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SUPPORT

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ACTIVITIES OF THE UNITED NATIONS SUDANO-SAHELIAN OFFICE

1989

Report of the Administrator

SUMMARY

This report is submitted in accordance with Governing Council decision 89/54 of 30 June 1989. It contains a summary of activities carried out by the United Nations Sudano-Sahelian Office in support of the efforts of the 22 countries of the Sudano-Sahelian region of Africa concerning desertification control and drought-relief activities.

The report includes an overview of the operational activities deriving from the two mandates of the United Nations Sudano-Sahelian Office. It presents projects and programmes initiated in recent years which are increasingly geared towards an integrated management and protection of the natural resource base, focusing on one or several of the following components: deforestation control, range management, soil and water conservation and sand-dune fixation. It also stresses the activities undertaken in the planning and co-ordination of desertification-control efforts at the country level, and the creation and strengthening of ecological monitoring facilities. The report notes the renewed momentum of activities in resource mobilization and the resulting increase of resources mobilized in 1989. Further, it summarizes the new initiatives launched in an effort to help increase public knowledge and information about environmental concerns. Also featured are activities directly related to desertification control carried out by other entities within the United Nations Development Programme.

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## INTRODUCTION

1. In 1989, the Sudano-Sahelian region experienced above average rainfall compared to the deficit of the last 17 years. Emergencies such as outbreaks of the desert locust and, in certain countries, flooding following rainy seasons continued to threaten the physical condition of the region.
2. In spite of the various efforts to halt ecological degradation, the situation of natural resources continues to deteriorate further. Climatic variations, in addition to human activities such as the overexploitation of land and water, the overgrazing of rangelands and deforestation remain the driving forces behind the ecological degradation of the region.
3. To help address these challenges, the United Nations Sudano-Sahelian Office (UNSO), as the United Nations body responsible for the implementation of the Plan of Action to Combat Desertification in the Sudano-Sahelian region, continued its work, focusing on the protection and rehabilitation of the natural productive resources and the promotion of sustainable development in 22 Sudano-Sahelian countries.
4. The present report summarizes some of the activities of the United Nations Sudano-Sahelian Office for the year 1989 undertaken under its two mandates:  
(a) assistance to the drought-stricken countries in their programmes of drought-preparedness and recovery, rehabilitation and medium- to long-term development; and (b) assistance, on behalf of the United Nations Environment Programme (UNEP), in the implementation of the Plan of Action to Combat Desertification, under a joint venture between UNEP and UNDP.

### I. SUPPORT FOR PLANNING, CO-ORDINATION AND ECOLOGICAL MONITORING

5. During 1989, UNSO continued to provide assistance to Governments in the planning and co-ordination of anti-desertification activities. Underlying these efforts were the growing evidence and conviction of the need to provide a framework for the integration of environmental considerations into the overall economic and social development of the countries.
6. UNSO strategy in this area entails close co-operation with Governments in the formulation of strategic policy frameworks and programmes aimed at protecting the productive capacity of the natural resources of each country. This strategy also includes the establishment or strengthening of national mechanisms to ensure the coherence and implementation of programmes identified. Specific efforts initiated or under way concentrate on reinforcing the capacity of governmental bodies to carry out effective planning. Assistance is also provided for the establishment of advisory/co-ordinating units, scientific advisory councils or national committees for desertification control. In countries where important advances have been made in terms of policy formulation, and based on government requests, UNSO focused its support on the establishment or strengthening of efficient institutions, to take the initiative in programme development.

7. In Tanzania, UNSO provided support for the establishment of a mechanism for co-ordinating desertification control activities. The project, which has helped establish a Drought and Desertification Control Unit within the National Environment Management Council, is also assisting with the preparation of a national plan to combat desertification, the establishment of a data base on drought and desertification issues and the mapping of areas threatened by desertification.

8. Similarly during 1989, UNSO initiated arrangements with the newly established Ministry of Arid and Semi-Arid Areas and Waste Lands in Kenya, for initial support in the planning and formulation of desertification control policies and programmes. The project operations, which will start in 1990, will help improve the Ministry's capacity in training, planning, public information and grass-roots outreach.

9. In Mali, UNSO continued to assist in improving the operating and institutional capacities of the Government in monitoring and co-ordinating its efforts in desertification control. In the overall context of the UNDP round-table process, there was an emphasis on sectoral/thematic follow-up meetings, in which UNSO played a leading role in co-ordinating follow-up action, thus ensuring a linkage between the round-table meetings and local dialogue. As was the case in the first round-table follow-up meeting, UNSO supported the second sectoral follow-up meeting in 1989 on the theme of desertification control. At the meeting, substantive policy exchange between donors and the Government took place on the formulation of specific actions and programmes needed for the implementation of the national plan to combat desertification. Also, outstanding issues such as the national forest action plan were subjected to thorough discussions; agreement was reached for the integration of the latter into the national plan to combat desertification. The meeting was instrumental in facilitating the increased flow of financial resources in support of desertification control activities and in identifying technical assistance needs and priorities. A number of donors committed themselves to financing specific projects or programmes based on the action plans that were presented by the Government.

10. Other examples of activities in the area of planning and co-ordination include:

(a) In Mauritania, assistance to the unit responsible for natural resources management within the Ministry of Rural Development, to strengthen its capacity in planning and formulating desertification control policies and programmes. The project supported the elaboration of comprehensive environmental plans which provided a framework for the integration of natural resources conservation into overall economic and social development;

(b) In Guinea-Bissau, assistance to the Government to finalize its national plan for desertification control and set up appropriate mechanisms to formulate and co-ordinate the implementation of programmes and activities based upon such a plan;

(c) In Chad, assistance to the Government to prepare a national plan of action to combat desertification. The project was prepared in close co-operation with the Permanent Inter-State Committee on Drought Control in the Sahel (CILSS).

11. In line with the new emphasis given to the support of ecological monitoring, UNSO continued its support for the monitoring of environmental processes and phenomena, and the study of the impact of anti-desertification measures. In general, data available in the Sudano-Sahelian region, particularly ecological data, are far from adequate in quality and quantity and have not yet been recorded long enough to be useful for building models with effective prediction capabilities. In 1989, UNSO continued to assist the Ecological Monitoring Centre in Senegal, which has evolved into a dynamic unit, capable of undertaking remote sensing, aerial surveys and ground monitoring for gathering information on biomass production, in particular in grasslands, as well as estimating livestock numbers and distribution. Over the last two years, the Centre has played a leading role in the development of methods to measure the extent of bush fires and to estimate rainfall distribution. Based on its experience in Senegal, UNSO is currently involved in the formulation of a similar project in Somalia.

12. In Chad, UNSO provided assistance for a project to improve planning and management of agricultural, silvicultural and pastoral resources. Using pictures from the telecommunications satellites LANDSAT and SPOT, the project will produce maps and data on livestock population and distribution, vegetation cover, bush fires and wind and water erosion features for two northern regions of the country as a tool for improved natural resources management.

13. In keeping with the emphasis of UNSO on increased support for planning and co-ordination, programmes are currently being finalized to assist Governments in the preparation of national action plans or to co-ordinate their desertification control activities. This is taking place in Burkina Faso, Cameroon, Guinea, Guinea-Bissau and Niger.

## II. PROGRAMMES AND PROJECTS

14. By the end of 1989, ongoing UNSO projects reached a value of approximately \$100 million, focusing primarily on four broad categories: deforestation control; rangeland management and water resources development; soil protection and sand-dune stabilization; and integrated land management.

### Deforestation control

15. Deforestation is regarded as one of the major factors of land degradation and desertification. The causes of the crisis are rooted in agricultural practices and energy demands. Indeed, with ever-greater demands for land to feed growing populations, and for fuelwood and wood products, pressures on forests continued to increase. The replenishment of wood supplies through afforestation and reforestation remains a means of combating deforestation, while at the same time satisfying the growing demands for fuelwood, shelter and other needs.

16. UNSO initiatives in this area call for: (a) increasing the supply of wood resources through afforestation and reforestation, agroforestry, community forestry and the restocking of gumbelts; (b) reducing the demand and improving the

management of wood resources through improved technologies and wastage reduction; and (c) substituting wood resources by other biomass or non-biomass forms of energy resources.

17. In the context of afforestation control and environmental protection, UNSO initiated in 1989 a \$2 million project aimed at restocking the Gum Arabic Belt in Darfur, the most western region of the Sudan. Darfur has become partially deforested as a result of repeated droughts and migration from the rural to the urban areas, which has left the gum gardens untended. The Acacia senegal gum species acts to fix nitrogen and is therefore particularly suited for desertification control. Once the project is under way, the income generated from the sale of the gum is expected to make this species attractive to farmers. The project includes a strong sensitization and education component and provides for the establishment of nurseries to ensure the supply of sufficient quantities and varieties of tree species apart from Acacia senegal. The project will also initiate activities to introduce fast-growing fuelwood species as well as encourage shelterbelts around farms, villages and towns. This project is supported by UNSO through donations from the Government of Norway and from the Arab Gulf Programme for United Nations Development Organizations (AGFUND) as well as an indicative planning figure (IPF) contribution. UNSO is supporting a similar project for the regeneration of Acacia senegal in Mali.

18. With five East African countries, namely Djibouti, Ethiopia, Somalia, Sudan and Uganda, UNSO pursued arrangements for launching tree-seed projects under financing from the Danish International Development Agency (DANIDA). These projects will seek to establish and strengthen national and regional tree-seed centres for the purpose of collecting, screening, storing and distributing high quality tree seed to alleviate the current seed shortage often faced by planting programmes.

19. In Burkina Faso, UNSO provided assistance to enhance rural energy supplies through village woodlot and community forestry. During earlier phases, the project successfully established 1,600 ha of fuel woodlot, 2,900 ha of multipurpose tree plantations and over 100 km of windbreak. By the end of the project, the village woodlot and multipurpose plantations will increase by 3,000 ha and 1,600 ha, respectively. In addition, the project supports an agroforestry land-use system in eight villages, each consisting of 50 farmers. Support is also extended to some 100 village and government nurseries to promote the planting of multipurpose local species with a target of 4 million seedlings.

20. In the field of energy conservation, UNSO supported a pilot demonstration project in the Sudan which came to an end during 1989. The project sought to demonstrate the feasibility of producing fuel briquettes from agricultural residues (groundnut shells and cotton stalks) thus saving valuable forest resources from being cut for fuelwood. The results of this project have been very promising and UNSO, with DANIDA funding, is planning to support it for another two years.

21. Negotiations were completed with the Government of Burkina Faso and the Swedish International Development Agency (SIDA) to continue the financing of a project for improved cooking stoves for another three years, beginning in 1990. The new phase will develop self-sustainable marketing channels and enhance the national capacity for manufacturing and distribution of over 200,000 stoves.

22. Another project in the Gambia has made significant progress towards achieving sustainable production and distribution of improved cooking stoves. The total number of stoves disseminated is well over 40,000 for a total of 82,000 households. In addition, the project trained 85 blacksmiths in 54 workshops country wide; 760 potters in 36 villages; 20 field staff in stove production, survey techniques, marketing, dissemination strategies and accounting methods. The project, which was extended for two more years, is now focused on promoting stove dissemination in the rural areas.

#### Range management and water resources development

23. Because of the excessive utilization of vegetation, including pastures, trees and shrubs used for browsing, the Sudano-Sahelian region is highly susceptible to rangeland deterioration. This process can be observed particularly at watering places, where animals congregate. Through various projects, UNSO supports government efforts aimed at arresting the deterioration of fragile rangeland ecosystems.

24. In 1989, UNSO continued to support the second phase of the project for the integrated development of the lake zone in Mali. As of 1986, the project had established 12 village-level organizations to ensure the management of rehabilitated land and the regeneration of bourgou, an aquatic plant; introduced vegetable gardens in 10 villages; and initiated family-based reforestation in 19 target villages. In the coming year, the project aims to carry out water and soil conservation experiments and conduct socio-economic surveys relating to the rational management of Bourgou pasture. Preparation is under way for a third phase to help consolidate earlier successful phases.

25. Support for projects dealing with the construction of small earthen dams, groundwater development and water conservation for irrigation, livestock and households continued during the reporting period. In Mauritania, the UNSO contribution of \$160,000 is supporting a project that aims to improve the supplies and management of water resources in the rural areas of the country. The project includes the irrigation of small-scale perimeters for small farmers, as well as assistance for maintenance systems, considered vital to sustainable water projects.

#### Soil protection and sand-dune stabilization

26. The soils in most of the Sudano-Sahelian region are structurally fragile with low humus content and poor water retention capacity. Because most of the land is exposed to wind and rain, the region is experiencing soil degradation of one form or another combined with overexploitation of the land.

27. UNSO has continued funding Phase II of the integrated programme of sand-dune fixation (UNSO/SEN/89/X01) in Senegal. During Phase I, 950 ha of dunes were fixed, 125 km of windbreaks erected, 200 ha of village woodlot established and 600 ha of soils treated to improve fertility. The success of the first phase and the large extent of the problem led to agreement on the implementation of Phase II. With funding from the Government of Norway in the amount of \$2.1 million, the project aims to extend the activities initiated under the first phase by implementing a range of agro-forestry activities such as dune stabilization, recovery of soil fertility, road protection, and the establishment of windbreaks and woodlots as well as strengthening national capabilities to carry out further activities.

28. In Mauritania, UNSO continued its support to the nation-wide programme of sand-dune fixation. The first phase of the project was instrumental in the construction of barriers across dried expanses to change ruinous wind patterns and to stabilize about 850 ha of dunes at 15 sites. The present phase, for which the Government of Denmark made a contribution of \$5 million, will extend the number of sites to 40 and will yield combined agro-sylvo-pastoral development.

29. In Cape Verde, UNSO continued to support the implementation of the management master plan of the Sao Joao Baptista valley. The second phase, currently under negotiation with the Government of Norway, involves the management of natural resources, the improvement of infrastructure for water harvesting, and the promotion of popular participation and sensitization.

30. Support was extended to anti-desertification efforts in the coastal areas of Shallambot and Brava in Somalia. A project was prepared to arrest the movement of sand dunes which now threatens pastures, farmland, human settlements and infrastructure, through the planting of seedlings. New species of vegetation will also be introduced that will have both environmental and commercial value to local people.

#### Integrated land management

31. Because the causes of desertification are interrelated, UNSO has been supporting an integrated land-management approach - a multi-sectoral, multi-faceted approach to solving the problems of an area by combining different production activities, such as cropping, livestock rearing and forestry.

32. During the past year, with \$22 million from SIDA, UNSO has been developing a programme specifically geared towards addressing land management and the rehabilitation of vegetation cover in the Sahel, more specifically in Burkina Faso, Niger and Senegal. The objective of the programme is to contribute, through a number of thematically related national projects, to the promotion of agro-forestry activities; the management of natural resources at village level; the improvement of agro-sylvo-pastoral systems of production; the promotion and diffusion of improved cooking stoves and training of women and local artisans for their manufacture; the sensitization of the population to the problem of desertification; the strengthening of relevant community and government institutions and other related activities.



33. Under this programme, two projects in Burkina Faso (see para. 21) support the construction and diffusion of improved wood stoves and the development of collective and family woodlots with the aim of improving the local conditions for agro-pastoral activities and meeting population needs for firewood, timber and other forest products through reforestation. The projects further aim at the improved management of natural forests and family/collective woodlots, as well as conservation of firewood through the use of improved cooking stoves and the natural regeneration of ligneous vegetation.

34. In Niger, the agro-forestry activities undertaken during previous project phases will be continued with a more integrated agro-sylvo-pastoral approach. New surveys and interventions will help to identify improved and sustainable cropping systems and land-use patterns, which will be extended in order to make better use of the natural resources on a sustainable basis.

35. In Senegal, the integrated afforestation project in the Louga, Bakel and Mbaké regions aims at the development of sustainable production systems and land-use patterns through the extension of appropriate agro-sylvo-pastoral technical packages, the integration of trees on farm land (multipurpose tree planting) and soil and water-conservation measures. The project also supports community development activities through the sensitization of people to environmental issues, support for grass-roots initiatives, the establishment of family and school woodlots and the development and diffusion of improved woodstoves.

36. With \$1.8 million funding from the Government of Norway, the second phase of the project Development of the Lake Faguibine System (MLI/85/X05) is now under way in Mali. The overall objective of the project is the restoration and conservation of the food production potential of the Faguibine zone and the provision of water to the villagers. During the first phase, where the project also benefited from an IPF contribution, a prefeasibility study was undertaken to develop an efficient water flow system to optimize agricultural production. In addition, priority earthworks and vegetation restoration have been carried out with extensive involvement of the community. The second phase of the project will complete remaining studies and surveys on the physical, economic and climatic situation to obtain a scheme for optimal utilization of the land in the Lake Faguibine zone and will proceed with the channel clearing works.

### III. RESOURCE MOBILIZATION

37. In 1989, the total amount of resources mobilized by UNSO through the UNSO Trust Fund was \$37.5 million, an increase of over 37 per cent over the resources mobilized in 1988.

38. As in the past, the bulk of the resources mobilized, \$22.5 million, was in the form of contributions earmarked for specific projects under trust fund arrangements, identified and formulated jointly by recipient Governments, UNSO and donor agencies. The 1989 figure represented an increase of almost 14 per cent over the earmarked project resources mobilized in 1988. Pledges for 1989 to UNSO general resources totalled \$6.7 million. In 1989, funding amounting to \$8.2 million was obtained under Management Service Agreements.

39. During the period under review, UNSO stepped up its fund-raising efforts while maintaining regular consultations with its main donors, namely, Denmark, Norway and Sweden. Discussions were held with governmental authorities from Canada, Finland, France, Italy, Japan and the Netherlands. Most of these meetings provided an overall confirmation of donor interest in continuing or initiating co-operation with UNSO. Indeed, in 1989, France joined the group of UNSO donors by announcing a pledge to UNSO General Resources. In addition, agreement has been reached between UNSO and France to develop a special initiative called "Observatory of the Sahara and the Sahel" (see para. 46).

#### IV. CO-ORDINATION AT THE INTERNATIONAL LEVEL

40. UNSO continued its endeavour to establish and develop close relationships with other United Nations agencies, and international and regional organizations in areas of common concern. In this regard, the following activities were of note.

##### United Nations Programme of Action for African Economic Recovery and Development

41. In 1989, UNSO, as requested by the Office of the Director-General for Development and International Co-operation, provided a contribution to the United Nations Secretary-General's report on the implementation of the United Nations Programme of Action for African Economic Recovery and Development, 1986-1990 (UNPAAERD). The report focused on the totality of the efforts being made by African Governments, donor communities, and international co-operation agencies in combating desertification. It also revealed the existence of significant differences in the evaluation of similar issues by the African Governments on one hand, and the international co-operation agencies on the other. These differences in perception were related to issues such as deforestation, overgrazing, adverse climatic conditions, population pressure or sufficient financial resources.

42. Despite these differences, however, there is an emerging consensus on the usefulness of an approach to the problem based on establishing national plans that provide a framework for the integration of desertification control issues into the country's overall economic and social development. The report also noted that the return of the rains should not be a reason for complacency, but rather a stimulus to pursue fresh efforts to improve the management of the productive resource base. It urged both African Governments and donor communities to step up their efforts to improve resource flows and introduce better co-ordination of planning efforts to avoid duplication and ensure more efficient interventions. The agencies and organizations that participated in this collegial effort were: the Food and Agriculture Organization of the United Nations (FAO), the World Bank, UNEP, The World Food Programme (WFP), the International Fund for Agricultural Development (IFAD), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Industrial Development Organization (UNIDO) and the World Meteorological Organization (WMO).

UNSO/UNEP co-operation

43. UNSO further strengthened its relationship with UNEP during 1989. Following the opening in 1988 of the UNSO regional office in Nairobi, Kenya, a new quality has been added to the relationship under UNEP. The new UNSO office has enabled the further strengthening of arrangements for the exchange of views and information and the co-ordination of activities of common interest.

44. In addition, co-operation with the UNEP global and ecological monitoring system has been established to support monitoring activities and the establishment of Geographic Information Systems (GIS). In this connection, there was growing collaboration between UNSO and UNEP/GEMS in the field of training, monitoring assistance and institutional linkages.

UNSO/Non-governmental organizations co-operation

45. During 1989, UNSO took over the role of institutional co-ordinator of the Sahel Information System, a non-governmental organization (NGO) information system operating in Burkina Faso, Mali, Niger and Senegal. Funded partly by UNSO General Resources and UNDP/UNEP Joint Venture funds, the project also obtained funding from the United States Agency for International Development (USAID) and from IBM Brussels through the Industry Council for Development. The project has established a network in the four countries under the NGO umbrella groups established there. Information is being gathered and exchanged on issues concerning natural resource management. Information users, apart from NGOs, include the Governments and multilateral and bilateral aid agencies. During 1990, UNSO will seek support to strengthen and maintain this system.

"Observatory of the Sahara and the Sahel" Programme

46. UNSO is the designated focal point within the United Nations system for the programme initiated by the French Government "Observatory of the Sahara and the Sahel". The objective of the Observatory is to complete and reinforce existing anti-drought and anti-desertification programmes in northern, western and eastern Africa. The programme intends to cover 20 countries of the region and establish communication networks with specialized scientific agencies within and outside Africa.

47. The programme is made up of three components. The first aims at reinforcing the structures for the continual monitoring of the environment. The second develops scientific research on different types of vegetation and their fitness for drought conditions: crops, pasture, forests and natural growth; it will also conduct research on water resources and their use; on methods of controlling erosion and maintaining fertility; and on socio-economic aspects. The third will test, disseminate and promote methods of prevention and correction and analyse existing agricultural and pastoral production systems and their reactions to droughts.

Contribution to relevant international and regional forums

48. Participating at various international forums provided another means for harmonizing views and the exchange of information leading to programme co-ordination. In 1989, UNSO participated in a series of meetings related to environmental matters and desertification issues such as the Inter-Agency Working Group on Desertification (IAWGD), the Designated Officials on Environmental Matters, the donor meeting of the African Centre for Meteorological Application for Development in Geneva and meetings organized by UNEP and the Club du Sahel.

V. SERVING AS THE UNITED NATIONS FOCAL POINT FOR THE PERMANENT INTER-STATE COMMITTEE ON DROUGHT CONTROL IN THE SAHEL AND THE INTER-GOVERNMENTAL AUTHORITY FOR DROUGHT AND DEVELOPMENT

49. In 1989, UNSO continued to strengthen working collaboration with and support for both CILSS and the Inter-governmental Authority for Drought and Development (IGADD). Consultations were held with CILSS and IGADD to discuss, plan or review programmes. The collaboration of UNSO with CILSS concentrated on the Sahel Institute in Bamako. Apart from assistance to the Institute itself, the collaboration included the following:

(a) Support for an integrated control programme against pest infestation of the Sahelian vegetation cover. Through the project, which is executed by the Institute, research and training is undertaken and co-ordinated;

(b) Training assistance for post-graduate level specialists and intermediary staff in rural development and desertification control, within the framework of the Integrated Grasslands Management Training Programme in the Sahel;

(c) Support for the development of a Sahelian environmental education programme at the secondary level (see para. 57).

50. In addition, UNSO continued its support for the five-year programme to ensure co-ordination and supervision of research related to drought and desertification in the CILSS member States. Attention was also given to the follow up on the diagnostic study carried out on the Lake Chad Basin as the first step towards formulating a rehabilitation and development master plan for the hydrological system.

51. To further improve and intensify its working relationship with IGADD, UNSO made arrangements to exchange information on a regular basis on major ongoing, planned or special activities, including meetings, seminars and workshops, and also to hold regular consultation meetings in Djibouti and in New York to enhance the effectiveness of their activities in the region. At present, UNSO is studying specific areas of collaboration with IGADD, namely in the preparation of regional sector strategies; the planning and launching of various initiatives intended to intensify public awareness and participation in desertification control activities; the provision of seed money for selected projects; and the provision of support to facilitate better access to information.

## VI. INCREASING PUBLIC KNOWLEDGE AND AWARENESS ON DROUGHT AND DESERTIFICATION ISSUES

52. Increased attention is being given to ensuring that the greatest number of people are aware of the problems and efforts being made to combat drought and desertification. Accordingly, UNSO has taken steps to produce various publications and audio-visual aids, and to promote and encourage wider coverage of all aspects of natural resources management.

53. The first two issues of UNSO technical papers, prepared in 1989, will be issued in French and in English in the second quarter of 1990. The first publication will introduce readers to the methods and technologies currently in use for monitoring ecosystems, based on the experience of the monitoring centre in Senegal. The second will deal with the experience in Mali of the regeneration of bourgou (Echinichloa stagnina) to rehabilitate degraded natural pastures. These publications will offer to the development community, approaches and views drawn from practical UNSO experience.

54. During the reporting period, UNSO organized a subregional workshop in Ouagadougou, Burkina Faso on desertification control through its regional office in Ouagadougou and in collaboration with CILSS, UNESCO, and the United Nations Information Centre. The workshop, which brought together country experts, researchers and technicians dealing with desertification problems in the Sahel, was designed to sensitize journalists in the region on the problems and the issues related to drought and desertification.

55. In Uganda, a workshop entitled "A Green Future for Uganda" was held during September 1989 in co-operation with the Uganda National Council of Women and UNSO. Eighty participants from the Uganda Women's Tree Planting Movement, the National Council of Women and women from all districts of Uganda discussed environmental issues. They sought to encourage tree planting and to enhance public awareness of the risks and consequences of the loss of forest cover in the country.

56. UNSO financed the formulation of a CILSS programme designed to educate high school students to be effective channels for disseminating skills and attitudes which help in combating the effects of desertification. This programme, which was officially adopted by the CILSS Heads of State Conference in January 1988, aims at developing and incorporating an environmental education programme in all academic curricula within a span of 6-7 years. The programme is designed to provide students with better knowledge of their environment and of their relationship to it, and to sensitize them to environmental issues. The project, which is in its final stage of formulation, will introduce in the secondary school curricula educational information that promotes better care of the Sahelian natural resources. It will also ensure that the necessary institutional arrangements, such as trained teachers and teaching materials of good quality are at hand.

57. Other activities in the area of public information include a song festival in Nairobi, organized in collaboration with UNEP and the African NGO's Environment Network (ANEN), to promote public awareness of the need to protect the African

environment. The countries represented in the festival were: Kenya, Mauritius, Tanzania, Uganda and Zaire. The Government of Uganda has indicated its readiness to host the 1990 song festival and UNSO is considering contributing to the cost of this event. It is hoped that the 1990 event will involve a much larger number of participating countries.

58. Also, as in previous years, UNSO sponsored tree-planting days in Benin and Togo. Drawing on this productive experience, UNSO intends to continue organizing similar events elsewhere in the region.

#### VII. OPERATIONAL ARRANGEMENTS

59. In 1989, consultation arrangements between UNSO and UNDP core programme and other units such as the Regional Bureau for Africa (RBA), the Regional Bureau for Arab States and Europe (RBASE), the United Nations Capital Development Fund (UNCDF) and the United Nations Development Fund for Women (UNIFEM) and the Division for Non-Governmental Organizations have been strengthened. At the regional level, the UNSO offices in Nairobi and Ouagadougou continued to play an important role in facilitating contacts with regional organizations and the countries they cover.

60. At the national level, progress has been made in establishing and strengthening working arrangements for co-operation with UNDP field offices through regular programme reviews and participation at round-table meetings and various bilateral and multilateral donor meetings. UNSO has also provided some of the UNDP field offices with staff to assist in co-ordinating and monitoring UNSO activities in the field and ensuring closer linkages between UNSO projects and local co-ordination groups. UNSO has organized meetings of all UNDP Resident Representatives in countries covered by the UNSO mandates to ensure the exchange of information and better co-ordination and follow-up of UNSO activities.

#### VIII. ACTIVITIES OF OTHER ENTITIES IN THE UNITED NATIONS DEVELOPMENT PROGRAMME

61. Within UNDP, UNSO works closely with other entities, in particular with RBA, RBASE and UNCDF on activities relating to drought and desertification in the Sudano-Sahelian region. These and other units of UNDP co-ordinate their activities through, inter alia, the UNDP in-house working group on drought and desertification control, which is chaired by the Director of UNSO in his capacity as Special Advisor to the Administrator on Drought and Desertification. In addition, there is an environment action team, under the chairmanship of the Technical Advisory Division, which facilitates the exchange of information and planning of activities in the field of environment in general.

62. During the period under review, UNDP involvement with desertification control programmes has been significant. Its activities have helped to protect valuable natural resources, conserve soils, reclaim rangelands and protect forests, watersheds and wildlife. In association with other agencies of the United Nations system, IPFs provided support to a number of projects. Some of these projects and activities are mentioned below.

63. In Djibouti, within the framework of the second country programme, which stressed the control of water resources and the development of agricultural irrigation, UNDP provided financing to support the planning and management of water resources and the provision and improvement of water wells in the districts of D'Obock and Dikhil and Ali-Sabieh. Financing was also provided to survey the underground water potential for exploitation and to ascertain the feasibility of planned reinvestment totalling \$2 million in the area of hydro-agricultural development and rural migration. To alleviate Djibouti's dependence on importation of primary goods, UNDP is also assisting in the implementation of improved resources management and the preparation of national plans to protect the environment.

64. In Somalia, in response to the serious desertification problems faced by the country, and in accordance with the fourth country programme, UNDP allocated \$1.3 million for the establishment of a Natural Water Centre, and over \$700,000 to improve the state of water reservoirs. Financing amounting to \$1.1 million was also provided to support the establishment of a mechanism to manage forestry and wildlife resources. Other projects financed by UNDP in Somalia will assist the Government to make a comprehensive assessment of its environmental strategy and establish an inventory of environmentally degraded areas; to establish a disaster-preparedness and emergency-response unit to cope with droughts and their consequences; and to set up a network of water relief sources and prepare a National Forestry Action Plan.

65. In Cape Verde, UNDP provided \$1.1 million in technical assistance to help improve the exploitation and management of Cape Verde's water resources based on an improved evaluation of present and future needs. UNDP also contributed over \$700,000 for technical assistance and the acquisition of drilling equipment and vehicles to support 25 boreholes in villages in Borno State, Nigeria.

66. In the Sudan, \$700,000 was allocated to establish an economic water planning model and a computerized database to improve land and water resources development. UNDP also supported an area development scheme aimed at achieving rural development in selected areas of the Sudan. Over \$11.8 million has been allocated to this project to improve agricultural production, increase rural family income and ensure environmentally sound production systems. Other projects aim at reducing the country's energy dependence on fuelwood; enhancing the sustainable exploitation of water resources; and raising the standards of living of the rural population.

67. In Togo, UNDP contributed over \$800,000 to help the Government improve the living conditions and incomes of the rural population by setting up and executing a village forestry development programme. UNDP also supported the preparation of the National Forestry Action Plan of Togo and provided over \$700,000 to establish a geographic data bank and prepare a master plan.

68. In Mali and Mauritania, UNIFEM and UNSO are co-financing two improved stoves projects. In the case of Mali, the project involves a large-scale dissemination scheme of improved cooking stoves, the modification of supply channels for wood; and research for the development of alternative fuels. In Mauritania, the project involves the design and implementation of an integrated strategy for a wide

distribution of the stoves in the country. It is expected that both projects will contribute to the struggle against desertification as well as the reduction of household expenses for the purchase of domestic fuels and the lessening of women's work-load.

69. In Benin, UNCDF approved \$4.5 million for a livestock development project which is also aimed at developing grazing resources. The aims of the project are to improve animal disease control, provide plants and seeds for fodder production, promote intensive breeding and train agro-pastoralist groups to manage their range resources.

70. The United Nations Volunteers (UNV) provided a wide range of specialists in promoting a more ecologically sound use of natural resources. In 1989, a UNV expert served on a UNSO-supported project in Mali to evaluate the impact of new types of improved stoves in urban areas. In Mauritania, three UNV experts were involved in the promotion of alternative agricultural technologies and the formulation of plans for sand-dune fixation. UNV experts have also served in Somalia on FAO-executed projects in carrying out a number of country-wide surveys on water availability and water use, and the training of national surveyors and soil technicians.

#### IX. CONCLUSION

71. Despite the growing commitment of development agencies and the countries of the Sudano-Sahelian region, there is strong evidence that the physical condition of the region continues to deteriorate, in some cases perhaps irreversibly. This threat can be averted only through concerted actions among all the partners in development: Governments, bilateral and multilateral institutions and NGOs, both local and foreign.

72. As we enter a new decade, environmental issues have been moving towards the top of national and international political agendas. The Conference on the Environment and Development, to be held in 1992, will be an important forum to launch a new era of international co-operation. As requested by the General Assembly last December, UNSO will work closely with the countries of the Sudano-Sahelian region to help articulate and follow up on the issues related to drought and desertification.

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