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SUPPORT

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ACTIVITIES OF THE UNITED NATIONS SUDANO-SAHELIAN OFFICE (UNSO) AND
ASSISTANCE TO OTHER DROUGHT-STRICKEN COUNTRIES IN AFRICA

Implementation in the Sudano-Sahelian Region
of the Plan of Action to Combat Desertification

Report of the Administrator

Summary

In response to the request of the Governing Council at its thirtieth session (decision 83/24), the Administrator is submitting an annual report on the implementation in the Sudano-Sahelian region of the Plan of Action to Combat Desertification. This report describes the activities carried out by the United Nations Sudano-Sahelian Office (UNSO) under its mandate to assist the countries of the region in implementing the Plan of Action, under a joint venture of UNDP and the United Nations Environment Programme (UNEP). The report summarizes the principal thrusts of UNSO planning, programming and resource mobilization operations carried out in connection with the preparation of activities dealing principally with deforestation control, range management, water resource management, soil protection and sand-dune fixation. It also describes the co-ordination and inter-organizational co-operation activities of UNSO in the exercise of its desertification control mandate.

INTRODUCTION

1. This annual report is submitted in accordance with UNDP Governing Council decision 83/24 adopted on 22 June 1983 which, inter alia, requested the Administrator to continue to report annually to the Governing Council on the implementation in the Sudano-Sahelian region of the Plan of Action to Combat Desertification. In that decision, the Governing Council noted with satisfaction the report of the Joint Inspection Unit on the activities of UNSO (JIU/REP/83/1), commended the Administrator on the progress achieved by UNSO in assisting the countries of the region, under the joint UNDP-UNEP venture, in combating desertification and requested the Administrator to continue to support the administrative and programme costs of the joint venture in full and equal partnership with UNEP. The latter would be undertaken with a view to ensuring the timely and effective provision of assistance, through UNSO, in combating desertification at a level commensurate with the needs of the countries of the region. The Council also urged all Governments, organizations organs and other bodies of the United Nations system, as well as other inter-governmental organizations and private organizations, to intensify their assistance either bilaterally or through UNSO or any other intermediary, in response to the priority requirements of the countries of the region.

2. Subsequently, the General Assembly, in its resolution 38/164 of 19 December 1983: (a) expressed its satisfaction with the progress made by UNSO in assisting the Governments of the region in combating desertification under the joint venture; (b) requested the Governing Councils of UNDP and UNEP to continue to provide adequate support for UNSO in order to enable it to respond more adequately to the pressing needs of the countries of the region; (c) invited the Governing Council of UNEP to examine at its twelfth session the possibility of including Ghana and Togo in the list of countries which receive assistance through UNSO in implementing the Plan of Action to Combat Desertification in the Sudano-Sahelian region, and to report on this matter to the General Assembly at its thirty-ninth session^{1/}; and (d) urged all Governments to respond favourably to requests for assistance from the Governments of the Sudano-Sahelian region in combating desertification.

3. At the time this report was being prepared, there were 19 countries covered by UNSO's desertification control mandate, with a total population of 224.2 million and an area of 12.4 million square kilometres, of which 80 per cent were arid or semi-arid, compared to a world average (excluding Antarctica) of 33 per cent.^{2/} It is estimated that over 90 per cent of the rangelands and 85 per cent of the rainfed crop lands of the Sudano-Sahelian region are affected in various degrees by desertification. If the Governing Council of UNEP decides to include Ghana and Togo in the list of countries receiving assistance through UNSO in combating desertification, this will bring the total number of countries covered by UNSO's desertification-control mandate to 21, with a total area of 12.7 million square kilometres and a population of 238.7 million.

4. The volume of funds mobilized and allocated by UNSO through the United Nations Trust Fund for Sudano-Sahelian Activities for desertification control activities amounted to \$15.6 million in 1983, bringing the total resources mobilized by UNSO to \$62.6 million since the start of its desertification control mandate in 1979. Of this total, \$40.6 million was provided through the Trust Fund,^{3/} while the balance, amounting to \$22 million, went directly to project implementation from multilateral, bilateral and other sources.

5. Despite the substantial resources mobilized, lack of sufficient financing remains one of the principal constraints on the effective implementation of the Plan of Action in the Sudano-Sahelian region. This is one of the main conclusions of an assessment of desertification in the Sudano-Sahelian region held seven years after the adoption of the Plan of Action by the United Nations Conference on Desertification in 1977. The assessment, which was commissioned by UNSO in co-operation with UNEP, also notes that rainfall in the region continues to be below average and that the great Sahelian drought that started in 1968 has not ended but has rather intensified and spread. The extended drought has been another obstacle to the effective implementation of the Plan of Action.

I. MAIN FEATURES OF DESERTIFICATION CONTROL OPERATIONS IN THE SUDANO-SAHELIAN REGION

6. During the past year, the main thrusts of UNSO's anti-desertification operations have been in the areas of deforestation control, range management, water resources management, soil protection and sand dune fixation, and planning and co-ordination. Since one of the principal causes of desertification is the cutting of trees and woody shrubs for fuelwood and construction purposes, there has been a particularly heavy emphasis on deforestation control. UNSO has been trying to combat deforestation by carrying out forestry projects, developing renewable alternatives to fuelwood, promoting fuel-efficient stoves and combating bush fires. In these and other areas, UNSO has continued to emphasize the involvement of the people affected in the planning and implementation of projects. It has also continued to work with the Governments and populations of the region in raising their collective consciousness with respect to the importance of desertification, the preparation of national plans or strategies for desertification control and the establishment or strengthening of the necessary institutional machinery.

A. Combating deforestation

1. Forestry

7. The expanded activities of UNSO in this area include the establishment of fuelwood plantations to meet the energy requirements of rural and urban populations on an ecologically sound basis. In Ethiopia, the Danish International Development Agency (DANIDA) has agreed to contribute \$5.9 million through the Trust Fund for the establishment of 8,700 hectares of fuelwood plantations in the towns of Debre Birhan and Nazret, and the Finnish International Development Agency (FINNIDA) is contributing \$500,000 through the Trust Fund to support a pilot programme in Dese, involving the establishment of the necessary infrastructure and a pilot programme involving 200 hectares of plantations. In Somalia, FINNIDA also has agreed to submit to its Governing Board a \$5.9 million contribution to the Trust Fund for the establishment of irrigated fuelwood plantations and associated forest villages for workers in the Mogadiscio-Merka area as the first phase of a larger, long-term programme. With the Food and Agriculture Organization of the United Nations (FAO) as executing agency, UNSO has also supported short courses in nursery and afforestation techniques and species trials for rainfed fuelwood plantations in Somalia.

8. For Cameroon, the Government of Italy has agreed to make an earmarked contribution of \$2.6 million to UNSO for a project for extensive reforestation in the northern part of the country. Of this amount, \$1.6 million is tied to the procurement of goods and services in Italy. The project will include soil rehabilitation and protection from erosion, applied research on suitable forest species and regional planning. In Senegal, a programme has been formulated for the rehabilitation of the saline soils of the Sine-Saloum region through reforestation. The Canadian International Development Agency (CIDA) has made contributions to UNSO (including a tied contribution) totalling \$150,000 to finance the first phase of the project, which involves cartographic and pedological studies of the region. Negotiations are progressing with CIDA for the financing of the entire project at a cost of over \$1.5 million.

9. In the Gambia and Senegal, UNSO fielded an expert team to examine the widespread dieback of mangroves, which has been attributed to changing water levels and increased salinity in the Gambia river due to the drought. The team was able to identify a lethal plant pathogen in sampled mangrove galls which may be a significant factor in the dieback of the trees. Projects were formulated for the conservation and management of the mangroves. New projects have also been formulated for the establishment of shelter-belts in northern Sudan and assistance to the Shelter-belt Research Station at Kano, in northern Nigeria.

10. UNSO has been emphasizing work in agroforestry, since in arid regions there is often competition for land between agriculturists in need of food crops and forest conservationists who wish to maintain forest cover to protect the soil and serve as wind-breaks. Among projects UNSO has helped design are schemes ensuring complementary and mutually supportive forestry and agricultural activities in Kano, and in the Kerio forest in Kenya. Agroforestry activities include the planting of Acacia albida which, with its deep tap roots, is drought resistant, does not compete with food crops, contributes to the fertility of the soil through its nitrogen-fixing qualities and provides fodder and shade for livestock. In Benin, UNSO has allocated \$1,141,900 for a multi-purpose tree-planting programme financed by earmarked contributions through the Trust Fund of \$306,900 from the Arab Gulf Fund (AGFUND) and \$825,000 from the Government of the Netherlands. UNEP has made a \$10,000 contribution to the project, and the Government of Benin is financing the remaining costs.

2. Development of alternative sources of energy

11. To help reduce the demand for fuelwood, UNSO is continuing to support projects for the development of alternative sources of energy. Ongoing projects in Cape Verde, the Gambia and Senegal involve wind energy, ground-nut shell briquettes and other fuelwood substitutes. In Senegal, feasibility studies have been completed for the systematic harvesting of peat for use as fuel briquettes and as mixtures in sandy soils to improve their structure, organic content and productivity. The studies indicate a large potential for the use of peat for soil protection, to increase agricultural productivity, and as a source of energy which could reduce the demand for charcoal in Dakar by 50 per cent. The Council of Ministers will decide in May 1984 on follow-up action to these studies of the future utilization of Senegal's considerable peat resources. UNSO has also initiated feasibility studies for the possible production of fuel briquettes in the Sudan and the Niger. In Nigeria, UNSO has been exploring with the Government the possibilities of producing charcoal from by-products of wood-based industries in the south for utilization in northern Nigeria, which has limited ligneous resources. In the Gambia and Senegal, an UNSO technical mission examined the conditions of the mangroves in Sine Saloum, Casamance and along the Gambia river. Proposals have been made for projects aimed at the protection, salvaging and ecologically sound harvesting of mangrove trees, some of which have fallen victim to dieback, the causes of which are also being studied.

3. Promotion of fuel-efficient stoves

12. As another means of reducing the demand for fuelwood, UNSO is supporting the design, development and production of fuel-efficient cooking stoves that use less wood or different kinds of fuel. In Mali, Mauritania and the Niger, UNSO is co-financing with the Voluntary Fund for the United Nations Decade for Women preparatory assistance activities for the design and development of fuel-efficient wood burning stoves and is seeking resources, in

co-operation with the secretariat of the Permanent Inter-State Committee on Drought Control in the Sahel (CILSS), to finance large scale follow-up projects in these countries. UNSO has also agreed to finance a regional preparatory project for improved wood-burning stoves in Kenya, Nigeria, Somalia and the Sudan. The project will take into account the special circumstances in Nigeria, including its potential for charcoal production from wood-based industries near the tropical rain forests in the south and its considerable oil resources, which can provide fuel for kerosene and gas stoves.

4. Bushfire control

13. In addition to its support to ongoing projects for the control of bush fires, UNSO fielded missions to Guinea and Benin to assist the Governments in the preparation of large scale projects for controlling the fires. Bush fires are particularly damaging in drylands, where they suppress the natural regeneration of the savannah and denude the soils of their vegetative cover, exposing them to wind erosion and the damaging effects of the sun on their upper humus layers.

B. Range Management

14. In Kenya, a mission on range management has prepared a rangeland management and development plan for the arid and semi-arid zones of the country. The plan and related projects will be used by UNSO to mobilize resources. In Djibouti, UNSO has allocated \$543,800, with contributions from AGFUND, UNEP, and from the resources of the Trust Fund, for a pilot project for desertification control and the ecologically sound development of natural resources in the coastal plains. The project will be a comprehensive one; it will gather data and develop plans for the optimum use of natural resources of Djibouti, including its range resources. In Somalia, UNSO financed a prefeasibility study for the establishment of a Nomadic Studies Institute, and in Senegal it supported a regional seminar on the ecological monitoring of the country's Sahelian rangelands in November 1983. The seminar was conducted so that the participants could share the methodology developed and other results achieved by the UNEP/FAO project, Monitoring the Sahelian Rangeland Ecosystem. It is envisaged that the first phase of this project will be completed by the end of 1984. UNSO will then assist in mobilizing resources for a second phase, which may have regional implications in view of the fact that transnational livestock movements follow a pattern based on the availability, often seasonally, of forage and water.

C. Water resources management

15. In the Gambia, UNSO has obtained a contribution of \$472,000 to the Trust Fund from the Government of Australia for a project for the construction of small dams for irrigation and protection against salt water intrusion. The project will help to ensure a sufficient supply of fresh water for longer

periods, including periods of drought. UNSO has also agreed to finance a project for the management of groundwater resources in the Banjul area. The project, which will be Government executed with the United Nations as co-operating agency, will obtain the services of International Business Machines (IBM) at no cost through an arrangement between UNSO/UNDP and the International Council for Development (ICD) for the construction of a mathematical model and the training of Gambian nationals in ground water modelling by IBM.

16. In Mali, UNSO has agreed to allocate \$500,000, for which a contribution by the Government of Yugoslavia is expected, to finance a project to strengthen the operational capacity of the Department of Water Resources in ground water exploration and exploitation. Formulation is also underway of a pilot water harvesting programme for three sites in Darfur Region, the Sudan.

D. Soil protection and sand dune fixation

17. In Cape Verde, UNSO allocated \$200,000 through a contribution by AGFUND to the Trust Fund for the continuation of a pilot project for the protection against soil erosion of the San Joao Baptista Valley. The project will involve afforestation to provide vegetative protection for the soil and the building of dykes to prevent water erosion and for water harvesting purposes. In the Sudan, a feasibility study was carried out to formulate a pilot research programme for the utilization of gardud soils. These hard soils, mainly in Darfur and Kordofan, are not normally arable or water-retentive. By using mechanized techniques, however, they can be developed for agriculture and pastures, thus alleviating the pressure on sandy soils which are particularly vulnerable to erosion.

18. In Somalia, UNSO allocated \$1.1 million through a contribution to the Trust Fund by DANIDA for coastal sand-dune stabilization in the Brava area, covering 1,500 hectares, through dune fixation and water erosion control works. In the Niger, the Government of Norway has agreed to contribute \$560,000 as an initial contribution to the Trust Fund for a project aimed at controlling the encroachment of sand-dunes upon the palm groves of the Bilma district.

E. Planning, co-ordination and monitoring

19. Following a meeting of donors for the reconstruction of Chad held in November 1982, a joint CILSS/Club du Sahel/UNSO mission visited Chad in January 1983 to assess the needs of the country and prepare the framework for the re-establishment of technical co-operation activities with the Government. This was followed by an UNSO multi-disciplinary desertification planning and programming mission in April, which prepared a report on desertification and identified 20 desertification control projects with the technical services concerned. It is envisaged that these projects will form the core of a future national plan for combating desertification and will be used for future UNSO resource mobilization efforts for the country.

20. In Senegal, UNSO has initiated assistance to the Government in the preparation of a national strategy for combating desertification, with the World Bank as executing agency. An inter-ministerial committee under the aegis of the Ministry of Planning has been established and will convene a national seminar in 1984 for the formulation of the strategy. In the Niger and the Upper Volta, UNSO has provided assistance to the Governments in the formulation of national desertification control strategies, with the United Nations Educational, Scientific and Cultural Organization (UNESCO) as executing agency. The national strategy for the Niger will include an updating of the case study on desertification which was prepared by the Government for the United Nations Conference on Desertification in 1977. With UNESCO as executing agency, UNSO funded a project that prepared a national plan for combating environmental and especially soil degradation in Guinea-Bissau. In Benin, UNSO has also funded a project, with UNESCO as executing agency, to assist the Ministry of Planning in the development of an institutional structure and work programme for combating desertification. The cost of UNSO support for the above planning, co-ordinating and monitoring activities ranged from about \$25,000 to \$75,000.

II. PROGRAMMING AND RESOURCE MOBILIZATION

21. As noted previously, UNSO intensified its resource mobilization efforts in 1983, during which it reached new levels of funds mobilized for antidesertification projects. As part of these efforts, UNSO submitted 10 projects to the fourth meeting of the Consultative Group for Desertification Control (DESCON), which was convened by the Executive Director of UNEP in Nairobi in February 1983. UNSO's participation in DESCON IV is but one aspect of its various and continuous resource mobilization activities. Through various planning and programming missions and continuous consultations with the authorities concerned, UNSO has identified with the Governments of the region a total of 311 priority projects requiring an investment of over \$744 million. A total of over \$419 million has been committed by bilateral, multilateral and other sources, of which over \$40 million has been received by the Trust Fund and over \$41 million has been contributed by the recipient countries. This leaves over \$325 million of external resources still needed to finance priority antidesertification projects for which the Governments of the region have requested assistance. Thus, there is still a need for considerably higher volumes of assistance to combat desertification that can be mobilized only by a concerted effort on the part of the international donor community.

III. CO-ORDINATION AND INTER-ORGANIZATIONAL CO-OPERATION

22. UNSO continues to maintain a close working relationship with regional and other bodies, both within and outside the United Nations system. It has participated in donor round-table meetings convened by the UNDP in Mali and Djibouti for the purposes of co-ordinating and increasing donors' interest in mobilizing resources for specific countries. UNSO also has been co-operating with the Governments of the member countries of CILSS in the organization, with the support of the Club du Sahel and CILSS, of special round tables on forestry aimed at assessing the latest situation of the forestry sector and proposing appropriate national strategies for forest conservation. In accordance with a co-operation agreement signed in 1982 with the West African Economic Community (CEAO), UNSO and the Community are co-financing a study, carried out by FAO, which will produce recommendations on technical aspects of grain and cereal storage at the village and farm levels in the Member States of CILSS.

23. In April, a seminar was held under the joint sponsorship of UNSO and the International Trade Centre (ITC) in Senegal on the latest developments concerning gum arabic research, production and marketing. It also participated, in October, in a workshop on soil physics sponsored by the International Centre for Theoretical Physics in Trieste (Italy) and, in November, in a seminar convened by UNESCO in Médénine, Tunisia, on soil erosion in pre-desert zones. Together with UNEP and the Economic Commission for Africa (ECA), UNSO sponsored and participated in a series of meetings which culminated in a scientific round-table meeting on the climatic situation and drought in Africa. During the meeting, which was held in Addis Ababa in February 1984, certain conclusions were reached on the African drought and drought prediction, and a draft Regional Plan of Action to Combat the Impact of Drought in Africa was produced for consideration and adoption by the Council of Ministers of ECA in late May 1984.

24. As part of a programme for the promotion of an exchange of information on and expertise in desertification matters co-ordinated by UNEP in pursuance of decision 10/18 of 31 May 1982 of the UNEP Governing Council, UNSO commissioned and helped prepare (a) a survey in the Sudano-Sahelian region of information and experiences on desertification control technology, successes and failures, and techniques suitable for duplication in other countries; and (b) a directory of national and international institutions in the Sudano-Sahelian and adjacent countries involved in desertification control research, training and implementation. This regional survey and directory will form part of a consolidated survey and directory for Africa, which UNEP is preparing.

25. Finally, UNSO, as mentioned previously, commissioned and helped in the preparation of an assessment of desertification in the Sudano-Sahelian and adjacent regions seven years after the adoption of the Plan of Action. This regional assessment was scheduled for review together with a global assessment by the Governing Council of UNEP in May 1984. The assessment, which is called for by the Plan of Action, contains an evaluation of the progress in the implementation of the Plan of Action, with special emphasis on the immediate measures which the Plan of Action envisaged should be carried out over a seven-year period, beginning in 1978. Sets of indicators of the degrees of desertification show that for most countries the overall state of desertification has worsened. Some of this may be due to the continued drought. The most successful areas in which the Plan of Action has been carried out have been in sensitizing Governments and local populations to the importance of anti-desertification measures and national planning as well as institutional machinery, projects with a specific focus such as sand-dune fixation, and projects which allow for the involvement of the people affected. The assessment also concludes that efforts should be made to develop supplementary and alternative systems of livelihood in those areas where present ways of resource utilization cannot be sustained on an ecologically sound basis.

IV. PROPOSED ADDITION OF GHANA AND TOGO TO THE LIST OF COUNTRIES ASSISTED BY UNSO IN COMBATING DESERTIFICATION

26. As previously noted, the General Assembly, in its resolution 38/164 of 19 December 1983, invited the Governing Council of UNEP to examine at its twelfth session the possibility of including Ghana and Togo in the list of countries which receive assistance, through UNSO, in implementing the Plan of Action, and to report on this matter to the General Assembly at its thirty-ninth session.

27. The following considerations may be noted in this connexion. Togo and Ghana are located directly to the east of Benin and directly south of Upper Volta. Benin was included in UNSO's desertification control mandate by UNEP Governing Council decision 9/22B of 26 May 1981 which was endorsed by the UNDP Governing Council in its decision 81/4 of 19 June 1981. Although their climates are not as arid as those of the true Sahelian bio-climatic zones, they have extensive subhumid areas similar to those of Benin. The northern parts of Togo and Ghana, like northern Benin, are especially vulnerable to the harmattan, a hot, dessicating, dust-laden wind that blows from the north-east across the Sahara. Partly because of these climatic factors, there is extensive savannah in Ghana, especially north of the Kwhahu plateau, and in northern Togo. Togo's coastal areas in the south, as well as Ghana's south-eastern coast, are also dry, and both countries were hit by drought in 1982 and 1983. Under these conditions, there are extensive areas in both Ghana and Togo which are suffering from desertification.

28. Finally, it should be noted that the Atacora massif, a continuous mountain chain which forms a watershed between the Volta and the Niger basins, affects the flow of the Niger river in the Sudano-Sahelian countries of the Niger, Nigeria and the Upper Volta. The geographic and ecological inter-relationship between northern Benin and its northern Sahelian neighbors due to the massif was one of the reasons for the inclusion of Benin in UNSO's desertification control mandate. The massif extends from northern Ghana through northern Togo to northern Benin. In this light, the Governing Council may wish to endorse a UNEP Governing Council decision for the inclusion of Ghana and Togo among the countries which receive assistance through UNSO in implementing the Plan of Action to Combat Desertification.

Notes

1/ The twelfth session of the Governing Council of UNEP is scheduled for 16 to 29 May 1984, preceding the thirty-first session of the UNDP Governing Council.

2/ The countries are Benin, Cameroon, Cape Verde, Chad, Djibouti, Ethiopia, the Gambia, Guinea, Guinea-Bissau, Kenya, Mali, Mauritania, the Niger, Nigeria, Senegal, Somalia, the Sudan, Uganda and the Upper Volta.

3/ These figures include an amount of \$2.6 million received in late December 1983, which is not included in an earlier report of the Executive Director of UNEP to the UNEP Governing Council.
