEP/ CEFIGRE	CEFIGRE
Third meeting of the Scientific Expert Group on Evaluation of State of Environmentally Sound Water management	Paris, 2-4 September	UNEP/ CEFIGRE	CEFIGRE

Title	Venue and dates	Financed by	Organized by
First meeting of the Regional Co-ordination Unit of the Water Resources Network of the African Ministerial Conference on the Environment	Cairo, 26-28 October	UNEP/ Unesco	UNEP
Thirty-fourth session of the Lake Chad Basin Commission Sub-Commission on Water Resources	N'Djamena, 28-29 October	Lake Chad Basin Commission	Lake Chad Basin Commission
Fifth meeting of the Advisory Group on Water Resources	Vienna, 29 November — 3 December	UNEP	UNEP
Third meeting of Working Group on Large-scale Water Development Project	Laxenburg, 30 November — 2 December	UNEP	UNEP/ IIASA
	Soils (Budget subline 6101)		
Meeting of an *Ad Hoc* expert group on the feasibility and methodology of global soil degradation assessment	Nairobi, 18-22 May	UNEP	UNEP
First Project Advisory Committee meeting on the global assessment of soil degradation (GLASOD)	Wageningen, Netherlands, 28-30 September 1987	UNEP/ISRIC	ISRIC

Title	Venue and dates	Financed by	Organized by
First meeting of the Regional Co-ordination Unit of the AMCEN Soils and Fertilizers Network (SOFERNET)	Accra, 19-21 October	UNEP/FAO/ Government of Ghana	Government of Ghana/ UNEP/FAO
Round-table meeting on the project on advisory services to Ethiopia, Sudan and Uganda on the formulation of national soils policies	Rome, 25-26 November	UNEP/FAO	FAO/UNEP
	Tropical forests (Budget subline 6102)		
Meeting of the AMCEN Committee on Forests and Woodlands	Kinshasa, 22-25 March	UNEP	UNEP
Expert meeting on agroforestry application	Volgagrad, USSR	UNEP	UNEP
	Other ecosystems (Budget subline 6103)		
	None		
	Management of agricultural chemicals and residues (Budget subline 6104)		
Ad Hoc technical meeting for the preparation of the 1987 pest control campaign in eastern, central and southern Africa	Nairobi, 23-25 June	FAO/UNEP	FAO
Thirteenth session of the FAO/UNEP Panel of Experts on Integrated Pest Control	Rome, 22-24 September	FAO/UNEP	FAO

Title	Venue and dates	Financed by	Organized by
Expert meeting on public health impact of agrochemicals	Moscow, 23-27 November	UNEP/WHO	WHO
	Wildlife and protected areas (Budget subline 6105)		
	None		
	Genetic resources (Budget subline 6106)		
Third meeting of ECG Working Group on *In Situ* Conservation of Plant Genetic Resources	Rome, 28-29 September	UNEP/FAO/Unesco/ IUCN	FAO
Third meeting of the UNIDO/WHO/UNEP Working Group on Biotechnology Safety	Paris, 15-17 December	UNEP/UNIDO/WHO	UNEP
	Lithosphere (Budget subline 6107)		
Third session of the International Scientific Council on Geology and Environment	Moscow, 30 November-4 December	UNEP/Unesco/ UNEPCOM	UNEPCOM
	Arid and semi-arid lands ecosystems and desertification (Budget line 62)		
First meeting of the AMCEN Deserts and Arid Lands Committee	Dakar, 16-18 March	UNEP/Government of Senegal	UNEP/Government of Senegal

Title	Venue and dates	Financed by	Organized by
Meeting of high-level experts to evaluate the financing of the Plan of Action to Combat Desertification	Geneva, 6-9 July	UNEP	UNEP
Fourteenth meeting of the Inter-Agency Working Group on Desertification	Paris, 21-23 September	UNEP/Unesco	UNEP/Unesco
DESCON *Ad Hoc* Working Group Meeting	Rome, 26-28 October	UNEP	UNEP/Co-sponsors
	Environmental health ***(Budget subline 7101)***		
Tenth session of the WHO/TDR Join Co-ordination Board	Geneva, 24-25 June	WHO/UNEP	WHO
Seventh session of the FAO/UNEP/ WHO Panel of Experts on Environmental Management for Vector Control	Geneva, 5-12 September	FAO/UNEP/WHO	FAO/UNEP/WHO
Second International Conference on Mycotoxins	Bangkok, 28 September 4 October	FAO/UNEP/WHO	FAO/UNEP/WHO
	International Register of Potentially Toxic Chemicals (IRPTC) *(Budget subline 7102)*		
	None		
	Working Environment *(Budget subline 7103)*		
	None		

Title	Venue and dates	Financed by	Organized by
	Human settlements (Budget subline 7104)		
UNEP/WHO expert meeting on life-saving services in urban areas	Rio de Janeiro, 18-22 January	UNEP/WHO	UNEP/WHO
UNEP/WHO expert meeting on indoor environment	Geneva, 9-11 February	UNEP/WHO	UNEP/WHO
WHO/UNEP meeting of Working Group on Urban Drainage	Geneva, 1-3 September	UNEP/WHO	UNEP/WHO
UNEP/WHO Working Group on the Preparation of Insect and Rodent Control Kit	Bombay, 24-26 September	UNEP/WHO	UNEP/WHO
UNEP/WHO expert group meeting on environmental health aspects of planning urban areas	Tallinin, USSR, 19-26 October	UNEP/WHO	UNEP/WHO
WHO/UNEP expert meeting on training and diffusion of information and guidance documents	New Orleans, United States, 2-6 November	UNEP/WHO	UNEP/WHO

The Arms Race and the Environment (Budget line 81)

None

Regional and Technical Co-operation (Budget line 82)

None

B. WORKSHOPS, SEMINARS AND OTHER MEETINGS

Title	Venue and dates	Financed by	Organized by	Number of participants
		Environment and development (Budget sublines 2101 and 2102)		
		None		
		Energy (Budget subline 2103)		
Risk identification and Characterization guidelines for assessing and managing health and environmental risks from energy and other complex industrial systems	New York, 30 June - 2 July	IAEA/UNEP/WHO	IAEA/UNEP/WHO	12
		Industry and transportation (Budget subline 2104)		
European Conference on Industry and Environment Management (ECIEM)	Interlaken, Switzerland, 12-14 October	CEC/industry/ Participants	ECIEM Foundation	200
Consultative meeting with trade/industry associations	Paris, 26 June	Participants	UNEP	16

Title	Venue and Dates	Financed by	Organized by	Number of Participants
	Environmental law and environmental machinery (Budget subline 2105)			
	None			
	Environmental education and environmental training (Budget sublines 3101 and 3102)			
First joint Unesco-UNEP IEEP inter-secretariat meeting on environmental education	Nairobi, 27-28 April	UNEP/Unesco	UNEP	8
Meeting of the Advisory Committee on the Environmental Training Network for Latin America and the Caribbean	Montevideo, 3-4 April	UNEP	UNEP/ROLAC	17
Joint Unesco-UNEP special inter-secretariat meeting on environmental education with UNEP/ ROLAC and Unesco/OREALC	Mexico City, 17-19 September	UNEP/Unesco	UNEP/ROLAC	8
Environmental awareness-building workshop for personnel of African ministries of planning and the environment	Nairobi, 26-30 October	UNEP	UNEP	29
IEEP subregional seminar on teacher training in environmental education for Asia	Selangor, Malaysia, 15-22 November	UNEP/Unesco	Pertanian University/ Government of Malaysia/ Unesco	17

Title	Venue and Dates	Financed by	Organized by	Number of Participants
Training workshop on environmental education and resource management in African tertiary-level institutions	Nairobi, 23-27 November	GTZ/Unesco/ UNEP	GTZ with Unesco and UNEP	35
Second joint Unesco-UNEP IEEP inter-secretariat meeting on environmental education	Paris, 9-11 December	UNEP/Unesco	Unesco	11
	Public information (Budget subline 3103)			
	None			
	INFOTERRA (Budget subline 3104)			
INFOTERRA national seminar in New Zealand	Wellington, 13 April	Government of New Zealand	Government of New Zealand/UNEP	110
INFOTERRA national seminar in Fiji	Suva, 15 April	Government of Fiji	Government of Fiji/UNEP	40
INFOTERRA national seminar in Spain	Madrid, 3-4 June	Government of Spain	Government of Spain/UNEP	80
INFOTERRA national seminar in Saudi Arabia	Jeddah, 15 December	Government of Saudi Arabia	Government of Saudi Arabia/UNEP	50
INFOTERRA regional seminar for members of the Gulf Co-operation Council	Kuwait, 16-19 December	Gulf Co-operation Council	Gulf Co-operation Council/UNEP	8

Title	Venue and Dates	Financed by	Organized by	Number of Participants
		State of the environment and environmental data (Budget subline 3105)		
		None		
		The Global Environmental Monitoring System (GEMS) (Budget subline 4101)		
Third meeting of Intergovernmental Programme Task Force on Assessment and Monitoring of Air Pollution Effects on Forests	Usti Nad Labem, Czechoslovakia, 27-28 May	UNEP/ECE/ Government of Czechoslovakia	ECE	20
National GEMS/Water workshop	Lima, 29 September — 9 October	UNEP/WHO	WHO	15
National GEMS/Water workshop	Cali, Colombia, 12-23 October	UNEP/WHO	WHO	12
		Outer limits and assessment (Budget sublines 4102 and 4103)		
Techniques used in agro-climatological studies in the humid tropics	Quito, Ecuador, 23-27 March	UNEP	WMO	33
Review meeting of the Kenya case-study on climatic variability and agricultural production in semi-arid regions	Nairobi, 24-25 March	UNEP	IIASA	50

Title	Venue and Dates	Financed by	Organized by	Number of Participants
Ad Hoc scientific meeting to compare model generated assessments of ozone layer change for various strategies for CFC control	Wurzburg, Federal Republic of Germany, 9-10 April	UNEP	UNEP	12
International workshop on the socio-economic impacts of sea-level rise and increased storm frequency	Norwich, United Kingdom, 1-4 September	UNEP	University of East Anglia	40
Impacts of drought on the economy and society in north-east Brazil	Fortaleza, Brazil, 28-29 May	UNEP	IIASA	25
International workshop on developing policies for responding to climate change (Part I)	Villach, Austria, 28 September — 2 October	UNEP/ Rockfeller Brothers Foundation	Beijer Institute	60
Interrelated bioclimatic and land-use changes	Noorwijkerhoot, Netherlands, 17-21 October	UNEP/Government of the Netherlands	Government of the Netherlands	60
Workshop on the scientific results of the international land surface climatology project (ISLSCP)	Yalta, USSR, 26-30 October	UNEP	Government of the USSR/ COSPAR	15
International workshop on developing policies for responding to climate change (Part II)	Bellagio, Italy, 9-13 November	UNEP/ Rockfeller Brothers Foundation	Beijer Institute	30
Joint UNEP/WHO/King's College, London seminar on principles for setting environmental priorities	King's College, London, 4 December	King's College, London	MARC	349

Title	Venue and Dates	Financed by	Organized by	Number of Participants
Second session of the Advisory Group on Greenhouse Gases (AGGG)	Paris, 11-12 December	UNEP	UNEP	10
Expert group meeting on the socio-economic impacts and policy responses resulting from climate change	Bangkok, 14-17 December	UNEP	UNEP	17
	Oceans (Budget sublines 5101, 5102, 5103)			
Consultation on measures to propose for prevention of pollution of mercury and cadmium	Athens, 7 January	UNEP (MEDU)	UNEP	
Consultation on assessment of Mediterranean monitoring and research programming (MEDPOL)	Athens, 8-9 January	UNEP (MEDU)	UNEP	
Twentieth meeting of the Inter-agency Advisory Committee for MEDPOL	Athens, 12-16 January	UNEP (MEDU)	UNEP	
Meeting of the expanded core group of GESAMP Working Group 26 (State of the Marine Environment)	London, 19-23 January	IMO/UNEP (OCA/PAC)/ WMO	IMO	
Consultation on joint project on aquaculture	Rome, 2-4 February	FAO/UNEP (PAP/RAC)	UNEP	
Meeting of the Bureau of the Contracting Parties to the Barcelona Convention	Istanbul, 18 February	UNEP (MEDU)	UNEP	

Title	Venue and Dates	Financed by	Organized by	Number of Participants
Review meeting on the structure and functions of the Regional Oil Combating Centre for the Mediterranean sea	Malta, 23-27 February	IMO/ROCC/UNEP (MEDU)	ROCC	
Consulation meeting on environmental impact assessment	Athens, 23-25 February	UNEP (MEDU) (PAP/RAC)	UNEP	
Scientific meeting on the Indian Ocean as a sanctuary for whales	Seychelles, 24-28 February	IWC/UNEP (OCA/PAC)	IWC	
Scientific workshop on eutrophication in the Mediterranean: receiving capacity and monitoring of long-term effects	Bologna, 2-6 March	Unesco/FAO/UNEP (MEDU)	Unesco	
Workshop on architectural survey and the analysis of the actual state of Mediterranean urban and architectural heritage	Marseilles, France, 18-20 March	UNEP (MEDU) (PAP/RAC)	UNEP	
Meeting of task team on state of marine environment in South-West Atlantic region	Montevideo, 23-25 March	IOC/UNEP (OCA/PAC)	IOC	
Consultation meeting on environmental quality criteria for shellfish-growing waters and shellfish in the Mediterranean	Athens, 26-27 March	UNEP (MEDU)/ WHO	UNEP	
Seventeenth session of GESAMP	Rome, 30 March— 3 April	FAO/IMO/Unesco/ WMO/WHO/IAEA/UN/ UNEP (OCA/PAC)	FAO	
Fifth inter-agency meeting on oceans and coastal areas	Rome, 6-9 April	FAO/UNEP (OCA/PAC)	UNEP	

Title	Venue and Dates	Financed by	Organized by	Number of Participants
General training course in marine pollution combating (MEDPOL 87)	Malta, 6-16 April	IMO/ROCC/UNEP (MEDU)	ROCC	
Review meeting of regional directors of UNEP with staff of Co-ordinating Unit of Mediterranean Action Plan	Athens, 8-9 April	UNEP (MEDU)	UNEP	
Regional training course on coastal resources management and protected area planning	SPREP region, 13-24 April	SPREP/NZ/ESCAP	SPREP	
Sixth meeting of the Co-ordinating Body of the Seas of East Asia (COBSEA)	Bangkok, 27-29 April	UNEP (OCA/PAC)	UNEP	
Meeting of task team on the state of marine environment in South Pacific region	Noumea, 27-29 April	SPC/UNEP (OCA/PAC)	SPC	
Meeting of the task team on the regional review of the state of marine environment in the Kuwait Action Plan region	Athens, 27-30 April	IOC/UNEP (OCA/PAC)	IOC	
CPPS/UNEP Extraordinary Inter-governmental Meeting on the Entry into Force of the Convention for the Protection of the Marine Environment and Coastal Areas of the South-East Pacific	Bogota, 27-29 April	CPPS/UNEP (OCA/PAC)	CPPS	
Steering Committee of the Blue Plan	Sophia-Antipolis, France, 28-29 April	Blue Plan/ RAC/UNEP (MEDU)	Blue Plan/RAC	

Title	Venue and Dates	Financed by	Organized by	Number of Participants
Workshop on the methodological approach to integrated planning and management of Mediterranean coastal zones	Split, Yugoslavia, 6-8 May	UNEP (PAP/RAC)	UNEP	
Task force meeting on the effects of climatic changes on the Mediterranean	Geneva, 11-14 May	UNEP (MEDU)	UNEP	
Fifth meeting of the Monitoring Committee on the Action Plan for the Caribbean Environment Programme	Kingston, 11-14 May	UNEP (CAR/RCU)	UNEP	
Third meeting of GESAMP Working Group 25 (Coastal Modelling)	Delft, 11-15 May	IAEA/UNEP/Unesco IMO	IAEA	
Meeting of experts to review maps of critical areas, vulnerable resources and protection against oil pollution in the South-East Pacific	Tumaco, Colombia, 13-15 May	CPPS/UNEP (OCA/PAC)	CPPS	
Meeting on contaminants in marine mammals and their effects	Copenhagen, 18-20 May	ICES/IOC/UNEP (OCA/PAC)	ICES	
Meeting of the Task Team on the State of the Marine Environment in South Asian Seas Region	Bangkok, 18-20 May	IOC/UNEP (OCA/PAC)	IOC	
Meeting of the Task Team on the State of Marine Environment in the East Asian Seas Region	Bangkok, 18-20 May	FAO/UNEP (OCA/PAC)	FAO	

Title	Venue and Dates	Financed by	Organized by	Number of Participants
First meeting of the Committee on Seas of the African Ministerial Conference on Environment (AMCEN)	Algiers, 25-27 May	UNEP (ROA) (OCA/PAC)	UNEP	
Meeting on the contribution of bilateral and multilateral programmes to the objectives of the Mediterranean Action Plan	Madrid, 25-27 May	UNEP (MEDU)	UNEP	
Meeting of the Task Team on the State of the Marine Environment in the South-East Pacific Region	Valparaiso, 1-3 June	IOC/UNEP (OCA/PAC)	IOC	
First meeting of the National Focal Points for Specially Protected Areas	Athens, 1-4 June	UNEP (MEDU) (SPA/RAC)	UNEP	
Prevention and control of accidental marine pollution (INFOPOL 87)	Paris, Brest and Marseilles, France, 4-19 June	IMO/ROCC/UNEP (MEDU)	ROCC	
Meeting of the Task Team on the Preparation of the Mediterranean Regional Report on the State of Marine Environment	Athens, 10-12 June	UNEP (MEDU)	UNEP	
Meeting of the Task Team on the State of the Marine Environment in the Red Sea Region	Athens, 15-17 June	IOC/UNEP (OCA/PAC)	IOC	

Title	Venue and Dates	Financed by	Organized by	Number of Participants
CPPS/ECLAC/IAEA/UNEP regional workshop on problems of radioactive contamination in the South-East Pacific region	Santiago, 17-20 June	CPPS/ECLAC/IAEA/ UNEP (OCA/PAC)	CPPS	
Meeting on alternative methods of calculating contributions to the Mediterranean Trust Fund	Madrid, 19-22 June	UNEP (MEDU)	UNEP	
Meeting of the Bureau of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution and its Related Protocols	Madrid, 22 June	UNEP (MEDU)	UNEP	
Meeting on national focal points of Priority Actions Programme	Split, Yugoslavia, 24-26 June	UNEP (PAP/RAC)	UNEP	
Consultation on microbial pollution in Mediterranean coastal areas and associated health effects	Copenhagen, 29 June — 3 July	WHO/UNEP (MEDU)	WHO	
Eighth session of the joint IOC/UNEP Group of Experts on Methods, Standards and Intercalibrations (GEMSI)	Paris, 6-10 July	IOC/UNEP (OCA/PAC)	IOC	
GESAMP Working Group on Long-term Ecological Consequences of Low-level Contamination of the Marine Environment	Plymouth, United Kingdom, 13-17 July	FAO/UNEP (OCA/PAC)	FAO	

Title	Venue and Dates	Financed by	Organized by	Number of Participants
Meeting of the Task Team on the State of the Marine Environment in Caribbean Region	Kingston, 27-29 July	IOC/UNEP (OCA/PAC)	IOC	
Eight meeting of the national focal points for the Blue Plan	Sophia-Antipolis, 20-22 July	UNEP (Blue Plan/RAC)	UNEP	
Workshop on technical and scientific information and guidelines needed for oilspill response planning, clean-up and environmental impact assessment	Jakarta, 6-13 August	Government of Indonesia/UNEP (OCA/PAC)	Government of Indonesia	
Workshop on coastal area development	Kuwait, 19-23 August	ROPME/UNEP (OCA/PAC)	ROPME	
Symposium on regional co-operation on environmental protection at the XVI Pacific Science Congress	Seoul, 25-30 August	Pacific Science Congress/UNEP (OCA/PAC)	Pacific Science Congress	
Scientific Committee to Review Kuwait Action Plan projects	Kuwait, 26-28 August	ROPME/UNEP (OCA/PAC)	ROPME	
Fifth ordinary meeting of the Contracting Parties to the Convention for the Protection of the Mediterrean Sea against Pollution and Its Related Protocols	Athens, 7-11 September	UNEP (MEDU)	UNEP	
Fourteenth meeting of the SPREP Co-ordinating Group	Noumea, 21-25 September	SPREP/UNEP (OCA/PAC)	SPREP	

Title	Venue and Dates	Financed by	Organized by	Number of Participants
CPPS/UNEP/ECLAC seminar on mineral resources of the sea-bed: technical, legal, and environmental aspects of its exploration and exploitation	Cartagena, Colombia, 28-30 September	CPPS/ECLAC/ UNEP (OCA/PAC)	CPPS	
Seminar on the control of waste disposal at sea	Mexico City, 28 September— 2 October	Government of Mexico/UNEP (CAR/RCU)/IMO	Government of Mexico	
Meeting of government experts on co-operation in combating marine pollution emergencies in the Gulf of Aden and seminar on MARPOL 73/78 requirements	Djibouti, 3-8 October	IMO/UNEP (OCA/PAC)	IMO	
Ad Hoc meeting on organo-tin compounds	Athens, 5-7 October	FAO/IAEA/UNEP (MEDU)	UNEP	
Ad Hoc meeting on persistent synthetic materials	Athens, 14-16 October	IOC/FAO/UNEP (MEDU)	IOC	
Sixth meeting of the Monitoring Committee on the Action Plan for the Caribbean Environment Programme	Guadeloupe, 21-23 October	UNEP (CAR/RCU)	UNEP	
First meeting of the Contracting Parties and fourth Intergovernmental Meeting on the Action Plan for the Caribbean Environment Programme	Guadeloupe, 26-29 October	UNEP (CAR/RCU)	UNEP	

Title	Venue and Dates	Financed by	Organized by	Number of Participants
Seminar on the development of Mediterranean tourism harmonized with the environment	Split, Yugoslavia, 28-30 October	UNEP (PAP/RAC) (MEDU)	UNEP	
Workshop on the impact of carcinogenic, mutagenic and teratogenic marine pollutants on health and the environment	Rome, 9-11 November	WHO/UNEP (MEDU)/ University of Rome	UNEP	
Workshop to review the preliminary results of a pilot project and relevant research on airborne pollution in the Mediterranean region	Belgrade, 9-13 November	WMO/UNEP (MEDU)	WMO	
Ad Hoc meeting on organophosphorous compounds	Athens, 18-20 November	FAO/IAEA/UNEP (MEDU)	UNEP	
Workshop on the re-use of treated urban waste	Split, Yugoslavia, 18-20 November	UNEP (PAP/RAC)	UNEP	
Consultation meeting on monitoring of land-based sources of marine pollution in the Mediterranean	Split, Yugoslavia, 1-5 December	WHO/UNEP (MEDU)	UNEP	
Meeting of national focal points on the development of an action plan for the protection and management of the South Asian Seas region	Bangkok, 7-11 December	UNEP (OCA/PAC)	UNEP	
Meeting of GESAMP Working Group 26 (State of the Marine Environment)	Geneva, 14-18 December	UNEP (OCA/PAC)/ FAO/IOC	UNEP	

Title	Venue and Dates	Financed by	Organized by	Number of Participants
Regional seminar on the control of waste disposal at sea	Bangkok, 14-18 December	IMO/UNEP (OCA/PAC)	IMO	
		Water (Budget line 52)		
Interregional symposium on improved efficiency in the management of water resources	New York, 5-9 January	United Nations agencies	Department of Technical Co-operation for Development	
Third Unesco/WHO International Conference on Hydrology and Scientific Bases of Water Resources Management	Geneva, 16-21 March	Unesco/ WMO	WMO	160
Planning meeting on River Danube water quality protection project	Vienna, 22-24 April	WHO/ IIASA	IIASA	31
International seminar on water resources in Lake Chad Basin	N'Djamena, Chad, 3-5 June	Lake Chad Basin Commission	Lake Chad Basin Commission	30
Workshop on environment and development in the managing of international drainage basins in Africa	Kisumu, Kenya, 3-9 August	University of Nairobi	University of Nairobi	30
Thirteenth International Congress on Irrigation and Drainage	Casablanca, Morocco, 14-26 September	ICID	ICID	530
Seminar on land and water ecosystems management	Nairobi, 5-16 October	EDI (World Bank)	UNEP/ EDI	30

Title	Venue and Dates	Financed by	Organized by	Number of Participants
First meeting of the Steering Committee for the Preparation and Promotion of a Second Edition of the World Conservation Strategy (WCS-2)	Gland, Switzerland, 7 May	UNEP	IUCN/UNEP	7
First meeting of the Standing Committee to the Convention on the Conservation of Migratory Species of Wild Animals (CMS)	Bonn, 11 May	UNEP/CMS Secretariat/ Government of the Federal Republic of Germany	UNEP/CMS Secretariat	10
Third meeting of the Conference of the Parties to the Convention on Wetlands of International Importance, Especially as Waterfowl Habitat (Ramsar Convention)	Regina, Canada, 27 May—5 June	Ramsar Convention Bureau, Ramsar Parties, UNEP	Ramsar Convention Bureau	
Sixth meeting of the Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	Ottawa, 12-24 July	UNEP/CITES Secretariat/ Government of Canada/Government of Norway/ Government of Switzerland/ several NGOs	UNEP/CITES Secretariat	700
Fifteenth and sixteenth meetings of the Standing Committee of the CITES Convention	Ottawa, 20 and 24 July 1987	UNEP/CITES, Secretariat/ CITES Parties	UNEP/CITES Secretariat	15
Fourth World Wilderness Congress—Worldwide Conservation	Colorado, United States, 11-18 September	International Wilderness Leadership Foundation/UNEP/ others	International Wilderness Leadership Foundation	1700

Title	Venue and Dates	Financed by	Organized by	Number of Participants
Fourteenth General meeting of the Ecosystem Conservation Group (ECG) and *Ad Hoc* ECG meeting on *in situ* conservation of plant genetic resources	Rome, 28-29 September	UNEP/FAO/Unesco/ IUCN	UNEP	16
Second meeting of the Standing Committee to the Convention on the Conservation of Migratory Species of Wild Animals	Bonn, 29 September	UNEP/CMS/ Government of the Federal Republic of Germany	UNEP/CMS Secretariat	16
First meeting of the WCS-2 Technical Advisory Committee	Washington, D.C. 29-30 October	UNEP	IUCN/UNEP	22
Meeting to discuss a draft agreement on the conservation of bats in Europe	London, 18-20 November	Government of the United Kingdom	Government of the United Kingdom/ UNEP/CMS Secretariat	27
		Genetic resources (Budget subline 6106)		
Third International Symposium on Integral Utilization of Coffee Processing By-products	Guatemala, 16-18 February	ICAITI/UNEP	Guatemala MIRCEN	171
Symposium on Biotechnology for Biomass Production and Waste Treatment	Antigua, 18-20 February	ICAITI/OAS/UNEP	Guatemala MIRCEN	160
Regional Training Workshop on Biological Diversity and Genetic Resources Techniques and Methods: Conservation Biology	Lusaka, 16-22 May	UNEP/CSC	CSC	21

Title	Venue and Dates	Financed by	Organized by	Number of Participants
International Drinking Water Supply and Sanitation Decade consultation	Interlaken, Switzerland, 13-16 October	WHO/ SDCA	WHO	58
Inter-agency Steering Committee for Co-operative Action for IDWSSD	Santo Domingo, 5-6 November	United Nations agencies	WHO	30
Second session of the Panel Meeting for Integration of Environmental Aspects on Water Resources Engineering Education	Lausanne, Switzerland, 23-27 November	UNEP/ Unesco	UNEP	10
	Soils (Budget subline 6101)			
Expert workshop on model curricula and training for soil erosion control and watershed management	Kathmandu, Nepal and Dushambe, USSR, 13-26 July	UNEP/ICIMOD/ UNEPCOM	UNEP/ICIMOD/ UNEPCOM	
Seminar on management of land and water ecosystems in eastern and southern Africa	Nairobi, 5-16 October	EDI/UNEP	UNEP/EDI	
Sixth General Conference of the Association of Faculties of Agriculture in Africa (AFAA) on Food Security in Africa	Lome, 7-14 November	AFAA/UNEP	AFAA	

Title	Venue and Dates	Financed by	Organized by	Number of Participants
		Tropical forests (Budget subline 6102)		
International training seminar on forestry applications of Remote-Sensing for Spanish-speaking Countries	Moscow, 24 August — 11 September	UNEP/UNEPCOM	UNEP/UNEPCOM	16
International Seminar on Rescuing Andean Technologies	Cajamarca, Peru, 8-14 August	UNEP	UNEP/CORDE CAJ-PERU	30
		Other ecosystems (Budget subline 6103)		
		None		
		Management of agricultural chemicals and residues (Budget subline 6104)		
FAO/UNEP/ICIPE/USAID *Ad Hoc* meeting on integrated pest management	Nairobi, 21 August	ICIPE/USAID	USAID	6
The African Association of Insect Scientists (AAIS) workshop on integrated pest management and environmental conservation	Dakar, 7-10 December	AAIS/UNEP	AAIS	100
		Wildlife and protected areas (Budget subline 6105)		
Conference on Resource Conservation for Ghana's Sustainable Development	Accra, 28-30 April	UNEP/EEC/ Government of Ghana	Government of Ghana	50

Title	Venue and Dates	Financed by	Organized by	Number of Participants
Fourteenth International Botanical Congress	Berlin, 24 July — 1 August	University of Berlin/UNEP/ others	University of Berlin	
Seminar on Biological Nitrogen Fixation	Leningrad, USSR, 7-13 September	UNEP	UNEPCOM	
International Symposium on New Crops for Food and Industry	Southampton, United Kingdom, 22-25 September	University of Southampton/ UNEP/others	University of Southampton	
Regional Workhop on Upgrading of Cassava/Cassava Wastes by Appropriate Biotechnologies	Bangkok, 24-26 November	UNEP/Bangkok MIRCEN	Bangkok MIRCEN	27
	Lithosphere (Budget subline 6107)			
	None			
	Arid and semi-arid lands ecosystems and desertification (Budget line 62)			
Sixth session of the Consultative Group for Desertification Control	Geneva, 24-27 March	UNEP	UNEP/co-sponsors	33
Fourteenth meeting of the Inter-agency Working Group on Desertification	Paris, 23-25 September	UNEP	UNEP/Unesco	11
District seminar on desertification control	Bokspits, Botswana, 11-18 March	UNEP/Government of Botswana	Government of Botswana	100

Title	Venue and Dates	Financed by	Organized by	Number of Participants
District seminar on desertification control	Gomare, Botswana, 4-7 May 1987	UNEP/Government of Botswana	Government of Botswana	90
Asia-Pacific NGOs Conference on Afforestation and Desertification Control	New Delhi, 23-25 October	UNEP/INTACH	INTACH	75
	Environmental health (Budget subline 7101)			
Workshop on training needs in the field of integrated vector-borne disease control in riceland agroecosystems of developing countries	Manila, 9-14 March	FAO/UNEP/WHO/ USDA/IRRI	WHO/IRRI	30
Meeting of FAO/UNEP/WHO/UNEPCOM/ Government of Tanzania on Mycotoxin Control	Dar es Salaam, 25-29 May	FAO/UNEP/ UNEPCOM	UNEPCOM/ Government of Tanzania	9
UNEP/WHO Workshop on Chemical Hazards for African Countries	Nairobi, 14-18 September	UNEP/WHO/ Commonwealth Secretariat/ League of Arab States	UNEP/WHO	32
	International Register of Potentially Toxic Chemicals (IRPTC) (Budget subline 7102)			
Study meeting on state control of hazardous chemicals	Federal Republic of Germany (several cities)	Government of the Federal Republic of Germany	UNEP/Government of the Federal Republic of Germany	

Title	Venue and Dates	Financed by	Organized by	Number of Participants
		Working environment (Budget subline 7103)		
		None		
		Human settlements (Budget subline 7104)		
		None		
		The arms race and the environment (Budget line 81)		
Symposium on cultural norms, war and the environment	Stockholm, 15-18 March	UNEP/SIPRI	UNEP/SIPRI	12
		Regional and technical co-operation (Budget line 82)		
First Inter-Parliamentary Conference on the Environment in Latin America and the Caribbean	Mexico City, 23-25 March	Mexican Senate/ UNEP	Mexican Senate/ Latin American Parliament/ UNEP (ROLAC)	
Fifth Intergovernmental Regional Meeting on the Environment in Latin America and the Caribbean	Montevideo, 6-8 April	Governments	UNEP (ROLAC)	
Meeting of government nominated high-level experts on regional co-operation on environmental matters in Latin America and the Caribbean	Montevideo, 6-8 April	Governments	UNEP (ROLAC)	

C. TRAINING COURSES

Title	Venue and Dates	Financed by	Organized by	Number of Participants
		Environment and development *(Budget sublines 2101 and 2102)*		
		None		
		Energy *(Budget subline 2103)*		
		None		
		Industry and transportation *(Budget subline 2104)*		
Training seminar on industrial waste management	Buenos Aires, 8-12 September	ECLAC/UNEP/ Government of the Federal Republic of Germany	ECLAC	30
Training workshop on the environmental management in the iron and steel industry	Tokyo, 14-18 December	UNEP/JISF/MITTI/ AOTS/IISI	UNEP/JISF	34
		Environmental law and environmental machinery *(Budget subline 2105)*		
		None		

Title	Venue and Dates	Financed by	Organized by	Number of Participants
		Environmental education and environmental training (Budget sublines 3101 and 3102)		
IEEP subregional training seminar on the incorporation of environmental education into curriculum and teacher training for industrial schools in Asia	New Delhi, 20-27 April	UNEP/Unesco	Indian National Council of Educational Research and Training/Unesco	18
IEEP subregional training seminar on non-formal environmental education	University of Guyana, 25-31 May	UNEP/Unesco	University of Guyana/ Unesco	26
IEEP subregional training seminar on curriculum development in environmental education	Domasi, Malawi, 7-12 December	UNEP/Unesco	Malawi Institute of Education/Unesco	20
		Public information (Budget subline 3103)		
		None		
		INFOTERRA (Budget subline 3104)		
INFOTERRA training course for English/French-speaking national focal points	Nairobi, 29 June—3 July	UNEP	UNEP	16
INFOTERRA training course for Spanish-speaking national focal points	Santiago, 19-23 October	UNEP	Government of Chile/UNEP	14

Title	Venue and Dates	Financed by	Organized by	Number of Participants
ICSTI/INFOTERRA training course on the application of microcomputers for the processing of scientific and technical information	Moscow, 17-20 November	UNEP	ICSTI/UNEP	30
	State of the environment and environmental data (Budget subline 3105)			
	None			
	The Global Environmental Monitoring System (GEMS) (Budget subline 4101)			
Thirteenth training course on background pollution measurements	Budapest, 15 August — 12 September	UNEP/WHO	WMO	
International training course on assessment of forest damage attributed to the effects of air pollution	Freiburg, Federal Republic of Germany, 29 June—3 July	UNEP/ECE/ Government of the Federal Republic of Germany	ECE	
	Outer limits and assessment (Budget sublines 4102 and 4103)			
	None			

Title	Venue and Dates	Financed by	Organized by	Number of Participants
	Oceans *(Budget sublines 5101, 5102 and 5103)*			
Regional course on analytical techniques to determine the concentration of heavy metals and pesticides in selected marine organisms and sediments in the South-East Pacific	Cartagena, Colombia, 9-22 August	CPPS/IOC/FAO/IAEA (ILMR)/UNEP (OCA/PAC)	CPPS	
Practical training course on combating oil pollution	Marseilles, 13-20 October	ROCC/UNEP (MEDU)	ROCC	
CPPS/IOC/UNEP regional course on petroleum hydrocarbons in marine sediments and biota of the South-East Pacific	Valparaiso, Chile, 19-29 October	CPPS/IOC/UNEP	CPPS	
Training course on modelling of dispersion of substances released through coastal outfalls	Athens, 26-31 October	UNEP (MEDU)/IOC	UNEP	
	Water *(Budget line 52)*			
	None			
	Soils *(Budget subline 6101)*			
	None			
	Tropical forests *(Budget subline 6102)*			
	None			

Title	Venue and Dates	Financed by	Organized by	Number of Participants
		Other ecosystems (Budget subline 6103)		
		None		
		Management of agricultural chemicals and residues (Budget subline 6104)		
		None		
		Wildlife and protected areas (Budget subline 6105)		
		None		
		Genetic resources (Budget subline 6106)		
Training course on conservation and evaluation of plant genetic resources	Leningrad, 4-17 June	UNEP	UNEPCOM	5
Training course on the use of computers in microbial diagnosis	Prague, 27 June — 2 July	UNEP/MSDN	MSDN	12
Training course on isolation, identification, estimation and preservation of nitrogen-fixing in soil micro-organisms	Leningrad, 19 August — 11 September	UNEP	UNEPCOM	16
Training course on biological nitrogen fixation technology for extension workers	Khartoum, 9-19 September	UNEP/AGFUND	Sudanese Agricultural Research Council	11

Title	Venue and Dates	Financed by	Organized by	Number of Participants
Training course on advanced microbial technologies	Lahore, 26 September—15 October	NEP/IESCO/John Hopkins University	Centre of Advanced Molecular Biology, Lahore	16
Regional training course on the use of microbial pathogens in the control of insect pests and vectors	Nairobi, 11-24 October	UNEP	ICIPE/UNEP/ Nairobi MIRCEN	8
Training course in computers for culture collections	Porto Alegre, Brazil, 17-24 October	UNEP/UNDP/MSDN	MSDN/Porto Alegre MIRCEN	16
Training course on food microbiology and quality control	Cairo, 7-20 November	UNEP/Cairo MIRCEN	Cairo MIRCEN	32
	(Budget subline 6107)			
	None			
	Arid and semi-arid lands ecosystems and desertification (Budget line 62)			
Seminar on rangeland improvement in the arid and semi-arid zones and its environmental and socio-economic aspects for ESCAP region countries	Moscow and Samarkand, USSR, 17 May-4 June	UNEP	UNEP/UNEPCOM	14
Training course on rangeland ecology management and productivity for SADCC region countries	Moscow and Central Asia, USSR, 23 September — 10 October	UNEP	UNEP/UNEPCOM	20

Title	Venue and Dates	Financed by	Organized by	Number of Participants
Training course on assessment and desertification control in the Latin American region	Mendoza, Argentina, 1-25 October	UNEP/Government of Argentina	UNEP/IADIZA	23
Training course on rangeland and soil conservation control in the SADCC region	Gabarone, 23 November— 11 December	UNEP	UNEP/Government of Botswana	23
Training course on soil laboratory technology for ESCWA region countries	Damascus, 28 November — 10 December	UNEP/ACSAD	UNEP/ACSAD	20
Training course on assessment and desertification control in Brazil for African and South Atlantic countries	Petrolina, Brazil, 23 November — 18 December	UNEP/Government of Brazil	UNEP/EMBRAPA	40
Training workshop for indigenous African NGOs in desertification control	Nairobi, 21-25 September	UNEP	ANEN	30
	Environmental health (Budget subline 7101)			
UNEP/USSR training course on biological control	Moscow the USSR	UNEP/Government of	UNEP/Government of the USSR	17 the USSR
	International Register of Potentially Toxic Chemicals (IRPTC) (Budget subline 7102)			
Third training course in preventive toxicology: industrial and household chemicals	Moscow, Leningrad	UNEP/ UNEPCOM	UNEP/ UNEPCOM	16

Title	Venue and Dates	Financed by	Organized by	Number of Participants
		Working environment (Budget subline 7103)		
		None		
		Human settlements (Budget subline 7104)		
Training course on the integrated planning of human settlements to improve environmental conditions	Moscow, 20-24 March	UNEP/WHO	UNEP/WHO	15
		The arms race and the environment (Budget line 81)		
		None		
		Regional and technical co-operation (Budget line 82)		
		None		

Annex V

CONTRIBUTIONS TO THE ENVIRONMENT FUND

Table 1: Contributions paid to the Environment Fund for 1986 and 1987 as at 31 December 1987.

Table 2: Contributions outstanding for 1984-1987 as at 31 December 1987.

Table 3: Cash counterpart contributions pledged for 1987.

Table 4: Cash counterpart contributions pledged to trust fund projects for 1987.

Table 5: Cash counterpart contributions pledged to Environment Fund projects for 1987.

Table 6: Programming of counterpart contributions for 1985-1987.

Table 1

CONTRIBUTIONS PAID* TO THE ENVIRONMENT FUND FOR 1986 AND 1987 AS AT 31 DECEMBER 1987

(Dollars)

Country	1986	1987
Algeria	11 000	—
Argentina	70 000	—
Bahrain	300 000	—
Bangladesh	2 456	—
Barbados	1 000	1 000
Botswana	3 938	—
Brazil	20 000	—
Bulgaria	10 000	—
Byelorussian SSR	17 856	20 282
Cameroon	17 964	19 667
Canada	793 708	818 148
Chile	5 000	—
China	80 196	80 841
Colombia	35 000	36 091
Costa Rica	170	693
Cote d'Ivoire	5 222	5 222
Cyprus	2 500	2 500
Czechoslovakia	28 249	—
Democratic Yemen	2 200	2 198
Denmark	465 718	514 176
Egypt	9 174	—
Finland	707 130	798 049
France	900 675	1 186 440
German Democratic Republic	151 000	194 269
Germany, Federal Republic of	2 195 892	2 599 372
Ghana	—	15 000
Greece	10 000	10 000
Haiti	3 500	—
Hungary	26 537	26 965
Iceland	4 500	4 500
India	100 425	100 000
Indonesia	—	12 000
Iran (Islamic Republic of)	29 966	—

Table 1 (continued)

Country	1986	1987
Ireland	23 854	31 021
Italy	313 725	398 208
Japan	4 000 000	4 500 000
Jordan	10 000	10 000
Kenya	61 124	65 417
Kuwait	200 000	200 000
Lao People's Democratic Republic	2 000	2 000
Lesotho	388	—
Luxembourg	6 973	9 145
Malawi	3 614	2 426
Malaysia	20 000	20 000
Malta	1 702	1 975
Mauritius	3 500	1 261
Mongolia	882	—
Morocco	10 277	—
Nepal	3 500	3 500
Netherlands	655 186	811 275
New Zealand	54 324	58 000
Nigeria	—	15 623
Norway	953 737	1 067 099
Oman	10 000	—
Pakistan	5 000	5 000
Panama	4 000	4 000
Philippines	10 000	10 000
Poland	30 675	21 367
Rwanda	1 000	1 000
Saudi Arabia	500 000	—
Seychelles	100	100
Singapore	1 000	1 000
Somalia	72	—
Spain	374 752	422 219
Sri Lanka	3 000	3 500
Swaziland	896	2 275
Sweden	2 224 456	2 623 622
Switzerland	593 325	769 231
Thailand	10 000	10 000
Tunisia	15 180	15 180

Table 1 (continued)

Country	1986	1987
Turkey	9 000	9 000
Uganda	2 000	—
Ukrainian SSR	43 956	49 922
USSR	3 601 195	4 089 969
United Kingdom	1 471 500	1 570 000
United States	8 613 000	6 800 000
Uruguay	14 000	—
Yugoslavia	34 742	18 730
Zambia	2 066	1 018
Zimbabwe	3 996	—
Total	29 918 173	30 071 496

Table 2

CONTRIBUTIONS OUTSTANDING** FOR 1984-1987 AS AT 31 DECEMBER 1987 (Dollars)

Country	1984	1985	1986	1987	Total
Algeria	—	—	—	11 000	11 000
Argentina	—	—	—	70 000*	70 000
Austria	—	—	—	86 972*	86 972
Bahamas	—	—	500	—	500
Bahrain	—	—	—	3 500	3 500
Bangladesh	—	—	85*	2 541*	2 626
Belgium	—	306 916*	306 916	—	613 832
Benin	—	1 624	—	—	1 624
Botswana	—	—	—	3 938*	3 938
Brazil	—	—	—	20 000*	20 000
Bulgaria	—	—	—	8 547	8 547
Burundi	—	—	847*	—	847
Chile	—	—	—	5 000	5 000
Congo	—	7 370	—	—	7 370
Czechoslovakia	—	—	—	31 915*	31 915
Ecuador	5 000*	5 000*	5 000*	5 000*	20 000
Egypt	—	—	—	9 174*	9 174
Gabon	—	—	6 000	—	6 000
Guinea	1 000*	1 000*	—	—	2 000
Haiti	—	—	—	3 500	3 500
Indonesia	—	—	12 000*	—	12 000
Iran (Islamic Republic of)	—	—	—	29 966	29 966
Jamaica	2 534*	3 745*	—	—	6 279
Kenya	—	—	—	35 107*	35 107
Lesotho	—	338	—	388	776
Mauritius	—	—	—	2 239	2 239
Mexico	—	—	2 188*	2 188*	4 376
Mongolia	—	—	—	1 056*	1 056
Morocco	—	—	—	10 000*	10 000
Nigeria	—	23 235	8 765	16 377*	48 377
Oman	—	—	—	10 000*	10 000
Papua New Guinea	—	555*	13 000*	13 000*	26 555
Portugal	—	—	3 000	—	3 000
Qatar	—	—	10 000	—	10 000
Saudi Arabia	—	—	—	500 000	500 000
Senegal	—	—	2 000*	2 000*	4 000
Somalia	—	—	105*	639*	744
Sudan	7 211*	15 000*	—	—	22 211
Syrian Arab Republic	—	14 663*	—	—	14 663
Togo	500	—	—	—	500
Trinidad and Tobago	—	—	5 025*	—	5 025

Table 2 (continued)

Country	1984	1985	1986	1987	Total
Uganda	—	—	—	2 000	2 000
Venezuela	—	—	57 333	—	57 333
Yugoslavia	—	—	—	7 583*	7 583
Zaire	25 000*	50 000*	—	—	75 000
Zimbabwe	—	—	—	3 892	3 892
Total	41 245	429 496	432 764	897 522	1 801 027

* Confirmed pledge.

** Including contributions estimated, although not formally pledged.

Table 3

CASH COUNTERPART CONTRIBUTIONS PLEDGED FOR 1987

Governments	US $	Intergovernmental organizations	US $	NGOs	US $	Private entities	US $
Australia	5 188	AGFUND	138 000	IMTEC	3 000	Alcan	8 750
Austria	25 000	Commonwealth Secretariat	7 154	WWF-International	2 700	American Fur Industry	10 000
Canada	48 500	EEC	66 637	WWF-USA	15 000	American Fur Institute	10 000
Denmark	6 000					Bodiopelli	5 000
Finland	6 000		211 791		20 700	Corp Andina de Fomenta	3 000
France	60 478					Curtidores de Reptiles	20 000
Germany, F.R. of	16 941					Edelstein Trading	12 000
Greece	400 000					Exocuirs	5 000
Hungary	765	(3 intergovernmental		(3 NGOs for 2 projects)		Friedlien	2 801
Indonesia	2 700	organizations for				Fur Council of Canada	7 367
Italy	166 084	5 projects)				Fur Institute of Canada	5 000
Jamaica	40 310					Fuso Trading	1 000
Japan	255 000					Francecroco	5 000
Netherlands	96 133					International Council of Bird Preservation	1 000
Norway	25 000					International Exotic Leather	2 500
Spain	25 000					International Fur Trade Federation	35 000
Sweden	6 000					International Lake Environment Comm.	4 000
Switzerland	295 163					IPAI	20 000
United Kingdom	53 044					Italettile	10 000
United States of America	20 000					Italian Reptile Association	20 000
						Japan All Leather Importers	10 000
	1 553 306					Japan General Merchandise Association	25 000
						Japan Livestock Importers Association	10 000
						Japan Reptile Industries	23 000
						Mahler	2 500
						Nippon Light Metal Co.	8 750
(20 Governments, for 19 projects)						PIJAC, USA	5 000
						Safari Club International	25 000
						Takaichi Ivory	3 000
						Tanneries des Cuirs	5 000
						UN Industria, Milan	1 500
						World Orchid Conference	3 191
							309 359
Total: $2 095 156						(32 private entities for 11 projects)	
as at 31 March 1988							

Table 4

CASH COUNTERPART CONTRIBUTIONS PLEDGED TO THE TRUST FUND PROJECTS FOR 1987

Governments	US $	Intergovernmental organizations	US $	NGOs	US$	Private entities	US $
France	60 478	EEC	26 941	WWF-International	2 700	American Fur Industry	10 000
Germany, F.R. of	10 941			WWF-USA	15 000	American Fur Institute	10 000
Greece	400 000		26 941			Bodiopelli	5 000
Hungary	765				17 700	Curtidores de Reptiles	20 000
Indonesia	2 700					Edelstein Trading	12 000
Jamaica	40 310	(1 intergovernmental organization for 2 projects)				Exocuirs	5 000
Japan	255 000					Friedlien	2 801
Norway	15 000			(2 NGOs for 1 project)		Fur Council of Canada	7 367
Switzerland	29 139					Fur Institute of Canada	5 000
United Kingdom	8 044					Fuso Trading	1 000
United States of America	20 000					Francecroco	5 000
						International Council of Bird Preservation	1 000
	842 377					International Exotic Leather	2 500
						International Fur Trade Federation	35 000
						Italettile	10 000
(11 Governments for 10 projects)						Italian Reptile Association	20 000
						Japan All Leather Importers	10 000
						Japan General Merchandise Association	25 000
						Japan Livestock Importers Association	10 000
						Japan Reptiles Industries	23 000
						Mahler	2 500
						PIJAC, USA	5 000
						Safari Club International	25 000
						Takaichi Ivory	3 000
						Tanneries des Cuirs	5 000
						UN Industria, Milan	1 500
						World Orchid Conference	3 191
							264 859
						(27 private entities for 8 projects)	

Total: $1 151 877
as at 31 March 1988

Table 5

CASH COUNTERPART CONTRIBUTIONS PLEDGED TO THE ENVIRONMENT FUND PROJECTS FOR 1987

Governments	US $	Intergovernmental organizations	US $	NGOs	US $	Private Entities	US $
Australia	5 188	AGFUND	138 000	IMTEC	3 000	Alcan	8 750
Austria	25 000	Commonwealth Secretariat	7 154			Corp Andina de Fomenta	3 000
Canada	48 500	EEC	39 696		3 000	International Lake Environment Comm.	4 000
Denmark	6 000					IPAI	20 000
Finland	6 000		184 850			Nippon Light Metal Co.	8 750
Germany F.R. of	6 000						
Italy	166 084	(3 intergovernmental organizations for 4 projects)		(1 NGO for 1 project)			44 500
						(5 private entities for 3 projects)	
Netherlands	96 133						
Norway	10 000						
Spain	25 000						
Sweden	6 000						
Switzerland	266 024						
United Kingdom	45 000						
	710 929						

(13 Govts. for 9 projects)

Total: $943 279
as at 31 March 1988

Table 6

PROGRAMMING OF COUNTERPART CONTRIBUTIONS FOR 1985—1987
(United States dollars)

Activity	Pledges for 1985	Pledges for 1986	Pledges for 1987
A. contributions for projects under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)			
Caiman Latin American project (CP/6105—84—64)			
France—Croco	5 000	—	—
Mahler, (United States)	2 500	—	—
TCIM (France)	5 000	—	—
Italrettila (Italia)	20 000	—	—
United States	35 000	—	—
All Japan Association of Reptile Skins and Leather Industries	15 000	—	—
Trading SRL (Bolivia)	17 120	—	—
Muller GmbH, (Federal Republic of Germany)	5 000	—	—
Fonseca Fur and Hide (United States)	4 000	—	—
Syndicat national des tanneurs de reptile français (France)	3 000	—	—
European Economic Community	15 000	—	—
Japan	20 000	—	—
Bodiopelli (Italy)	2 000	—	—
Asicusa (Bolivia)	2 000	—	—
WWF (United States)	15 000	—	—
	165 620	—	—
Technical Committee Meeting: (CP/6105—84—04)			
Pet Industries (United States)	5 000	—	—
Ivory Co—ordination Unit (CP/6105—84—61)			
General Merchandise Importers Association of Japan	31 350	31 500	25 000
United Kingdom	—	7 637	8 044
Grasselli	25	—	—
Friedlien	—	2 866	2 801
Takaichi Ivory	—	—	3 000
Fuso Trading	—	—	1 000
	31 375	42 003	39 845

Table 6 (continued)

Activity	Pledges for 1985	Pledges for 1986	Pledges for 1987
Special Project Unit (CP/6105—84—62)			
International Fur Trade Federation (United Kingdom)	—	25 000	25 000
European Economic Community	—	1 378	—
	—	26 378	25 000
Crocodile and Ivory Project (CP/6105-84-63)			
European Economic Community	50 000	—	—
Fifth meeting of the Conference of the Parties to CITES, Buenos Aires (CP/6105-84-65)			
Environment Education Centre	3 000	—	—
WWF (United States)	9 082	—	—
	12 082	—	—
Identification Manual (CP/6105-84-66)			
European Economic Community	—	55 359	—
Sub-project on Status of all Filidae in Bolivia (CP/6105-84-67)			
European Economic Community	—	26 968	—
Sub-project on the status of and trade in Green Turtles (CP/6105-84-68)			
Japan	—	80 000	—
Project on survey of leopard in sub-Saharan Africa (CP/6105-84-69)			
Safari Club International	—	40 000	20 000
American Fur Industry	—	—	10 000
	—	40 000	30 000
Enforcement Seminar (CP/6105-84-70)			
US Fur Trade Federation	—	10 000	—
WWF International	—	4 061	—
WWF (United States)	—	10 000	—
	—	24 061	—

Table 6 (continued)

Activity	Pledges for 1985	Pledges for 1986	Pledges for 1987
Hyacinth Macaw project (CP/6105-84-71)			
Japan Livestock Importers Association, Tokyo	—	—	10 000
International Council for Bird Preservation	—	—	1 000
	—	—	11 000
Sixth meeting of the Conference of the Parties to CITES, Ottawa (CP/6105-84-72)			
Int. Exotic Leather	—	—	2 500
Italrettile	—	—	10 000
Safari Club International	—	—	5 000
UN Industria, Milan	—	—	1 500
Federal Republic of Germany	—	—	6 000
Hungary	—	—	765
Norway	—	—	15 000
Italian Reptile Association	—	—	20 000
France-Croco	—	—	5 000
Curtidores de Reptiles, Argentina	—	—	20 000
Indonesia	—	—	2 700
Fur Institute of Canada	—	—	5 000
American Fur Institute	—	—	10 000
Edelstein Trading	—	—	12 000
International Fur Trade Federation	—	—	10 000
Japan All Leather Importers	—	—	10 000
Japan Reptile Industries	—	—	10 000
Tanneries des Cuirs	—	—	5 000
European Economic Community	—	—	24 000
Exocuirs	—	—	5 000
Switzerland	—	—	29 139
Fur Council of Canada	—	—	7 367
WWF International	—	—	2 700
WWF (United States)	—	—	15 000
Bodiopelli	—	—	5 000
Mahler	—	—	2 500
	—	—	241 171
Survey of status of Nile Crocodiles in Africa (CP/6105-84-73)			
Japan	—	—	105 000
Survey of biological and trade status of Monitor Lizards in South and South East Asia (CP/6105-84-74)			
Japan	—	—	60 000

Table 6 (continued)

Activity	Pledges for 1985	Pledges for 1986	Pledges for 1987
Status Survey of Spectacled Caiman in northern Latin America (CP/6105-84-75)			
Japan	—	—	70 000
Production of identification manual on plants (CP/6105-84-76)			
Japan	—	—	20 000
Significant trade in species (WTMU)			
PIJAC, United States	—	—	5 000
Crocodile Workshop			
European Economic Community	—	—	2 941
Communicating strategy for fund-raising (CP/6105-84-78)			
Japan Reptile Industries	—	—	13 000
Purpose not yet decided			
World Orchid Conference	—	—	3 191
B. Counterpart contributions for other projects			
Meeting of the *Ad Hoc* Working Group of Legal and Technical Experts for the Elaboration of a Global Framework Convention for the Protection of the Ozone Layer (CP/2105-81-03)			
Austria	27 000	—	25 000
Canada	10 000	—	48 500
Denmark	—	—	6 000
Finland	5 000	2 500	6 000
Federal Republic of Germany	—	—	6 000
Netherlands	—	20 000	18 000
Norway	10 000	—	10 000
United States	10 000	20 000	—
Sweden	—	—	6 000
United Kingdom	—	—	6 000
European Economic Community	—	13 500	—
	62 000	56 000	131 500

Table 6 (continued)

Activity	Pledges for 1985	Pledges for 1986	Pledges for 1987
Third session of the *Ad Hoc* Working Group of Experts on the Protection of the Marine Environment against Pollution from Land-Based Sources (CP/2105-82-02)			
Canada	23 400	—	—
On-going consultative relationship with specific industries (CP/2104-78-01/2104-86-02)			
ALCAN	—	8 750	8 750
France	5 680	—	—
International Primary Aluminium Institute (IPAI)	—	20 000	20 000
Nippon Light Metal Co.	37 500	8 750	8 750
	43 180	37 500	37 500
International Register for Potentially Toxic Chemicals (IRPTC) (CP/7102-86-01)			
(1) Assistance to IRPTC in implementing the Provisional Notification Scheme for Banned and Severely Restricted Chemicals			
Netherlands	—	15 000	—
(2) Assistance to IRPTC in analysis and evaluating options for transfer of/access to its data by users world-wide			
Netherlands	—	12 000	—
(3) Data profiles in respect of priority chemicals in wide use in developing countries			
Netherlands	50 000	—	—
(4) Waste Management File			
European Atomic Energy Community	8 360	—	—
(5) Study on substances easily absorbed through the skin			
European Economic Community	10 055	21 565	17 966

Table 6 (continued)

Activity	Pledges for 1985	Pledges for 1986	Pledges for 1987
(6) Data files on selected flame Retardants			
Switzerland	—	34 040	—
(7) Completion of IRPTC Legal File			
European Economic Community	—	7 100	—
Workshop on Environmental Aspects of Non-Wood Fibres for Pulp and Paper Manufacturing (CP/2104-86-03)			
Sweden	—	15 000	—
International symposium on clean technologies (CP/2104-85-01)			
Federal Republic of Germany	100 000	—	—
International symposium of solid waste management (CP/7104-83-01)			
Federal Republic of Germany	1 917	—	—
African Conference on the Environment (CP/2101-85-01)			
Egypt	36 510	—	—
International Seminar on Environmental Management in the Pulp and Paper Industry (CP/2104-85-03)			
Finland	—	54 300	—
Reforestation projects in South India (CP/6102-85-04)			
National Federation of UNESCO Associations in Japan	35 000	—	—
Tree-planting in tropical Asia and the Pacific (CP/6102-85-03)			
National Federation of UNESCO Associations in Japan	10 000	35 000	—

Table 6 (continued)

Activity	Pledges for 1985	Pledges for 1986	Pledges for 1987
Secretariat for the Convention on the Conservation of Migratory Species of Wild Animals (CP/6105-84-03)			
Federal Republic of Germany	57 074	—	4 941
Establishment of a network of environmental training institutions for Latin America and the Caribbean (CP/3102-82-02)			
Chile	5 000	—	—
Spain	24 344	—	—
	29 344	—	—
Support to regional co-operation project for the implementation of the Environmental Training Network for Latin America and the Caribbean (CP/3102-86-02)			
Chile	—	5 000	—
Corp. Andina de Fomenta	—	—	3 000
Ecuador	—	3 000	—
Spain	—	15 656	—
	—	23 656	3 000
Fourth ordinary meeting of the Contracting Parties to the Barcelona Convention (CP/5102-75-01)			
Italy	18 019	—	—
Counterpart contribution to the Mediterranean Trust Fund (CP/5102-75-01)			
Greece	400 000	400 000	400 000
Workshop for chemical safety for Africa (CP/7101-86-02)			
Arab Fund for Technical Assistance to African and Arab countries (AFTAAAC)	—	20 000	—
Commonwealth Secretariat	—	—	7 154
	—	20 000	7 154

Table 6 (continued)

Activity	Pledges for 1985	Pledges for 1986	Pledges for 1987
Development of a Global Resources Information Database (GRID) — Pilot phase (CP/4101-85-03)			
Switzerland	—	256 210	264 156
Support to the Caribbean Regional Co-ordination Unit (FP/CR/CP/5102-86-05)			
France	—	—	60 478
Jamaica	—	42 125	40 310
United States	—	—	20 000
	—	42 125	120 788
Asian and African regional workshops on the application of economic analysis to degradation and Rehabilitation of drylands (CP/2101-86-01)			
CIDA	—	89 717	—
African Development Bank	—	90 000	—
	—	179 717	—
INFOTERRA Programe Activity Centre: Advisory Committee and regional centres managers meetings (CP/3104-86-01)			
Australia	—	—	5 188
Support to the Desertification Control Programme Activity Centre (CP/6201-87-01)			
Institute of Marine and Terrestrial Ecology (IMTEC)	—	—	3 000
Regional advisory services for Latin America (CP/8201-75-53)			
Spain	—	19 890	—
Regional Intergovernmental Meeting for Latin America to be held in Montivedeo (CP/8201-75-53)			
Spain	—	—	25 000

Table 6 (continued)

Activity	Pledges for 1985	Pledges for 1986	Pledges for 1987
Regional advisory services Regional Office for Western Asia (CP/8201-75-54)			
Gulf Co-operation Council	—	25 000	—
Improvement of food safety and drinking water quality — Bahrain (CP/FP/7101-87-01)			
AGFUND	—	—	138 000
Senior-level workshop to strengthen application of environmental impact assessment (EIA) in SACEP countries (CP/FP/2101-87-01)			
Netherlands	—	—	48 000
Development and periodic review of environmental law (CP/FP/2105-86-02)			
United Kingdom	—	—	39 000
Switzerland	—	—	1 868
Netherlands	—	—	5 133
	—	—	46 001
Co-ordination of UNEP publications programme (Phase III) (CP/3103-86-06)			
Italy	—	—	154 930
Survey on environmental issues			
Netherlands	—	—	25 000
Survey of the state of world lakes (Phase I) (CP/5201-87-02)			
International Lake Environment Committee	—	—	4 000

Table 6 (continued)

Activity	Pledges for 1985	Pledges for 1986	Pledges for 1987
Support to the Priority Actions Programme (CP/5102-83-05)			
Italy	—	—	11 154
Training of environmental managers in Africa (CP/3102-87-87)			
European Economic Community	—	—	21 730
Grand Total	1 148 936	1 548 872	2 095 156

ANNEX VI

THE ENVIRONMENT FUND: APPROPRIATIONS, ALLOCATIONS, COMMITMENTS AND EXPENDITURES

Table 1: Appropriation for Fund programme activities, its apportionment by budget line and the allocations made to budget lines by the Executive Director 1986-1987.

Table 2: Appropriation for Fund programme activities, its apportionment by budget line and the allocations made to budget lines by the Executive Director 1988-1989.

Table 3: Allocations and commitments for Fund programme activities and Fund programme reserve activities 1986-1987, as at 31 December 1987.

Table 4: Allocations and commitments for Fund programme activities and Fund programme resource activities 1988, 1989, as at 31 December 1987.

Table 5: 1987 commitments for Fund programme activities and Fund programme reserve activities as at 31 December 1987.

Table 6: New commitments approved during the year 1987 for Fund programme activities and Fund programme reserve activities as at 31 December 1987.

Table 7: Allocations and expenditures 1986 and 1987 in convertible and non-convertible currencies as at 31 December 1987.

Table 8: Distribution of projects and expenditures by institution implementing Fund projects 1986 and 1987.

Table 9: Expenditure on Environment Fund projects by type of implementing organization.

Table 10: Geographical distribution of Fund expenditures 1982-1987.

Table 1

APPROPRIATION FOR FUND PROGRAMME ACTIVITIES, ITS APPORTIONMENT BY BUDGET LINE AND THE ALLOCATIONS MADE TO BUDGET LINES BY THE EXECUTIVE DIRECTOR 1986-1987

Budget line	Apportionment of appropriation[a]	Allocation	Apportionment	Allocation
	(thousands of dollars)		(percentages)	
Environment and development	6 360	5 150	10.6	9.6
Environmental awareness	9 120	8 210	15.2	15.3
Earthwatch	9 770	8 670	16.3	16.2
Oceans	6 780	6 100	11.3	11.4
Water	3 000	2 730	5.0	5.1
Terrestrial ecosystems	7 260	6 520	12.1	12.2
Arid and semi-arid lands ecosystems and desertification control	6 000	5 400	10.0	10.1
Health and human settlements	6 190	5 750	10.3	10.8
The arms race and the environment	360	320	0.6	0.6
Regional and technical co-operation	5 160	4 630	8.6	8.7
Total Fund programme activities	60 000	53 480	100.0	100.0
Fund programme reserve	2 000	2 000		
Grand Total	62 000	55 480		

a Decision 13/36, para. 9.

Table 2

APPROPRIATION FOR FUND PROGRAMME ACTIVITIES, ITS APPORTIONMENT BY BUDGET LINE AND THE ALLOCATIONS MADE TO BUDGET LINES BY THE EXECUTIVE DIRECTOR 1988-1989

Budget line	Apportionment of appropriation[a]	Allocation	Apportionment	Allocation
	(thousands of dollars)		(percentages)	
Monitoring and assessment	8 300	7 055	13.8	13.8
Information exchange	5 600	4 760	9.3	9.3
Oceans	6 900	5 865	11.5	11.5
Water	3 200	2 720	5.3	5.3
Terrestrial ecosystems management	6 300	5 355	10.5	10.5
Desertification control	6 000	5 100	10.0	10.0
Environmental health	2 100	1 785	3.5	3.5
Peace, arms race and the environment	350	300	0.6	0.6
Technology and the environment	4 900	4 165	8.2	8.2
Support measures	11 250	9 560	18.8	18.8
Technical and regional co-operation	5 100	4 335	8.5	8.5
Total Fund programme activities	60 000	51 000	100.0	100.0
Fund programme reserve	2 000	2 000		
Grand Total	62 000	53 000		

a Decision 14/36, para. 11.

Table 3

ALLOCATIONS AND COMMITMENTS FOR FUND PROGRAMME ACTIVITIES AND FUND PROGRAMME RESERVE ACTIVITIES 1986-1987 AS AT 31 DECEMBER 1987
(Dollars)

Budget line	Allocations	Commitments
Environment and development	5 150 000	4 160 233
Environmental awareness	8 210 000	6 759 562
Earthwatch	8 670 000	8 428 541
Oceans	6 100 000	5 958 907
Water	2 730 000	1 351 394
Terrestrial ecosystems	6 520 000	4 493 949
Arid and semi-arid lands ecosystems and desertification control	5 400 000	4 383 361
Health and human settlement	5 750 000	5 184 136
The arms race and the environment	320 000	223 348
Regional and technical co-operation	4 630 000	3 867 679
Total Fund programme activities	53 480 000	44 811 170
Fund programme reserve	2 000 000	1 634 315
Grand Total	55 480 000	46 445 425

Table 4

ALLOCATIONS AND COMMITMENTS FOR FUND PROGRAMME ACTIVITIES AND FUND PROGRAMME RESERVE ACTIVITIES 1988-1989 AS AT 31 DECEMBER 1987
(Dollars)

Budget line	Allocations	Commitments
Monitoring and assessment	7 055 000	3 844 773
Information exchange	4 760 000	4 088 677
Oceans	5 865 000	2 910 717
Water	2 720 000	1 699 565
Terrestrial ecosystems management	5 355 000	1 464 276
Desertification control	5 100 000	2 867 477
Environmental health	1 785 000	292 600
Peace, arms race and the environment	300 000	2 825
Technology and the environment	4 165 000	2 484 718
Support measures	9 560 000	1 737 472
Technical and regional co-operation	4 335 000	1 999 098
Total Fund programme activities	51 000 000	23 392 198
Fund programme reserve	2 000 000	293 061
Grand Total	53 000 000	23 685 259

Table 5

1987 COMMITMENTS FOR FUND PROGRAMME ACTIVITIES AND FUND PROGRAMME RESERVE ACTIVITIES AS AT 31 DECEMBER 1987 (Dollars)

Budget line	Allocations available* 1987	Total commitments 1987	1987 commitments incurred before 1987	1987 commitments incurred during 1987
Environment and development	3 886 505	2 897 338	1 758 676	1 138 662
Environmental awareness	6 170 692	4 720 254	2 855 594	1 864 660
Earthwatch	5 376 160	5 134 701	1 629 183	3 505 518
Oceans	4 110 835	3 969 742	2 291 582	1 678 160
Water	2 562 808	1 184 203	319 330	864 873
Terrestrial ecosystems	5 292 794	3 266 744	1 124 659	2 142 085
Arid and semi-arid lands ecosystems and desertification control	4 084 758	3 068 119	544 036	2 524 083
Health and human settlements	3 584 132	3 018 268	2 377 397	640 871
The arms race and the environment	232 367	135 715	92 750	42 965
Regional and technical co-operation	3 023 266	2 260 945	1 603 499	657 446
Total Fund programme activities	38 324 317	29 656 029	14 596 706	15 059 323
Fund programme reserve	1 646 306	1 280 621	448 600	832 021
Grand Total	39 970 623	30 936 650	15 045 306	15 891 344

* After deducting the allocation used (spent) from the biennium allocation

Table 6

NEW COMMITMENTS APPROVED DURING THE YEAR 1987 FOR FUND PROGRAMME ACTIVITIES AND FUND PROGRAMME RESERVE ACTIVITIES AS AT 31 DECEMBER 1987
(Dollars)

Budget line	Total commitments approved in 1987	Commitments approved for 1987	Commitments approved for 1988	Commitments approved for 1989
Environment and development	3 925 588	1 138 662	1 751 279	1 035 647
Environmental awareness	2 462 730	1 864 660	475 620	122 450
Earthwatch	8 934 679	3 505 518	2 605 231	2 823 930
Oceans	4 571 677	1 678 160	2 189 517	704 000
Water	2 556 638	864 873	983 765	708 000
Terrestrial ecosystems	3 466 454	2 142 085	955 482	368 887
Arid and semi-arid lands ecosystems and desertification control	5 369 550	2 524 083	1 871 867	973 600
Health and human settlements	3 267 078	640 871	1 485 457	1 140 750
The arms race and the environment	44 190	42 965	1 225	—
Regional and technical co-operation	2 641 976	657 446	1 116 530	868 000
Total Fund programme activities	37 240 560	15 059 323	13 435 973	8 745 264
Fund Programme reserve	1 125 082	832 021	270 733	22 328
Total	38 365 642	15 891 344	13 706 706	8 767 592

Table 7

ALLOCATIONS AND EXPENDITURES 1986 AND 1987 IN CONVERTIBLE AND NON-CONVERTIBLE CURRENCIES
(Millions of dollars)

Budget line	Convertible currency				Non-convertible currency[a]			
	1986		1987		1986		1987	
	Allocations[b]	Expenditure	Allocations	Expenditure	Allocations[b]	Expenditure	Allocations	Expenditure
Environment and development	1.12	1.12	2.72	1.95	0.14	0.14	1.16	0.31
Environmental awareness	2.17	2.17	4.40	2.74	0.48	0.48	1.77	1.04
Earthwatch	2.14	2.14	4.69	5.03	0.54	0.54	0.69	0.39
Oceans	2.01	2.01	3.74	3.33	(0.02)	(0.02)	0.37	0.04
Water	0.24	0.24	1.29	0.85	(0.07)	(0.07)	1.27	0.35
Terrestrial ecosystems	0.78	0.78	2.90	1.04	0.45	0.45	2.39	1.59
Arid and semi-arid lands ecosystems and desertification control	0.82	0.82	2.95	1.51	0.49	0.49	1.13	0.66
Health and human settlements	1.23	1.23	2.15	1.71	0.94	0.94	1.43	0.97
The arms race and the environment	0.09	0.09	0.18	0.11	—	—	0.05	—
Regional and technical co-operation	1.40	1.40	2.51	1.70	0.21	0.21	0.52	0.03
Total Fund programme activities	12.00	12.00	27.54	19.97	3.16	3.16	10.78	5.38
Fund programme reserve	0.35	0.35	1.60	0.96	—	—	0.05	—
Grand Total	12.35	12.35	29.14	20.93	3.16	3.16	10.83	5.38

a Dollar equivalent.

b 1986 allocations having been leveled to the actual expenditures and the balance rephased to 1987.

Table 8

DISTRIBUTION OF PROJECTS AND EXPENDITURES BY INSTITUTION IMPLEMENTING FUND PROJECTS 1986 AND 1987

	Expenditure 1986 (Dollars)	Number of projects	Expenditure 1987 (Dollars)	Number of Projects
Co-operating agencies				
ECA	96 613	3	95 038	2
ECE	12 317	2	246 046	3
ECLAC	172 264	3	118 639	2
ESCAP	71 114	2	230 667	3
ESCWA	95 595	1	107 139	1
FAO	396 972	18	594 204	15
IAEA	117 083	1	100 260	2
IBRD	15 000	1	—	—
ILO	78 608	2	90 505	3
IMO	5 476	2	43 461	4
IOC/UNESCO	—	—	48 051	1
UNCHS	438 679	5	(31 101)	4
UNDIESA	35 660	1	—	—
UNDTC	(51 387)	2	162 513	3
UNDRO	(28 536)	—	—	—
UNESCO	930 286	22	1 799 491	20
UNRISD	(13 081)	1	—	—
UNSO	276 719	6	33 020	4
WHO	543 682	13	1 269 982	14
WMO	454 309	7	241 758	6
Total co-operating agencies	3 647 373	92	5 149 672	87

Table 8 (continued)

	Expenditure 1986 (Dollars)	Number of projects	Expenditure 1987 (Dollars)	Number of Projects
Supporting organizations				
(a) Governments				
Australia	43 535	2	32 788	2
Brazil	—	—	4 579	1
China	64 750	2	52 860	2
Canada	—	—	25 158	1
Colombia	—	1	36 512	1
Democratic Yemen	(76 223)	1	117 635	1
Egypt	11 291	1	32 355	3
Indonesia	811	2	17 575	2
Finland	—	1	3 311	1
Kenya	103 723	5	244 898	4
Jamaica	—	1	—	—
Malaysia	(14 487)	1	4 631	2
Mongolia	25 731	1	—	—
Peru	(103 598)	1	(1 600)	1
Philippines	51 750	2	973	2
Poland	—	1	40 000	1
Singapore	5 217	1	—	1
Sri Lanka	832	1	152	1
Sudan	69 362	1	20 029	1
Thailand	22 500	2	59 592	2
Tunisia	—	1	42 389	1
USSR	1 500 542	16	2 372 008	21
Venezuela	—	1	—	1
Total Governments as supporting organizations	1 705 736	45	3 105 845	52

Table 8 (continued)

	Expenditure 1986 (Dollars)	Number of projects	Expenditure 1987 (Dollars)	Number of Projects
Supporting organizations				
(b) Others				
AAEA	—	1	7 000	1
AFME	—	—	—	1
AL AHRAM	57 783	3	42 469	3
ANEN	9 113	1	136 477	1
AOYE	3 063	1	20 997	1
ASRT	(125 494)	1	4 832	1
BEIJER	—	—	83 901	2
BFS	12 696	1	24 202	1
CARICOM	—	1	56 576	1
CATIE	5 931	1	46 922	1
CCA	—	—	18 504	1
CEFIGRE	70 748	1	110 219	2
CHECO	346 677	2	488 599	2
COSPAR	18 000	1	72 705	1
CPPS	190 149	1	284 675	1
ELC	87 360	4	143 356	3
ESL/NRC	—	—	—	—
FSDC	(1 495)	1	—	—
GGSMF	10 140	1	9 226	1
GTZ	—	—	8 203	1
IADIZA	—	—	42 129	1
IAEMS	—	—	—	1
IAHS	23 836	1	—	—
IATTC	132 715	1	53 586	1
IBPGR	307 320	2	69 557	1
ICAITI	9 990	1	21 340	1
ICIPE	79 576	1	13 539	1
IDE	15 285	1	—	—
IIASA	20 683	1	104 429	2

Table 8 (continued)

	Expenditure 1986 (Dollars)	Number of projects	Expenditure 1987 (Dollars)	Number of Projects
IIED	(111)	2	—	—
ILEC	—	—	8 000	1
IPAGRO	12 000	1	10 928	1
IPS	40 000	1	36 667	1
ISEM	—	—	—	—
ISRIC	—	—	335 311	1
IUCN	271 068	9	166 819	12
KING'S COLLEGE	160 283	1	29 938	1
LUS	—	1	—	—
NRC-FRG	3 034	1	24 994	1
NWLSEA	(2 300)	1	6 061	1
OAS	(16 737)	1	15 493	1
PAP/RAC	—	—	—	1
PFA	25 212	2	24 927	1
PU	—	—	—	1
SCAR	1 210	1	—	—
SCOPE	71 879	3	100 049	2
SIPRI	85 646	2	104 752	1
SPC	258 483	1	315 568	—
TVE	43 565	1	426 465	1
UABER	58 698	1	4 523	1
UEA	—	—	53 736	1
URO	22 993	1	2 528	1
WFCC	8 165	1	64 438	1
WDC	7 000	1	1 209	1
WRI	—	—	213 340	1
WWF	30 000	1	—	—
Total other supporting organizations	2 354 164	62	3 809 193	66
Programme activity centres	3 723 618	6	4 102 157	6
Internal projects	4 078 486	77	10 154 970	84
Grand Total	15 509 377	282	26 321 837	295

Table 9

EXPENDITURE ON ENVIRONMENT FUND PROJECTS BY TYPE OF IMPLEMENTING ORGANIZATION 1973-1987

	Co-operating agencies		Supporting organizations		Internal projects		Programme activity centres		Total
	Dollars	Percentage	Dollars	Percentage	Dollars	Percentage	Dollars	Percentage	Dollars
1973	953 333	29.2	865 087	26.5	1 446 165	44.3	—	—	3 264 585
1974	2 260 826	56.3	831 245	20.7	863 370	21.5	60 235	1.5	4 015 676
1975	7 414 648	56.4	2 510 989	19.1	2 747 628	20.9	473 275	3.6	13 146 540
1976	9 108 121	58.4	3 072 431	19.7	2 573 356	16.5	842 190	5.4	15 596 098
1977	11 959 858	55.2	3 943 287	18.2	4 289 950	19.8	1 473 315	6.8	21 666 410
1978	10 168 696	44.4	5 817 227	25.4	4 191 152	18.3	2 725 394	11.9	22 902 469
1979	11 084 885	41.0	7 489 057	27.5	4 947 644	18.3	3 514 720	13.0	27 036 306
1980	9 256 382	34.5	7 592 916	28.3	6 036 771	22.5	3 944 024	14.7	26 830 093
1981	7 095 164	30.6	6 676 296	28.8	5 618 780	24.2	3 816 721	16.4	23 206 960
1982	6 873 728	31.0	7 104 150	32.1	5 219 605	23.6	2 948 312	13.3	22 145 795
1983	8 740 409	35.2	6 425 805	25.8	6 613 699	6.6	3 091 898	12.4	24 871 811
1984	5 328 831	31.5	4 778 727	28.3	4 053 123	24.0	2 742 899	16.2	16 903 581
1985	6 603 950	28.1	6 716 145	28.5	6 074 770	25.8	4 137 045	17.6	23 531 910
1986	3 647 373	23.5	4 059 900	26.2	4 078 486	26.3	3 723 618	24.0	15 509 377
1987	5 149 672	19.6	6 915 038	26.3	10 154 970	38.6	4 102 157	15.5	26 321 837
Total	105 645 876	36.8	74 798 300	26.1	68 909 469	24.0	37 595 803	13.1	286 949 448

Table 10

GEOGRAPHICAL DISTRIBUTION OF FUND EXPENDITURES 1982-1987
(Dollars)

	1982	1983	1984	1985	1986	1987
Africa	1 875 308	2 932 120	2 034 281	2 877 964	1 432 071	3 278 138
Asia	1 645 556	2 108 254	1 414 406	2 064 742	1 357 452	1 685 621
Latin America	1 878 378	1 925 638	988 227	1 134 215	863 267	1 487 493
North America	203 774	30 854	22 154	39 806	9 928	35 075
Europe	810 699	458 106	227 478	197 096	105 320	371 858
Total regional	6 413 715	7 454 972	4 686 546	6 313 823	3 768 038	6 858 185
Inter-regional	4 785 040	2 561 221	1 730 031	2 038 135	1 193 383	2 000 246
Global	10 947 040	14 855 618	15 487 004	15 179 952	10 548 531	17 463 407
Grand Total	22 145 795	24 871 811	16 903 581	23 531 910	15 509 377	26 321 837

ABBREVIATIONS USED IN TABLE 8

AAEA	African Adult Education Association
AFME	Agence Française pour la maîtrise de l'énergie
AL AHRAM	Al Ahram Publishing House, Cairo
ANEN	African NGOs Environment Network
AOYE	Arab Office for Youth and Environment
ASRT	Academy for Scientific Research and Technology, Egypt
BEIJER	Beijer Institute, Royal Swedish Academy of Sciences
BFS	Bellerive Foundation, Switzerland
CARICOM	Caribbean Community Secretariat
CATIE	Tropical Agricultural Research and Training Center
CCA	Caribbean Conservation Association, Bridgetown, Barbados
CEFIGRE	International Training Centre for Water Resources Management
CHECO	Chelsea College, University of London
COSPAR	Committee on Space Research, ICSU
CPPS	Comisión Permanente del Pacífico Sur
ECA	Economic Commission for Africa
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ELC	Environment Liaison Centre
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
ESL/NRC	Earth Sciences Laboratory, National Research Centre, Egypt
FAO	Food and Agriculture Organization of the United Nations
FSDC	Farm Systems Development Corporation, Philippines
GGSMF	G.G. Soans Memorial Farmers' and Rural Afforestation Training Centre
GTZ	Gesellshaft für Technische Zusammenarbeit, Federal Republic of Germany
IADIZA	Argentine Institute for Arid Zone Research
IAEA	International Atomic Energy Agency
IAEMS	International Association of Environmental Mutagen Societies
IAHS	International Association of Hydrological Sciences
IATTC	Inter-American Tropical Tuna Commission
IBPGR	International Board for Plant Genetic Resources
IBRD	International Bank for Reconstruction and Development
ICAITI	Central American Research Institute for Industry
ICIPE	International Centre of Insect Physiology and Ecology
IDE	Institute for Development and Environment, Washington D.C.
IIASA	International Institute for Applied Systems Analysis
IIED	International Institute for Environment and Development
ILEC	International Lake Environment Committee
ILO	International Labour Organisation
IMO	International Maritime Organization
IOC/UNESCO	Intergovernmental Oceanographic Commission (Unesco)
IPAGRO	Instituto de Pesquisas Agronomicas, Brazil
IPS	Inter-Press Service

ISEM	International Society for Ecological Modelling
ISRIC	International Soil Reference and Information Centre
IUCN	International Union for the Conservation of Nature and Natural Resources
KING'S COLLEGE	King's College, London
LUS	Linköping University, Sweden
NRC-FRG	Nuclear Research Centre, Federal Republic of Germany
NWLSEA	National Water Leak Survey Engineering Association, Tokyo
OAS	Organization of American States
PAP/RAC	Priority Actions Programme/Regional Activity Centre
PFA	Press Foundation of Asia
PU	Padjadjaran University
SCAR	Scientific Committee on Antarctic Research, ICSU
SCOPE	Scientific Committee on Problems of the Environment
SIPRI	Stockholm International Peace Research Institute
SPC	South Pacific Commission
TVE	Television Trust for the Environment
UABER	University of Aberdeen, Scotland
UEA	University of East Anglia
UNCHS	United Nations Centre for Human Settlements (Habitat)
UNDIESA	United Nations Department of International Economic and Social Affairs
UNDRO	Office of the United Nations Disaster Relief Co-ordinator
UNDTCD	United Nations Department of Technical Co-operation for Development
UNESCO	United Nations Educational Scientific and Cultural Organization
UNRISD	United Nations Research Institute for Social Development
UNSO	United Nations Sudano-Sahelian Office
URO	University of Roorkee, India
WDC	World Data Centre on Micro-organisms, University of Queensland, Australia
WFCC	World Federation for Culture Collection
WHO	World Health Organization
WMO	World Meteorological Organization
WRI	World Resources Institute
WWF	World-wide Fund for Nature

ANNEX VII

TRUST FUNDS AND OTHER FUNDS

Table 1: Status and actions since 1 January 1987

Table 2: Financial status as at 31 December 1987

TRUST FUNDS AND OTHER FUNDS

1. Status and action taken since 1 January 1987

A. General trust funds

	Name of trust fund	Year of establishment	Present expiry date	Action taken since 1 January 1987
1.	Regional Trust Fund for the Protection and Development of the Marine Environment and Coastal Areas of Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates	1978	30 June 1989	— The Parties to the Convention requested an extension through 30 June 1989. — Extension approved provisionally by the Governing Council at its fourteenth session (decision 14/34, para. 5 (a)). — Extension approved by the Secretary-General.
2.	Trust Fund for the Protection of the Mediterranean Sea Against Pollution	1979	31 December 1989	— The Bureau of the Contracting Parties to the Convention requested an extension through 31 December 1989. — Extension approved provisionally by the Governing Council at its fourteenth session (decision 14/34, para. 5 (b)). — Extension approved by the Secretary-General.

	Name of trust fund	Year of establishment	Present expiry date	Action taken since 1 January 1987
3.	Trust Fund for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region	1981	31 December 1989	— The Chairman of the Bureau of the Contracting Parties to the Convention requested an extension through 31 December 1989. — Extension approved provisionally by the Governing Council at its fourteenth session (decision 14/34, para. 6 (b)). — Extension approved by the Secretary-General.
4.	Regional Trust Fund for the Implementation of the Action Plan for the Caribbean Environment Programme	1981	31 December 1989	— The Monitoring Committee, on behalf of Governments, requested an extension through 31 December 1989. — Extension approved provisionally by the Governing Council at its fourteenth session (decision 14/34, para. 5 (c)). — Extension approved by the Secretary-General.
5.	Regional Trust Fund for the Implementation of the Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the East Asian Seas	1981	31 December 1989	— The Governments concerned requested an extension through 31 December 1989. — Extension approved provisionally by the Governing Council at its fourteenth session (decision 14/34, para. 5 (d)). — Extension approved by the Secretary-General.
6.	Regional Seas Trust Fund for the Eastern African Region	1986	31 December 1989	— The Governments concerned requested an extension through 31 December 1989. — Extension approved provisionally by the Governing Council at its fourteenth session (decision 14/34, para. 6 (c)). — Extension approved by the Secretary-General.
7.	Trust Fund for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	1979	31 December 1991	— The Contracting Parties to the Convention requested an extension through 31 December 1991. — Extension approved provisionally by the Governing Council at its fourteenth session (decision 14/34, para. 6 (a)). — Extension approved by the Secretary-General.

Name of trust fund	Year of establishment	Present expiry date	Action taken since 1 January 1987
8. Trust Fund for the Convention on the Conservation of Migratory Species of Wild Animals (CMS)	1986	31 December 1991	— The Standing Committee on behalf of the Contracting Parties to the Convention requested an extension through 31 December 1991. — Extension approved provisionally by the Governing Council at its fourteenth session (decision 14/34, para. 5 (e)). — Extension approved by the Secretary-General.
9. Trust Fund for the Sasakawa Environment Prize	1982	None	— The 1987 awards were granted to Mr. Nicholas Polunin and Ms. Elizabeth Mann Bongese.
10. United Nations Trust Fund for the Environment Stamp Conservation Fund	1984	None	— The seven natural conservation projects that have been financed under the fund continued and are to be completed by mid-1988.

B. Technical co-operation trust funds

Name of trust fund	Year of establishment	Present expiry date	Action taken since 1 January 1987
11. Technical Assistance Trust Fund to Promote Technical Co-operation and Assistance in Industrial, Environmental and Raw Material Management financed by the Swedish International Development Authority (SIDA)	1985	31 December 1988	— The Executive Director approved an extension from 31 July 1988 to 31 December 1988

Name of trust fund	Year of establishment	Present expiry date	Action taken since 1 January 1987
12. Technical Assistance Trust Fund for the Provision of Short-Term Experts to Developing Countries, financed by the Government of the Federal Republic of Germany	1984	31 December 1986	— The Trust Fund was closed.
13. Technical Assistance Trust Fund for an Integrated Pilot Project on Environmental Management and Protection of Andean Ecosystems (Cajamarca/ Peru), financed by the Government of the Federal Republic of Germany	1984	31 December 1989	— The Executive Director approved an extension from 31 December 1987 to 31 December 1989. — The planned 1987 activities were completed successfully. Substantial progress was made in research and field activities on use of plants, agro-meteorology, agricultural cultivation, livestock, habits and infrastructure, social services, and soil conservation.
14. Technical Co-operation Trust Fund for Control of Environmental Health Hazards and Promotion of Chemical Safety, financed by the Government of the Federal Republic of Germany	1985	31 December 1988	— The Governing Council, at its fourteenth session, noted the establishment of the Trust Fund by the Executive Director (decision 14/34, para. 7 (a)). — The Executive Director approved an extension from 31 December 1987 to 31 December 1988. — Two projects, "Strengthening of national environmental pollution control programmes with particular reference to management of hazardous wastes in Latin America and the Caribbean and Asia and the Pacific" and "Strengthening environmental institutions and environmental health programmes in the Yemen Arab Republic" are being implemented.

Name of trust fund	Year of establishment	Present expiry date	Action taken since 1 January 1987
15. Technical Co-operation Trust Fund to Support the Clearing-house Mechanism through Provision of Consultancies on Strategies for Dealing with Serious Environment Problems, financed by the Government of Norway	1985	31 December 1988	— The establishment of the Trust Fund was noted by the Governing Council at its fourteenth session (decision 14/34, para. 7 (b)). — The Executive Director approved an extension from 31 December 1987 to 31 December 1988. — Pre-feasibility studies in both Uganda and Sudan were undertaken and draft pilot village project proposals on the development and rehabilitation of ecological zones are being submitted to the donors for funding and implementation.
16. Technical Co-operation Trust Fund to Provide Consultancies to Developing Countries, financed by the Government of Finland	1986	31 December 1988	— The establishment of the Trust Fund was noted by the Governing Council at its fourteenth session (decision 14/34, para. 7 (c)). — The Executive Director approved an extension from 31 December 1987 to 31 December 1988. — A technical mission was undertaken to prepare a preliminary action programme for the water pollution control of the rivers crossing the city of Shaoxing and surrounding water basin area. Negotiations are under way with the donor concerning other activities.
17. Technical Co-operation Trust Fund to Provide Experts to the Secretariat of SADCC, financed by the Government of Finland	1986	31 December 1988	— The establishment of the Trust Fund was noted by the Governing Council at its fourteenth session (decision 14/34, para. 7 (d)). — One expert has been working in the Desertification Control Programme Activity Centre.
18. Special Purpose Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Norway	1982	None	— Two Junior Professional Officers have been working in Nairobi, one since May 1986 and the other since August 1986.

	Name of trust fund	Year of establishment	Present expiry date	Action taken since 1 January 1987
19.	Technical Co-operation Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Japan	1985	None	— The establishment of the Trust Fund was noted by the Governing Council at its fourteenth session (decision 14/34, para. 7 (e)). — There are presently 5 Junior Professional Officers working in UNEP.
20.	Special Purpose Trust Fund for the Provision of Junior Professional Officers financed by the Government of Denmark	1981	None	— One Junior Professional Officer completed an assignment in August 1987, and one new Officer started working at UNEP in October 1987.
21.	Special Purpose Trust Fund for the Provision of Junior Professional Officers, financed by the Government of the Federal Republic of Germany	1983	None	— Two Junior Professional Officers are currently working in UNEP, Nairobi
22.	Technical Co-operation Trust Fund to Provide Experts to the UNEP Global Resource Information Database (GRID)	1987	31 December 1989	— The Trust Fund was established in September 1987 by the Executive Director under authority delegated by the Secretary-General. — Experts financed by DANIDA and FINNIDA started working in the Geneva office of GRID in October and November 1987 to assist in the management of the Global Resource Information Database.
23.	Special Account to finance the implementation of the Plan of Action to Combat Desertification	1979	None	— No funds were committed for activities as at 31 December 1987, but it is expected that some desertification control activities will be financed from the Account in 1988.

2. Financial status of Trust Funds and other funds as at 31 December 1987 (in United States dollars)

A. General Trust Funds

Name of trust fund	A. Balance available as at 1 January 1987	B. Pledges in 1987	C. Total contributions collected in 1987	D. Total interest/ miscellaneous Income in 1987	E. Expenditures in 1987	F. Outstanding contributions for 1987 and prior years	Balance available as at 31 December 1987 (A B D E F)
1. Regional Trust Fund for the Protection and Development of the Marine Environment and Coastal Areas of Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates	230 527	—	—	26 168	108 365	—	148 330
2. Trust Fund for the Protection of the Mediterranean Sea Against Pollution	5 813 766	3 407 221	2 470 178	326 526	4 355 875	2 204 298	2 987 340
3. Trust Fund for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region	3 290 179	1 000 100	35 143	35 631	156 583	3 858 787	310 540
4. Regional Trust Fund for the Implementation of the Action Plan for the Caribbean Environment Programme	2 331 007	619 345	424 560	119 844	332 047	755 807	1 982 342
5. Regional Trust Fund for the Implementation of the Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the East Asian Seas	307 129	90 800	57 800	20 742	118 546	89 700	210 425

Name of trust fund	A. Balance available as at 1 January 1987	B. Pledges in 1987	C. Total contributions collected in 1987	D. Total interest/ miscellaneous Income in 1987	E. Expenditures in 1987	F. Outstanding contributions for 1987 and prior years	Balance available as at 31 December 1987 (A+B+D−E−F)
6. Regional Seas Trust Fund for the Eastern African Region	251 455	312 058	—	6 654	—	499 608	70 559
7. Trust Fund for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	883 841	759 171	613 735	13 875	972 661	806 700	(122 474)
8. Trust Fund for the Convention on the Conservation of Migratory Species of Wild Animals (CMS)	4 324	318 885	174 583	7 071	—	144 302	185 978
9. Trust Fund for the Sasakawa Environment Prize	1 176 861	—	—	126 300	94 758	—	1 208 403
10. United Nations Trust Fund for the Environment Stamp Conservation Fund	86 245	—	—	6 603	37 823	—	55 025

B. Technical co-operation trust funds

Name of trust fund	A. Balance available as at 1 January 1987	B. Pledges in 1987	C. Total contributions collected in 1987	D. Total interest/ miscellaneous Income in 1987	E. Expenditures in 1987	F. Outstanding contributions for 1987 and prior years	Balance available as at 31 December 1987 (A+B+D−E−F)
11. Technical Assistance Trust Fund to Promote Technical Co-operation and Assistance in Industrial, Environmental and Raw Material Management financed by the Swedish International Development Agency (SIDA)	64 939	107 728	107 728	10 662	109 793	—	73 536

Name of trust fund	A. Balance available as at 1 January 1987	B. Pledges in 1987	C. Total contributions collected in 1987	D. Total interest/ miscellaneous Income in 1987	E. Expenditures in 1987	F. Outstanding contributions for 1987 and prior years	Balance available as at 31 December 1987 (A+B+D-E-F)
12. Technical Assistance Trust Fund for the Provision of Short-term Experts to Developing Countries financed by the Government of the Federal Republic of Germany	1 792	—	—	714	(4 100)	—	6 606
13. Technical Assistance Trust Fund for an Integrated Pilot Project on Environmental Management and Protection of Andean Ecosystems (Cajamarca/ Peru), financed by the Government of the Federal Republic of Germany	649 056	329 327	329 327	55 622	190 611	—	843 394
14. Technical Co-operation Trust Fund for Control of Environmental Health Hazards and Promotion of Chemical Safety, financed by the Government of the Federal Republic of Germany	95 407	109 517	109 517	11 846	27 157	—	189 613
15. Technical Co-operation Trust Fund to Support the Clearing-house Mechanism through Provision of Consultancies on Strategies for Dealing with Serious Environment Problems, financed by the Government of Norway	95 734	—	—	8 301	101 700	—	2 335
16. Technical Co-operation Trust Fund to Provide Consultancies to Developing Countries, financed by the Government of Finland	102 834	—	—	7 601	23 084	—	87 351

Name of trust fund	A. Balance available as at 1 January 1987	B. Pledges in 1987	C. Total contributions collected in 1987	D. Total interest/ miscellaneous Income in 1987	E. Expenditures in 1987	F. Outstanding contributions for 1987 and prior years	Balance available as at 31 December 1987 (A B D E F)
17. Technical Co-operation Trust Fund to Provide Experts to the Secretariat of SADCC, financed by the Government of Finland	56 739	150 120	150 120	6 587	97 096	—	116 350
18. Special Purpose Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Norway	69 091	64 411	64 411	6 654	52 101	—	88 055
19. Technical Co-operation Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Japan	98 934	200 743	200 743	12 475	154 268	—	157 884
20. Special Purpose Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Denmark	31 836	58 684	58 684	1 591	69 970	—	22 141
21. Special Purpose Trust Fund for the Provision of Junior Professional Officers, financed by the Government of the Federal Republic of Germany	80 619	99 158	99 158	5 549	39 813	—	145 513
22. Technical Co-operation Trust Fund to Provide Experts to the UNEP Global Resource Information Database (GRID)	—	285 316	285 316	6 608	35 000	—	256 924
23. Special Account to finance the implementation of the Plan of Action to Combat Desertification	229 748	—	—	15 381	—	15 000	230 129



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