

**Progress Report on the Implementation  
of Recommendations on Regional Programmes  
in the Conservation and Management  
of African Wildlife**

*Prepared by*

*Toman Hutagalung*

*Joseph A. Sawe*

*Joint Inspection Unit*



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## I. INTRODUCTION

### A. Purpose of the Report

1. Four years ago, the Joint Inspection Unit issued its report in January 1979 on "Regional Training Programmes in African Wildlife Management at Mweka and Garoua" (JIU/REP/79/1). That report was of special concern to UNDP, FAO, UNESCO, UNEP and ECA, but was also distributed to the rest of the organizations of the United Nations system and to other concerned international organizations for information and action as necessary.

2. The report was well received and its recommendations were considered and endorsed by all the UN organizations directly concerned and, in particular, by the Conference of Ministers of the United Nations Economic Commission for Africa at their meeting of 12 April 1980. Based on these endorsements and the decisions taken by their Governing bodies, and a specific request to JIU from the Administrator of UNDP 1/ to initiate action towards the implementation of specific recommendations in the report, the Joint Inspection Unit decided to include, in its work programme for 1982, a follow-up review with the following main purposes in mind:-

(a) to see to what extent the United Nations system has responded, in practical actions, to the decisions taken by the relevant Governing bodies on the recommendations of the report;

(b) to up-date information contained in the JIU report and to include such other information as may adequately reflect current trends and problems in the conservation of Africa's wildlife resources; and

(c) to offer further suggestions, to stimulate quicker action in the implementation of the recommendations of the report.

### B. Initial Consultations

3. Following the positive reaction to the report and the request from the UNDP Administrator to initiate consultations with the UN organizations on the implementation of the recommendations, the Inspectors made several visits for consultations to the headquarters of FAO, ECA including MULPOC in Lusaka, OAU, IUCN and UNDP and its field offices in Ethiopia, Kenya, Tanzania, Zambia, Madagascar and Mauritius. At the same time they had consultations with senior officials of the Governments in the countries visited. Visits were also made to FAO and UNESCO headquarters during the preparation of the present report and discussions were held with the Executive Director of UNEP and the Executive Secretary of ECA during ECOSOC session in July 1982. The Inspectors are very grateful for the support indicated during these consultations which, in part, culminated in the ECA Conference of Ministers Resolution 388 (XV) on a regional programme under ECA, and some re-orientation of the programme activities of most of the above organizations.

4. The initial consultations with senior Government officials did reveal one major weakness within the UN system over the distribution of the JIU reports to the Government departments concerned. In this case, none of the offices visited had received a copy of the report nearly a year after its publication. Fortunately this was rectified later.

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1/ UNDP letter 130/1/1. JIU of 18 October 1978.

### C. Conclusions and Recommendations of the JIU Report

5. The report examined the state of protection, management, development and utilization of the wildlife resources and protected wildlife areas in Africa. In particular, it drew attention to existing and potential problems being faced by countries in husbanding these resources, measures which these countries are taking individually or collectively at regional and international levels, and the contribution of the United Nations system in this direction. The report noted that the majority of countries in Africa had made tremendous effort in conserving their natural heritage despite their limited financial and trained manpower resources. This effort could be enhanced and made more effective through carefully formulated long-term national wildlife conservation programmes linked to a region-wide programme. They should be fully integrated into overall national or regional development plans on the basis of cultural and economic contributions which wildlife, as a natural heritage and an economic asset, is making to the peoples of Africa and mankind generally.

6. Furthermore, the report stressed that wildlife conservation calls for multi-disciplinary approach requiring expertise in such aspects like legal, administration, economics and wildlife resources utilization, ecology, biology, veterinary, park planning, management and development, and conservation education and extension programmes to boost public awareness. Training facilities were found to be inadequate at all levels while there was a growing demand for qualified personnel particularly as more countries increase the number and size of protected areas, and develop comprehensive management plans for protected areas. The contribution made by the College of African Wildlife Management at Mweka, Tanzania which was established in 1963 to cater for the English-speaking African countries, and by the Ecole de Faune at Garoua in Cameroon, established in 1970 for French-speaking African countries, was seen as a clear demonstration of successful regional cooperation and effective international assistance, especially the assistance from the UNDP with FAO as executing agency. The phasing out of external assistance had however put a heavy burden on the governments of Cameroon and Tanzania which impaired the effectiveness of the two institutions in maintaining on-going training programmes and the further development of their capacities to meet growing demands for places, including also the demand for instructors for technician level wildlife schools. The sharing of operational costs by user countries under TCDC and co-ordinated international assistance were viewed as most essential for sustainable performance of the two colleges.

7. The main recommendations of the report are given below for easy reference:

#### Recommendation 1

(a) Mweka and Garoua are highly successful regional training programmes in wildlife management. It is recommended that the two colleges be placed on the Regional IPF.

(b) UNEP should take the lead within the framework of the Ecosystem Conservation Group (ECG) in mobilizing and co-ordinating additional international support for the two colleges.

#### Recommendation 2

FAO and UNESCO should ensure that the capacities of the two colleges are utilized fully for:

(a) the training of more instructors,

(b) a continuous training programme in the form of staff development activities like refresher courses for wildlife managers and instructors drawn from national parks and colleges in the region.

### Recommendation 3

FAO as the executing agency of both projects should use every opportunity to encourage participating Member States to agree on:

- (a) recognition of the Certificates and Diplomas delivered by both colleges,
- (b) assuming progressively a more balanced share in the operating cost of the colleges so that their TCDC potential is tapped to the maximum.

### Recommendation 4

FAO and UNESCO should encourage the two colleges to exchange staff members and scientific documentation on a regular basis.

### Recommendation 5

Research in various aspects of wildlife is greatly needed for the training purposes and proper management of wildlife. UNESCO and FAO should initiate arrangements that would bring National Wildlife Research Institutes into closer relationship with the training colleges.

### Recommendation 6

UNEP should fully discharge its co-ordination mandate by serving as a clearing-house for government requests for assistance and for projects and programmes proposed by members of ECG.

### Recommendation 7

In order to derive full and durable benefits from the training provided in the two colleges, UNEP, assisted by members of ECG, should stimulate the development of comprehensive and integrated programmes for the whole region. Such programmes should incorporate the following aspects:

- (a) legal protection of wildlife;
- (b) development of national parks and other protected areas;
- (c) creation of appropriate national administrative structures;
- (d) utilization of wildlife areas;
- (e) national, regional and international measures against poaching;
- (f) research facilities.

### Recommendation 8

FAO should implement resolution 11/75 of November 26, 1975 so that it can post a wildlife officer to its regional office in Africa."

### D. Distribution of the Report

8. As stated above, the report was distributed and considered by the governing bodies of FAO, UNDP, UNEP, UNESCO, UN/ECA, ECOSOC, the two colleges. Copies were sent to a number of non-UN organizations including the Organization of African Unity (OAU), the International Union for Conservation of Nature and Natural Resources (IUCN) and the World Wildlife Fund (WWF). FAO and UNDP made special effort to send copies to their respective field and country offices and the ECA presented the report to the Council of Ministers of Eastern and Southern Africa Multinational Programming and Operational Centre (MULPOC) when they met in Gaborone in January 1980.

9. UNEP and IUCN distributed copies to the participants of the First All-Africa Wildlife Conference/Sixth Regional Wildlife Conference for Eastern and Central Africa during the meeting convened in Nairobi, Kenya 13-19 July 1980 while IUCN brought the report and its recommendations to the attention of Government participants at the Technical Meeting on the Conservation of Biotic Communities of West and Central Africa held in Ouagadougou, Upper Volta 4-10 February 1980 and to the meeting of the IUCN Commission on National Parks and Protected Areas in Garoua,

Cameroon in November 1980. In addition to discussing training needs, this meeting identified potential natural sites of outstanding universal importance in Africa.

#### E. Sources of Review Materials

10. Comments from the Governing bodies of the United Nations system and from other international organizations are summarized in Section II. These and a number of NGOs have cooperated in providing information on recent field activities and other developments concerned with wildlife conservation in Africa, particularly in connection with the JIU recommendations. Annual reviews and programmes of work and budget, and other reports have served to show shifts, if any, in emphasis given to the conservation of wildlife resources by these organizations.

11. A number of selected countries, the colleges of Mweka and Garoua, national wildlife schools, and a number of universities known to offer training in wildlife management, cooperated in providing information to up-date the previous report, and to assess current wildlife conservation situation and needs, in the region. There have also been a number of important recent developments concerned with ecosystems and species conservation which have implications on wildlife conservation in Africa. These, together with other information are treated in Sections III and IV.

12. The Inspectors are especially grateful to Government agencies, United Nations organizations and non-UN organizations who co-operated in providing information and materials for this review and to Mr. John N. Kundaeli, a Consultant to the Joint Inspection Unit who assisted them in collecting and compiling data for this report.

## II. SUMMARY OF COMMENTS AND DECISIONS OF GOVERNING BODIES OF RELEVANT ORGANS OF THE UNITED NATIONS SYSTEM

### A. Food and Agriculture Organization of the United Nations (FAO)

13. In his comments (Doc. CL 76/7), the Director-General stressed the "urgent need to determine whether and to what extent current wildlife training institutions are meeting training requirements of FAO Member countries and to assess their minimum manpower requirements over the next 10 to 20 years" in order to determine "whether additional demand for medium level training should be met by expanding Mweka and Garoua or establish new institutions or both." The Director-General recommended follow-up to FAO/UNDP efforts in the area of wildlife and national parks management training in the form of consultants and fellowships inputs to Mweka and Garoua, as a short term measure, and in the long term, assistance with the development of a regional training programme.

14. The Thirty-seventh Session of the Programme Committee observed that although the report covered only two institutions, the recommendations had a much wider application both geographically and subject-wise, and expressed opinion that "FAO should assume increased responsibility in the field of wildlife resources management". - a view supported by the Council of FAO at its Seventy-sixth Session in November 1979 (CL 76/4 and CL 76/REP).

### B. United Nations Environment Programme (UNEP)

15. The Executive Director of UNEP acknowledged the key role played by the training of personnel in the management of wildlife and protected areas as a tool for the achievement of UNEP's goals and objectives for 1982 (UNEP GC.8/L.1) specifically to ... "develop and promote training, education, extension and information

programmes related to conservation"... especially in developing countries where wildlife conservation has often been constrained by the paucity of appropriately trained personnel and in turn, the mechanisms which generate information on the status of wildlife resources and on research - both of which are essential prerequisite for the development of wildlife and national conservation programmes. He emphasized the importance of strengthening the regional character of the two colleges and of maintaining international support in order to sustain their highly successful example of TCDC. And while UNEP's on-going programme had been positively responsive to the substance of recommendations (1) and (6) of the report, he pledged UNEP to "continue to be ready to act as a clearing house for requests for assistance and co-ordinate the use of international funds for this purpose" and ... "to stimulate, with the assistance of ECG members (UNEP, FAO, UNESCO and IUCN), the development of integrated programmes for the region covered by the two colleges with the World Conservation Strategy providing a framework for action by all organizations concerned with an integrated approach towards wildlife conservation at national, regional and international levels". The Governing Council of UNEP noted with approval the report and the views of the Executive Director during its Eighth Session (Decision 8/6, IV(2)).

C. United Nations Educational, Scientific and Cultural Organization  
(UNESCO)

16. The Director-General of UNESCO in welcoming the report and its recommendations urged for constructive response from all the international organizations concerned, particularly UNESCO even though not the executing agency for these training programmes (Note 109 EX/10). He considered the two colleges an excellent and successful example of sub-regional co-operation between two linguistic communities in Africa, which deserves encouragement and expansion in the interests of all ecological activities needing development, such as the training of specialists and in ecological research. The objectives of these training institutions should include integrated ecological research component and, as executing agencies, carry out research projects in Biosphere reserves like Waza National Park in Cameroon and Ngorongoro Conservation Area in Tanzania. He pledged UNESCO would endeavour, through the MAB and the Environmental Training Unit, and as far as extra-budgetary funds permit, to make a more substantial contribution such as the provision of fellowships, sending consultants and desired equipment recommended in the report to the two colleges.

17. Based on these remarks and the suggestions and views of Special Committee (Report 109 EX/4), the Executive Board of UNESCO invited the Director-General ... "to take whatever action is necessary to encourage linkages between MAB research activities and the training programmes, and to help raise the awareness of decision-makers and the public as regards the need for wildlife conservation and management" (Decision 109 EX/SR.31).

D. United Nations Economic Commission for Africa (ECA)

18. After examining the report and the implications of its recommendations, the Executive Secretary followed up with a note to the Council of Ministers of the Eastern and Southern Africa MULPOC when it met in Gaborone, Botswana in January 1980. He stressed the urgent need to recognize wildlife as an essential part of the region's natural resources and that integrated approach to wildlife conservation should be seen as an integral part of socio-economic development at national and regional levels requiring co-ordination and collective self-reliance to achieve greater impact. Like FAO, he stressed the need for manpower survey particularly as countries develop more sustainable and comprehensive national wildlife resources development programmes. He envisaged ECA initiating a comprehensive regional programme providing for all aspects of wildlife conservation needs with African States participating financially on the basis of TCDC, reinforced by technical cooperation arrangements in which the relevant organizations of the United Nations and the OAU would play a significant part. The two colleges would be developed to host the regional programme while the function of co-ordination, monitoring and reporting would be regionally based in a body such as the ECA.

19. The Executive Secretary invited the meeting to consider five points on possible follow-up by the ECA. These were favourably received by the Council of Ministers and led to the draft resolution prepared by the First Meeting of the Technical Preparatory Committee of the Whole under the sponsorship of Tanzania, Uganda and Cameroon (E/CN.14/L.692). The draft was fully endorsed by the Conference of Ministers at their 212th Meeting in April 1980 under its Resolution 388(IV). Because of its important implications the operative part is included here in full:

"Convinced that better wildlife development and management is in the best interest of African States both individually and collectively

- (1) Endorses the decision of the Council of Ministers of the MULPOC for Eastern and Southern Africa calling for negotiations with the Government of the United Republic of Tanzania with a view to converting the College of African Wildlife Management at Mweka into a full-fledged regional institution for English-speaking African countries;
- (2) Decides that a similar approach be made to the United Republic of Cameroon with a view to broadening the regional scope and status of the Ecole de Faune at Garoua in Cameroon in order to serve all French-speaking African countries;
- (3) Calls upon the Executive Secretary of ECA to:
  - (a) initiate the action required in operative paragraphs 1 and 2 of this resolution; and
  - (b) formulate and, in collaboration with the appropriate agencies, co-ordinate the implementation of a long-term integrated regional programme of wildlife conservation, development and management in Africa, based on the existing regional institutions at Mweka and Garoua with the programme providing for the training of middle and higher level personnel, and for research and advisory services in respect of administrative, legislative, economic, ecological, socio-cultural and other aspects of wildlife conservation, development and utilization within the context of overall development planning;
- (4) Appeals to UNDP to continue its programme support to the Mweka and Garoua centres on an enhanced scale and to favourably consider financial contribution towards the implementation of the integrated long-term regional programme called for in operative paragraph 3(b) above;
- (5) Requests the Food and Agriculture Organization (FAO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Environment Programme (UNEP), the Organization of African Unity (OAU), the International Union for the Conservation of Nature, the World Wildlife Fund as well as other bilateral and multilateral organizations to support meaningfully the African regional programme in wildlife conservation, development and management and to assist ECA in the realization of this programme;
- (6) Requests further the Executive Secretary to submit to the Conference of Ministers biennial reports on the operation of the above regional programme and the status of conservation, and management of African wildlife."

E. United Nations Development Programme (UNDP)

20. In his note DP/418 of 15 June 1979 to the 26th Session of the Governing Council of UNDP the Administrator expressed general agreement with the main points of

the JIU report and concern that both schools require considerable external assistance to maintain existing infra-structure and programme to meet changing requirements in Africa. He supported the view that all governments need to broaden their financial involvement and to increasingly contribute toward the capital development and operational costs of the two colleges. He hoped that the report would stimulate governments to draw on the specialized agencies of the United Nations system, notably FAO and UNESCO, as well as UNEP, with a view to tackling wildlife conservation problems efficiently and comprehensively. He indicated that UNDP would be "prepared to consider appropriate requests by governments for which national and regional resources may be used".

#### F. Comments From Other Organizations

21. Although no formal comments were expected from organizations outside the UN system, several of them were consulted during the preparation of the report. IUCN, WWF, Frankfurt Zoological Society welcomed the report, and saw a possible active role in the implementation of its recommendations. The report was also sent to the Organization of African Unity, especially in relation to the African Convention on the Conservation of Nature and Natural Resources (OAU African Convention) and to recommendation (7) of the report, but so far no direct comments have been received from the OAU.

22. According to recent information provided by the Director, the Conseil de Direction of Garoua College has not yet discussed the report; however the Minister of Agriculture is aware of it. The attention of the Governing Body of Mweka College was drawn to the report and its recommendations at its Thirty-Third Meeting on 7 October 1980 which endorsed the recommendations, requesting the Government to accord the College full regional status. Meanwhile a Ministerial Committee had been set up to look into the requirements of the ECA Resolution which was understood to mean the legal status of Mweka as a national institution would have to be changed. This the Government considered unnecessary as the college had operated successfully a regional programme for the past 20 years. But the Government gave assurance of its support to the College and to continue to admit students from any country in the region as in the past.

### III. FOLLOW-UP ON THE DECISIONS AND COMMITMENTS MADE BY ORGANIZATIONS OF THE UNITED NATIONS SYSTEM AND OTHER INTERNATIONAL ORGANIZATIONS

23. This section examines the contribution given to wildlife conservation and management in Africa by the relevant organizations of the United Nations system, and by other international organizations related to observations and recommendations made in the JIU report. The non-UN organizations such as IUCN and WWF have made magnificent contribution to conservation effort in Africa and elsewhere. Theirs has been a complementary role but sometimes unique enough to draw international attention to crucial conservation problems in Africa such as on recent declines of wild populations of the African elephant, the African rhinoceros and the mountain gorilla, and the degradation of tropical forests.

24. The inclusion of wildlife conservation projects in national development programmes for which external assistance is requested is dependent upon priority accorded to wildlife both as an important socio-economic resource and as a valued natural heritage. Due to other pressing socio-economic problems, however wildlife conservation priorities are often relegated to second, if not third order priority; this applies equally to regional programmes.

A. Food and Agriculture Organization (FAO)

25. In the past few years FAO has placed greater emphasis on conservation of forest resources. This no doubt reflects international concern over the improvement of drylands through desertification and the role of forestry in this regard, and also the degradation and continuing decrease in the area of tropical and sub-tropical forests, including mangrove forests.

26. Under Forest Resources and Environment Programme for 1982-83 and in acknowledging that about 80% of animal protein consumed by rural people living in tropical areas derive from wildlife, FAO intended to focus on the "management of wildlife, particularly for its nutritive value, its direct contributions to rural welfare and its significance as part of natural ecosystems". The plan of action for the Conservation and Wildlife Sub-programme includes the "formulation of wildlife and national park policies within renewable natural resources policies, with emphasis on the possibilities of wildlife utilization by rural people as a source of protein and income" and an "assessment of national manpower requirements for wildlife and national parks resources sector, especially in Africa, to determine training needs and required institutional improvements". Estimated budget for this sub-programme was \$412,000, or 17.30% of total allocation to the Forest Resources and Environment Programme from Regular Programme funds, and technical support would be given to 80 extra-budgetary projects, some of which are shown in Annex I and those in Annex II under UNEP.

27. With regard to the implementation of the JIU recommendations the Tenth Session of the Advisory Committee on Forestry Education (29-31 October 1980) devoted part of its time on training in wildlife and national parks management at which two papers were discussed: one on training for wildlife management in tropical countries with focus on the Indonesian Environmental Conservation Management School at Ciawi and the other on manpower training in Africa with particular relevance to the JIU recommendations. This will be examined again at the Seventh Session of the African Forestry Commission Working Party on Wildlife Management and National Parks, at which FAO will seek the views and guidance of the relevant authorities of African Member States responsible for wildlife conservation in developing future action programmes.

28. During the 1982-83 biennium the staff of the Forest and Wildlife Conservation Branch in the Forest Resources Division supplemented by contractual services, are carrying out a two stage exercise:

(a) elaboration of a methodology for the assessment of manpower requirements for the wildlife and national parks management sectors

(b) application of the methodology to the African region in order to establish a basis for the estimation of future training requirements.

29. Furthermore, project RAF-74-056 (Garoua Wildlife School) has been extended and some US\$13,500 withheld to enable FAO to initiate activities envisaged in a new project titled "Regional Project on Wildlife Training in Africa" which is expected to be fully operational during 1983; this project will complement (a) and (b) above with particular reference to field activities in the region. This is in addition to on-going training programmes for junior level wildlife conservation personnel in Botswana, Central African Republic and Nigeria (Annex I), and encouragement given in this direction to Ivory Coast, Kenya, Malawi, Mozambique, Somalia and Zaire. The FAO Legal Office has published a comprehensive study on wildlife and national parks legislations in Africa and has extended technical assistance missions on this subject to the Central African Republic, Ethiopia and Rwanda. Like the other ECG members, FAO has participated in international and other regional meetings concerned with wildlife conservation.

30. FAO is best placed for the realization of wildlife conservation objectives and planned actions globally, and more specifically in Africa through effective inputs into all development projects for which it is responsible including through the use of its own TCP funds. However, and despite the general elaboration of its

work plans, FAO has played a minor part in the implementation of the approved recommendations in the JIU report, which is greatly regrettable in view of its long experience in wildlife management training, particularly essential for the ECA in project formulation.

#### B. United Nations Environment Programme (UNEP)

31. Since its creation 10 years ago, UNEP has placed strong emphasis on the conservation of ecosystems and species as an essential factor in the maintenance and enhancement of the human environment as born out in the medium-term plans and biennia programmes and the decisions of the Governing Council of UNEP throughout this period. The biennia programmes cover a wide range of activities with implication on the conservation of ecosystems and species but conservation of wildlife and protected areas is more adequately met under Terrestrial Ecosystems and the Oceans sub-programmes.

32. During the period 1980-83, UNEP's medium-term plan under Terrestrial Ecosystems sub-programme was "to promote the integrated and environmentally sound management of terrestrial ecosystems so as to minimize the adverse impact of man's activities and to ensure sustained production within each ecosystem". Amongst the activities to be embarked upon include the preparation of "regional plans for integrated training programmes in management of wildlife, national parks and living marine resources", which bears well on the JIU recommendations. About 17,0% of regular budget and 24,5% of extra-budgetary funds (or 24.4% of total budget) were to be spent on this sub-programme.

33. During the preceding medium-term period UNEP, IUCN and WWF jointly and in collaboration with FAO, UNESCO and others critically examined the global conservation status of living natural resources, problems and related human activities which negate the full and sustained contributions which these resources could make towards all spheres of human welfare and endeavours. The result of this important activity was the development of the World Conservation Strategy (WCS) which was welcomed by the UN General Assembly in Resolution 34/188 and later endorsed by Resolution 35/74. When the WCS was launched simultaneously in 34 countries in March 1980, in most cases by Heads of State and Government, it received world-wide political attention and support including an appeal by the UN Secretary-General to Governments, international and national organizations, and individuals concerned with living resources. The WCS is now reflected in the International Development Strategy for the Third United Nations Development Decade.

34. In its endorsement the UNEP Governing Council called on the Executive Director to promote the adherence to the principles and guidelines suggested in the WCS and the implementation of its recommendations (Decision 8/11). At the Session of a Special Character of the Governing Council in May 1982 numerous governments expressly re-affirmed commitment to the WCS and called on the UN system for implementing action, while the 69th Conference of Inter-parliamentary Union in September 1982 called on national groups to urge their parliaments and governments to promote the achievement of WCS objectives. Accordingly UNEP's efforts during this period have been directed towards the achievement of the WCS goals, in close co-operation with the other members of the Ecosystem Conservation Group (ECG; see Annex II), and the ninth ECG meeting was devoted to this subject. This meeting also reviewed and endorsed all the recommendations of the JIU report, and members agreed to pursue their implementation. Activities decided upon then and others included in Annex II have close bearing on the Recommendation 7 of the report and provide ready-to-use contributions to the regional programme called for in the ECA Resolution 388(XV). These include the promotion of multilateral conservation treaties and agreements such as CITES (Annex V) and the initiation of new ones such as those concluded under the Regional Seas Programme, and active support and participation in regional and international meetings concerned with the conservation of species and ecosystems such as those mentioned in paragraph 9 and the recent third World National Parks Congress which meets every ten years, held in Bali in Indonesia in October 1982 sponsored by IUCN, UNEP, FAO/UNDP, UNESCO, WWF and others.

35. The report was taken up again at the Tenth general meeting of ECG in Paris, 6-7 September 1982, at which JIU was invited to participate in the discussions of agenda item "Training support in wildlife and national parks management". The JIU representative briefed the meeting on actions taken so far to implement the JIU recommendations noting the need for co-ordination between the ECG members on this matter and for close co-operation with the ECA in view of its resolution. The Group noted that, with the exception of FAO, the resolution had not been officially circulated to the other members. The meeting agreed each member should pursue the implementation of the JIU recommendations particularly with regard to support to Mweka and Garoua. The subject was further discussed at a Joint Thematic Programming Meeting, under Forestry and Wildlife, which followed immediately after and at which ECA had been invited to participate. As a matter of top priority, the Inspectors recommend that ECA, assisted by UNEP, should now call the ECG members together to chart out modalities for implementing the JIU recommendations and the ECA resolution.

C. United Nations Educational, Scientific and Cultural Organization  
(UNESCO)

36. UNESCO's contribution to living resources conservation has been principally through support to ecological research, particularly through activities which finally led to the convening of the Biosphere Conference in 1968 on regional use and conservation of the resources of biosphere and the launching of the Intergovernmental Man and the Biosphere Programme (MAB) in 1970. Subsequent implementation of some of the research projects under this programme directly favours the conservation of living resources; these include MAB projects (1) on tropical and sub-tropical forest ecosystems, (3) on savanna and grassland ecosystems, (4) on dynamics of arid and semi-arid zone ecosystems, (5) on value and resources of lakes, marshes, rivers, deltas estuaries and coastal zones, (6) on mountain and tundra ecosystems and project (8) on the conservation of natural areas and of the genetic material they contain. The adoption of the World Heritage Convention in 1972 provided UNESCO with yet another tool for more direct involvement in the conservation of wildlife and the establishment of protected areas to preserve natural heritage.

37. Medium-Term Plan, 1977-1982, objectives are of particular relevance to the general conclusions and recommendations of the JIU report. For example, Sub-objective 7.21 on Co-ordination and stimulation of cooperative research within the natural and social sciences; Sub-objective 7.22 on Promotion of an integrated approach to land resources research and management; and Sub-objective 7.23 on the Promotion and development of national and regional capacities for research and management on problems associated with the environment and with the integrated use of biological terrestrial resources.

38. However, UNESCO is meeting the need for traditional wildlife conservation adequately through Sub-objective 7.63 of the Plan: promotion of the preservation of the natural heritage of mankind. This combines the ultimate goal of MAB Project 8 and the World Heritage Convention. Thus during the six-year period, UNESCO in cooperation with UNEP and IUCN, and with the MAB National Committees planned to:

- "- increase awareness throughout the world of the importance of the preservation of representative natural areas, particularly for their role in the conservation of genetic material of wild plants and animals;
- stimulate national efforts at establishment of new reserves in major ecosystem types where few or no reserves now exist and strengthening of existing reserves;
- stimulate co-operative international research programme and exchange of information which will improve the base knowledge applicable to management of natural areas and conservation of genetic resources.
- train personnel in the field of conservation."

39. Thus, while Unesco planned a total allocation of \$3,434,500 for activities connected with ecological sciences (MAB Programme) during the 1975-1976 biennium, expenditure on activities connected with natural heritage alone during the 1981-1983 triennium was expected to be \$2,107,800, with the contribution from the World Heritage Fund amounting to \$590,000 and \$900,000 during the 1979-80 and 1981-1983 periods respectively. Specific field activities include those already shown in Annex II under UNEP, and those in Annex III, which also include actions deriving directly from the JIU recommendations and the decision of UNESCO's Executive Board.

40. UNESCO has also made other significant contributions, alone or in co-operation with the other ECG members, such as the development of a biogeographical classification of the world into fairly distinct groupings (provinces), the preparation and improvement of vegetation maps of Africa, the Inter-governmental Conference on Environmental Education held in Tbilisi, USSR in 1977 and in international and regional meetings concerned with wildlife conservation. The above classification, recently refined by UNEP and IUCN and presented at the Bali Congress mentioned earlier, provides a reliable guide for monitoring the attainment and selection of protected, representative viable samples of ecosystems as World Heritage sites, Biosphere reserves, national parks, etc.

41. In addition to the World Heritage Convention for which UNESCO has full responsibility for promoting adherence (Annex V); UNESCO is also depositary for the Wetlands Convention. Like the OAU African Convention (Depositary OAU, Addis Ababa) ratification or accession to this treaty has been poor with only 28 contracting parties as of November 1980, three of whom are from Africa. This problem was reviewed at the first meeting of the contracting parties in Cagliari, Italy 24-29 November 1980. In addition to calling for concerted effort to secure more contracting parties and the strengthening of the Convention through the adoption of procedures and protocols including the establishment of a permanent secretariat, the meeting called for the designation of more wetlands, especially in order to cover the southern wintering areas for Palearctic waterfowl in Africa. Furthermore, the meeting recognized the important roles played by training and research in the achievement of the objectives of this treaty.

#### D. United Nations Economic Commission for Africa (ECA)

42. Within the United Nations system, and in line with the UN General Assembly Resolution 32/197 of 1977, the ECA is the "main general economic and social development centre" for the Africa Region and is required to "exercise team leadership and responsibility for co-ordination and co-operation" in the region. Until the ECA resolution the development of Africa's wildlife resources, even as an economic resource, has had little room in the ECA's regional activities probably due to limited resources relative to competing needs of the region. This was sharply reversed by the JIU report and may be regarded as one of the major achievements of the report. On the other hand, ECA has paid attention to environmental matters generally, and pollution in particular, through cooperation with UNEP which, in 1978 helped establish an Environmental Co-ordination Unit (ECU) within the ECA Secretariat. During the Tenth Session of the Governing Council of UNEP in Nairobi, 20-31 May 1982, under decision GC 10/2(IV) the Executive Director was requested to continue to provide institutional support to, amongst others, the ECU of the Economic Commission for Africa. This unit could take on the additional responsibility deriving from the resolution.

43. The ECA resolution came well after the approval of the 1980-1983 Medium-Term Plan, and of the programme activities envisaged during this period. Nevertheless, the Secretariat has drawn up a project with the title "Integrated Regional Training Research and Advisory Programme for the Conservation and Management of African Wildlife for the purpose of implementing operative paragraphs 1, 2 and 3(b) of resolution and in accordance with paragraph 4 has requested UNDP preparatory assistance amounting to US\$165,000 which has not yet been approved. FAO, UNESCO, UNEP and the OAU are expected to participate in the project and to make contributions through their areas of specialization and resources; although only FAO appears to have been consulted during the preparation of the proposal.

44. During the Tenth Session of the ECA Conference of Ministers in Tripoli, April 1982, the Secretariat reported that the Government of Tanzania wishes to retain the present legal status of the College and to continue to admit students from other countries and to include representatives from other African countries on the Governing Body. The Government of Cameroon is still studying the ECA resolution but according to recent discussions with the Executive Secretary of ECA the response is likely to be similar to that given by Tanzania. The hesitation to convert Mweka, and Garoua, into full-fledged regional institutions stems from the experience gained from regional institutions already existing in Cameroon and Tanzania, and in other countries in the region. As one participant observed at the Tripoli meeting, other regional institutes are "suffering from the withdrawal of UNDP assistance" and advocated a cautious approach to UNDP financial contributions to regional institutions. This has also been amply demonstrated in connection with the operations of the African Regional Training Centre for Labour Administration (CRADAT) in which the Government of Cameroon has had to intervene time and again to make up for unpaid contributions to keep the programme going. It is suggested that ECA Member States consider the feasibility of the two colleges to execute a regional project without requiring a change in legal status. Precedence has already been set by UNEP in allowing Mweka College to be the "executing agency" for project FP-1103-77-01 (Annex II).

#### E. United Nations Development Programme (UNDP)

45. UNDP normally considers requests from Governments either individually under national IPF or as a group under regional IPF and this is evident from projects listed in the JIU report. UNDP has two advisory mechanisms which would make it feasible for an increased contribution towards wildlife conservation. The first is the network of country representation through which advice is provided to Governments and to other organizations of the UN system, particularly on technical assistance programmes. This has already been demonstrated in Uganda where the national parks are badly in need of rehabilitation (Annex I). The second mechanism is country programming missions which are consultative and advisory services to Governments through which UNDP, UNEP, FAO and UNESCO have opportunities to enhance the awareness of the ecological and socio-economic value of wildlife resources and in doing so, encourage Governments to include among priorities for funding by UNDP, projects concerned with the management and development of these resources.

46. Whether the above mechanisms have been put to fullest possible use, especially following the JIU report, can be judged from Annex I and from the list of UNDP funded projects in the Agriculture-Forestry-Fisheries sector in Africa, both national and regional. The June 1981 Compendium lists 608 projects of which only 13 are specific to wildlife conservation. Some of the project activities could be expanded to adequately include wildlife conservation and thus fulfill some of the objectives of the JIU recommendations and the ECA resolution. Examples include the regional project RAF-78-025. Forestry Resources Development and Conservation; BEN-78-005 Development of Forest Resources (Benin); IVC-79-011: Onchocerciasis programme (Ivory Coast); and LIR-77-801 Integrated Rural Development (Liberia). It has not been possible to find out from countries wildlife projects included in the requests for UNDP assistance during the Third Cycle, 1982-1986. However, the trend implied in Annex I, the current world economic situation combined with food and other critical problems facing African countries, do not give much encouragement.

47. As regards the two colleges, UNDP confirmed in the letter of 12 July 1982 to JIU that \$1.5 million has been earmarked under the Regional Programme for Africa for assistance to Garoua and Mweka colleges during the period 1983-1986; although UNDP has now indicated that this amount is likely to be reduced due to current financial constraints. However, UNDP representative at the ECA meeting in Tripoli, is reported to have said that "UNDP was ready to help Garoua School and Mweka Wildlife College financially as long as they were effectively regionalized". As clearly demonstrated in the previous report and in the next chapter, the two colleges more than fulfill this condition which is also the basis for UNDP support to Garoua under project RAF-74-056. The Inspectors are aware of recent Government intentions

to consult with the representatives of UNDP and FAO in Dar es Salaam in connection with support to Mweka College under Regional IPF on the basis of fulfilling a regional function, as opposed to regional ownership, much in line with the regional project for Pilot and Aircraft Maintenance Technician Training Centre in Addis Ababa (RAF/78/070/01/15), which is the example suggested by UNDP to the Inspectors during their consultations. This would also allow greater mobility of ECA's and UNDP's resources once these colleges become self-sustaining either through a TCDC arrangement or from the host country's own resources.

48. The Inspectors are of the opinion that co-ordination on this point between the various bodies of the United Nations has been grossly lacking resulting in confusion of long accepted practices within the United Nations family and recommend urgent consultations on the issue between the ECA, FAO and UNDP, and with the two Governments to enable planning for the next regional project to start soon, especially since UNDP has already made very generous allocations for these two colleges within the current programme cycle.

#### IV. GENERAL DEVELOPMENTS IN THE CONSERVATION OF LIVING NATURAL RESOURCES IN AFRICA

49. This section summarizes recent events, progress and trends in the conservation of living resources in Africa, at national and regional levels with particular focus on wildlife conservation. It also surveys contributions made in this direction through collective international effort towards global conservation of these resources and in relation to Africa.

##### A. Middle Level Training Programmes in Wildlife Conservation

50. Garoua and Mweka colleges have continued to play their regional function under financial and staff constraints noted in the first report except for support provided by their respective governments, and from a few other sources. Although the reaction of UNDP, UNEP, and FAO would favour the continuation and enhancement of existing support until action on Recommendations (1) and (7) took effect, the phasing out of specialist lecturers under project RAF-74-056 by 1979 and of project FP-1103-77-01 by 1981 to Garoua and Mweka respectively, is regrettable.

51. Mweka College has received some assistance from UNESCO, AWLF, and WWF/IUCN, especially to cover deficit arising from increased costs in maintaining training programmes. Cameroon is not a contracting party to the World Heritage Convention and accordingly Garoua College has not benefitted from the World Heritage Fund. Since this college trains some of the personnel responsible for the management of existing and future World Heritage sites and Biosphere reserves, the World Heritage Committee might find a way of providing assistance. Similarly, support to Mweka College should not be tied to Tanzania being party to this Convention. UNEP should also consider extending support to Garoua in support of French-speaking African countries and in connection with UNEP's own conservation objectives.

52. In addition to Mweka and Garoua colleges, authorities in Mozambique, and the ECA, are considering to establish a wildlife institute to serve Portuguese speaking African countries. Already in 1981 the Government of Mozambique prepared a draft proposal to secure some US\$1,222,460 from UNDP with one of its objectives being to "develop a system of professional training for the wildlife sector, adapted to the conditions prevailing in Mozambique, and possibly other countries of Portuguese tongue". However, the UNDP office in Maputo has confirmed that no provision has been made in the 1982-1986 country programme for this purpose, nor has UNEP been able to respond to approaches made to it due to limited financial resources. Current situation concerning the existing two colleges is summarized in the following paragraphs:

(a) Ecole de Faune, Garoua, Cameroon

53. Staff training and development: there has been a continuing decrease of African teaching staff since 1976 and the college has been forced to appeal and resort to visiting lecturers especially in: economics, ornithology and taxidermy, legislation and administration, and in topography, all of which are essential courses. Thus recruitment and training of Cameroonians is one of the major problems.

54. Financial resources: many of the organizations previously providing financial support to the college have phased out their support. Government subvention which was US\$58,823 during 1979-80 and 1980-81 has been reduced to US\$44,118 for the 1981-82 period, to which should be added equal amounts of US\$19,588 contributed by UNDP during the period 1980-81 and 1981-82, respectively.

55. Other support includes scholarships to students and during the past two academic periods 1980-81 and 1981-82 the following contributions have been made (in US\$) by: EDF: \$7,059 and \$14,118; UNDP: \$7,059 and \$3,529; FRG: \$30,000 and \$21,176 respectively. Thus the college had at its disposal the total amounts of \$122,353 and \$102,353 for 1980-81 and 1981-82 respectively. Overall contributions made by various sources since the College started are shown under, while the graduate output is shown in Table I.

Summary of sources of financial support to Garoua Wildlife School, Cameroon

Source of finance	1967-1975/76 US\$	1977 - 1982 US\$	Total US\$
<u>(i) Government, multi-lateral sources:</u>			
Government Subvention	843,702 <sup>a/</sup>	294,118	1,137,820
United Nations Dev. Programme <sup>a/</sup>	901,470	684,269 <sup>b/</sup>	1,585,739
Federal Republic of Germany/GTZ	102,941	154,559	257,500
France/FAC	117,647	120,000	237,647
European Development Fund(EDF)	-	60,294	60,249
United States of America/USAID	10,294	-	10,294
Cooperation Suisse	-	7,059	7,059
Government of Gabon (fees)	-	5,294	5,294
<u>(ii) Non-governmental sources:</u>			
Rockefeller Brothers Fund (RBF)	66,471	8,824	75,295
Frankfurt Zoological Society (FZS)	9,265	-	9,265
World Wildlife Fund/IUCN	3,676	2,941	6,617
Total Company, West Africa	4,412	-	4,412
Game Conservation International	2,353	-	2,353
African Wildlife Leadership Found.	-	1,471	1,471
<b>Total:</b>	<b>2,062,231</b>	<b>1,338,829</b>	<b>3,401,060</b>

Sources: JIU/REP/79/1 and College Administration.

a/ Except for UNDP and Phase I Govt. contribution, all figures have been converted from CFA at official UN rate US\$1=340 CFA, July 1982.

b/ Some US\$13,500 from project RAF-74-056 were used by FAO in 1982 to initiate a survey of trained manpower needs in Africa (see paras. 28 and 29)

56. Legal status: According to information given during a visit to FAO, Rome the Government of Cameroon has now signed the legal instrument establishing Garoua as a national institution with a regional function. It is hoped that this will facilitate the formal recognition by user countries of diplomas and certificates awarded by the college and also the objective of the JIU recommendation 3(a).

TABLE I. Graduate output from the Ecole pour la Formation de Spécialistes de Faune at Garoua, Cameroon up to June 1981

COUNTRY	1970-1976		1976-1977		1977-1979		1979-1981		Total 1970-1981		1981/1983	
	CERT	DIP	CERT	DIP	CERT	DIP	CERT	DIP	CERT	DIP	CERT	DIP
CAMEROON	15	9	5	7	6	5	4	4	29	25	3	5
ZAIRE	8	23	-	6	2	4	2	1	12	34	2	-
SENEGAL	16	7	4	2	4	3	3	5	27	17	4	4
IVORY COAST	14	8	2	2	-	2	2	-	18	12	1	1
UPPER VOLTA	6	2	4	-	4	2	2	-	16	4	2	3
BENIN	11	2	2	1	1	2	1	-	15	5	2	3
C. A. REPUBLIC	6	6	-	2	-	1	3	1	9	10	2	2
CHAD	7	9	-	2	-	-	-	-	7	11	-	-
TOGO	7	2	-	-	2	3	1	4	10	9	3	2
CONGO	12	4	3	-	-	-	1	1	16	5	2	2
GABON	-	2	-	2	1	2	2	4	3	10	-	-
MALI	7	1	-	-	-	-	-	4	7	5	-	5
RWANDA	3	2	3	1	1	-	-	-	7	3	-	2
NIGER	7	1	-	-	-	-	-	-	7	1	-	-
MOROCCO	-	-	-	1	-	3	-	-	-	4	-	-
TUNISIA	-	-	-	-	2	2	-	-	2	2	-	-
BURUNDI	1	-	-	-	-	-	-	-	1	-	-	-
MADAGASCAR	-	1	1	-	-	-	-	-	1	1	1	-
NIGERIA	-	1	-	-	-	-	-	-	-	1	-	-
GUINEA-BISSAU	-	-	-	-	-	-	-	-	-	-	1	-
Total: 20	120	80	24	27	23	29	20	23	187	159	23	29

Sources: JIU/REP/79/1 and College Administration

CERT - Certificate level; DIP - Diploma level. Some of the CERTS are re-admitted for the Diploma Course.

(b) College of African Wildlife Management, Mweka (CAWM), Tanzania

57. Staff training and development: Problems arising from the expansion and extension of the training programmes at Mweka are described in the previous report. By a decision of the Government, the Governing Body must employ its own staff. Most of the instructors formerly on secondment from the Government have, accordingly, opted for permanent employment with the College. This has been a great improvement from administration point of view.

58. Some measurable effort has been made to train and develop staff through study tours, field projects and university training under support from external sources including DANIDA, the World Heritage Fund, AWLF, etc. to nine staff members; four of these were for a degree in wildlife management. In 1979, and as a way of relieving staff-shortage, the US National Parks Service initiated a 2-month team-teaching arrangement which was unexpectedly curtailed after March 1981 due to budgetary restrictions on foreign travel imposed on US Government employees. Two staff members of the Ministry of Environment and Natural Resources, Kenya, were seconded to Mweka as instructors, which augurs well with recommendation 3(b) and TCDC in particular. This development should be given more encouragement and a similar line of action is suggested for Garoua College.

59. Financial support: See summary of financial sources below. Major expenditure item has been on capital development so that the two-year diploma and certificate courses can be run concurrently. Construction of new buildings, with DANIDA grant, started during the first part of 1981 and is continuing. This grant also included provision for transport and scholarships and of lecturers, one of whom has already arrived.

Summary of sources of financial support to Mweka Wildlife College, Tanzania

Financial sources	1963-1976	1976/77-1981/82	Total
	US\$	US\$	US\$
<u>Government/Multi-bilateral sources</u>			
Government of Tanzania	2,549,032 <u>a/</u>	787,215 <u>b/</u>	3,336,247
* Federal Republic of Germany/GTZ <u>b/</u>	300,000	159,252	459,252
* United States of America/USAID/USNPS <u>b/</u>	221,530	n.a.	221,530
* United Kingdom <u>b/</u>	6,744	-	6,744
* Government of Denmark/DANIDA - Development	-	1,426,829	
- to finance budget deficit	-	15,244	1,442,073
Government of Kenya <u>c/</u>	-	14,634	14,634
UNDP/FAO (Phase I & II, all costs)	517,100	679,850	1,196,950
United Nations Environment Programme	-	180,000	180,000
UNESCO (fellowships + equipment)	-	155,413 <u>d/</u>	155,413
Canada - CIDA+CUSO (Staff + equipment)	6,829	-	6,829
<u>Non-governmental and other sources</u>			
African Wildlife Leadership Foundation (AWLF)			
- Development + equipment	56,152	n.a.	
- Budget deficit	-	10,000	66,152
Frankfurt Zoological Society (Dev. + equip.)	14,185	-	14,185
Rockefeller Brothers Fund, WWF/IUCN, others	14,861	50	14,911
WWF/IUCN - Budget deficit	-	30,000	30,000
Ford Foundation (emoluments)	n.a.	n.a.	
<b>Total:</b>	<b>3,686,433</b>	<b>3,458,487</b>	<b>7,144,920</b>

Sources: JIU/REP/79/1 and College Administration

- a/ Include staff and equipment costs
- b/ Excluding staff costs
- c/ Cost for seconded officer
- d/ See Annex II for details.

60. The year 1979-80 was critical to Mweka College and appeals were made to raise funds to offset a large deficit. The Governing Body in consultation with the Government was forced to raise student fees to US\$5,600 in 1981 and in 1982 to US\$7,000 per year to reflect a more realistic cost, compared to US\$1,300 for certificate and \$1,500 for diploma courses per year in 1976. Up until this decision the Government of Tanzania was in effect subsidizing fees of students from other countries - a point acknowledged at the last ECG meeting. It is noted that a number of donor governments and organizations, including UNDP, have provided Garoua with fellowship funds to sponsor students from user countries (paragraph 55), whereas with the exception of the UNEP fellowship programme, governments sponsoring students to Mweka have had to meet fees from their own resources. This is one contributing factor to the much lower student fees charged at Garoua, now about US\$1,500 per year.

61. Furthermore, college needs were to be included in the regular national development programmes and budget. Accordingly in 1981 the Principal submitted a Five-year Development Plan, 1982-1987, in which it was estimated that some US\$3,680,105 and US\$152,439 would be needed for capital and staff development, respectively. The deficit problem was discussed at an informal meeting, at the request of AWLF, organized during the Sixtieth Anniversary (Diamond Jubilee) of the conservation of Serengeti/Ngorongoro Ecosystem at Seronera, Serengeti National Park in January 1981, at which representatives of UNESCO, UNEP, AWLF, WWF, IUCN, FZS and JIU participated. A number of these organizations made specific contributions as shown in the financial summary, while UNESCO intervened through the World Heritage Fund (Annex III). These and other sources have enabled Mweka to sustain training programmes and graduate output shown in Table 2.

#### B. Junior Level Training Programmes in Wildlife

62. Only a few countries have taken measures to establish training facilities for this cadre, some with external assistance. The previous report mentioned Botswana, Mozambique, Nigeria and Tanzania. To these should be added the Central African Republic, Kenya, Malawi (1983), Zambia and Zimbabwe. Other less formal in-service training arrangements are under way in Ethiopia, Ghana, Kenya, Malawi, Rwanda, Senegal, Southern Sudan, Uganda and Zaire. In Ivory Coast, courses in wildlife conservation, including fisheries, are part of a forest guards training programme offered at the Ecole Forestière de Bouafle, established in 1978 with a capacity of 30 students per a 3-month course. This is an interesting combination especially for countries in which forestry, wildlife and fisheries fall under a single technical department, such as in the majority of French-speaking African countries. In 1981 Mozambique established an additional school, the Escola da Reserva do Maputo, for staff and student recruitment to Gorongosa Wildlife School, including initial training and refresher courses for game scouts. It has a capacity of 50 students while courses run for 6 months.

63. The long-term development objectives of these schools is, however, the qualification of certificate level cadre of which a large number is needed to man the national parks and for other general field operations. It will be noted from the following summaries that some of these schools are likely to serve other countries at the sub-regional level. This underscores all the more the relevance of JIU Recommendation (2) concerning the role of Garoua and Mweka in training instructors and the urgent need for FAO to move quickly with the proposed assessment of manpower and training needs in Africa in order to provide guidance to these and other similar initiatives.

64. Botswana: Wildlife Training Centre, Maun (1980), with initial external support from EEC/EFD, RBF and UNDP, for pre-service and in-service training of field personnel from Assistant Game Warden (Mweka Certificate Level) to Game Scouts. It is also the operational base for conservation extension under Wildlife Education Extension Programme, including venue for seminars and workshops on environmental conservation for government officials. The school offers four courses - induction course (5 weeks), promotion course (5 weeks), refresher course (4 weeks) and cer-

TABLE 2. Graduate output from the College of African Wildlife Management at Mweka, Tanzania up to June 1981

Academic period: COUNTRY	1965		1975		1977		1979		1981		1981/82 enrolmt.					
	CERT	DIP	CERT	DIP	CERT	DIP	CERT	DIP	CERT	DIP	CERT	DIP				
TANZANIA	171	74	6	13	12	-	11	13	19	1	208	118	9	335	18	16
KENYA	132	53	-	14	7	-	16	16	11	-	174	81	-	255	11	2
ZAMBIA	29	6	-	3	3	-	5	-	-	-	37	12	-	49	3	-
GHANA	16	11	1	4	5	-	-	1	1	1	20	21	3	44	-	6
UGANDA	23	12	-	5	2	-	3	-	-	-	31	14	1	46	1	-
NIGERIA	7	4	3	7	2	1	4	5	3	1	23	12	5	40	2	-
ETHIOPIA	10	7	1	-	1	-	1	1	3	2	12	14	4	30	-	2
SUDAN	5	3	-	1	-	-	-	5	-	-	11	3	-	14	6	-
BOTSWANA	9	4	-	-	-	-	2	1	-	-	12	4	-	16	-	-
MALAWI	8	2	1	-	-	1	-	-	-	-	8	2	2	12	-	-
LIBERIA	-	-	-	-	-	1	2	2	1	1	4	1	2	7	3	-
SIERRA LEONE	1	2	-	3	-	-	2	-	-	-	6	2	-	8	-	-
CAMEROON	3	4	1	-	-	-	-	-	-	-	3	4	1	8	-	-
SOMALIA	1	-	-	-	-	-	-	2	-	-	3	-	-	3	-	1
EGYPT	-	-	-	-	-	-	-	-	-	2	-	-	2	2	-	-
United Kingdom	1	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-
Total: 15 + 1	416	182	14	50	32	3	46	36	5	45	38	8	870	44	27	2

Sources: JIU/REP/79/1 and College Administration

Above figures do not include special orientation courses offered to wildlife conservation personnel from Nepal, Sri Lanka, Panama, Nigeria, etc. The 1982/83 enrolment includes seven (7) Mozambican students

CERT - Certificate level; DIP - Diploma level; PGR - Post-graduate Diploma in Wildlife Management. Some of the CERTS continue directly or return for the Diploma Course.

tificate course (7 months). Courses are heavily field-oriented and include biology; wildlife and habitat management; park planning, development, interpretation and maintenance; field craftsmanship; administration and public relations; legislation and law enforcement; etc. under a team of 4 instructors.

65. The school has optimum intake capacity of 20 students and trained staff output of 60 per year. There is presently no intake from neighbouring countries but preparations are underway for the extension of the Centre to bring it to a sub-regional training facility with plans to admit external students during the 1983 school year.

66. Central African Republic established in 1980 with UNDP/FAO assistance, aims at a similar training level like the Botswana school.

67. Kenya: Wildlife and Fisheries Training Institute, Naivasha (1981) established under part of a \$17.0 million World Bank loan for the training, up to certificate level, of wildlife and fisheries technicians, and has potential for training programmes at diploma level. The Government of Kenya hopes that this facility will benefit other interested countries as well.

68. Mozambique: Escola de Agentes de Conservação da Natureza, Gorongosa established in 1977 with assistance from Nordic countries, and with a capacity of 35 students/year runs both short and long duration courses ranging from Elementary Courses in Wildlife Conservation and for Forest Guards (6 months each), Basic Wildlife Management (12 months), Medium-level Wildlife Management (3 years). In addition to natural sciences, administration, field crafts and wildlife management other subjects covered include wildlife utilization and production, and foreign languages (Portuguese and English). The school has also provided training to Angolan students.

69. These courses are being run by a team of 5 instructors, mostly expatriates with two seconded from Tanzania. It has been difficult to recruit suitably qualified nationals, and to locate willing expatriates due to inadequate facilities at Gorongosa - hence the request for UNDP assistance. Authorities plan to select suitable candidates from those trained at Gorongosa for university training in order to fill this need.

70. Nigeria: Federal Wildlife School (1978) with UNDP/FAO assistance (NIR-76-003) offers about similar training as the Mweka Certificate and Botswana Wildlife School.

71. Tanzania: Maliasili Natural Resources Institute initiated in 1966 as a Game Scout Training School, runs one year programmes plus short-term refresher courses much the same way as the Gorongosa Wildlife School in Mozambique, and to a lesser extent the Mweka certificate course upon which the two training programmes are based. Programme is inter-disciplinary involving, especially, candidates from wildlife, forestry and fisheries services.

72. Zambia: Chunga Wildlife Management College (1979) funded by Government, with the immediate purpose of training wildlife technicians (Game Scouts) but in the long-term to also include refresher and orientation courses for trainee Assistant Wildlife Rangers (certificate level). Courses are of one year duration with a similar range of subjects as the Botswana and Mozambique schools but with added emphasis on law enforcement and administration. The optimum annual intake is 30 students and to-date 45 Game Scouts have been trained. Major problems include a lack of instructors, accommodation, field equipment and other facilities. Presently there are three full-time instructors supplemented by 10 visiting instructors.

73. Zimbabwe: Natural Resources College (August 1982) primarily to supply the Department of National Parks and Wildlife Management and related agencies, with trained Ranger (Warden) and also for in-service training. In the long-term it is planned to function as a regional centre for the training of environmental field-workers at supervisory level. Expected optimum capacity is 70 students comprising 30 and 20 first and second-year students and 20 in-service trainees, with instructors drawn from the Department. Financial support is directly provided from Government - Z\$ 548,000 for development of which \$48,000 will be used to mount the first

courses during 1982-83, and from private donors within Zimbabwe. To bring the college to completion will require Z\$1.85 million and only with additional external assistance can the proposed developments be completed early. Judging from the proposed curriculum, copy of which has been provided to JIU by the Department of National Parks and Wildlife Management, the college promises a quality comparable to graduates from Garoua and Mweka.

### C. Research and High Level Manpower Training

74. The previous report stressed the need for trained scientific management and research personnel, as a basis for a vigorous research programme, and drew attention to inadequate support given to research activities by African governments. It noted that a few of the research achievements recorded to-date are attributable to expatriate individual work. With the exception of a very few countries, notably Kenya, Nigeria, Tanzania and Zimbabwe, this situation has changed very little: Kenya and Tanzania, with the assistance of UNEP and IUCN, have already made a start at drawing up country-wide comprehensive wildlife research programmes to be administered by the Wildlife Planning Unit and the Serengeti Wildlife Research Institute respectively. Organized research activities are also under way in Malawi (Kasungu National Park Research Centre), Nigeria (Kainji Lake Research Institute), Uganda Institute of Ecology which pioneered research in this field in East Africa under the then Nuffield Institute of Tropical Ecology and generally in Botswana, Cameroon, Ghana, Ivory Coast (Tai N. Park), Madagascar, Rwanda, Sudan (Southern Region and Red Sea), Zaire, Zambia and Zimbabwe. It is the Inspectors' view, however, that a comprehensive research programme would provide a most economic way of deploying the available but limited national and external resources.

75. A number of universities, including those mentioned in the previous report, are providing formal curricula in wildlife conservation closely linked to conservation activities in the country. Student research projects in protected areas also contribute to scientific data base essential for the management of these areas. However, the Inspectors have been informed that these universities are finding it difficult to fully provide for the students due to inadequate funding and a lack of qualified lecturers in this field. Furthermore, the University of Nairobi has pointed out that few African countries have a career structure that will attract graduates of high scientific ability or advanced training in this field. Consequently it has been difficult to attract first rate African graduates to the MSc course. Despite these difficulties, these universities have made a positive contribution towards alleviating high level trained manpower needs in Africa as indicated in the following paragraphs.

76. The University of Nairobi, Kenya. In 1970, the University of Nairobi initiated a two-year MSc course in Biology of Conservation with option for Ph.D. in Zoology. To-date students from Kenya (20), Uganda (4), Nigeria (3), USA (2), Tanzania (2), Great Britain (2), Malawi (1) and Zambia (1) have benefited from this programme. In order for the few lecturers to adequately supervise students' research projects during their second year, the Department can only admit a maximum of 6 students per year.

77. The University of Ibadan, Nigeria. In 1975, the University of Ibadan initiated a Ph.D. in Forestry and an option for Ph.D. in Wildlife and Fisheries. So far 30 students have graduated under the programme in addition to 2 MSc graduates in Wildlife. The Department is a full member of the Department of Wildlife and Fisheries Management, Ibadan, and is also a member of the Department of Wildlife Ecology and Management. The University has now created a full Department of Wildlife and Fisheries Management (first regular enrolment in September 1982) with a mandate to produce high level manpower in wildlife and fisheries management for all tropical countries and to collaborate with other higher learning and research institutes within and outside Nigeria to develop and execute proper scientific research projects in the country. The Department is now engaged in the training of students in its training programmes.



83. In this connection the Inspectors would like to commend the joint efforts of ECA and UNEP in organizing a seminar convened by ECA at Addis Ababa between September 29 and October 3 in 1980, for lawyers on Development of Environmental Protection Legislation in the ECA region. This seminar was attended by experts from 8 African countries with participation of FAO, WHO, UNDP, UNEP, OAU, IUCN and other international organizations. A most encouraging feature was the use of consultants from five African countries which is a good indication of the availability of necessary expertise in the region for a more dynamic leadership in this field. 3/

#### D. Conservation of Ecosystems and Species

84. A number of factors, including those mentioned in the previous report, have dictated the pace at which countries establish new conservation areas and provide for the effective protection of existing one and of species. In addition to inadequate or the absence of specific institutional arrangements for this purpose, trained manpower and limited funds are probably amongst the most important. For example, practically none of Madagascar's 15 parks and reserves has a warden and only two have an assistant warden; in Botswana only about six of the 10 parks and reserves have a warden, and of the 6 national parks in Senegal, only the Niokolo-Koba has a full staff complement. This inadequacy was especially obvious during an Africa-wide status survey of elephants and rhino (see para 89) and in 1981 the CITES Secretariat with WWF/IUCN support sent two experts to provide on-the-spot advice to a number of countries. In March/April 1982 the Secretariat provided a special course at its office and at the national CITES Management Office in Bern, Switzerland to four officials from Botswana, the Central African Republic, Cameroon and Tanzania. Although Annex IV suggests a large number of diploma graduates, most of these are either tied up with administrative duties at provincial and district headquarters, gone for further training, or have left the services.

85. Most countries allocate much less than 1% of national budget to wildlife conservation, except where tourism is an incentive. This limits the ability of wildlife conservation agencies to plan and develop conservation areas, and to identify and gazette new ones. It also aggravates poaching and encroachment problems in already established conservation areas due to lack of field equipment and transport so that in Uganda, for example, most of the wildlife sanctuaries and controlled hunting areas are likely to deteriorate further.

86. Competition for land, especially for cultivation, grazing and settlements has generally been amplified by both an increasing human population in Africa, from 354 million in 1970 to 469 million in 1980 (UN Statistical Pocketbook 1981), and by perpetual food insufficiency. Consequently most governments have been progressively hesitant to set aside more wildlife areas, particularly so in countries with high population densities (Annex IV) or limited arable lands. For example, Rwanda, with density of about 192 per Km<sup>2</sup> and amongst the highest in Africa, the only two national parks (Kagera and Volcans) are under severe human pressure, combined with acute shortage of land for both cultivation and settlement. And the unique Okavango Delta swamps - an oasis in semi-arid northwestern Botswana - is threatened by irrigated agriculture and livestock development schemes both of which will depend on the extraction of water from the swamps and on the successful control of tsetse-fly.

87. Protection of species, habitats and ecosystems for their bio-ecological and other functions, is only now gaining wider appreciation by governments in Africa. Some governments are now trying to integrate conservation in national land-use and related development plans e.g. Botswana, Cameroon, Ghana, Liberia, Kenya, Senegal, Seychelles, Sudan and Tanzania. For the majority of African countries, over-riding economic problems have obscured the integration of conservation of living resources in development plans; for others it is still a low priority. For those which are moving towards this direction, the draw-back remains that of inadequate body of scientific information to draw from and limited resources for acquiring such information and for implementation.

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3/ Economic Commission for Africa - E/CN.14/784, 21 October 1980.

88. The 1970s witnessed severe declines of elephant and rhino populations giving rise to much concern in some countries and to international outcry, especially by NGOs. It is estimated that from 1974 Kenya's elephant population declined at the rate of 20% per year while between 1970 and 1980 black rhino population was reduced from about 15,000 to 1,500 animals, a 90% reduction 4/. Consequently in 1973 the Government of Tanzania, and in 1977 Kenya, imposed a total ban on hunting and trophy dealings in wildlife products; and in 1975 Zaire instituted a 10-year ban to protect elephants. A number of other countries including Ivory Coast, Niger and Somalia also introduced hunting bans. However, these bans have had the effect of enormously increasing the market value of ivory and rhino horns leading to an intensification of poaching and illegal trade in these products.

89. Consequently too, IUCN, WWF and NYZS cooperated to undertake an Africa-wide survey of the status and conservation needs of elephants (1976) and rhino (1979/80) in which the US Government contributed to a special study of trade in ivory, which was later instrumental in raising the status of the elephants to Appendix I of the US Endangered Species Act. In addition to increased effort to promote the implementation of CITES by both exporting and importing countries (Annex V), these surveys indicate that in savanna and woodlands, wild populations of elephants in 34 African countries stand at over 1.1 million with the bulk of these in Sudan, Tanzania, Zaire and Zambia, while there are less than 15,000 black and 7,000 northern white rhino with the bulk of black rhino located in Tanzania, Zambia, and the white rhino in Zaire.

90. African Governments are cooperating with these NGOs, and with UNEP and FAO, to provide more protection to viable population units of these animals especially through a network of national parks and reserves so as to also preserve geographical races (genetic diversity) which will also protect other species including their habitats and samples of ecosystems. Furthermore, the Central African Republic has initiated consultations with all the neighbouring states: Sudan, Zaire, Congo, Gabon, Cameroon and Chad with a view to inter-state cooperation to combat poaching and illegal trade. Inter-ministerial meetings were convened in 1981 and 1982 to agree on a protocol and institutional framework for this purpose. In implementing JIU Recommendation 7, the Inspectors hope that such welcome efforts by African countries will be brought together at a common forum under ECA and OAU.

91. Concern has also been voiced on the over-exploitation of wild populations of primates particularly for trophies, private zoos and for biomedical research. Thus in 1979 the International Primate Protection League (IPPL), the most vocal on this matter, collaborated with the Sierra Leone Nature Conservation Association (SLENCA) and succeeded in convincing the President of Sierra Leone to place a temporary ban on the exploitation and trade in chimpanzees pending a survey of the status of this animal. This survey was carried out in 1980/81 with the financial assistance from NYZS and WWF and is to be extended to cover other populations in this area. The results have been useful in identifying the Outamba-Kilimi as a priority conservation area in Sierra Leone. A similar situation applies to the mountain gorilla where the AWLF, FFPS, PTES, and WWF/IUCN are assisting the Government of Rwanda to protect the Parc de Volcans population.

92. With regard to biomedical research, consultations between WHO, IUCN and other members of the ECG led to a WHO/ECG Joint Policy Statement, in 1981, which stressed the conservation of wild populations of non-human primates in line with the recommendations of the World Conservation Strategy. It emphasized the protection of threatened primate populations and the rational utilization and management programmes for those species of importance to biomedical research.

93. Along with the decline of primates, and as pointed out in Chapter 16 of the World Conservation Strategy, is the decrease in area and degradation of tropical forests, and the impoverishment of their genetic wealth with consequent adverse impacts on man himself. The UN system including the ECG members, concerned NGOs

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4/ UNEP Report No. 6, 1980.

and donor countries e.g. the Netherlands, Sweden and the USA are actively assisting tropical countries to conserve this ecosystem. The "Global 2000" report sponsored by the Government of the USA is one example of its contribution. In March 1980, UNEP convened an experts meeting in Nairobi with representatives from governments, several UN agencies and a number of NGOs to consider measures for the protection and sustainable use of tropical and sub-tropical forests. A follow-up expert meeting sponsored by UNEP, FAO and UNESCO in Rome, January 1982 adopted recommendations for action which the FAO Committee on Forestry is examining with a view for further input to the UNEP tropical forest programme for 1984-1985, and are being implemented by organizations within and outside the UN system. For example, IUCN in co-operation with WWF and other NGOs have launched a programme to protect representative, viable samples of this ecosystem through a network of parks and reserves. African countries under this programme include Madagascar especially to also protect endangered lemurs, Tanzania, Rwanda-Uganda-Zaire to also protect mountain gorilla, Cameroon and in West Africa on-going activities in Ghana, Ivory Coast, Liberia and Sierra Leone.

94. Equally important is the acknowledgement of the role of forests in socio-economic development by African Heads of State and Government when they met in Lagos, 28-29 April 1980 and adopted the "Monrovia Strategy" under the "Lagos Plan of Action". They agreed to co-operate in the preservation, protection and improvement of the natural environment and called for the expansion of areas under forestry regeneration programmes by 10 per cent per annum up to 1985, with special attention to community woodlots and agro-forestry and the expansion of forest reserves by 10 per cent over the next five years. FAO in collaboration with ECA are cooperating with a view to achieving this objective.

95. Another activity and probably amongst the most successful of UNEP's undertakings, is the Regional Seas Programme which is concerned with the protection of coastal and marine environments - particularly from diverse sources of pollution. The programme includes the conservation of coastal and marine living resources. Three such regional programmes affecting Africa have been adopted, namely the Mediterranean (1975), the West Africa (Gulf of Guinea) (1981), and the Red Sea and the Gulf of Aden (1982) regional seas programmes. Following the request of the Governments of Eastern Africa and the Governing Council of UNEP Decision 8/13 C of 29 April 1980, action on an East African Regional Sea Programme was initiated in 1981 through a joint mission involving all the ECG members, United Nations, WHO, IMO and UNIDC to Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia and Tanzania.

96. A workshop of Government experts convened in Mahe, Seychelles in September 1982 discussed the mission's reports and identified priorities including the preparation of a draft plan of action. Amongst the top priority regional projects identified by the workshop three have direct bearing on the protection and conservation of species and ecosystems (UNEP/WG.77/4). This enhances the value of efforts made in this direction by individual governments such as Seychelles in the establishment of the Indian Ocean Cetacean Sanctuary and the Indian Ocean Alliance of governments bordering this ocean to protect the sanctuary, and by ECG members and concerned NGOs to protect endangered species and ecosystems (marine turtles, dugong, coral and coral reefs, mangrove forests, etc.).

97. As a measure towards co-ordination at sub-regional and regional levels were two UNEP/IUCN technical meetings, one in 1974 at Seronera in Serengeti N.P., Tanzania and the other in Ouagadougou, Upper Volta in 1980, which recommended a broad range of conservation actions. The Seronera meeting was convened within the framework of an already existing informal inter-governmental association of directors of wildlife agencies - the Regional Wildlife Conference for Eastern and Central Africa - which, at its fifth meeting in Gaborone, Botswana in 1978 resolved to expand the forum to cover the whole region. Consequently the Sixth Wildlife Conference convened in Nairobi, Kenya in 1980 was also the first All-Africa Wildlife Conference and was attended by representatives from 15 countries, the organisations of the UN system and others directly concerned. A sub-regional

framework to co-ordinate fisheries, wildlife and tourism development already exists within the Southern African Development Coordination Conference (SADCC) with Malawi having the responsibility for co-ordination. And in West Africa, the Ivory Coast, Upper Volta, Niger, Togo and Benin have established a commission under their "Conseil d'Entente" specifically to co-ordinate tourism, wildlife conservation and national parks between these countries. See also paragraph 90.

98. In this connection the Inspectors would like FAO to consider the possibility of organizing jointly sessions of the AFC Working Party on Wildlife Management and National Parks with the All-Africa Wildlife Conference and other similar meetings in close co-operation with the ECA. This will certainly bring some savings to the Governments as well as to FAO and ECA, and more important, the views and guidance of African Member States can be made at one venue. Although this falls short of an obvious need for a single, regional body to serve as the principal inter-governmental forum to monitor and review the implementation of the regional programme requested by ECA Member States, including adherence to the OAU African Convention and other multi-lateral treaties.

99. The Inspectors note that the African Governments gave political commitment to living resources conservation in 1968 when they concluded the OAU African Convention; although only about 28 countries have ratified or acceded to this Convention (Annex V). However, the decline of elephant and rhino populations, and the degradation of large ecosystems mentioned earlier have not been arrested by a joint effort by OAU members on the basis of this Convention, under which the OAU should be able to give effect to regional co-ordination and co-operation in matters connected with conservation. The Convention embodies all aspects of living resources conservation in Africa and provides the necessary legal framework for regional co-ordination. This treaty requires not only active promotion by an effective secretariat but also to be reviewed from time to time, as already requested at meetings mentioned above, and a programme of action. At the request of OAU Secretariat, the IUCN Commission on Environmental Policy, Law and Administration (with financial assistance from the Federal Republic of Germany) currently undertakes a review of the Convention with a view to possible amendments to strengthen its operation. Nevertheless, it is suggested that the OAU and the ECA could still gain from the experience which has brought success to such other treaties like CITES and the World Heritage Convention and from the Regional Seas Programme.

100. Altogether therefore, these various activities in the region provide a sound base for a comprehensive regional living resources conservation programme and provided it is realistic and adopted by African Governments, it might attract the necessary financial resources through innovative approaches to new sources while sustaining the interest of existing ones. For example, the EEC has already shown interest through support to wildlife related projects in Botswana, Sudan and Uganda under the Lome II Convention. The world-wide endorsement of the World Conservation Strategy is evidence of favourable climate and a global sense of responsibility towards the better management of the earth's living resources. As further evidence, in October 1982 the General Assembly adopted the World Charter for Nature which was prepared at the request of Zaire. The Inspectors very much hope that a regional living resources conservation strategy and programme will be formulated and implemented with the support of the international community to embody all related aspects deriving from the OAU African Convention, the Lagos Plan of Action and the ECA Resolution so as to also rationalize large scale development schemes. From a global point of view the recommendations and suggestions put forward at the Bali Congress would be invaluable during the process of developing this strategy and programme.

101. Mention has already been made concerning a World Bank/IBRD loan to the Government of Kenya. The Bank has recently initiated a project screening mechanism within the Secretariat - Office of the Environment and Health Affairs - and amongst its programme activities the development of tourism. Even though recipient countries are unlikely to accept remedial actions exceeding 3-5% of total project cost,

the integration of wildlife oriented tourism into a project might be attractive. In addition, by their "Declaration of Environmental Policies and Procedures Relating to Economic Development", multilateral development financing institutions committed themselves to providing technical assistance upon request by developing countries and to support projects designed to protect, manage or enhance the human environment, and related resources. The Inspectors are convinced that with some encouragement, these organizations will increase their support to projects in wildlife conservation, particularly from the OECD members several of whom Inspectors met during the preparation of this report.

102. Non-governmental organizations (NGOs) have also made substantial contributions towards the establishment of many of the existing national parks and wildlife reserves in Africa and have nourished an ever growing conservation awareness, especially among the youth. Within the region there are about 30 national NGOs and 7 nature clubs (wildlife clubs) in some 20 countries all concerned with wildlife conservation. The impact of these national NGOs is quite evident in their countries. For example in Sierra Leone in connection with ban on trade in chimpanzees and the proposed Outamba-Kilimi National Park, and the Wildlife Clubs of Kenya which, together with other NGOs, campaigned vigorously against severe poaching and illegal trade, especially of elephants leading eventually to the 1977 ban.

103. At least 7 international NGOs are co-operating with African Governments, and with ECG members, in activities ranging from species and habitat protection to institutional support. During the period 1977-1982 they provided assistance to about 38 countries in projects covering 191 on species and habitat conservation, 49 on general surveys and research, 25 on training, 46 on conservation education, and 26 on general institutional support, some of which have already been noted in the report. At the regional level the East African Wild Life Society has continued to make significant contributions in similar areas in East Africa, and the Society's Journal of African Ecology is now serving as an important channel for disseminating research results by workers in the region. The potential represented by these NGOs within the context of developing and implementing a future regional wildlife conservation programme can best be appreciated from the summary below.

104. The Inspectors would like to urge these NGOs to increase their effort on training in order to assure durable impact of their contributions in the region. Also the ECA and OAU should encourage co-operation with these NGOs, particularly in connection with Recommendation 7 and the ECA resolution. There is little doubt that the NGOs would welcome opportunities offered through the ECA resolution to achieve the conservation objectives for which each of them was founded.

Summary of contributions by some NGOs to species and ecosystems conservation in Africa, 1977-1982

Organization	Number of Countries	No. of Projects		Financial Contribution/Commitment(US\$)
		National	Regional	
World Wildlife Fund/IUCN	34	133	20	3,913,299 (1,703,487) <u>a/</u>
Frankfurt Zool. Society (FZS)	13	74	0	3,371,873
New York Zool. Society (NYZS)	12	23	2	436,745
African Wildlife Leadership Foundation (AWLF)	+9	+34	3	160,000 <u>b/</u>
Fauna and Flora Preservation Society (FFPS)	15	30	2	72,929
Peoples Trust for Endangered Species (PTES)	6	8	0	n.a. <u>c/</u>
Intern. Foundation for Game Conservation (IGF)	+4	+7	+3	n.a.
	+38	+307	30	+7,954,846

Source: From individual NGOs.

a/ 1982-83 commitment for category I projects

b/ On training only

c/ PTES cooperates and jointly funds projects with FFPS.

## V. CONCLUSIONS AND RECOMMENDATIONS

105. The first report on regional training programmes in African wildlife management (JIU/REP/79/1) reviewed developments and problems connected with the conservation of wildlife resources in Africa and the contribution of the UN system in this sector, particularly by FAO, UNEP, UNESCO and UNDP. Garoua Wildlife School in Cameroon and Mweka College in Tanzania were considered a very successful example of regionally functioning institutions, and a demonstration of effective international cooperation and assistance and they should be placed under regional IPF and operate within the framework of a comprehensive regional wildlife conservation programme. Comments by the Executive heads and the decisions of the Governing bodies of the concerned UN organizations identified areas in which they planned to make further contributions, mostly in training. The ECA Conference of Ministers in April 1980 by their resolution 388(XV) recommended that the two colleges be converted to full regional institutions and called upon the ECA Secretariat to cooperate with other organizations of the UN system and with OAU and IUCN in formulating and implementing a long-term integrated regional wildlife conservation programme. However, the Governments of Cameroon and Tanzania wish to retain the existing legal status and operating arrangements of their colleges. This has further delayed assistance to Mweka under regional IPF and continuation of support to Garoua under Project RAF-74-056 at an enhanced level.

106. Meanwhile there has been an increase in both the number of junior and middle level training institutions and of universities providing curricula in wildlife conservation, developments which may overtake the FAO's proposed assessment of manpower and training needs in African Member States. Similarly, countries are endeavouring to provide more protection and to manage better marine and terrestrial species and ecosystems, with most encouragement coming from non-UN sources. There is evidence of inter-state co-operation especially at sub-regional level although this does not necessarily derive from adherence to the OAU African Convention. Thus the range of current activities concerned with living resources conservation in Africa, including research and training, all combine to introduce new elements to be taken into account during subsequent implementation of the JIU recommendations and the ECA resolution.

107. In conclusion, the implementation of the JIU recommendations has been piecemeal and their objectives only partially attained. The Inspectors have seen no meaningful coordination or cooperation in this matter, probably because no lead organization of the UN system was charged with this responsibility. The need for more consultations is also evident even on policies regarding the use of regional IPF. Similar observations can be made regarding the implementation of the ECA resolution whereby the ECA Secretariat is expected to initiate and coordinate action. For an integrated regional conservation programme to succeed there must be full co-operation not only among ECA State members, but equally important among the UN organizations concerned in particular members of the Ecosystem Conservation Group (FAO, UNEP, UNESCO and IUCN) in close co-operation with the ECA. On the basis of these and other aspects covered in the body of the report the Inspectors wish to recommend the following course of action:

### A. Support to Training Programmes in Wildlife Conservation at Technical and Administrative Levels

108. Garoua and Mweka colleges have continued to fulfill their regional training functions despite financial insecurity and to date have trained students from 35 African countries. The Governments of Cameroon and Tanzania have continued to shoulder financial burden to keep the training programmes going. In the case of Mweka College, fees have increased to a point where most user countries may no longer be able to sponsor students. UNDP has earmarked about US\$1.5 million under Regional IPF for the two colleges for the period 1983-86.

RECOMMENDATION 1: The ECA Secretariat should as a matter of urgency:

(a) consult the Government of Cameroon and of Tanzania, and UNDP, to ensure that the earmarked funds are made available to Garoua and Mweka early in 1983 (para. 47 and 105);

(b) consult Member States to re-consider their call for a change of the legal status of Garoua and Mweka since the two colleges, as national institutions, are already meeting some of the objectives of the ECA Resolution and one of them, Garoua, has continued to receive support under Regional IPF since 1974. Instead, the two colleges under Government execution for UNDP programmes could host a regional programme (para. 19 and 44);

(c) co-operate with FAO and the other ECG members, and with the Governments of Cameroon and Tanzania to define the objectives, scope and the mode of operation of relevant elements of the regional programme requested by Member States to be based at Garoua and Mweka (para. 19, 45 and 48).

RECOMMENDATION 2: In view of a growing number of junior level training schools:

(a) FAO and UNESCO should actively pursue the implementation of JIU Recommendation in connection with the role of Garoua and Mweka in the training of instructors for these schools (para. 7).

(b) UNDP in consultations with Member States, and with ECA and FAO, should continue to encourage and support Governments wishing to develop training institutions at this level, especially those with potential to cover the needs of neighbouring countries (paras. 62-73), and

(c) as a solution to the severe manpower scarcity in Portuguese-speaking African countries, UNDP, FAO, UNEP and ECA including UNESCO should encourage the initiative taken by the Government of Mozambique to establish a wildlife training institute for this purpose (para. 52).

B. Training Programmes at Scientific Level

109. A number of universities have instituted formal curricula in wildlife ecology and biology but suffer from inadequate funding and qualified lecturers. The ECA Resolution calls for the development of scientific capability in the field of wildlife conservation.

RECOMMENDATION 3:

(a) FAO and UNESCO, in cooperation with ECA should assist a select number of these or other suitable institutions to develop regional training programmes at this level in a similar way that Garoua and Mweka Colleges are serving African countries. The programme should include the development of expertise in conservation policy and legislation (para. 75, 81, 82).

(b) UNESCO should encourage these universities to fully participate in MAB Programme activities, and to make use of Biosphere reserves and World Heritage sites for training and staff development purposes (paras. 74, 75).

(c) ECG Members, especially FAO, UNESCO and UNEP, should make special effort to secure fellowships and research funds for the training of lecturers to improve staff competence and capacity of these universities (para. 75, 76).

C. Integrated Regional Living Resources Conservation Strategy and Programme

110. In order to bring effect to the ECA Resolution, the JIU Recommendation 7 for which UNEP is primarily responsible, and the Lagos Plan of Action, and without pre-

judice to continued international support to Garoua and Mweka colleges, particularly assistance from UNDP under Regional IPF and from UNEP, and bearing in mind the political and legal framework provided by the OAU African Convention on the conservation of Nature and Natural Resources, and the conceptual framework provided by the World Conservation Strategy and the MAB Programme.

RECOMMENDATION 4:

(a) ECA as the co-ordinator at regional level should, as a matter of urgency, convey the request of Member States to the organizations mentioned in the resolution to cooperate in the formulation and the implementation of an integrated regional living resources conservation strategy and programme (para. 19, 35, 42).

(b) UNEP assisted by the other members of ECG should cooperate closely with the ECA and, in particular, consider to provide the ECA with necessary financial support to initiate the formulation of the strategy and implementation of the programme mentioned in (a) above (para. 100 and 107) by:

- (i) strengthening the capacity of the Environmental Co-ordination Unit,
- (ii) convening a meeting of experts drawn from ECA Member States to lay down the framework for the regional strategy and programme.

RECOMMENDATION 5:

(a) ECA in close cooperation with OAU should encourage more Member States to ratify or accede to the OAU African Convention and related multi-lateral treaties and agreements (para. 99).

(b) ECA, FAO and OAU should consult with Member States with a view to establishing a single, formal technical forum to bring together agencies in Member States responsible for the administration and management of wildlife resources (para. 98).

RECOMMENDATION 6:

(a) ECA in close cooperation with UNEP should encourage and co-ordinate international financial support for the implementation of the programme referred to in 4(a) above, and together with other ECG members should assist African Governments to design projects which will aim at the achievement of the long-term objectives of the programme (para. 101 and 105).

(b) African Governments should request UNDP, UNEP, FAO, UNESCO and others to increase the content of wildlife conservation in other related national and regional funded projects (para. 46).

RECOMMENDATION 7: Non-governmental conservation organizations have the potential for meaningful participation in the regional conservation programme. ECA, in cooperation with OAU and IUCN should encourage these NGOs to continue and possibly increase their conservation efforts in Africa and, in particular, to orient their activities towards the attainment of priorities identified in the programme (para. 102-105).



ANNEX I. UNDP/FAO field activities in wildlife and protected area management in Africa, 1977-1982

Country	Project number and title	Executing Agency	Duration/ Start Date	UNDP Contrib. in US\$	
BENIN	BEN-72-012	Amenagement de la faune et des parcs nationaux	FAO	09/73-01/79	375,641
	BEN-77-011	Developpement des parcs nationaux	FAO	01/78-01/83*	489,361
BOTSWANA	BOT-72-020	Wildlife management and utilization	FAO	10/72-01/79*	161,638
	BOT-74-012	Wildlife management and biology	FAO	12/74-01/79	2,662
	BOT-77-013	Strengthening the Department of Wildlife and national Parks and Tourism	UNV	10/77-01/80*	5,453
	BOT-78-007	Assistance to the Wildlife Training Centre - Training Officer	FAO	08/78-01/85	456,369
	BOT-80-004	Formulation mission	FAO	12/80-01/81	70,178
C.A. REPUBLIC	CAF-72-010	Amenagement de la faune en zone Nord	FAO	11/73-01/80	425,456
	CAF-78-006	Amenagement de la faune	FAO	01/79-01/82*	663,584
CHAD	CHD-69-004	Direction du service des parcs nationaux et des reserves de faune	FAO	01/70-01/77	198,506
CONGO	RPC-77-007	Planification de la mise en valeur des ressources forestieres du Sud Congo	FAO	08/77-01/82*	602,698
KENYA	KEN-68-013	Wildlife veterinarian	FAO	11/68-01/80	271,246
	KEN-71-526	Wildlife management in Masailand	FAO	02/71-01/80	1,690,806
	KEN-73-003	Habitat utilization research	FAO	11/73-01/78	122,400
MAURITANIA	MAU-78-001	Formation agricole	FAO	01/78-01/83	1,123,226
MOROCCO	MOR-73-015	Amenagement d'un parc national	FAO	03/74-02/77	152,718
NIGERIA	NIR-74-019	Inland fisheries and wildlife management training	FAO	11/74-01/80	24,398
	NIR-76-003	Federal School of Wildlife	FAO	06/78-01/81	236,501
SENEGAL	SEN-80-002	Lutte contre les feux (LDC funds)	UNDP	03/80-01/82*	35,000
SOMALIA	SOM-72-012	Forestry and wildlife management	FAO	05/73-10/78	638,376
	SOM-75-007	Strengthening of wildlife & forestry management	FAO	10/75-01/77	128,268
SUDAN	SUD-76-021	Wildlife conservation & management (Southern Sudan)	FAO	11/76-10/77	4,598
UGANDA	UGA-80-016	Assistance for anti-poaching activities in the national parks (LDC funds)	GVT	11/80-01/84*	910,434
U.R. CAMEROON	CMR-72-025	Assistance to the national parks in the north	FAO	04/73-01/78	187,836
U.R. TANZANIA	URT-70-530	College of African Wildlife Management (phase II)	FAO	06/70-01/79	676,467
UPPER VOLIA	UPV-72-029	Development of forest resources, wildlife & fisheries	FAO	11/73-01/79	955,496
	UPV-78-004	Dev. des ressources forestieres et cynegetiques	FAO	08/78-01/83*	1,022,879
	UPV-78-008	Inventaire des ressources en faune sauvage et etude economique sur son utilisation en zone rurale	FAO	07/79-01/83*	499,078
ZAIRE	ZAI-70-001	Formation de cadres pour la conservation de la nature	FAO	06/70-01/81	407,283
	ZAI-80-002	Mission de formulation d'un programme d'assistance aux secteurs forêts et amenagement de la faune au Zaire	FAO	02/80-04/83*	34,000
ZAMBIA	ZAM-68-510	Luangwa Valley Conservation and Development	FAO	01/68-01/79	1,105,147
REGIONAL PROJECTS	RAF-74-056	Wildlife School, Garoua	FAO	08/74-01/83	684,269
Total 32 projects					14,351,972

Sources: UNDP Compendia of Approved Projects 1977/79/81 and UNDP NY letter of 24.8.1982 (indicated by \*)

Observations

1. Of the 32 projects listed above 18 were initiated before 1977, while 25 projects were to be phased out by 1982 and only about 7 continued beyond the period under consideration
2. Compendium or list of approved projects in June 1982 is not yet available in order to determine wildlife projects included in the UNDP Third Programme cycle, 1982-86
3. See Annex II for activities funded under UNEP.



ANNEX II. United Nations Environment Programme field activities having a close bearing on the conservation of ecosystems and wild species of fauna and flora in Africa during the period 1977 to 1982

Project number	Project Title	Agency	Project dates	Cost to UNEP (in US\$)
FP 0202-73-01	State of knowledge report on sub-humid tropical ecosystems as a basic tool for research design, training and integrated planning	UNESCO	11/73-06/82	212,323
FP 0302-76-03	Pre-construction environmental study of Tana River upper reservoir (includes impacts on wildlife)	Gvt.of Kenya	05/76-04/77	181,893
FP 0305-80-03*	Promoting an understanding of conservation through information, education and training	IUCN	01/81-12/83	247,500
FP 0502-74-01	Conservation of aquatic mammals	FAO	08/74-12/78	277,704
FP 0502-78-01	First International Conference on the Mediterranean Monk Seal	MOC	05/78-10/80	13,124
FP 0502-78-02	Development of a global plan of action for the conservation, management and utilization of marine mammals	FAO	09/78-12/83	164,832
FP 0502-80-01*	Promotion of the establishment & effective management of coastal and marine protected areas	IUCN	01/81-12/83	212,500
FP 0503-75-03	Mediterranean programme activity promotion of the establishment of marine parks and reserves in the Mediterranean - MED III	IUCN	01/75-02/77	34,597
FP 0503-77-01	Regional Environment Programme for the Red Sea and the Gulf of Aden (Phase I)	ALECSO	01/77-12/82	191,973
FP 0503-79-19	Development of a comprehensive action plan for the protection & dev. of the marine & coastal areas of the West Africa Regn	UNEP	09/79-04/82	527,003
FP 0503-82-03	UNEP support to Action Plan for the West & Central African Regn.	UNEP	07/82-06/83	175,730
FP 0503-82-04	UNEP support to dev. of an Action Plan for the East African Regn.	UNEP	07/82-06/83	238,746
FP 0605-74-01	Advisory services in ecology and conservation concerning living aquatic and terrestrial resources with special attention to ecosystems, endangered species, national parks & nature reserves	UNEP	01/74-12/78	219,909
FP 0605-74-04	Co-ordinated system of national parks and reserves in West Africa	IUCN	01/75-12/77	39,278
FP 1000-76-01	Environment protection & assessment of some multilateral develop. financing agencies a review of programmes & their implications	IIED	08/76-07/77	63,652
FP 1001-79-02	Preparation of a "Declaration of Principles & Operational Guidelines for the inclusion of environmental concerns in activities undertaken by development financing agencies	UNEP	06/79-07/82	213,069
FP 1002-79-01	Development of legislation for environmental protection in the ECA Region	ECA	07/79-06/82	76,787
FP 1102-76-01	Pilot projects in ecological training & management in tropical forest areas as a basis for environmentally sound development	UNESCO	01/77-12/83	1,146,652
FP 1102-78-01	International post-graduate training course on eco-management for developing countries at the Technical University of Dresden	UNESCO	06/78-12/83	1,227,690
FP 1102-79-01	Meeting on deforestation in tropical areas	UNEP	07/79-12/82	259,900
FP 1103-75-04	Conservation & development programme strategy for ecosystem conservation promotion and coordination action	IUCN	05/75-05/79	1,862,369
FP 1103-77-01	Fellowship programme at the College of African Wildlife Management (CAWM), Mweka	CAWM	07/77-07/81	180,000
FP 1104-76-01*	Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora	IUCN	04/74-01/83	1,477,101
FP 1105-75-01	Sub-regional seminar & workshop on conservation & integrated management of natural ecosystems for officers in South Eastern Africa	UNESCO	04/75-01/78	31,274
FP 1105-80-02	Conservation strategies for critical ecosystems especially coastal and freshwater ecosystems	IUCN	01/81-12/83	230,000
FP 1106-80-03	Expert meeting on world soil policy & plan of action for its implementation	UNEP	01/81-06/82	132,800
FP 1107-79-01	Training courses for environmentally-sound management and Utilization of river basins	UNEP/COM	02/79-12/82	1,265,954
FP 1107-79-02	Pre-construction ecological studies and planning in Rufiji Basin, Tanzania, Phase I	UNEP	04/79-05/80	15,545
FP 1110-79-01	Development & promotion of the implementation of a World Conservation Strategy	IUCN	01/79-12/81	1,613,878
FP 1110-80-01*	Monitoring the status of wild fauna and flora	IUCN	01/81-12/83	190,000
FP 1110-80-02	Promoting the conservation of wild fauna and flora	IUCN	01/81-12/83	432,000
FP 1110-80-03	Promotion of the establishment & effective management of terrestrial and freshwater protected areas	IUCN	01/81-12/83	280,000
FP 1110-80-04	Promotion of conservation strategies in selected tropical countries	IUCN	01/81-12/83	300,550
FP 1110-81-01	Checklist of the Vertebrates of the World	CITES	01/81-12/82	20,000
FP 1110-81-02*	Identification Manual for Endangered Species	CITTS	02/81-12/83	150,500
FP 1110-81-03*	International Congress on Biosphere Reserves, Minsk, USSR	UNESCO	06/81-04/84	660,050
FP 1110-81-04	Study Tour on Protected Areas & Wildlife in the USSR	UNESCO	06/81-12/83	297,000
FP 1110-81-05	Establishment of Biosphere Reserves in Arid and Semi-Arid Lands	UNESCO	10/81-12/83	183,500
FP 1110-82-01	Regional/Quarterly Bulletin on Wildlife, National Parks and Wild-land Conservation & Management for Africa (Nature et Faune)	IAO	07/82-06/84	48,000
FP 1301-78-04	Tropical forest resources assessment	FAO	10/78-07/83	277,353
FP 1301-79-01	Pilot project on the inventory & monitoring of Sahelian pastoral ecosystems	FAO	07/79-12/84	1,412,376



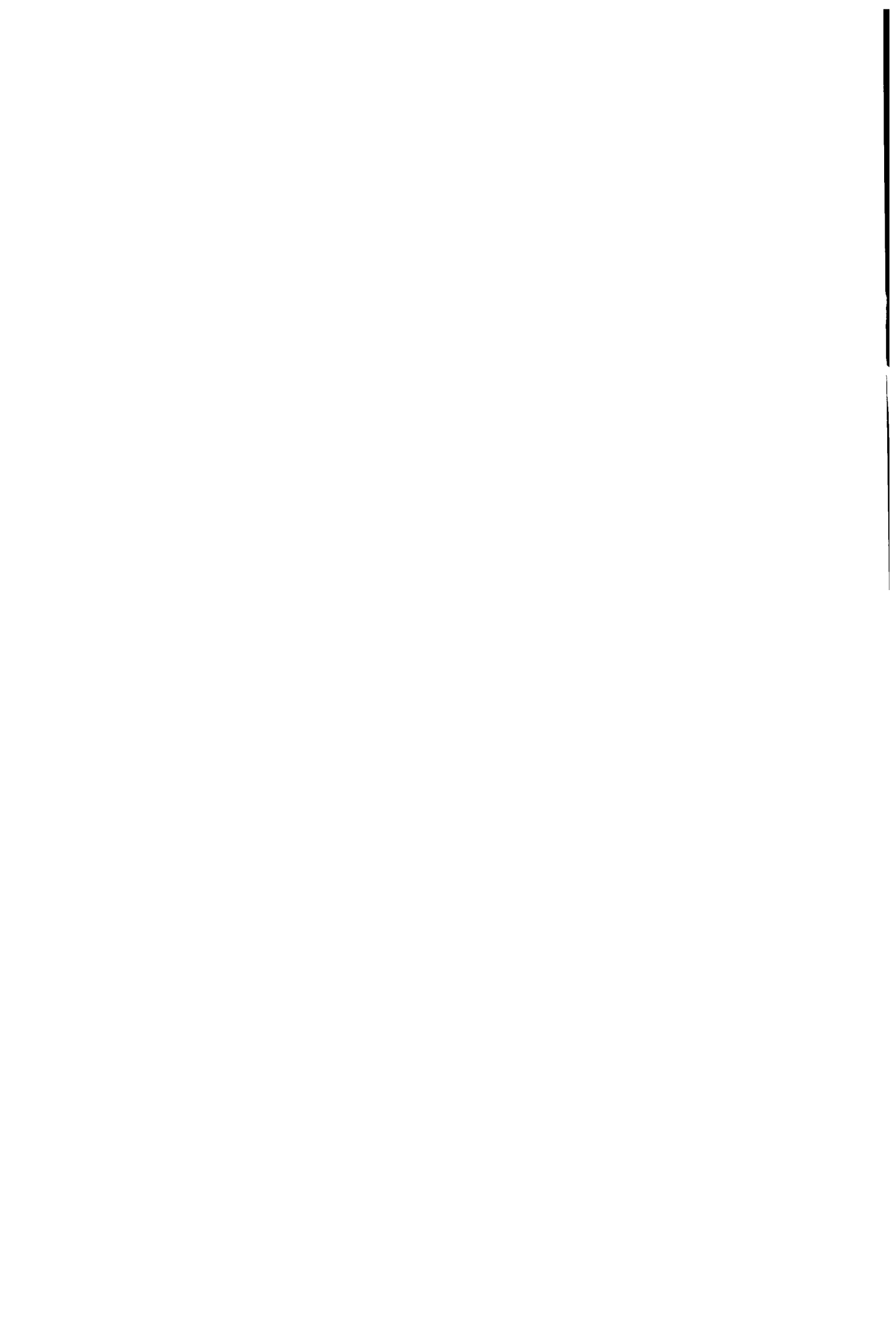
ANNEX III. Some UNESCO's field activities in the conservation of natural heritage in Africa,  
1977-1982

Project	Nature of Activity	Source	Duration	Contribution in US\$
ALG-75-037	Assistance to the Nat'l Research Centre on Arid Zones	UNDP	10/77-01/82	135,300
ALG-77-034	Assistance for Planning & Training Personnel responsible for safeguarding historical sites and monuments	UNDP	01/79-01/84	364,300
EGY-73-063	Coastal protection studies	UNDP	08/75-01/80	869,726
ETH-74-014	Ethiopia, Preservation & Presentation of selected sites and monuments	UNDP	04/76-01/82	648,085
RAF-79-017	Regional, Formation en aménagement pastorale integre au Sahel (VOLET A Cours post-universitaire cadres superieurs)	UNDP	01/80-04/82	358,336
RAF-79-038	Centre regional de documentation et d'information en ecologie tropical humide	UNDP	06/80-08/80	17,130
SIL-68-010	Sierra Leone, Marine sciences	UNDP	11/68-01/79	185,912
URT-78-026	Tanzania, Seminar on Environmental Engineering	UNDP	08/78-01/79	4,424
507-KEN-41	Kenya, Integrated Project on Arid Lands (IPAL)	FIT-FRG	n.a.	n.a.
509-KEN-41	Strengthening of environmental control & conservation mechanism for desertification control	FIT-FRG	n.a.	n.a.
609-RAF-42	Integrated pastoral development training in the Sahel	UNSO/UNDP/ UNESCO	n.a.	n.a.
901-LIB-42	El-Fateh University-Marine Research	FIT-Self- benefiting	n.a.	n.a.
609-SUD-40	Sudar, Strengthening of Natural Desertification Control	UNSO/UNESCO/ UNDP	n.a.	n.a.
<u>Contribution from the World Heritage Fund</u>				
EGYPT	Fellowships, 2x22m specialists to Mweka College Fellowships 2x9m students to Mweka College		08/81-04/82 08/82 -	20,000 21,200
ETHIOPIA	Preparatory mission for tech. assistance, Simen Mtn. N.P. & advice on inscription of Bale Mtn. Abijata-Shalla Lakes reserves Fellowship, 1x12m for student to Mweka College Fellowships, 2x22m students to Mweka College In-service Game Scouts training course, Simen Mtn. N.P. Equipment for Simen Mtn. N. Park Simen Mtn. N. Park, seminar and park management plan		01/81-04/81 09/81-09/82 09/81-07/83 - 1982 - - 1982 - - 1983 -	12,108 7,200 54,000 9,691 113,450 21,000
GUINEA	Assistance for tripartite meeting on protection of Mount Nimba (Guinea, Ivory Coast and Liberia) Fellowship, vegetation analysis (Paris & Mont-pellier) Fellowship, land use planning and ecosystems protection (Arion, Belgium) Equipment for protection of Mt. Nimba		26-29/82 09/81-12/81 09/81-10/82 - 1981 -	8,000 7,200 21,000 70,000
IVORY COAST	Comoe N. Park, support to monitoring activities (MAB Programme)		- 1982 -	6,000
KENYA	Malindi-Watamu N. Park, research and management (MAB Programme) Wildlife Clubs of Kenya, support to conservation training seminar for teachers & advisors (MAB Programme)		- 1982 - - 1982 -	3,000 2,000
NIGERIA	Preparatory assistance for natural heritage inscription		01/79-02/79	7,323
SENEGAL	Expert mission on establishment of protection measures, Djoudj N.Park (2 missions) Study tour on national parks management, USA and Canada Fellowship, light aircraft pilot training Niokolo-Koba N. Park, equipment for wardens Djoudj N. Park, equipment for wardens		01/81-08/81 08/81-09/81 - 1982 - - 1983 - - 1983 -	20,838 4,865 5,000 27,031 29,132
SEYCHELLES	Aldabra Atoll N.Reserve, equipment for warden station		- 1983 -	21,000
TANZANIA	Fellowship, 1x6m for Mweka College instructor (refresher course) Fellowship, 1x2m in law and administration for Ngorongoro C. Area staff Fellowship, 1x10m in interpretation techniques in USA Fellowship, 1x20m in pasture (range) management Fellowship, 1x6 weeks in economic development and natural resources management Technical cooperation, preparation of project on conservation & presentation of Oldupai & Laetolil Gorges Ngorongoro C. Area Preparation of management plan, Ngorongoro C. Area		10/80-11/80 06/81-07/82 06/81-07/82 - 1982 - 05/82-06/82 09/80-10/80 - 1980 -	5,913 18,000 21,000 32,400 6,000 4,343 33,000
306-INF-40	Field training equipment for Mweka College Communications & surveying equipment under TC request, CAWM, Mweka		- 1981 - - 1983 -	60,000 45,000
TUNISIA	Support for studies on protection measures for Ichkeul N.Park		- 1981 -	30,000
ZAIRI	Expert mission on natural heritage Fellowship, 1x9m in fauna inventory techniques in Kenya Fellowship, 1x3m on vegetation mapping in France Fellowship, 1x9m in animal population dynamics, Dakar Fellowship, 1x7m in national parks management, USA, Canada and Kenya Equipment & consultation mission on Virunga national park Equipment for Garamba national park Equipment for Kahuzi-Biega national park		08/79-09/79 - 1980 - 01/81-04/81 - 1981 - 04/82-10/82 - 1980 - - 1980 - - 1980 -	4,486 9,900 5,860 21,900 12,000 43,660 19,120 15,120
GLOBAL	Brazil, Cyprus, Ethiopia, India, Nepal, course in teledetection and its application in wildlife management (Telespatio, Italy)		12-22/7-82	15,000

Sources UNDP Compendia of Approved Projects 1977/79/81, UNESCO 21 C/3 & 22 C/3, UNESCO letter IM/JIU/92/117 of 18.06.1982 and 21.12.1982, and Doc. CLT-82/CH/C ONF-015/INF.1 of 8.11.1982

NB - Activities undertaken in cooperation with UNEP are shown in Annex II

n.a. - information not available.



ANNEX IV. Situation regarding the establishment and protection of wildlife conservation areas in selected African countries, including tourist trends

COUNTRY	Population and Growth Rate, 1980		Area Surface	Area under National parks and reserves		Number of National Parks and reserves <sup>a/</sup>				Garoua and Mweka Graduates			Tourist Arrivals (in thousands)	
	Millions	(%)	(Km <sup>2</sup> )	(Km <sup>2</sup> )	(%)	NPs	GRs	BRs	WHS	CERT	DIP	PGR	1970	1980
BOTSWANA *	0.82	(2.8)	600, 72	103,953	(17.31)	4	6	-	-	12	4		91.0 <sup>b/</sup>	226.9 <sup>c/</sup>
CAMEROON	8.50	(2.3)	475,442	23,748	( 5.00)	5	10	3	-	30	25		64.8 <sup>d/</sup>	126.3 <sup>e/</sup>
CA REPUBLIC	2.22 <sup>e/</sup>	(n.a)	622,984	67,552	(10.84)	4	8	2	-	9	10		3.2 <sup>b/</sup>	n.a
ETHIOPIA *	32.60 <sup>e/</sup>	(1.8)	1,221,000	23,770	( 1.94)	9	-	-	7	12	14	4	52.2	36.4
GHANA	11.45	(3.1)	238,537	10,680	( 4.48)	5	1	-	2	20	21	3	35.5	46.3 <sup>b/</sup>
IVORY COAST *	7.97 <sup>e/</sup>	(3.5)	322,463	19,760	( 6.13)	6	4	1	1	18	12		92.0	198.9 <sup>c/</sup>
KENYA	16.40 <sup>e/</sup>	(4.0)	582,644	51,465	( 8.83)	22	17	4	-	178	81		322.0	383.1 <sup>c/</sup>
LIBERIA *	1.87	(3.5)	111,269	1,344	( 1.21)	0(2) <sup>f/</sup>	-	-	-	4	-	2	n.a	n.a
MADAGASCAR *	8.74 <sup>e/</sup>	(2.6)	587,041	6,693	( 1.14)	2	14	-	-	1	1		28.0	11.2 <sup>c/</sup>
MALAWI	5.97	(3.2)	118,484	10,503	( 8.86)	5	4	-	-	8	2	2	34.4 <sup>b/</sup>	47.5 <sup>c/</sup>
MAURITIUS *	0.96 <sup>h/</sup>	(1.6)	2,045	46	-	-	14	1	-	-	-		68.0	122.5 <sup>c/</sup>
MOZAMBIQUE *	10.47 <sup>e/</sup>	(2.6)	297,657	34,200	(11.49)	4	7	-	-	-	-		n.a	n.a
NIGERIA *	77.08 <sup>e/</sup>	(3.2)	923,168	34,527	( 3.74)	1	13	1	-	23	13	5	n.a	n.a
RWANDA *	5.05	(3.0)	26,538	2,620	( 9.95)	2	-	-	-	7	3		n.a	n.a
SENEGAL *	5.66 <sup>e/</sup>	(2.6)	196,192	22,382	(11.41)	7	6	3	3	17	17		46.5	198.5 <sup>c/</sup>
SEYCHELLES *	0.06	(3.1)	280 <sup>l/</sup>	221 <sup>l/</sup>	-	5	4	-	1	-	-		3.2 <sup>d/</sup>	78.1 <sup>c/</sup>
SIERRA LEONE *	3.47 <sup>e/</sup>	(2.6)	71,140	2,060	( 2.87)	0(2) <sup>f/</sup>	6	-	-	6	2		7.5 <sup>k/</sup>	35.1 <sup>g/</sup>
TANZANIA *	17.98	(3.1)	939,103	131,121	(13.95)	10(11) <sup>f/</sup>	17	2	4	208	118	9	72.2	93.0 <sup>l/</sup>
UGANDA *	13.22 <sup>c/</sup>	(3.0)	236,036	17,269	( 7.32)	3	14	1	-	31	14	1	n.a	n.a
ZAIRE	28.29 <sup>e/</sup>	(2.8)	2,345,409	83,090	( 3.54)	7	n.a	2	3	12	33		38.4	16.4
ZAMBIA	5.83	(3.2)	752,614	59,451	( 7.90)	18	n.a	-	-	37	12		47.0	55.2 <sup>c/</sup>
ZIMBABWE	7.36	(3.4)	390,580	43,984	(11.26)	11	14	-	-	-	-		n.a	n.a

Sources: UN List of National Parks and Protected Areas, 1982 Edition, UN Statistical Pocketbook, 6 Edition, 1981 and Map No.2753, Rev.1, 1975, Government agencies responsible for wildlife conservation (marked by \*), Garoua and Mweka Colleges as per Tables 4 and 5

- <sup>a/</sup> Some of the Biosphere reserves and World Heritage Sites are also national parks or wildlife reserves  
<sup>b/</sup> 1972  
<sup>c/</sup> 1979  
<sup>d/</sup> 1971  
<sup>e/</sup> UN estimate  
<sup>f/</sup> Includes areas awaiting official declaration of status as under appropriate category  
<sup>g/</sup> 1978  
<sup>h/</sup> Excluding Rodrigues  
<sup>l/</sup> Land surface only  
<sup>j/</sup> Includes marine parks  
<sup>k/</sup> 1973  
<sup>l/</sup> 1977

#### Observations

1. CERT - Certificate level a good number of whom continue into the diploma course or return after a few years' field work
2. DIP - Diploma level some of whom are either tied up with administrative duties at provincial and district headquarters, gone for further studies or have left the service
3. PGR - Post-graduate diploma most of whom end up with administrative duties and planning, and only a few in management or research in protected areas.



ANNEX V. Ratification/accession to multilateral conservation treaties by African countries as at June 1982

Treaty Adopted Inforce	AFRICON Algiers, 1968 Oct. 1969	WETLANDS Ramsar, 1971 Dec. 1975	WORLD HERITAGE <sup>a/</sup> Paris, 1972 Dec. 1975	C I T E S Washington, 1973 July 1975	MIGR. SPECIES Bonn, 1979 (not yet)
Algeria	S	-	Jun 1974 (R)	-	-
Angola	-	-	-	-	-
Benin	S	-	Jun 1982 (R)	-	-
Botswana	S	-	-	Nov 1977 (A)	-
Burundi	S	-	May 1982 (R)	-	-
Cameroon, United Republic	Sep 1978 (R)	-	-	Jun 1981 (A)	S
Cape Verde	-	-	-	-	-
Central African Republic	Mar 1970 (R)	-	Dec 1980 (R)	Aug 1980 (A)	S
Chad	S	-	-	-	S
Comoros	Apr 1981 (R)	-	-	-	-
Congo	S	-	-	-	-
Djibuti	Apr 1978 (R)	-	-	-	-
Egypt	Mar 1972 (R)	-	Feb 1974 (R)	Jan 1978 (R)	S
Equatorial Guinea	S	-	-	-	-
Ethiopia	S	-	Jul 1977 (R)	-	-
Gabon	S	-	-	-	-
Gambia	S	-	-	Aug 1977 (A)	-
Ghana	May 1969 (R)	-	Jul 1975 (R)	Nov 1975 (R)	-
Guinea	S	-	Mar 1979 (R)	Sep 1981 (A)	-
Guinea-Bissau	-	-	-	-	-
Ivory Coast	Jan 1969 (R)	-	Jan 1981 (R)	-	S
Kenya	Mar 1969 (R)	-	-	Dec 1978 (R)	-
Lesotho	S	-	-	S	-
Liberia	Nov 1978 (R)	-	-	Mar 1981 (A)	-
Libya, Arab Jamahiriya	S	-	Oct 1978 (R)	-	-
Madagascar	Sep 1971 (R)	-	-	Aug 1975 (R)	S
Malawi	Mar 1973 (R)	-	Jan 1982 (R)	Feb 1982 (A)	-
Mali	Jun 1974 (R)	-	Apr 1977 (A)	Oct 1977 (A)	-
Mauritania	S	-	Mar 1981 (R)	-	-
Mauritius	S	-	-	Apr 1975 (R)	-
Morocco	Feb 1977 (R)	-	Oct 1975 (R)	Oct 1975 (R)	S
Mozambique	Apr 1981 (R)	-	-	Mar 1981 (A)	-
Niger	Jan 1970 (R)	-	Dec 1974 (A)	Sep 1975 (R)	R
Nigeria	May 1974 (R)	-	Oct 1974 (R)	May 1974 (R)	-
Rwanda	Feb 1980 (R)	-	-	Oct 1980 (A)	-
Sao Tome & Principe	-	-	-	-	-
Senegal	Feb 1972 (R)	Jul 1977 (A)	Feb 1976 (R)	Aug 1977 (A)	S
Seychelles	Oct 1977 (R)	-	Apr 1980 (A)	Feb 1977 (A)	-
Sierra Leone	S	-	-	-	-
Somalia	S	-	-	-	S
Sudan	Oct 1973 (R)	-	Jun 1974 (R)	S	-
Swaziland	Apr 1969 (R)	-	-	-	-
Tanzania, United Republic	Nov 1974 (R)	-	Aug 1977 (R)	Nov 1979 (R)	-
Togo	Nov 1979 (R)	-	-	Oct 1978 (R)	S
Tunisia	Feb 1977 (R)	Jan 1980 (A)	Mar 1975 (A)	Jul 1974 (R)	-
Uganda	Nov 1977 (R)	-	-	-	-
Upper Volta	Aug 1969 (R)	-	-	-	-
Zaire	Oct 1976 (R)	-	Sep 1974 (R)	Jul 1976 (A)	-
Zambia	May 1972 (R)	-	-	Nov 1980 (A)	-
Zimbabwe	-	-	Aug 1982	May 1981 (A)	-
Total	28 out of 50	2 out of 31	23 out of 67	26 out of 77	1

Sources CITES Secretariat, IUCN/CEPIA Bonn (Burhenne, W), UNESCO

Explanation of symbols A - Accession, R - Ratification, S - Signatory

a/ as on 16 August 1982

AFRICON OAU African Convention on Conservation of Nature and Natural Resources

CITES Convention on International Trade in Endangered Species of Wild Fauna and Flora

MIG. SPECIES Convention on the Conservation of Migratory Species of Wild Animals

WETLANDS Convention on Wetlands of International Importance, especially as Waterfowl Habitat

WORLD HERITAGE Convention concerning the Protection of the World Cultural and Natural Heritage.