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PROPOSED FUND PROGRAMME ACTIVITIES

(REVISED 1975, PROPOSED 1976-1977)

Note by the Executive Director

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I. INTRODUCTION

1. Document UNEP/GC/14/Add.2, submitted to the Council at its second session, contained both the programme of UNEP and the Fund Programme. This year the subject matter is presented in two separate documents dealing with the UNEP programme (UNEP/GC/31) and with the Fund Programme (UNEP/GC/32), referred to respectively as Level Two and Level Three.

2. As recalled in the introductory report by the Executive Director (UNEP/GC/28), Level Two is based on the objectives and priorities established by Governments, and defines a programme of action to meet those objectives. Within the framework of this programme of action, Level Three, or the Fund programme, consists of those actions which are selected for support by the Fund of UNEP.

* * *

3. It is fully recognized that the rationale of Fund support for environmental activities undertaken within and outside the United Nations system will have to be defined more explicitly, and criteria for the use of Fund resources to be the object of practical refining, if useful guidance is to be provided to Governments, agencies and other organizations. For the Fund to play a catalytic role by starting or accelerating action and by encouraging a multi-agency approach to problems, it will be necessary to know the full range of the activities of agencies and other organizations in sufficient detail to permit gaps to be seen and interventions to be planned. The effort at data gathering for the Level One report and the programme exercise, as well as the close working relations being established with agencies and organizations, should provide an increasing amount of such information in the future.

4. As a first approach to the matter of defining criteria for Fund support, and at the risk of considerable generalization, three main categories of situations may perhaps be identified:

(a) Situation relating to those sets of inter-disciplinary problems on there is reasonable coverage at the sectoral level by one or more agencies, but insufficient inter-sectoral linkage from which each sector would benefit. Here the Fund must play a key role by encouraging, financing and setting up integrating cross-sectoral frameworks as may be required. Most of UNEP's work in human settlements, oceans and arid lands would fall in this category. The Fund would almost by definition encourage multi-agency projects in these fields;

(b) Situations in sectors lying within the jurisdiction of specific agencies or organizations, where UNEP, through the Fund, wishes to introduce or reinforce environmental considerations. Such fields as education, international trade, human health, development planning and natural disasters would fall broadly within this category. The Fund would in such cases supplement the efforts of individual agencies;

(c) Situations in areas of concern for which there is no clear action or responsibility for action by other organizations. In such cases, Fund support is the way of starting activities and developing awareness of and response to the issue involved. The co-operation of others in these fields will be enlisted once the relevance of their work to the overall environmental problems thus tackled has been identified. Important examples are GEMS and IRS, as well as the so-called "future programmes", which in their initial phase mostly call for the direct intervention of the Fund through internal projects.

5. Once situations susceptible of intervention by the Environment Fund have been identified along the lines described above, a set of criteria might have to be developed to determine in concrete terms whether a specific action should be encouraged by financial support from the Fund and be made the object of a project. For instance:

(a) The action should clearly support priorities set by the Governing Council;

(b) The support from the Fund should meet acceptable cost-benefit criteria, from the point of view of the expertise and support provided by the co-operating agency or supporting organization and the importance of the results expected;

(c) Intervention by the Fund should favour projects capable of generating follow-up action programmes, such as projects that provide Governments, agencies and supporting organizations with orientation and guidance in the development of their own respective programmes;

(d) Projects should preferably reflect the maximum concentration of resources compatible with the number and complexity of priority areas determined by the Governing Council, as well as with the need for limited actions at the initial stage of programme development;

(e) Dissemination of data and recommendations should be given special attention, so as to encourage action in situations where knowledge already exists;

(f) The overall Fund programme should present a reasonable geographical balance, as well as a reasonable balance among co-operating agencies, supporting organizations and projects under direct execution (internal projects);

(g) The support from the Fund should be needed to ensure that the objective to which it is addressed is met. In other words, support should not be provided unless financing is not available under satisfactory conditions from alternative sources.

6. These considerations are not put forward in a final or absolute sense. They are intended to point to the nature and direction of the effort which the UNEP secretariat would undertake in the coming year, if encouraged to do so by the Governing Council, with a view to developing a more precise and elaborate framework of criteria for the selection of projects.

7. In order to give an overview of the use of resources for Fund programme activities, Table I presents, at the level of budget lines, the actual expenditures incurred for such activities in 1973 and 1974 and the proposals of the Executive Director for the apportionment of resources for Fund programme activities for 1975 (revised), 1976 and 1977.

8. Table II presents a summary of the proposed apportionment of resources for Fund programme activities for 1975 (revised), 1976 and 1977.

9. The document presents the Fund programme proposals largely in the same order and sequence of activities as the proposed programme contained in document UNEP/GC/31.

10. With a view to placing new proposals in the perspective of Fund programme activities already undertaken, the projects approved under each activity in 1973 and 1974 are listed, with their number, and with an indication of the total value of commitments thus made. Additional information on each project (name of co-operating agency or supporting organization, cost to UNEP, cost to others, duration, status of implementation) will be found in the report on the implementation of the Fund programme in 1974 (UNEP/GC/40), which should be read in conjunction with the present document. It is hoped that in future years a more analytical presentation of past and current activities may be provided as background information for the consideration of new proposals.

11. Finally, the document presents a proposal for a decision by the Council approving the apportionment for Fund programme activities for 1975 (revised), 1976 and 1977 and the forward commitment authority of the Executive Director for 1978 and 1979.

T A B L E I

Trends in Fund expenditures (1973 and 1974) and in the
proposed apportionment of resources (1975, 1976 and 1977)

Programme Activity	1973		1974		1975		1976		1977	
	\$000	%	\$000	%	\$000	%	\$000	%	\$000	%
Human settlements and health	175	42	846	16	4,550	23	6,350	23.5	8,700	25
Ecosystems <u>a/</u>	14	3	1,398	27	4,400	22	5,900	22	6,800	19.5
Environment and development	69	16	438	8	2,500	12.5	3,550	13	5,000	14
Oceans	7	2	501	9.5	2,300	11	3,000	11	4,000	11
Energy	-	-	59	1	300	1.5	600	2	1,000	3
Natural disasters <u>b/</u>	-	-	-	-	200	1	200	1	200	0.5
Earthwatch	40	10	494	9.5	1,900	10	2,200	8	2,600	8
Supporting measures	133	27	1,020	19	3,000	15	3,900	15	5,200	14
Environmental management	-	-	63	1	200	1	400	1.5	600	2
Development of the programme	-	-	466	9	650	3	900	3	900	3
Total	418	100	5,285	100	20,000	100	270,000	100	35,000	100

a/ In 1973 and 1974 appeared as two separate programme activities

b/ In 1973 and 1974 included in Future development of the programme.

TABLE II
Summary of proposed apportionment of resources
(1975, 1976 and 1977)
(in US \$ million)

	1975	1976	1977
I. PRIORITY SUBJECT AREAS			
A. Human settlements and habitat	2.85	4.05	5.70
1. General development of human settlements	0.50	1.80	3.50
2. Habitat	1.27	-	-
3. IHHSF	0.60	1.50	1.20
4. Human settlements technology	0.48	0.75	1.00
B. Health of people and of the environment	1.70	2.30	3.00
1. Human and environmental health	0.90	1.20	1.50
2. Pest management systems	0.80	1.10	1.50
C. Terrestrial ecosystems	4.40	5.90	6.80
1. Arid lands	1.40	1.90	2.10
2. Tropical woodlands	0.80	1.00	1.10
3. Other ecosystems	0.15	0.25	0.35
4. Ecosystems, sites and samples	0.20	0.30	0.40
5. Endangered species	0.15	0.30	0.40
6. Soils	0.50	0.65	0.75
7. Water	0.50	0.65	0.75
8. Genetic resources	0.70	0.85	0.85
D. Environment and development	2.50	3.55	5.00
1. Integrated approach	0.10	0.15	0.20
2. Eco-development	0.45	0.55	0.60
3. Socio-economic impact	0.30	0.45	0.60
4. Natural products	0.25	0.40	0.60
5. Technology	1.10	1.40	1.90
6. Industry	0.20	0.50	0.90
7. Industrial location	0.10	0.10	0.20

T A B L E II (Cont.)

	1975	1976	1977
E. Oceans	2.30	3.00	4.00
1. Regional activities	1.20	1.50	2.10
2. Marine pollution	0.60	0.80	1.00
3. Living marine resources	0.40	0.60	0.80
4. International agreements	0.10	0.10	0.10
F. Energy	0.30	0.60	1.00
G. Natural disasters	0.20	0.20	0.20
II. FUNCTIONAL TASKS			
A. Earthwatch	1.90	2.20	2.60
1. GEMS	1.00	1.20	1.60
2. IRS	0.90	1.00	1.00
B. Supporting measures	3.00	3.90	5.20
1. Information	0.50	0.75	1.00
2. Education and training	1.25	1.75	2.20
3. Technical assistance	1.25	1.40	2.00
C. Environmental management	0.20	0.40	0.60
III. DEVELOPMENT OF THE PROGRAMME	0.65	0.90	0.90
A. Outer limits	0.30	0.50	0.50
B. International environmental law	0.05	0.10	0.15
C. Comprehensive theory of comparative risk	0.05	0.05	0.05
D. Trees	0.05	0.05	0.05
E. Development of offshore resources	0.10	0.10	0.10
F. Antarctica	0.10	0.10	0.10
TOTAL	20.00	27.00	35.00

II. PRIORITY SUBJECT AREAS

A. HUMAN SETTLEMENTS AND HABITAT

Proposed allocation

1975: \$2.85m	1976: \$4.05m	1977: \$5.70m
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12. This area covers the following sub-areas:

1. General development of human settlements
2. Habitat
3. International Habitat and Human Settlements Foundation (IHHSF)
4. Human settlement technology.

1. General development of human settlementsProposed allocation

1975: \$0.5m	1976: \$1.80m	1977: \$3.45m
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13. Funds in the amount of \$43,000 were committed in 1973 and 1974 in this area for: publication of guidelines and criteria documents on the planned prevention of health hazards in transitional settlements (0101-73-007); provision of advisory services to the Development Authority, Dodoma, Tanzania, in preliminary planning of the new capital city (0302-RB-74-001); preparation of a paper and a report which were presented at the Stockholm Symposium on Population, Environment and Development (0101-73-001 and 0101-73-004), and development of a project on the comprehensive and integrated development of existing slums and marginal settlements and communities (0101-74-003, P.A. 1).

14. Follow-up and new activities to be initiated in 1975-1977 include:

(a) The development and co-ordination of a global research effort aimed at obtaining a better understanding of human settlements as ecosystems. This programme will be undertaken in co-operation with UNESCO, INTECOL and other agencies and supporting organizations, as well as a number of research institutions in both developing and developed countries;

(b) Preparation of detailed case studies in selected countries with a view to obtaining a solid basis upon which decision-makers can prepare and adopt policies and programmes aimed at obtaining a more environmentally sound distribution of population, and a network of human settlements that better satisfies the needs and conditions in each country;

(c) Identification on a regional and sub-regional basis, as appropriate, of a network of institutions which, with support from UNEP and other sources, would undertake continuous and intensive seminars aimed at sensitizing the middle-level decision-maker to the environmental dimension of human settlements planning and operation. The aim of these courses would not be to provide the participants with any particular high-level technical expertise, but rather to expose alternative methodologies for arriving at solutions to local human settlements problems;

(d) Selection of a few sites in different ecological and socio-cultural environments where the comprehensive environmentally sound approach to the improvement and upgrading of existing slums will be tested on a pilot project basis. Special emphasis will be placed on ensuring the participation of the population concerned. These sites will serve as training and demonstration sites and will provide direct feedback for any necessary further research and development (as a follow-up to projects 0101-73-007, 0101-74-003 P.A. 1);

(e) Initiation of the task of systematizing and scientifically determining the best way of disseminating the extensive information and experience that is being gained world-wide in the field of human settlements. This will involve identifying different target populations and determining what their information needs are and how best those needs can be satisfied. The methodology developed in this effort will be applicable to other fields of activity;

(f) Urban planning of special demonstration value, such as the proposed new capital city of Tanzania at Dodoma (as a follow-up to project 0302-RB-74-001). Such efforts will provide a process by which the methodology of environmentally sound planning can be refined.

2. Habitat

Proposed allocation

1975: \$1.27m	1976: \$-	1977: \$-
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15. Prior to the second session of the Governing Council, two projects were approved, entitled "Preparation for Habitat 76" (0101-73-002) and "United Nations Conference-Exposition on Human Settlements, Vancouver, 1976" (0101-73-009). The total cost to UNEP was \$245,000. At its second session, the Governing Council authorized the Executive Director to use a sum of not more than \$1.5 million for 1974 and 1975 from the resources apportioned to the area of human settlements, human health, habitat and well-being (decision 15 (II)). This \$1.5 million was allocated under project 0100-74-001 in the amounts of \$230,000 in 1974 and \$1,270,000 in 1975. Further support to this activity is to be considered by the Council upon reviewing the report of the Secretary-General of the Conference (document UNEP/GC/35).

3. International Habitat and Human Settlements Foundation (IHHSF)

Proposed allocation

1975: \$0.6m 1976: \$1.5m 1977: \$1.20m

16. Prior to the second session of the Governing Council, a project entitled "Study on International Fund or Financial Institution for Human Settlements" (0101-73-005) was approved for a total cost to UNEP of \$137,600. At its second session, the Governing Council recommended to the General Assembly that a voluntary International Habitat and Human Settlements Foundation should be established from 1 January 1975, and that \$1 million should be entered specifically as an allocation for IHHSF in the budget line "Human settlements, human health, habitat and well-being" for the year 1975. The Executive Director was also authorized to utilize funds from the Fund Programme Reserve in 1974 for the financing of preparatory steps related to IHHSF, and approved a project worth \$123,000 for this purpose (RD-0103-74-001). Specific recommendations for the funding of activities of IHHSF by the Fund are presented in document UNEP/GC/36.

4. Human settlements technology

Proposed allocation

1975: \$0.48m 1976: \$0.75m 1977: \$1.0m

17. In 1973-1974 a sum of \$154,800 was committed for the following activities: a study on architecture and development in the Arab region (0101-73-003); a preparatory study on appropriate building materials and construction methods of low-cost housing and infrastructure (0101-74-001); the preparation of guidelines on the minimum requirements for basic sanitary services in human settlements in developing countries (0101-73-008); financing a meeting to prepare guidelines for hand-pumps (0101-74-002), support to the Inter-agency Panel of Experts on Rural Water Supply and Sanitation (0208-74-002); a study of traffic ~~restraints~~ in Singapore (0101-74-005); and a project on the applications of meteorology to human settlement planning (0101-74-004).

18. During the period 1975-1977, actions in the field of human settlements technology will fall within the framework of a global programme aimed at the design and construction of environmentally sound local communities which can be afforded both by the people and by the Government. The backbone of this multi-agency, multidonor effort will be a network of appropriate institutions, possibly structured on an eco-region basis. The main burden of the operational phase of the programme will fall on these local institutions. The attainment of the ultimate goal as stated above will necessitate the consideration, inter alia, of the following activities to be supported by the Fund of UNEP:

(a) Studies of ways and means of utilizing to the fullest extent possible locally available building materials, renewable resources and recyclable materials (partly as follow-up to project 0101-74-001);

(b) Support for the development of new shelter designs and community layouts that take into account local socio-economic, ecological and environmental factors and where possible traditional building designs, material use and construction methods (partly as follow-up to projects 0101-73-003 and 0101-74-001);

(c) Development of new low-cost methods of waste-water recycling and sewage disposal (with production of compost as an additional target), water saving devices and water supply methods (in part, as a follow-up to projects 0208-74-002 and 0101-74-002);

(d) Promotion of studies on the possible use of different types of self-help mechanisms and labour-intensive methods, as well as new methods of energy conservation and utilization, in the development of human settlements.

19. The programme for human settlements technology will not only include a strong research component, but also follow through with pilot and demonstration projects. These will be fully documented as case studies so that appropriate methodologies for the development of human settlements can be devised. The relationship between the above programme for human settlements technology and the slum and squatter settlements improvement programme is very close, and in many cases the same local and international institutions will be involved in both programmes.

B. HEALTH OF PEOPLE AND OF THE ENVIRONMENT^{1/}

Proposed allocation

1975: \$1.70m	1976: \$2.30m	1977: \$3.00m
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20. This area includes the following sub-areas:

1. Human and environmental health
2. Pest management systems.

1. Human and environmental health

Proposed allocation

1975: \$0.9m	1976: \$1.20m	1977: \$1.50m
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21. In 1973 - 1974 \$775,000 were committed to support the following activities: the WHO Environmental Health Criteria Programme aimed at producing criteria documents and primary protection standards for the

^{1/} Activities in this priority area are related to GEMS and IRS.

implementation of practical programmes in environmental health and for the control of the quality of air, water, food and the working environment (0102-Pre.GC and 0102-73-003); an expert workshop in the Netherlands to develop a programme for the International Register for Potentially Toxic Chemicals (IRPTC) (0102-Pre.GC and 0102-74-004); financing of participation by experts from developing countries in the WHO/WMO Technical Conference on the Observation and Measurement of Atmospheric Pollution held at Helsinki (0102-Pre.GC); support for the work of the FAO/WHO Codex Alimentarius Commission on international standards for pollutants in food and strengthening of capabilities to assist developing countries in food control (0102-73-002); technical consultations on the FAO/WHO food contamination monitoring programme (0102-73-004); environmental health monitoring and epidemiological research for Latin America (0102-73-005); the development of environmental health criteria for planning of residential environment and housing (0101-73-013) guidelines for the planned prevention of health hazards in transitional settlements (0101-73-007); minimum requirements for basic sanitary services in human settlements in developing countries (0101-73-008); an IAEA/WHO seminar to study the radiation dose to the population from the peaceful uses of atomic energy, including the nuclear industry (0102-74-001); studies of the measures to be taken in international co-operation in the long-term management of high-level and alpha-bearing radio-active waste, which will be continued during the period 1975-1976 (0102-74-002); the preparation of new primary standards for radiation protection (0102-74-003); and proposals for the development of an environmental statistics programme (0102-73-001).

22. The activities on which the Fund of UNEP will concentrate its financial support are environmental health criteria and their use, registry of potentially toxic chemicals, food contamination control, epidemiological indices of environmental exposure, radiological protection problems and environmental statistics.

22.bis. Follow-up and new activities to be supported in 1975-1977 will include:

(a) Preparation of an "Overview in the area of environmental health, which will identify the nature and scope of the problem, review relevant current activities of international significance, identify major needs and gaps in the action being taken and point to priorities for future in action terms of collection and exchange of information, research, training and application of existing knowledge;

(b) Support for programmes designed to facilitate the use of the results of the environmental health criteria programme, particularly for the protection of quality of air, water, food and the working environment, recommended by expert meetings financed under projects 0102-Pre.GC and 0102-73-003; continued development of environmental health criteria for pollutants specified in a second priority list for noise and for other physical factors;

(c) Continuation of support for the development of environmental health criteria for planning of residential environment and housing (0101-73-013);

(d) Continued support for a co-ordinated food contamination control, inspection and research programme, with special emphasis given to strengthening Codex Alimentarius activities, to the abatement of mycotoxins, to the development of a pilot regional project in Africa, and to relevant training activities (0102-73-002 and 0102-73-004);

(e) Collection of data on levels of pollutants in the environment and the human body in order to identify their sources and assess their effects. As a test, this assessment will first be made for some isolated pollutant in all media, and similar assessments will follow for other pollutants on the basis of the experience gained;

(f) A programme for the establishment of IRPTC resulting from the recommendations of the Expert Workshop held in the Netherlands financed under project 0102-74-004, to be initiated by convening an expert task team to develop detailed plans for pilot projects as recommended by the Workshop;

(g) Harmonization and improvement of methods for epidemiological studies linked to environmental exposure on the basis of recommendations of a scientific group to be convened by UNEP and WHO;

(h) Finalization and publication of the guidelines for basic sanitary services in human settlements in developing countries, compiled under project 0101-73-008;

(i) The study and prevention of risks to human health caused by radioactive contamination from the peaceful non-medical uses of atomic energy, including the nuclear industry. This would include co-operation with specialized agencies and others for the long-term management of radioactive wastes and the establishment of registers of releases of significant radioactive material and wastes into the biosphere (0102-74-001 and 0102-74-002);

(j) Development of an Environmental Statistics Programme (which will encompass not only the health aspects but other areas of the Environmental Programme), following proposals made under project 0102-73-001.

23. Many of the activities outlined above are covered by the regular programme of other agencies, particularly FAO and WHO. The role of the Fund will be to provide:

(a) Partial financial support to accelerate certain ongoing activities such as the development of environmental health criteria, standards for food contaminants and radiological standards, and

(b) Support for and acceleration of the environmental work of other agencies designed to protect human health and well-being.

UNEP will take the initiative where required in respect of programmes covering the comprehensive aspects of environmental problems which cut across the mandates of other agencies, as in the case of the development of IRPTC or the environmental statistics programme.

2. Pest management systems

Proposed allocation

1975: \$0.8m

1976: \$1.10m

1977: \$1.50m

24. In 1973-1974 \$215,000 were committed for the following activities: technical consultations on monitoring the impact of residues resulting from uses of agricultural pesticides in developing countries (0102-74-005); a task force meeting in preparation for the conference on environmental control of schistosomiasis to be held in Egypt in 1975 (0102-74-006); technical consultations on a global UNEP/FAO programme on integrated pest control of major pesticide-consuming crops (0205-73-001); and the first phase of an environmental and economic study of the consequences of pesticide use in cotton production in Central America (0205-73-002).

25. Activities in this field have been or are being initiated by convening small task forces of experts on each of the three selected pests (insect pests of cotton, vectors of malaria and snail vectors of schistosomiasis); a task force on schistosomiasis has already been convened, on 30 August 1974 at Geneva (0102-74-006). These task forces will suggest the best way of co-ordinating the existing co-operative activities with respect to each pest and work out proposals for a transnational or world-wide plan of action to be considered by a symposium or conference in which all interested Governments and regional and international governmental and non-governmental organization will participate. Major roles in such co-operative efforts are expected to be played by WHO, FAO, UNESCO, the World Bank, UNDP and such other funding organizations as the Rockefeller, Ford and Clark Foundations in the United States and the Canadian and Swedish International Development Agencies.

26. Other activities expected to be supported in 1975-1977 are:

(a) The international conference on schistosomiasis, which will consider, inter-alia, the ecological and habitat control of schistosomiasis;

(b) A meeting of experts to develop a multinational programme for environmentally sound pest management systems for the control of vectors of malaria, to be held in Peru in November 1975;

(c) A meeting of governmental experts to develop a programme for the ecological and habitat management of cotton pests, to be held at Teheran towards the end of 1975;

(d) Regional training programmes in integrated pest management control (0205-73-001);

(e) The programme of the international research institutes of the Consultative Group on International Agricultural Research (CGIAR) in the field of environmentally sound pest management systems;

(f) Collaboration in the design of methodology for research and application of environmentally sound pest management systems, including the surveillance of changes in disease vectors as related to environmental conditions;

(g) Research into the impact of pesticide residues in developing countries;

(h) Preparation of an "Overview" in the area of ecological and habitat pest management which will identify the nature and scope of the problem, review relevant current activities of international significance, identify major needs and gaps in the action being taken and point to priorities for future action in terms of collection and exchange of information, research, training and application of existing knowledge.

27. In addition, the Fund will play a catalytic role in facilitating technical co-operation and helping to channel financial resources to the appropriate users.

C. TERRESTRIAL ECOSYSTEMS, THEIR MANAGEMENT AND CONTROL

Proposed allocation

1975: \$4.4m	1976: \$5.9m	1977: \$6.8m
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28. This area covers the following sub-areas:

1. Arid land and grazing land ecosystems
2. Tropical woodland and forest ecosystems
3. Other ecosystems (general, mountains, islands, etc.)
4. Ecosystems, sites and samples (national parks and reserves)
5. Endangered species and wildlife
6. Soils
7. Water
8. Genetic resources.

29. Financial support to the terrestrial ecosystems area of the Fund Programme will be concentrated mainly on arid, semi-arid and grazing lands and on tropical forests and woodlands and genetic resources. Lesser priority will be given to other ecosystems (mountains, islands, national parks and reserves), ecosystems, sites and samples, endangered species and wildlife, soils, and water.

1. Arid land and grazing land ecosystems

Proposed allocation

1975: \$1.4m

1976: \$1.9m

1977: \$2.1m

30. In 1973-1974 some \$462,000 were committed for: participation by scientists from developing countries in the First International Congress of Ecology (0602-73-001); preparation of a 1973 review of the world environmental situation of soils, deserts and ecosystems (0201-73-001); formulation of a medium- and long-term strategy for the rehabilitation of the drought-affected areas of the Sahelian and Sudano-Sahelian zones (0201-73-002); a regional meeting in West Asia to assess present activities in the region in the field of desertization and arid-land ecology (0201-73-003); a regional meeting in Niger to develop integrated ecological research and define training needs in the Sahelian region (0201-73-004); a technical meeting to formulate an international programme on the ecological management of arid or semi-arid rangelands in Africa and the Middle East (0201-73-006); a pre-programming study on the re-greening of Arab deserts (0206-74-002); a state of knowledge report on tropical arid and semi-arid grazing land ecosystems as a basic tool for research design, training and integrated planning by research workers, decision-makers and teachers (0202-73-006); and a regional meeting in Mendoza, Argentina, to assess present activities and design policies for research and programme implementation in arid zones (0206-74-004).

31. Also, in the field of water, as it affects arid lands/grazing lands, the Fund committed in 1973 and 1974 approximately \$31,800 for the preparation of a programme outline in the field of water (0203-73-001) and of detailed plans for a pilot project for the re-use of waste waters in West Asia (0203-73-002).

32. The future activities for 1975-1977 are expected to be directed towards both global and regional levels, and would cover general aspects, animal production, soil conservation and water quality.

1.1 General aspects

33. The Fund proposes to support a number of follow-up and new activities which would constitute the basis for the preparations for the 1977 United Nations Conference on Desertification:

(a) Establishment of a small secretariat (see document UNEP/GC/51) for the Conference, drawing also upon resources of the United Nations system, especially FAO, UNESCO and WMO;

(b) Assessment of the on-going activities of regional institutions and formulation of co-ordinated study programmes, research and pilot projects on arid land and grazing land ecology, with special emphasis on desertification problems. This will follow the lines recommended by the Mendoza meeting (November 1974, 0206-74-004), and those outlined in document UNEP/GC/31;

(c) Co-operation in the establishment of the mechanism recommended by EMASAR to co-ordinate and stimulate all United Nations activities that relate directly to range management and development, including education (follow-up to project 0201-73-006);

(d) Identification and support, at the regional level, of centres for the co-ordination of regional programmes in the field of arid lands/ grazing lands in co-ordination with the EMASAR Programme;

(e) Preparation, in each region, of ecological recommendations for development which would be followed by joint inter-governmental development programmes;

(f) Development of a methodology for unified approaches to the study and development of arid and grazing lands;

(g) Participation in the design of appropriate eco-development approaches in selected areas where it appears necessary to organize a balance of natural and man-made ecosystems;

(h) Development, on the basis of comprehensive socio-ecological inventories, of ecological atlases of arid regions and "guides to development of arid and grazing lands" based on such atlases;

(i) Co-operation with other United Nations bodies in the completion of a "state of knowledge" report on the major arid land and grazing land ecosystems in different geographical regions;

(j) Conduct of studies aimed at understanding the disturbances of hydrological regimes in arid and grazing lands. One study already identified is agroclimatological and hydrological studies in the Sudano-Sahelian zone, Sudan, Somalia, Ethiopia, Kenya and the territory of the Afars and Issars.

1.2 Animal production

34. The Fund proposes in 1975 to support activities in this field.

1.3 Soil Conservation activities (as they affect arid lands and grazing lands)

35. The new activities to be supported in 1975-1977 will be pilot projects on a selective basis under the following headings:

(a) Prevention of soil loss, especially where the process is rapid, as in arid lands;

(b) Re-vegetation of degraded ecosystems;

(c) Afforestation of marginal lands, for example around the Mediterranean;

(d) Stabilization of moving sand;

(e) Land-use development programmes and especially urbanization to prevent serious environmental consequences.

1.4 Water quality (as it affects arid lands and grazing lands)

36. The new activities to be supported in 1975-1977 are:

(a) Assistance to Governments in the form of pilot projects designed to improve water quality, mainly for use in agriculture and selected other purposes related to arid lands and grazing lands ecosystems;

(b) Initiation of water use and land management pilot projects which would include control of salinity and would introduce methods of providing fresh water where waterlogging and excessive salinity have impaired land to the point where it is unsuitable for agriculture.

2. Tropical woodland and forest ecosystems

Proposed allocation

1975: \$0.8m

1976: \$1m

1977: \$1.1m

37. In 1973 and 1974 approximately \$439,000 were committed for the following activities: a state of knowledge report on humid and sub-humid tropical ecosystems (0202-73-001); formulation of ecological principles and guidelines for the development of the American humid tropical forest ecosystems (0202-73-002); a regional meeting to develop integrated ecological research and training activities in Latin America with emphasis on tropical forest ecosystems (0202-73-003); formulation of ecological principles and guidelines for the development of tropical forest areas of South East Asia (0202-73-004); formulation of a tropical forest cover monitoring project (0202-73-005); a regional meeting to develop integrated ecological research training activities in South East Asia (0202-73-007); elaboration of a long-term programme for the detection and control of forest fires in order to protect the human environment (0206-74-003); a pre-programming activity on the atmospheric aspects of forest fires and their relationship to the human environment (0206-74-005); and a survey of tropical rain forest conservation in Venezuela (0206-74-006).

38. The proposed activities for 1975-1977 include:

(a) Implementation of a large-scale project for monitoring forest cover in tropical and sub-tropical areas (follow-up the project (0202-73-005). This activity will be co-ordinated and supported by GEMS;

(b) Implementation of a long-term programme for the detection and control of forest fires, including the improvement of fire detection systems (follow-up to project 0206-74-003);

(c) Integrated pilot projects on tropical forest ecology, including the effects of forests on the atmosphere, on water regimes and on soil-plant-animal relationships;

(d) Research to identify the minimum viable area of tropical forest ecosystems which should be conserved in different ecological regions;

(e) Design and implementation of a world survey and monitoring system on tropical rain forests to gather precise information about their present extent, status and evolution;

(f) Development of a limited number of integrated pilot research projects aimed at analysing the structure and functioning of "natural" forest ecosystems and adjacent managed and replacement systems;

(g) Creation of innovative techniques in tropical silviculture and agriculture, such as "tropical gardening", in order to improve soil capabilities, increase production and ensure long-term utilization. In this activity the Fund will co-operate with CGIAR.

3. Other ecosystems (general, mountains, islands)

Proposed allocation

1975: \$0.15m	1976: \$0.25m	1977: \$0.35m
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39. In 1975-1977, the Fund will support the following new activities:

(a) Development of a state of knowledge of some of those ecosystems that have not been subject to attention so far. As a pilot scheme, a study will be undertaken of the Andean mountain ecosystems;

(b) Inter-regional comparative studies on the origin and structure of ecosystems of the same type and with a similar general regime, but located in different regions having flora and fauna of different phylogenetic origins;

(c) Studies to improve the knowledge of adaptive strategies, colonization and other evolutionary phenomena relating to island ecosystems.

40. The above studies will be co-ordinated with and complementary to UNESCO's MAB programme and the programmes of other scientific and inter-governmental organizations active in this field.

4. Ecosystems, sites and samples (national parks and reserves)

Proposed allocation

1975: \$0.2m	1976: \$0.3m	1977: \$0.4m
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41. This sub-area covers general support, marine parks, and other sites and samples.

42. In 1973-1974, the Fund of UNEP committed approximately \$530,000 for the following activities: establishment of a co-ordinated system of national parks and reserves in East Africa (060-73-001); establishment of a co-ordinated system of national parks and reserves in Central America (0603-74-002); advisory services in ecology and conservation of living aquatic and terrestrial resources with special attention to endangered species, ecosystems, national parks and natural reserves (0605-75-001); development of a basis for the establishment of an international network of representative natural areas (0605-74-002); development of national parks and reserves in Africa and harmonization of their policies (0605-74-003), and establishment of a co-ordinated system of national parks and reserves in West Africa (0605-74-004).

43. The activities for 1975-1977 will include:

4.1 General support

44. Support will be given to:

(a) Creation of additional national parks and biological reserves, and of monitoring systems within these reserves, in such areas as semi-deserts, sclerophyllous forests, steppes, savanna, mountain ecosystems, islands and marine national parks (follow-up to project 0605-74-002);

(b) Training programmes for managers of national parks, biological reserves and wildlife (follow-up to project 0605-75-002);

(c) Preparation of an "Overview" of ecosystems, sites and samples, which will identify the nature and scope of the problem, review relevant current activities of international significance, identify major needs and gaps in the action being taken and point to priorities for future action in terms of collection and exchange of information, research, training and application of existing knowledge;

(d) Research to identify areas where no parks and reserves have been created, or, where they do exist, to evaluate their present state, management and representativeness;

(e) Co-operation with MAB Project No. 3 in the conservation of natural areas and of the genetic material they contain.

4.2 Marine national parks

45. Support will be given to:

(a) Creation of a network of marine parks in co-operation with MAB project 8. Two projects are already identified:

- A project covering the Northern Indian Ocean region, including the Red Sea and the Persian Gulf;

- A survey of marine parks in the Mediterranean;

(b) Support for the World Conference on marine parks in Tokyo in May 1975.

4.3 Other sites and samples

46. Support will be given to projects aiming at the restoration and conservation of certain key areas which play an exceptionally important role in the economy, ecological functioning and environmental well-being of the regions concerned.

5. Endangered species and wildlife

Proposed allocation

1975: \$0.15m	1976: \$0.3m	1977: \$0.4m
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47. In 1973-1974, the Fund of UNEP committed approximately \$101,000 for the creation of the secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (0601-73-001) and the International Conference on the Conservation of Wetlands and Waterfowl at Heiligenhafen (0601-74-001).

48. In 1975-1977 support will be given to:

(a) Preparation of an "Overview" of endangered species and wildlife, which will identify the nature and scope of the problem, review relevant current activities of international significance, identify major needs and gaps in the action being taken and point to priorities for future action in terms of collection and exchange of information, research, training and application of existing knowledge;

(b) Up-dating, at the national, regional and global levels, the list of plant and animal species threatened with extinction, including species of high scientific importance and potential economic value;

(c) A feasibility study for the establishment of protected areas in the arid and semi-arid zones of the Sahara desert and the Sahelian zone, with particular reference to addax, scimitar-horned oryx and associated species.

6. Soils

Proposed allocation

1975: \$0.5m	1976: \$0.6m	1977: \$0.75m
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49. In 1973 the Fund committed \$288,500 for the establishment of a methodology and a programme for assessing and monitoring soil degradation (0201-73-005); surface mining and the problem of reclamation of productive soils (0207-74-001); and the development of a programme promoting the use of organic materials as fertilizers (0207-74-002).

50. In 1975-1977, support will be given to:

(a) A global plan of action for conservation of the world's soil resources to be co-ordinated with FAO, UNESCO, WMO and SCOPE (follow-up to project 0201-73-005). These activities would comprise two parts:

(i) Assessment, mapping and monitoring of soil degradation and degradation hazards. The global inventory of soil degradation will take the form of a World Map. The monitoring component of the programme will be co-ordinated and supported by GEMS;

(ii) Implementation of a comprehensive network of national and regional action projects on soil conservation. Initially, three types of pilot projects will be implemented simultaneously in five different agro-ecological regions (five pilot projects), with the possibility of spreading into different continents. The main types of pilot projects would be:

- Assistance in establishing or strengthening national soil resources and conservation institutes;
- Organization of regional and national training seminars and of other training opportunities;
- Organization of soil conservation pilot and demonstration schemes at the country level;
- Convening of a symposium in Poland in 1976 on environmental problems arising out of strip mining of coal, with special attention to problems of preventing soil loss and restoring land to cultivation;
- Follow-up activities recommended by the FAO/SIDA/UNEP project 0207-74-002 on the promotion of the use of organic materials as fertilizers;
- Support for the soils programme of the international research institutes of CGIAR (new and more efficient sources of fertilizers, micro-organisms and mixed cropping systems).

7. Water

Proposed allocation

1975: \$0.5m	1976: \$0.65m	1977: \$0.75m
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51. Actions relating to water are included in other subject areas and sub-areas of the Fund programme. Under this section, the programme for financial support by the Fund for the period 1975-1977 will cover two main sub-areas: General (including the United Nations Water Conference) and Eutrophication.

7.1 General (including the United Nations Water Conference)

52. The Fund will support:

(a) The establishment of an integrated United Nations water programme. In creating the framework for this programme, the United Nations Water Conference could play an important role;

(b) The organization of the United Nations Water Conference to be held at Buenos Aires in 1977, especially through four preparatory regional meetings and through participation in an inter-agency group to review the entire water programme of the United Nations family;

(c) Assistance to Governments in making choices between alternative uses of available water;

(d) Assistance to Governments in the creation of water protection institutions and the development of multinational policies for water quality protection;

(e) Assistance to Governments in modifying water resources management to effect consecutive multiple use of available water;

(f) Assistance in establishing methodologies for the preparation of ecological atlases of river basins and support for pilot projects to test them;

(g) Corrective methods to improve water quality through support for various means of harvesting aquatic plants which could then be used as silage, animal food, fertilizers, energy sources, etc.;

(h) Promotion of waste water re-cycling, especially in rural areas and in arid zones where water is scarce, including studies of public health implications;

(i) Development of methods for protection and conservation through safe agricultural practices of water resources of specified quality, as well as non-polluted rivers, lakes and ecosystems sustained by them and underground water resources.

7.2 Eutrophication

53. Support will be given to studies to improve the level of knowledge of temperate woodlands and lakes, with special attention to eutrophication.

8. Genetic resources

Proposed allocation

1975: \$0.7m	1976: \$0.85m	1977: \$0.95m
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54. This sub-area covers general aspects, crops micro-organisms, forests and woodlands, fodder plants, and others (including animals).

55. In 1973-1974 some \$375,000 were committed to provide for: an Expert Group Meeting to outline plans for the establishment of micro-biological resources centres (0604-73-001); a pilot study on conservation of animal genetic resources (0604-73-002); formulation of guidelines on the most appropriate methodology of conservation of forest resources (0604-73-003); conservation of crop genetic resources (0604-73-004); a regional training course on conservation and use of micro-organisms for waste recovery and local fermentation in South East Asia (0604-73-005); strengthening of data centre on culture collections (0604-74-001); participation of scientists in a meeting in Australia on the development of specialized collection for the conservation and use of micro-organisms (0604-74-002); and an Expert Group Meeting on Rhizobia culture collection conservation (0604-74-003).

56. The Programme for 1975-1977 includes:

8.1 General aspects

(a) Preparation of an "Overview" of genetic resources which will identify the nature and scope of the problem, review relevant current activities of international significance, identify major needs and gaps in the action being taken and point to priorities for future action in terms of collection and exchange of information, research, training and application of existing knowledge;

(b) Support for the genetic resources programme of the international research institutes of CGIAR (animals, crops, including fodder plants, forest and micro-organisms) and special support for the work of the International Board for Plant Genetic Resources.

8.2 Crops

(a) Regional training programmes in the techniques for conservation and utilization of plant genetic resources;

(b) Follow-up activities, scheduled to start in 1976, recommended by project 0604-73-004 on conservation of crop genetic resources.

8.3 Micro-organisms

(a) Development of a network of world data centres on culture collections, containing an up-to-date registry of microbial genetic resources, with worldwide computer links for the rapid dissemination of information. Links may be established with IRS. The network will be especially geared to the needs of the developing countries. (Follow-up to projects 0604-74-001 and 0604-74-002);

(b) Follow-up activities recommended by project 0604-74-003 on Rhizobia culture collection conservation;

(c) Regional training programmes on conservation and use of micro-organisms for waste recovery and local fermentation (follow-up to project 0604-73-005);

(d) Activities designed to create new uses for genetic resources, especially micro-organisms for environmental management.

8.4 Forest and woodlands

(a) Research activities to ascertain possible new uses of tropical forest plants, to implement new conservation actions, including gene banks of forest resources and seed collection and conservation, and to reinforce existing mechanisms (follow-up activity recommended by 1973 project 0604-73-003).

8.5 Fodder plants

(a) Selection and breeding of fodder plants for the semi-arid zones.

8.6 Others (including animals)

(a) Support for existing institutions that form the nucleus of a global system of reserves and gene banks network. This activity will be co-ordinated with MAB project No.8;

(b) Follow-up activities recommended by 1973 project 0604-73-002 on conservation of animal genetic resources, with initial attention to the preservation of the Lake Chad kuri breed of cattle.

D. ENVIRONMENT AND DEVELOPMENT

Proposed allocation

1975: \$2.50m	1976: \$3.55m	1977: \$5.00m
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57. This area includes the following sub-areas:

1. Integrated approach to environment and development;
2. Eco-development;
3. Socio-economic impact of environmental measures and/or of their absence;
4. Natural products, including food (new and alternative products; rational uses of natural resources; substitution; natural versus synthetic products);
5. Technology (low-waste and non-waste technologies, recycling, and transfer of technology);
6. Environmental problems of specific industries;
7. Industrial location.

1. Integrated approach to environment and development

Proposed allocation

1975: \$0.10m

1976: \$0.15m

1977: \$0.20m

58. In 1973-1974 a sum of \$337,200 was committed to: the preparation and convening of the Symposium on Patterns of Resource Use, Environment and Development Strategies, held at Cocoyoc, Mexico, in October 1974, (projects 0401-73-001, 0401-73-003, 0401-73-004, 0401-74-002); a review of global simulation studies - Symposium on the Fundación Bariloche Studies (0401-74-003); study of the impact of environmental issues on the International Development Strategy and on the Action Programme adopted by the sixth special session of the General Assembly (0401-74-004); feasibility study for the examination of requirements to meet basic human needs without transgressing outer limits, leading to recommendations for specific objectives and terms of reference as well as means of achieving them (2001-74-002 and 2001-74-004).

59. Follow-up and new activities in 1975-1977 will include:

(a) Interdisciplinary research to analyse the development process as experienced in different parts of the world and by different types of societies, designed to define the role of technological development in development patterns, pinpoint the environmental variable in these patterns, and analyse how it has affected the process and vice versa. The aim is to prepare guidelines for the formulation of integrated development policies;

(b) A series of meetings at the regional level as a follow-up to the Cocoyoc meeting;

(c) An inquiry into the imperatives for international co-operation to meet basic human needs, financed under the Outer Limits section in 1974, also constitutes a follow-up to the above-mentioned meeting. The results of this project will be used in the deliberations of the special session of the General Assembly in September 1975. This phase of the inquiry will be followed by an inquiry into alternative means of ensuring the availability of basic resources and environmental capacity required to meet the basic human needs of all the world's people without transgressing the outer limits of the biophysical parameters on which all life depends, as a follow-up to projects 2001-74-003 and 2001-74-004;

(d) Research and analysis and critical evaluation of the impact of international trade on environment and development and studies of the ways and means of dealing with this impact;

(e) Critical analysis of the historical relationship between technology, environment and development;

(f) Support for programmes at the sectoral level to develop and test in practice methods of managing economic activity in accordance with environmental concerns. Pilot projects in specific areas of production;

(g) Formulating advice which could be offered to national Governments and to regional or local authorities on the formulation and implementation of development plans;

(h) Providing a theoretical basis for, and elaborating methodologies related to, the integration of the environmental dimension into development plans and their implementation and management.

2. Eco-development

Proposed allocation

1975: \$0.45m

1976: \$0.55m

1977: \$0.60m

60. In 1973-1974 a total of \$154,110 was committed to assist the creation of a documentation centre to collect and analyse techniques on eco-development and develop a programme with interested countries (2004-74-002; 2004-74-003); to support the first field study on eco-development in Papua New Guinea (2004-74-001) and for the preparatory activity to the Nyangoma project in Kenya, seen as a possible eco-development project (2004-74-004).

61. The new activities to be supported in 1975-1977 are:

(a) Development of suitable methodologies for the application of the eco-development concept;

(b) Promotion of studies on possible applications of the eco-development concept;

(c) Promotion of pilot projects of integrated research and training as a basis for ecologically-oriented development, focused on particular geographic units and involving constant feed-back between planners and research scientists.

3. Socio-economic impact of environmental measures and/or of their absence

Proposed allocation

1975: \$0.30m

1976: \$0.45m

1977: \$0.60m

62. This area covers non-tariff barriers and early warning systems, costs and benefit of environmental measures and socio-economic problems of labour-intensive methods.

63. During 1973-1974 a total of \$912,000 was committed to support: a study on trade barriers and restrictions resulting from environmental policies (0401-73-002); a study of the impact on employment and income in developing countries of measures to protect the environment in industrialized countries (0401-74-001); a study of the environmental component in the social evaluation and pricing of natural resources (0401-74-005); a study of the impact of environmental issues on the

foreign trade strategies of developing countries (0401-74-006), and development of a research programme to study and determine how psychosocial variables affect the relationship of man to his environment (0401-74-007).

64. Activities to be supported in 1975-1977 are:

(a) Development of a programme aimed at identifying the different types of impact of environmental measures in countries where they are applied, and study of the extent to which and the way in which these impacts are transferred;

(b) Support for research into methodologies for analysing the effects of environmental measures and for determining the cost of the absence of adequate policies. This will lead to development of the elements of environmental impact accountancy;

(c) Assistance to Governments in evaluating the socio-economic impact of the presence or absence of environmental measures;

(d) Support for programmes of research and studies designed to develop conceptually:

(i) Definition of criteria for selecting environmental measures whose effects it would be useful to know and study;

(ii) Selection of the variables through which the environmental, social and economic cost and impact of the measures can be evaluated and quantified;

(iii) Investigation of the machineries whereby the impact of environmental measures is internalized and/or transferred to other activities and/or countries, and of the resulting consequences;

(e) Studies on trade barriers and restrictions resulting from environmental policies, as a follow-up to project 0401-73-002;

(f) Development of suitable action for the development of an early warning system;

(g) Training activities and development of manuals on the socio-economic impact of environmental measures and/or of their absence;

(h) Case studies on the impact of environmental measures and of their absence;

(i) Cost of environmental measure in industrialization plans.

4. Natural products, including food (New and alternative products; rational uses of natural resources; substitution; natural versus synthetic products)

Proposed allocation

1975: \$0.25m	1976: \$0.40m	1977: \$0.60m
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65. In 1973-1974 the sum of \$132,000 was committed for a study of synthetic versus natural products - pilot project on the rubber industry (0402-73-005)

and a study on the impact of measures for the protection of the human environment on competitive positions of natural and synthetic materials (0402-73-007).

66. The new activities to be supported in 1975-1977 are:

- (a) Systematic studies of natural versus synthetic products (the first study was carried out on rubber in project 0402-73-005);
- (b) Studies of natural resources that are abundant and/or renewable, with a view to promoting their use on an environmentally sound basis;
- (c) Pilot projects to study the use of new products or new uses of existing natural products;
- (d) Scientific and technological research into new uses of specific and typical products which constitute the principal source of income of countries with a single export;
- (e) Studies and pilot projects on the utilization of agricultural and agro-industrial wastes.

5. Technology (low-waste and non-waste technologies, recycling and transfer of technology)

Proposed allocation

1975: \$1.10m	1976: \$1.40m	1977: \$1.90m
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67. In 1973-1974 a sum of \$90,000 was committed for case studies of four industrial development projects in developing countries (0402-73-002) and a study on the development of integrated industrial development complexes with minimized pollution (0402-73-003).

68. Activities to be supported in 1975-1977 are:

- (a) Preparation of an inventory of low-polluting technologies and of re-use and recycling;
- (b) Studies of the environmental consequences of the transfer of technology (particularly high-waste, high-pollution technologies and those that replace indigenous resources with imported ones);
- (c) Pilot studies and research on specific technological and scientific problems related to the environment;
- (d) Training courses, including evaluation of environmental engineering equipment at field level;
- (e) Studies of the effects of environmental protection policies on the transfer of technology and on the process of technological innovation;
- (f) Studies of advances in environmental engineering and sciences (in co-operation with ECE);
- (g) Transfer and adaptation of lowest feasible cost of environmentally sound technologies;

- (h) Support for the creation of indigenous research and development capabilities in the relevant fields of technology;
- (i) Development of methodologies for the adequate evaluation of technologies from the viewpoint of their impact on the environment;
- (j) Assistance to Governments in selecting environmentally sound technologies and assessing their environmental impact.

6. Environmental problems of specific industries

Proposed allocation

1975: \$0.20m	1976: \$0.50m	1977: \$0.90m
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69. In 1973-1974 the sum of \$45,000 was committed for: a study of environmental considerations in the leather industry (0402-73-001); a study of environmental considerations in the iron and steel industry (0402-73-004), and support to UNIDO to enable it to incorporate environmental elements in its in-plant training programme during the period 1975-1977.

70. Follow-up and new activities to be initiated with Fund financial support in 1975-1977 include:

(a) Conduct of an integrated investigation in accordance with the following outlines:

(i) Characterization of the environmental effects of engaging in the activity;

(ii) Analysis of the way in which the technological process used is a determining cause of these effects;

(iii) Examination of other causes of the environmental effects (causes which cannot be attributed to the technological process);

(iv) Social consequences of these environmental effects;

(v) Economic consequences;

(vi) Cost of eliminating the environmental effects described;

(vii) Lines of technological research which it would be useful to develop in order to contribute to adequate preservation of the environment;

(b) Continued support for the industry programme (follow-up to project 2004-73-004);

(c) Convening of a series of workshops for industrial sectors (petroleum, pulp and paper, automobile, iron and steel, aluminium, chemical, etc.) to examine in technical terms the principal environmental issues in each sector and provide information and guidelines to assist Governments in dealing with such issues.

7. Industrial location

Proposed allocation

1975: \$0.10m

1976: \$0.10m

1977: \$0.20m

71. No activities were financed in 1973-1974 in this area.
72. The following activities will be supported in 1975-1977:
- (a) Studies of the incorporation of environmental criteria in the process of industrial location;
 - (b) Integrated research programme on the process of industrial location in specific areas and for specific industries, including definition of methodologies for analysis and definition of location criteria;
 - (c) Research programme to examine current policies relating to the transfer of industry as a consequence of environmental protection policy (i.e. the relocation of industry to non-industrialized countries), and their impact on the process of transfer of technology, on the international division of labour and world trade, and on the development of developing countries;
 - (d) Assistance to Governments in developing countries in creating adequate structures to receive polluting industries with minimum damage to their environment and maximum benefit for their development.

E. OCEANS 2/

Proposed allocation

1975: \$2.30m

1976: \$3m

1977: \$4m

73. This area includes the following sub-areas:
- 1. Regional activities: the Mediterranean and other areas
 - 2. Global monitoring and assessment of marine pollution
 - 3. Monitoring and assessment of the state of living marine resources and their management
 - 4. International agreements.

2/ Activities in this priority area are related to GEMS and IRS.

1. Regional Activities:
the Mediterranean and other areas

Proposed allocation

1975: \$1.20m

1976: \$1.50m

1977: \$2.10m

The Mediterranean

74. In 1973-1974 \$133,000 were committed to: the Inter-Parliamentary Conference of Coastal States on the Control of Pollution in the Mediterranean Sea (0501-73-001); the convening of an international Workshop on marine pollution for the Mediterranean which proposed pilot projects as a basis for development of a pollution research and monitoring system for the Mediterranean (0501-73-003), and organization of the Inter-Governmental meeting on the Protection of the Mediterranean, to develop a plan of action, which was held at Barcelona from 28 January to 4 February 1975 (0501-74-006).

75. In 1975-1977, the Fund will support:

(a) A UNEP/ICSPRO inter-agency group to supervise the work of expert groups organized to develop detailed work plans for the implementation of the Action Plan for the Mediterranean, as approved by the Barcelona Meeting. This includes groups of experts on:

(i) A framework convention and protocol to be submitted to a plenipotentiary conference to be held 2-13 February 1976;

(ii) Integrated planning for development in the areas of waste treatment and pollution control, soil conservation, water recycling and management of living resources, including aquaculture;

(iii) Research and monitoring programmes;

(b) Studies of the costs and economic and social advantages of integrating environmental factors in development planning;

(c) Training for personnel at all levels required to implement the Action Plan for the Mediterranean;

(d) National surveys of urban sewage, waste disposal and treatment requirements, industrial effluents reaching the sea, river quality, and agricultural run-off problems, in co-operation with the development of the World Register of Rivers Discharging into the Oceans (0501-73-006);

(e) Pilot treatment plant design and construction;

(f) Preparatory phase of the General Fisheries Council for the Mediterranean pilot projects on effects of pollutants on living resources in the Mediterranean;

(g) Studies of the public health implications of the pollution of the Mediterranean.

Other areas

76. Activities to be supported in 1975-1977 are:

(a) UNEP participation in the forthcoming conference of riparian countries of the Persian Gulf to discuss ways and means of protecting the Gulf waters;

(b) Support to ALESCO for the preparation of draft conventions and certain studies in connexion with the plan they are developing for the protection of the Red Sea;

(c) Co-operation with the United Nations system for the integrated development of selected coastal areas.

2. Global Monitoring and Assessment of
Marine Pollution

Proposed allocation

1975: \$0.60m

1976: \$0.80m

1977: \$1.00m

77. In 1973-1974 \$403,500 were committed to support: a draft plan for the Global Investigation of Pollution in the Marine Environment (GIPME) which was reviewed by a group of experts, (0501-Pre.GC); followed by development of a comprehensive plan for GIPME to be executed within the Panel of Marine Research related to Pollution (SCOR/ACMPR/ECOR/ACORM/ICES/GESAMP) (0501-73-002); development of World Register of Rivers Discharging into the Oceans (0501-73-006); GESAMP studies of scientific methods for waste disposal into the sea (0501-74-002); GESAMP Working Group on evaluation of the hazards of harmful substances in the marine environment (0501-74-004); GESAMP Working Group on the Scientific Bases for the Determination of Concentrations and Effects of Marine Pollutants (0501-73-004); seminar on the application of remote sensing to water pollution detection and survey to assist in the preparation of regional agreements on the protection of specific bodies of water (0501-74-005); preparation of world directories of data on contaminants in aquatic organisms (0502-73-003); preparation of a Caribbean Regional Marine Pollution Workshop to assess marine pollution problems and evaluate research, monitoring and pollution control in the Caribbean (0501-73-005); and the development of a research programme to study the behaviour of pollutants in warm waters in the Persian Gulf and to set up the necessary facilities and instrumentation to carry out such research (0501-74-001).

78. Follow-up and new activities to be supported in 1975-1977 are:

(a) Development of a programme for GIPME to be implemented by governmental and non-governmental institutions such as GESAMP, SCOR, ICSU (0501-74-004).. The main components of this programme would include baseline studies to determine the present distribution of pollutants in the marine environment, mass balance studies to incorporate data on major pollutant sources, transfers and fates of pollutants in the marine environment, and development of basic standards for exposure efforts to control marine pollution;

- (b) Study of diffusion, dispersion and self-purification processes of pollutants in rivers;
- (c) Development of a long-term training programme on the monitoring of contaminants in the aquatic environment;
- (d) The holding of an international workshop on marine pollution in the Pacific;
- (e) Development of aquatic sciences and fisheries abstracts pollution files within the FAO Aquatic Sciences and Fisheries Information System (ASFIS);
- (f) Studies on the pathways of marine pollution;
- (g) The holding of a Workshop to develop guidelines for the control of pollution including its health aspects in the Caribbean (follow-up to project 0501-73-005);
- (h) Preparation of an "Overview" in the area of marine pollution that will identify the nature and scope of the problem, review relevant current activities of international significance, identify major needs and gaps in the action being taken and point to priorities for future action in terms of collection and exchange of information, research, training and application of existing knowledge.

79. Activities in this sub-area are also related to GEMS and the international environmental law programme.

3. Monitoring and assessment of the state of aquatic living resources and their management

Proposed allocation

1975: \$0.40m	1976: \$0.60m	1977: \$0.80m
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80. In 1973-1974 \$415,000 were committed to support: the study and review of effects of pollutants on living aquatic resources, and scientific basis for monitoring (0502-73-001); development of a system for monitoring world fishery resources as one facet of FAO's programme "world appraisal of fishery resources" (0502-73-002); the convening of a panel to study the effects of ionizing radiation on aquatic organisms and ecosystems, to serve as a basis for evaluating the effects of releases from nuclear facilities into the aquatic environment (0501-73-009), and support for activities of the working party on Marine Mammals (0502-74-001) set up by FAO's Advisory Committee on Marine Resources Research.

81. Follow-up and new activities for 1975-1977 are to be developed from the recommendations of completed projects, and will include:

- (a) Support for the action taken by FAO's Fishery Councils to survey living resources and develop monitoring methodologies for assessing the state of living resources with a view to identifying the threats to which they are exposed, as a basis for management action;

(b) Continued support for publication of guidelines and recommendations for research, monitoring and the management and conservation of marine mammals (follow-up to project 0502-74-001);

(c) Preparation of an "Overview" in the area of living resources which will identify the nature and scope of the problem, review relevant current activities of international significance, identify major needs and gaps in the action in terms of collection and exchange of information, research, training and application of existing knowledge;

(d) Continued support to update the FAO review on the status of exploitation of world fish resources, in accordance with General Assembly resolution 3133 (XXVIII).

4. International Agreements

Proposed allocation

1975: \$0.10m	1976: \$0.10m	1977: \$0.10m
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82. In 1974, \$38,000 was committed to support UNEP participation in the Law of the Sea Conference (0501-74-003).

83. Follow-up and new activities for 1975-1977 will include:

(a) Continued UNEP participation in the Law of the Sea Conference to ensure that environmental aspects are taken into consideration, in particular the responsibility of sponsoring agreements for the control of land based sources of pollution;

(b) Development of regional agreements for the protection of the marine environment and its living resources against the harmful effects of marine pollution;

(c) Servicing of and technical support for international and/or regional agreements where required by the contracting parties.

F. ENERGY

Proposed allocation

1975: \$0.3m	1976: \$0.6m	1977: \$1m
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84. In 1973-1974 some \$247,000 was committed to support a meeting on non-conventional energy sources (0700-73-001) and a review of the impact of the production and use of energy on the environment and the role of UNEP (0700-74-001). The review will be submitted to the Governing Council at its third session and the guidance of the Council will be sought in respect of the further development of activities in this area. The proposed allocation of resources anticipates Governing Council guidance on carrying out certain of the recommendations emerging from the review.

G. NATURAL DISASTERS

Proposed allocation

1975: \$0.2m

1976: \$0.2m

1977: \$0.2m

85. This area includes the following sub-areas:

1. Survey and analysis of existing knowledge;
2. Identification of possible means for the immediate practical application of existing knowledge;
3. Development and dissemination of new knowledge and improved techniques.

86. In 1973-1974 \$275,000 were committed to support: a study of the state of the art in disaster prevention and mitigation, leading to the formulation of guidelines and the collection of information on the subject (0101-73-011, 0101-73-012 and 2002-74-002); a study of the implications of natural disasters for the planning, construction and management of human settlements, leading to guidelines in the form of manuals (0101-73-006 and 0101-73-010); quantitative evaluation of tropical cyclone disaster risks, the first phase of which would consist of the development of the required methodology (2002-74-001), and the world survey of disaster damage - Phase 1 (2002-74-003).

87. Follow-up and new activities for 1975-1977 are:

- (a) Continuation of the project on state of the art in disaster prevention and mitigation (2002-74-002);
- (b) Continuation of the project on the quantitative evaluation of tropical cyclone disaster risks - the second phase to consist of pilot projects to test and improve the methodology, and the last phase to focus on expanding the applications of the techniques thus developed (2002-74-001);
- (c) Establishment of improved early warning systems for natural disasters and other steps which should be taken to mitigate the harmful effects of natural disasters;
- (d) Development of improved techniques for reducing the extent of damage to buildings and public works from extreme natural phenomena.

III. FUNCTIONAL TASKS

A. ENVIRONMENTAL ASSESSMENT: EARTHWATCH

Proposed allocation

1975: \$1.90m	1976: \$2.40m	1977: \$2.80m
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88. Earthwatch includes:

1. The Global Environment Monitoring System (GEMS)
2. The International Referral System (IRS)

1. Global Environmental Monitoring Systems (GEMS)

Proposed allocation

1975: \$1.0m	1976: \$1.40m	1977: \$1.80m
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89. The Fund will provide major financial support for the design, development and implementation of GEMS. The Fund could not and should not fund the establishment of whole new national networks, but will make recommendations to funding institutions and provide some technical assistance to help establish such networks. It will, however, provide or arrange for the establishment of new stations and instruments in developing countries, where necessary, for the operation of the global system.

90. In 1973-1974 some \$1,430,000 was committed to support: a meeting of experts held in April 1974 to prepare a report on monitoring of pollutants in terrestrial and freshwater ecosystems and the role of MAB (0800-73-004); an inter-governmental meeting on monitoring held in February 1974 which made recommendations for the identification of pollutants, the definition of objectives, principles and programme goals and the monitoring of environmental parameters in addition to priority pollutants (0800-73-005); management of the GEMS, under which a Director of GEMS as a "programme activity centre" has been appointed at UNEP headquarters (0800-74-004); development of the Integrated Global Ocean Station System (IGOSS) pilot project on Marine Pollution Monitoring (0501-74-004) with particular emphasis on oil pollution; studies on the development of environmental surveillance programmes at local, national and global levels related to the release of radio-active and other contaminants in nuclear programmes, leading to the formulation of an international monitoring programme (0800-74-002); a programme for development of a Manual to make available to participating countries the recommended routine and reference methods for the measurement of common air pollutants in urban areas (0800-73-006); development of a programme for water pollution monitoring and a pilot project for the control of water quality in the Danube River Basin (0800-73-009); technical research and development in environment

monitoring, carried out by SCOPE (0800-74-003); monitoring of background pollution in the atmosphere, as part of an ongoing WMO activity to establish baseline and regional stations to monitor long-term changes in atmospheric composition that may cause climatic changes (0800-73-008 and 0800-74-006), and a meeting to enable the Monaco Laboratory to expand its intercomparison-intercalibration activities to include selected trace elements and chlorinated hydrocarbons (0800-73-008).

91. Follow-up and new activities to be supported in 1975-1977 will include:

(a) Continuation of activities initiated under projects 0800-73-008 and 0800-74-006 for the development of networks of background air pollution stations;

(b) Development of criteria for siting air pollution monitoring stations in urban areas;

(c) Studies of the development of environmental surveillance programmes related to the release of radioactive and other contaminants in nuclear programmes, (follow-up to project 0800-74-002);

(d) Extension of the WHO pilot air pollution monitoring programme leading to improvement of the validity and comparability of air pollution measurements (0800-73-006);

(e) The IGOSS pilot project on Marine Pollution Monitoring (Oil) (follow-up to project 0501-74-010), to initiate and expand an internationally co-ordinated programme for monitoring oil and petroleum hydrocarbons, initially in selected ocean areas, and acquire and exchange among nations inter-comparable data for making periodic assessments of the state and degrees of contamination of the marine environment;

(f) Implementation of the water quality monitoring programme developed under project 0800-73-009;

(g) Development of a marine environmental monitoring programme for the Indian Ocean region;

(h) Pilot projects for the development of a pollution monitoring system for the Mediterranean region formulated by the Mediterranean Regional Marine Pollution Workshop held in 1974 under project 0501-73-003.

92. In addition to the above follow-up and new activities, GEMS will finance those activities related to it which are incorporated in other priority areas of the programme.

2. International Referral System (IRS)

Proposed Allocation

1975: \$0.9m

1976: \$1m

1977: \$1m

93. This activity covers the expansion of IRS capabilities and creation of a broad network system of focal points.

94. In 1973-1974 \$1,370,000 was committed to support the plans for the pilot phase, experimental phase and implementation phase of IRS (0900-Pre.GC, 0900-73-001; 0900-73-002, 0900-73-003); the continued operation and development of the IRS under project 0900-74-003, which provides for the core staff of a "programme activity centre" located at UNEP headquarters, a task force of experts for the immediate implementation of IRS, a meeting of representatives of focal points in order to develop guidelines for focal points operation, and the establishment of communication channels with IRS and among focal points; the preparation of a thesaurus of environmental terms in English (0900-74-002); development of the inter-organizational and inter-disciplinary data and information management and referral system related to marine environmental data and information, aimed at publication of a brochure to serve as a first order referral mechanism and of a technical referral catalogue (0900-74-004); and support for the Environmental Law Information System of IUCN (0900-74-001).

95. Follow-up and new activities to be supported in 1975-1977 will include:

- (a) Operation of IRS with a Central Unit located in Nairobi (0900-74-003);
- (b) Establishment of an operation and Development Unit to meet the needs of UNEP's Programme and supporting activities in the field of information systems, particularly GEMS and IRPTC;
- (c) Investigations into the feasibility of setting up model IRS focal points;
- (d) Technical assistance and training seminars for IRS national staff working with IRS national focal points;
- (e) Meetings of technical experts at the regional or global level to ensure the effectiveness of IRS;
- (f) Establishment of a network of national, regional and sectoral focal points closely co-ordinated with the national UNISIST focal points system;
- (g) Modification of IRS with a view to improving applied methods of work;
- (h) Updating of the Thesaurus of Environmental Terms in English (0900-74-002);
- (i) Establishment of inventories of marine environmental data and information, development of the inter-organizational and inter-disciplinary data and information management and referral system related to marine environmental data and information;
- (j) Development of environmental legislation information systems.

96. In addition to the activities listed above, IRS will finance those activities related to it which are incorporated in other priority areas.

B. ENVIRONMENTAL MANAGEMENT

Proposed allocation

1975: \$0.20m	1976: \$0.40m	1977: \$0.60m
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97. In 1973-1974 a sum of \$368,900 was committed for: environmental advisory services to the Committee for Co-ordination of Investigations of the Lower Mekong Basin (2002-73-001 and 1000-74-002); support of a workshop on the application of remote sensing from space to problems of developing countries (1000-74-001); collection of information on the environment in Latin America (2003-73-003); preparation of a paper on environmental aspects of food production for the World Food Conference (RA-1000-74-002) and a workshop on a methodology of environmental assessment (0204-73-001).

98. The follow-up and new activities to be supported are:

(a) Specific activities among those proposed by the Mekong Committee Secretariat (follow-up to project 1000-74-002);

(b) Action programmes in Latin America on the institutional and legal framework for dealing with environmental problems (follow-up to project 2003-73-003), in consultation, as appropriate, with the Governments concerned;

(c) Pilot projects, including pre- and post-audit studies;

(d) Training courses and workshops for planners and engineers concerned with formulation and management of development plans, programmes and projects (including development of suitable manuals);

(e) Development of a generalized methodology of multi-objective and multi-level planning and decision-making procedures, including environmental dimensions in large-scale regional development planning;

(f) Establishment of procedures for the inclusion of the environmental dimension into economic planning and management techniques;

(g) Development of ecological and resilience indicators for environmental management.

C. SUPPORTING MEASURES: INFORMATION, EDUCATION, TRAINING AND TECHNICAL ASSISTANCE

Proposed allocation

1975: \$3.00m	1976: \$3.90m	1977: \$5.20m
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99. This functional task covers:

1. Information
2. Education and Training
3. Technical Assistance.

1. Information

Proposed allocation

1975: \$0.50m 1976: \$0.75m 1977: \$1.00m

100. Action in the field of public information will be pursued both through direct activities of the Division of Communication and through support for outside information activities. The Fund will concentrate on supporting the following tasks:

- Environmental information institutions and activities;
- World Environment Day
- Training programmes for communicators
- Media briefing centre
- Media assistance and support services
- Media research
- Publications.

(a) Support to environmental information institutions and activities

101. In 1973-1974 \$352,534 was committed to support: consultancy on still photo illustration system - Stages I and II - (0303-73-001 and 0303-73-002); consultancy on audio-visual illustration system (0303-73-003); establishment of the United States Centre for World Environment Information (0303-73-004); an IUCN project on policy shaping, environmental education and public awareness (0303-73-005); an ILO attitude survey of employers' and workers' organizations toward the protection of the environment outside the workplace (0303-73-006); an Office of Public Information (United Nations) television series on the human environment (0303-74-002); a study of the dissemination of environmental materials carried out by the International Institute for Environmental Affairs, London (0303-74-003) and an NGO Environmental Board meeting in Geneva (0303-74-004).

102. Some of the above projects are expected to lead to follow-up actions or new activities, such as photographic systems and audio-visual resources for UNEP: possible follow-up action as a result of project 0303-74-003; production of audio-visual and speaking aids; and audio-visual training programmes in the environmental aspects of industrial development.

103. Furthermore, it is intended to use the Fund's resources to expand UNEP's co-operation with the environmental information efforts of the United Nations system, and to strengthen the communication component, as appropriate, within Fund programme activities.

(b) World Environment Day

104. "World Environment Day 1974" (0303-74-001) aimed at producing and distributing materials which the print and audio-visual mass media used to provide a global dimension in their coverage of local and national events marking World Environment Day.

105. Continued and expanded support will be given in order to ensure the effective distribution of materials to the mass media on the annual occasion of World Environment Day. Evaluation of the usefulness and impact of the materials distributed will also be encouraged.

(c) Training programmes for communicators

106. Fund of UNEP has supported as a matter of high priority a programme of activities in this respect, and this will be further developed in consultation with the mass-media industry, professional associations and other United Nations bodies.

(d) Media briefing centre

107. A media briefing centre will be established in 1975 as an in-house activity with wide consultancy support. The proposed centre, which will be the equivalent of the Environment Programme Information Centre (EPIC) referred to in document UNEP/GC/14/Add.2 (Page 110), will have the following components:

(a) An environmental fact file service for journalists and broadcasters;

(b) A graphic photo reference system; and

(c) An audio-visual resources system.

(e) Media assistance and support services

108. This activity will include:

(a) A consulting facility for the film industry; and

(b) A display and exhibition advisory service.

(f) Media research

109. It is proposed to develop the following additional services:

(a) A target audience data bank;

(b) Media impact studies; and

(c) Media feedback services.

(g) Publications

110. In 1974 a total of \$17,100 was allocated for participation in the publication of an issue of UNICEF News on "The Child and the Environment". A number of proposals concerning publications for 1975-1977 are currently being considered. Publications for this period will include the "Overviews" on environmental health, pest management, ecosystems, sites and samples, endangered species, genetic resources, marine pollution and living resources of the sea, referred to elsewhere in this report.

111. The Revolving Fund (Information) will be the main source of financing the distribution and marketing of publications to be issued by UNEP. These will include primarily practical handbooks and manuals on particular environmental subjects. It is also intended to support the publication of a scientific journal covering the major studies prepared by consultants in specific areas of the environment.

2. Education and Training

Proposed allocation

1975: \$1.25m	1976: \$1.75m	1977: \$2.20m
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112. Efforts in 1975-1977 will be concentrated primarily on specialized training for Governments' planning, administrative and technical personnel and professionals, environmental education, including development of educational materials and curricula, and improvement of the research and training capabilities of institutions in developing countries.

(a) Specialized training

113. Support will be provided for specialized training programmes in key areas of environmental concern such as marine pollution; food contaminants; pesticide control; arid-land ecology; tropical forest ecosystems; genetic resources, human settlements and habitats (slum and building technology); IRS; GEMS; eco-development (environmental management), and mass public information networks.

114. UNEP's effort is aimed at the development or strengthening of the capabilities of Governments through the training of administrative and technical personnel at all levels concerned with environmental policy, planning and management and the organizing of colloquiums, workshops, symposiums or seminars for policy and decision-makers, the staff of educational institutions, and professionals (architects, engineers etc. ...).

115. In 1973-1974, approximately \$1,366,550 was committed to finance: a regional meeting on desertification and arid-land ecology (0201-73-003); training activities for environmental planning in Africa (0301-73-003); an East African seminar on development and environment (0301-73-004); a regional seminar on training of environmental conservation guards and officers (0301-73-005); reinforcement of the international post-graduate

course in integrated study and rational workshop for environmental training of practicing engineers (0301-73-013); a regional training course for technical staff for national monitoring networks (0301-74-001); a training course on development planning and the environment in Latin America (0301-74-002); an ESCAP roving seminar on environment and development (0301-74-004); a West African seminar for decision-makers on integrated environmental management (0301-74-007); a regional training course on tropical ecology (0301-74-008); environmental training of engineers in institutions in developing countries (0301-74-009); a seminar on ecology, forest resources and the environment (0301-74-010); the Symposium on Patterns of Resources use, Environment and Development Strategies (0401-74-002); a regional training course on conservation and use of micro-organisms for waste recovery and local fermentation (0604-73-005); a meeting on the development of specialized collections for the conservation and use of micro-organisms in developing countries (0604-74-002), and a workshop and seminar on the application of space remote sensing to the problems of developing countries (1000-74-001).

116. Follow-up actions and new activities to be supported in 1975-1977 would include:

- (a) Continued support to project 0301-73-007, Reinforcement of the international post-graduate course in integrated surveys (UNESCO);
- (b) Integrated research projects between countries in Latin America and repetition of training course in system ecology in Africa and Asia (follow-up to project 0301-73-009 with UNESCO);
- (c) Continued support to project 0301-73-010, International post-graduate course in integrated studies and rational management of natural resources (UNESCO);
- (d) Training course on development planning and environment in the Caribbean and Central America (follow-up to project 0301-74-002, ECLA);
- (e) Seminar on integrated environmental management for decision-makers in East Africa, Latin America and Asia (follow-up to project 0301-74-007, UNESCO);
- (f) Training course for traffic engineers, (follow-up to project 0101-74-005, study of traffic restraints in Singapore, World Bank);
- (g) International post-graduate course on integrated ecological approach to research and planning for Spanish-speaking students (UNESCO);
- (h) Introduction of environmental concepts in education and training for rural development (FAO);
- (i) Seminar for national planners and decision-makers on environmental priorities (UNESCO);
- (j) A similar environmental training course for practicing engineers in regions other than Asia (follow-up to project 0301-73-013 with UNESCO);

(k) Training programme series on food pollutants, arid lands and pest control;

(l) Training programme series for information officers and other personnel for IRS; and

(m) Expert group meeting on transportation and environmental planning.

(b) Environmental education

117. The Fund feels it has a special responsibility to support Governments' efforts in the field of environmental education. It will therefore devote substantial resources to assisting in the development of educational materials and school curricula for all levels (primary, secondary, college/university and adults), in teacher training and in the creation of new institutions or the strengthening of existing ones, especially in developing countries, with a view to improving their capability for research, training and education that include environmental dimensions.

118. In 1973 and 1974 approximately \$302,000 was committed to support: preparatory work on professional education in environmental management (0301-73-002); a symposium on environmental science education (0301-73-003); environmental education in the Arab region (0301-73-006); a pilot seminar on environmental education methodology in East Africa (0301-73-015); explanatory work on the establishment of an environmental science centre at Nairobi (0301-74-003); audio-visual and other teaching aids for workers (0301-74-005); development of a programme of environmental education (0301-74-006); and a seminar/workshop on environmental science education for teacher education in French-speaking Central Africa (0301-74-011).

119. Follow-up and new activities which are to be supported in 1975-1977 would include:

(a) Co-sponsoring with UNESCO a major international programme on environmental education leading to an international conference in 1976;

(b) Supporting an environmental science training programme in Asia with the Government of Iran; and

(c) Audio-visual training programmes in the environmental aspects of industrial development with UNIDO.

(c) Other activities

120. The Fund will also consider supporting in 1975-1977 activities which would include:

(a) The possible establishment of a programme activity centre on environmental education and training, the principal functions of which would be follow-up and monitoring of UNEP/UNESCO environmental education and training projects, and of education training programmes initiated by other

agencies and supporting organizations with UNEP; the world-wide collection of information on current activities in the field of environmental education and training and the pre-programming and planning of new initiatives in this area;

(b) Travelling exhibits aimed at awakening or reinforcing public awareness of environmental issues, particularly in developing countries;

(c) Organization of a network of environmental training and educational institutions to meet identified requirements in developing countries; strengthening of national institutions in the developing countries;

(d) Establishment of a UNEP fellowships programme for training to be provided by a number of eligible institutions.

3. Technical assistance

Proposed allocation

1975: \$1.25m	1976: \$1.40m	1977: \$2.00m
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121. This sub-area covers:

- Support for activities in priority areas of concern
- Support for environmental administration and legislation.

122. Technical assistance funds will be utilized mainly to provide expert services, study grants or fellowships, equipment, information materials and library facilities. They may also be used as additional inputs to agencies' own technical assistance programmes, and as a means of providing or supplementing expert advice on environmental matters during country programming exercises.

123. In general, UNEP will concentrate its technical assistance efforts on support for activities in priority areas of environmental concern and for environmental administration and legislation.

(a) Activities in priority areas of environmental concern

124. These areas include oceans, with particular attention to the Mediterranean; GEMS; IRS; genetic resources; human settlements (in particular, slums and building technology); eco-development; soil, water and pest management.

125. In 1973 and 1974 approximately \$30,500 was committed to support: assistance to the Development Authority, Dodoma, Tanzania (RB-0302-74-001); advisory services to the Government of Tanzania on industrial affluent pollution (RB-0302-74-002); and assistance to the Government of Papua New Guinea for the Wagani Seminar - The Melanesian environment: change and development (0302-74-003).

126. Activities to be supported in 1975-1977 will include:

(a) Steps towards the establishment of a "clearing house" whereby specific requests for technical assistance can be related to and serviced by Governments having the corresponding expertise;

(b) In relation to the strengthening of the UNEP regional representatives' capabilities, establishment of small regional advisory teams is planned, as an essential concomitant to overall technical assistance programme activities. In this connexion, UNEP co-ordination with United Nations Development Advisory Teams on a global basis would be envisaged;

(c) In support of the regional advisory teams, it is intended to establish country survey teams which will have the principle task of identifying environmental problems in developing countries and possible means of applying eco-development concepts to specific areas within these countries. These surveys will enable UNEP to formulate technical assistance programmes relevant to the specific problems concerned.

(b) Environmental Administration and Legislation

127. In 1973-1974 approximately \$19,000 was approved to finance: advisory services to the Governments of the Ivory Coast (0302-74-001), Thailand (0302-74-002) and Pakistan (0302-74-004).

128. Requests for technical assistance in the field of environmental-administration and legislation have now been received from many developing countries, and these requests are being scrutinized.

IV. DEVELOPMENT OF THE PROGRAMME

Proposed allocation

1975: \$0.65m	1976: \$0.90m	1977: \$0.90m
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129. This section includes the following areas:

- A. Outer limits
- B. International environmental law
- C. Comprehensive theory of comparative risk
- D. Trees
- E. Development of offshore resources
- F. Antarctica.

A. Outer limits

Proposed allocation

1975: \$0.3m	1976: \$0.50m	1977: \$0.50m
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130. This activity covers:

1. Climatic change
2. Weather modification
3. Increase of bioproductivity
4. Possible risks to the ozone layer.

1. Climatic change

131. During the period 1973-1974 some \$170,000 were committed to support an international study conference on the physical basis of climate modelling held at Stockholm in August 1974 (2002-73-002), and a follow-up project on climate changes as part of a pre-programming exercise to further define the observational requirements which should fulfill the specific scientific needs (2001-74-005).

132. Follow-up and new activities to be initiated in 1975-1977 will include assistance for the development and implementation of the programme dealing with climatic changes, in co-operation with WMO and other agencies. This programme covers:

- (a) Climatic modelling aimed at long-term possibilities of predicting climatic changes;
- (b) Practical implications of possible climatic changes in areas such as agriculture, food production, human health, etc.

133. Activities in this area may also fall within the scope of the international environmental law programme.

2. Weather modification

134. In 1974 some \$5,000 was committed to support the attendance of legal experts at a WMO meeting at Toronto, Canada, on weather modification (2001-74-003).

135. In 1975-1977 the Fund will support follow-up action on the recommendations of the Toronto Meeting for the development of general principles and operative guidelines on weather modification and related environmental phenomena, including their operational and research aspects.

136. Activities in this sub-area may also fall within the scope of the international environmental law programme.

3. Increase of bioproductivity

137. No activities were financed in 1973-1974 in this area. Fund support for activities in 1975-1977 will cover a survey of existing knowledge on bioproductivity in co-operation with the scientific community (i.e. ICSU, SCOPE, IUBS), and co-operation with FAO on practical steps to be taken for the application of existing knowledge. Support will also be given to basic research in this field.

4. Possible risks to ozone layer

138. No activities were financed in 1973-1974 in this area. Fund support for activities in 1975-1977 will cover consultations with WHO for the development of a programme to study the possible risks to the ozone layer, commencing with the compilation of information on the work already done in monitoring ozone in the stratosphere and on the research aimed at assessing the risks to which it is exposed, in order to assess the effects of man's activities and identify areas where the Fund may support research activity.

B. International environmental law

Proposed allocation

1975: \$0.05m	1976: \$0.10m	1977: \$0.15m
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139. The subject of international environmental law includes a number of on-going programme activities dealt with elsewhere in this document, such as marine pollution, weather and climate modification, endangered species and wildlife, shared natural resources, industry, legal advisory services and technical assistance.

140. In 1974 some \$38,000 was committed to support UNEP participation in the Law of the Sea Conference (see paragraphs 82 and 83 above).

141. Activities to be supported in 1975-1977 will include:

(a) Development of environmental law in international and national law-making activities;

(b) Studies of possible institutional ways to monitor the implementation of draft conventions and codes of conduct on environmental matters;

(c) Comparative studies of national environmental protection laws, as a means of generating ideas and rules for wider application by countries in their national contexts as well as for adaptation to the requirements of international environmental law;

(d) Provision of legal advisory services to developing countries for the development of legislation dealing with the environment and environmental management.

C. Comprehensive theory of comparative risk

Proposed allocation

1975: \$0.05m 1976: \$0.05m 1977: \$0.50m

142. In 1974 a sum of \$76,000 was committed to evaluate the severity of comparative risks to the environment in an international context. This evaluation was intended to contribute to a general theory of risk assessment in environmental situations and to suggest ways in which present knowledge can be utilized to construct a systematic framework of practical use in comparing environmental risks (2007-74-001). The results of this ongoing project will be used to develop further activities in this field.

D. Trees

Proposed allocation

1975: \$0.05m 1976: \$0.05m 1977: \$0.05m

143. No activities were financed in 1973-1974 in this area. The Fund will support activities in 1975-1977 to develop, in consultation with FAO, a worldwide programme for the planting and protection of trees and for afforestation generally, involving:

- (a) Selection of appropriate trees for particular ecosystems;
- (b) Ensuring the provision of planting stock at proper places and times;
- (c) Developing educational programmes and materials on trees, their uses and their care;
- (d) Launching a world-wide campaign to interest people in this activity and providing them with information and material to support the development of national and citizen action programmes.

144. Activities in this area will be co-ordinated with those in the field of Terrestrial ecosystems, their management and control under the priority subject areas of the Programme.

E. Development of offshore resources

Proposed allocation

1975: \$0.10m 1976: \$0.10m 1977: \$0.10m

145. No activities were financed in 1973-1974 in this area. The Fund will support activities in 1975-1977 to develop an internationally useful set of guidelines for proper environmental safeguards and environmentally sound behaviour in the exploration for and exploitation of offshore resources, including petroleum and manganese nodules.

146. Activities in this area will be co-ordinated with those in the field of Marine pollution dealt with in the priority subject areas on Oceans.

F. Antarctica

Proposed allocation

1975: \$0.10m	1976: \$0.10m	1977: \$0.10m
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147. No activities were financed in 1973-1974 in this area. The Fund will support activities in 1975-1977 to collaborate with Governments to help prepare for inclusion of environmental factors in the extension of the Antarctic Treaty in such areas as:

- (a) Consultations with the Governments involved and with other concerned Governments;
- (b) Convening of an expert group, including nominees from Governments, to draw up proposed guidelines for exploration and exploitation;
- (c) Convening of legal experts, including nominees from Governments, to draw up proposed legal articles to be included in the extension of the Treaty;
- (d) Consultation with Governments concerning these articles with a view to their inclusion in the extension of the Treaty.

V. RECOMMENDED ACTION BY THE GOVERNING COUNCIL

148. The Governing Council may wish to approve the following draft decision:

"The Governing Council,

"Having reviewed the proposals of the Executive Director as outlined in his note on Proposed Fund Programme activities (revised 1975, proposed 1976-1977) (document UNEP/GC/32);

"Decides to apportion the allocation for Fund programme activities as follows:

	<u>1975</u>	<u>1976</u>	<u>1977</u>
- Human settlements, human health	3,950,000	4,850,000	7,500,000
- IHHSF	600,000	1,500,000	1,200,000
- Ecosystems	4,400,000	5,900,000	6,800,000
- Environment and development	2,500,000	3,550,000	5,000,000
- Oceans	2,300,000	3,000,000	4,000,000
- Energy	300,000	600,000	1,000,000
- Natural disasters	200,000	200,000	200,000
- Earthwatch	1,900,000	2,200,000	2,600,000
- Support	3,000,000	3,900,000	5,200,000
- Environmental management	200,000	400,000	600,000
- Development of the Programme	650,000	900,000	900,000
	<u>20,000,000</u>	<u>27,000,000</u>	<u>35,000,000</u>

"Authorizes the Executive Director to adjust the apportionment of funds up to a maximum of 20 per cent on each line if this should be necessary in order to preserve the integrity of the Programme;

"Further authorizes the Executive Director to enter into forward commitments of up to \$9 million for the year 1978 and up to \$4 million for the year 1979."

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