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SPECIAL ECONOMIC AND DISASTER RELIEF ASSISTANCE

Assistance to the drought-stricken areas in Somalia

Report of the Secretary-General

1. In its resolution 35/90 of 5 December 1980, entitled "Assistance to the drought-stricken areas in Djibouti, Somalia, the Sudan and Uganda", the General Assembly, inter alia, requested the Secretary-General: (a) to assign, as early as possible, and in consultation with the Administrator of the United Nations Development Programme and other organizations concerned within the United Nations system, the responsibility for assisting those countries in the region to the appropriate body, within the system, which will be funded from voluntary contributions, will be responsible for the co-ordination of the activities of the United Nations system in support of the recovery and rehabilitation efforts of the countries concerned and will also provide direct assistance to the Governments of those countries in co-ordinating inputs from donor sources and in strengthening their national and regional capabilities to mitigate the effects of future droughts and promote sustained economic and social development; (b) to mobilize international assistance for the populations affected as a result of drought and other natural disasters in the four countries concerned; (c) to send, as a matter of urgency, a multiagency mission to Djibouti, Somalia, the Sudan and Uganda to assess the medium-term and long-term needs of the Governments of those countries for their drought-afflicted populations; and (d) to report to the Economic and Social Council at its second regular session of 1981 on the results of the multiagency mission concerning the medium-term and long-term needs of the Governments concerned and also to the General Assembly at its thirty-sixth session on the progress achieved in the implementation of the resolution.

2. In implementation of General Assembly resolution 35/90, the Secretary-General on 23 December 1980 sent communications to Member States and relevant international financial institutions referring to the report of the missions which visited these countries in September/October 1980 in response to Economic and Social Council resolution 1980/70 and appealing for international assistance to deal with the immediate impact of the drought. The communications also drew attention to

paragraph 7 of Assembly resolution 35/90 and informed Member States that arrangements have been made with the Administrator of the United Nations Development Programme for a unit within his Programme to be assigned responsibility for assisting the affected countries in the region and for co-ordinating the activities of the United Nations system in support of recovery and rehabilitation in these countries. Further, the Secretary-General appealed for voluntary contributions to meet the operational costs of such a unit.

3. A multiagency mission was organized which visited Uganda from 25 to 30 September; Somalia from 1 to 8 October; Djibouti from 8 to 15 October; and the Sudan from 15 to 24 October 1981. The report of the interagency mission to Somalia is annexed to the present report. The other country reports of the mission have been issued as separate documents: Uganda (A/36/274), Djibouti (A/36/276) and the Sudan (A/36/277).

Annex

REPORT OF THE MULTIAGENCY DROUGHT MISSION TO SOMALIA
(1-8 October 1981)

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I. INTRODUCTION

1. On 3 November 1980, during the thirty-fifth session of the General Assembly, the Second Committee heard a statement by the United Nations Disaster Relief Co-ordinator on the grave effects of successive years of drought in Djibouti, Somalia, the Sudan and Uganda, and on the resulting shortages of foodstuffs, livestock, fodder and water. ^{1/} In the case of Somalia, the problems of drought have to be seen against the background of a fragile ecology and among other factors, the burden of a large influx of refugees.
2. In view of the critical situation in Somalia in 1979/80, the General Assembly adopted resolution 35/90, in which it requested the Secretary-General, *inter alia*, to mobilize international assistance for the populations affected as a result of drought and other natural disasters and to send, as a matter of urgency, a multiagency mission to Somalia to assess the medium and long-term needs of the Government for its drought-affected population.
3. The Secretary-General designated an Assistant Secretary-General to lead the multiagency mission, which visited Somalia from 1 to 8 October 1981. The mission comprised representatives of the United Nations, the United Nations Development Programme (UNDP), the United Nations Sudano-Sahelian Office (UNSO), the United Nations Environment Programme (UNEP), the United Nations Children's Fund (UNICEF), the Food and Agriculture Organization of the United Nations (FAO), the World Food Programme (WFP), the World Health Organization (WHO), the World Meteorological Organization (WMO), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Economic Commission for Africa (ECA). A list of participants is shown in the appendix to the present report.
4. The terms of reference of the mission, as concurred in by the Secretary-General, were as follows:
 - (a) Survey the drought-stricken areas of the country;
 - (b) Assess the medium-term and long-term needs of the Government in the situation;
 - (c) In carrying out that work, consider the policies and programmes which the Government had adopted to deal with the threat of drought;
 - (d) Review the status of implementation of recommendations made by previous missions, particularly the drought emergency mission led by UNDR0 in 1980;
 - (e) Examine measures which could be implemented on a country basis;
 - (f) Discuss the role and possible programme of the intergovernmental body mentioned in General Assembly resolution 35/90 of 5 December 1980;

^{1/} A/35/SR.36, paras. 6-17.

(g) Take into account in its recommendations previous and ongoing activities;

(h) Consider the amounts and types of assistance that would be needed from the international community and evaluate the ways such additional assistance might possibly be obtained.

5. The mission leader was received by the Vice-President, and the mission met further with the Ministers of Local Government and Rural Development, Agriculture and Livestock, the Acting Minister of National Planning and the Director-General of the Ministry of Foreign Affairs. It had group and individual meetings with representatives of all the ministries concerned, and with technical advisers. Several visits to drought-stricken areas had been made by locally resident participants in the mission prior to the actual mission dates. Upon completion of the mission, a full verbal account on tentative findings and recommendations was given at a general meeting with Ministers and senior officials.

6. The mission wishes to express its warm appreciation for the assistance received from the Ministers and staff of the Government, the Resident Representative of the United Nations Development Programme and his staff, and the representatives and experts of the United Nations agencies.

II. SUMMARY OF MAIN CONCLUSIONS AND RECOMMENDATIONS

7. The mission considers that the recommendation of medium- and long-term measures to mitigate the effects of future droughts can have little meaning unless those measures can be applied within the context of the sustained economic and social development of which General Assembly resolution 35/90 speaks. As the Government said, in its presentation to the United Nations Conference on the Least Developed Countries in Paris on 1 September 1981, the purpose of its new Five-Year Development Plan, 1982-1986, was to assist the country in breaking out of the vicious circle of stagnation and decline caused by the fact that major natural disasters had been imposed on a structurally weak, less developed economy. The major constraints to development are lack of financial resources for current expenditures and development, lack of trained and skilled manpower in all sectors, lack of employment opportunities outside the agriculture and livestock sector, and lack of foreign exchange and the limited absorptive capacity of the economy.

8. Although consideration of the national economy was not within the mission's mandate, some references to key factors are necessary in order to illuminate the problem of dealing with drought. In the period 1971-1980, only about 50 per cent of the outlay envisaged in the national plans was actually spent. Between 1972 and 1979, the production of food crops remained almost constant, and that of industrial crops declined. Imports of cereals and cereal products rose from 79,000 tons in 1972 to 175,000 tons in 1979 because of the influx of refugees and the needs of the rapidly increasing Somali population, and, during the first six months of 1981 alone, rose to 194,000 tons of which 53,000 tons were for refugees. In the livestock sector, the recent monthly rainfall shortages and the arrival of refugees with their herds and livestock negated the improvements brought about by the programmes of

disease control and animal health and of range development. In some instances production declined. The balance of payments moved into a large deficit in 1979 and, in the view of the Government, a substantial deficit will no doubt also occur in the 1980s. Foreign aid for other than refugee purposes declined in recent years.

9. As with the other countries visited by the mission, the national problems were complicated further by such global problems as the rising cost of energy and the decreasing availability of funds for development from international sources in general, exacerbated in the case of Somalia by the large influx of refugees in the past two years.

10. The Government has continued to wrestle with those daunting problems and presented to the mission a memorandum summarizing the action it had taken to deal with the consequences of drought and giving a broad indication of its plans for the future. The memorandum was produced after detailed discussions among ministers and senior officials of the Government and staff of United Nations agencies. The mission agreed with the view expressed in the memorandum that general background to the occurrence and effects of drought and related disasters in Somalia is adequately covered by the report of the previous United Nations interagency mission of September 1980, ^{2/} together with the reports of other missions fielded by UNDP, UNSO, UNEP, FAO, the International Fund for Agricultural Development (IFAD), the World Bank and other agencies.

11. Those reports contain valuable information and proposals for programme and project action. A great deal more work lies ahead, but in the mission's view, there is already available to the Government and the international community enough information to form a base for future action. What is now needed, in addition to the financial resources, which are so sorely lacking, is an officially stated policy on drought and related problems, so that the various elements of the response can be clearly related to each other and linked to improved management and co-ordination of the national programme and the efforts by the international community.

12. The best plans cannot be executed without resources, and there the picture can only be described as disappointing. The Government has only meagre financial resources for development. While there was an encouraging response from a number of existing donors and the prospect of some new donors, following the Government's presentation at the recent United Nations Conference on the Least Developed Countries, certain other donor countries are themselves experiencing economic difficulties, and considerable explanation will be needed before they are convinced of the case for Somalia.

^{2/} Assistance to the drought-stricken areas in Somalia (A/35/560, annex).

13. The Government noted that of 89 projects in the livestock, forestry and wildlife, agriculture and water resources sectors, of the current Three-Year Development Plan, 1979-1981 - all involved in the alleviation of drought effects in one way or another - 27 were not financed at all, and many others were grossly underfinanced. As a result, of the total development expenditure of 2,645 million Somali shillings planned for those sectors, it is anticipated that less than 50 per cent will have been spent by the end of the plan period.

14. The previous United Nations interagency mission visited Somalia in September 1980 in response to Economic and Social Council resolution 1980/70, to review the immediate relief needs of the people displaced by drought and other natural disasters. The mission produced many useful proposals for emergency action and some suggestions for longer-term action. The present mission has the duty to record that in the 12 intervening months, there was little response to those proposals - as distinct from the needs of refugees - from the international community. On the other hand, there were encouraging responses to the Government's subsequent appeal on drought, of 8 March, and to the flood relief appeal, of 2 May 1981.

15. The immediate prospect for Somalia is evidently not attractive, although there are one or two encouraging features.

16. The previous mission recognized that the refugee situation was inextricably involved with that of drought, but since its visit, there have been some important changes in the situation:

(a) After reaching a peak of 1.3 million in January 1981, the influx of refugees dropped from about 3,000 per day to about 300 per week. This is believed to be due partly to the improvement in water supplies and grazing, following the good rainfall, and partly to other reasons;

(b) There is evidence of some families returning to the Ogaden and of others leaving the camps, either to rejoin their menfolk and livestock elsewhere in Somalia or to find other forms of productive employment, probably for the same reasons as given above;

(c) Whereas at the turn of the year there was still a problem of underdistribution of food to the camps, the situation has now reversed. The in-camp population is generally better off for food than the surrounding population, but the latter benefit to the extent that certain food items which might not otherwise have been available to them, become available for exchange or sale in the vicinity of the camps;

(d) A new emphasis on self-sufficiency has been introduced which has led to the identification, funding and initiation of some development projects associated with the camps and their surroundings. Some of the voluntary agencies involved with refugees are playing a major role in that respect, especially in relation to the introduction of appropriate technology and the use of renewable sources of energy such as solar-powered water pumps.

17. Nevertheless, despite the easing of the general refugee situation, the disastrous effects of desertification continue within an expanding radius from the camps, as the search for fuel and construction wood goes ever further into the surrounding countryside. The Government is acutely conscious of the problem and is urgently seeking more substantial assistance to provide longer-term solutions.
18. The Government is conscious that in relation to the magnitude to the problem, the rate of progress in development related to the alleviations of drought effects is very slow, and during the past year there were certainly no great advances. On the other hand, several major projects may claim significant achievements which have much broader implications and point the way forward (see chap. IV, sect. C).
19. A major constraint is that the long-term targets of some key projects remain small in relation to the size of the need. The mission thought that the Government might consider the possibility of organizing a massive effort, with popular participation, to deal with a few of the tasks, such as tree planting, bunding, flood diversion and water storage, with aid organizations supplying any necessary supplementary technical advice, and WFP expanding its ongoing food-for-work programme in that field.
20. In the face of the staggering problems mentioned above and the very limited number of encouraging factors, the mission carefully discussed with the Government ways in which its recommendations could be concentrated upon the most urgently required medium and long-term responses to drought, which would be within the Government's capacity to implement in the next few years and which might have some hope of support from donors. The mission agreed with the Government that its recommendations would be limited to the following categories of projects (which correspond to the priorities of the Five-Year Plan, 1982-1986):
- (a) First priority: projects - including ongoing ones - in which an investment of effort, time and funds had already been made and for which underutilized human and material resources remained;
 - (b) Second priority: projects for which feasibility studies had already been completed and funds either fully or partially secured;
 - (c) Third priority: projects for which feasibility studies were under way, with some prospects for financing.
21. The mission agreed with the Government that it would not be appropriate to recommend new projects, unless - which was thought to be unlikely - there was some significant gap in the repertoire of projects put forward by the Government or recommended by the many earlier economic development missions. The mission is not implying a criticism of the useful ideas and project proposals that were put forward in the past; it is simply focusing its attention on those priority proposals which are most advanced and from which Somalis can secure the quickest results, with the minimum additional commitment of scarce resources.

22. The mission recommends that the Government should adopt a formal policy on measures against drought, so that the planning and work of many Government and donor agencies and people could be brought into focus. The Government indicated that the formulation and implementation of such a policy was desirable, and would consider the matter further after having reviewed the mission's report.

23. For a long time to come, Somalia will feel a shortage of trained people as a major obstacle to all development, and the mission recommends the establishment of a comprehensive technical assistance programme for training purposes. It would be expensive, relative to the number of experts, but it is vital if Somalia is to break out of the existing deadlock. The Government would also need to develop more incentives for trained people, both to retain them in Somalia and to encourage the return to Somalia of those who have training and experience and are now working abroad.

24. The mission noted that, until 1970, the country was basically self-sufficient in staple foods, such as sorghum and maize, and was exporting bananas and maize. The former are still being exported. In the intervening years, Somalia was struck by a series of major crises, so that some basic circumstances have changed. The facts are worth remembering, however, because if all other things were equal, there is no reason, in principle, why Somalia could not, in the long run, again become self-supporting in staple foods, provided that new drought and rapidly increasing population, do not take the goal beyond reach.

25. Given the shortage of domestic funds available for local costs of projects, the mission recommends that donors should be ready to assume a greater share of such costs until Somalia's financial position improves.

26. Somalia has made good improvement in food production this year, despite flood and monthly rainfall deficits. This is sufficiently encouraging, despite the uncertainties over future risk of drought, for the mission to suggest that donors now consider the supply of agricultural inputs, such as seeds, fertilizer, pesticides and agricultural implement in partial replacement for food.

III. GENERAL BACKGROUND

27. The Somali Democratic Republic, with a total area of 638,000 square kilometres, is located in the north-eastern corner of the Horn of Africa and is divided into 16 administrative regions and 82 districts. The Government now estimates a total resident population of 5.0 million people (excluding refugees), with a growth rate of about 3.2 per cent per annum. Approximately 60 per cent are nomadic or semi-nomadic, 20 per cent settled in rural areas and the remainder are urban dwellers.

28. The climate is generally arid to semi-arid, with seasonal rain twice in a normal year. There are frequent rainfall maldistributions, such as those of 1974-1975 and 1979-1980. The topography consists mainly of plateaux that

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slope towards the Indian Ocean in the east and the Gulf of Aden in the north. Average yearly rainfall is low, from 50 to 250 mm in northern Somalia to 400 mm on the Mudugh plateau; only in the south-west does it reach 500 mm. The southern region is the only fertile agricultural area with two perennial rivers, the Juba and the Shebelle, and constitutes the backbone of crop farming activities in the country. The northern region, which has been most adversely affected by the uneven rainfall of 1979-1980 contains 60 per cent of the area and 30 per cent of the population, most of whom are living a nomadic life on traditional, seasonal rangeland. Fortunately, rainfall in all parts of the country has been exceptionally good in 1981, which may restore the capacity of grazing and crop areas for the immediate future.

29. Among the poorest nations of the world, Somalia is classified as a least developed country. The gross national product per capita has been estimated at between \$100 and \$200. The country's growth is largely dependent on adequate water supplies, grazing areas and farmland. Thus, if drought recurred often, there would be a marked decline in livestock exports and an accompanying increase in food imports, resulting in a further deterioration of the balance of payments and the economic situation. In addition, there would be an increase in the number of destitute people, and an exodus of persons working in the drought areas to urban communities or to relief camps, where they exist.

30. Agriculture and related activities are the occupation of 80 per cent of the labour force and generate 60 per cent of the gross domestic product. Of the total land area, 13 per cent, or 8.2 million hectares, is potentially cultivable, and the balance is either suitable for grazing or unusable. Only 0.7 million hectares, or 8.5 per cent, of the potentially arable land is actually cultivated and has the physical and social infrastructure necessary for its full exploitation. In view of the limited surface water available, the ground-water resources, which largely depend on rain catchment, are vital to the country's needs. Only a minimum percentage of available rainfall is caught and stored in surface reservoirs and tank irrigation schemes.

31. Livestock is Somalia's most important renewable resource. Owing to the influx of refugees and their flocks, the present stocking rate compared to the available land has become extremely high, resulting in overgrazing, soil erosion and a decline in livestock quality. It is estimated that there are 5.2 million camels, 0.7 million head of cattle, 9.4 million sheep and 15.1 million goats.

32. The coastal waters of the country have substantial fish resources. Surveys have shown that the annual potential catch could be in the range of 8,000 tons of tuna and mackerel, 170,000 tons of other species, and 2,500 tons of crustaceans. However, the present annual catch is a mere fraction of that valuable export potential.

33. The forestry potential is very limited. As regards hydroelectric energy, the projected source is the Juba river following construction of the Bardera dam. That project, of major national importance, is expected to be completed by 1988, and its financial requirements of about \$US 640 million are being explored with a consortium of donors.

34. Somalia has a total road network of 9,108 kilometres, of which 2,310 kilometres are asphalted. The roads run mainly from north to south, and the north-western and central regions have yet to be linked to the main road network. Road transport facilities are reasonably well developed, with a major part of the fleet of vehicles being privately owned. The country has three ports, with adequate landing facilities for ocean-going vessels. Coastal shipping is gaining momentum. Somalia has four airports suitable for larger aircraft, but only one - at Mogadiscio - with full international facilities. There are a number of small landing strips in the interior. There is also a small national airline and a shipping company.

35. Somalia's health problems are similar to those in other developing countries, the principal ones being associated with communicable diseases, disorders, malnutrition and complications of childbirth. Those problems are aggravated by the fact that the majority of the population live as nomads, and the country's meagre health resources are simply not available to them. The lack of environmental sanitation facilities, of excreta and waste disposal facilities, and of access to potable water needs urgent attention.

IV. FOLLOW-UP TO THE INTERAGENCY MISSION OF 1980

36. There was very little response to the short-term recommendations of the interagency mission that visited the country from 9 to 20 September 1980 (A/35/560, annex). Such responses as were made are referred to in the sectoral statements below.

V. THE PRESENT SITUATION, AND PROPOSED MEDIUM-TERM AND LONG-TERM MEASURES TO MITIGATE THE EFFECTS OF DROUGHT

A. Planning

37. The 1980 interagency mission to Somalia recommended support for the establishment of a central statistical unit, and reinforcement of existing statistical capabilities, stressing that the importance of reasonably accurate economic and social statistics could not be overestimated. Hopes to raise appropriate funding did not materialize and the project could not be included within the already overloaded UNDP country programme.

38. The Government has identified two main priorities: national accounts needed for setting-up a macro-economic framework for development planning; and statistics covering agriculture, including livestock. A census on agriculture is vital for land use and rural sector planning, and the 1975 livestock census could usefully be updated.

39. There are now four experienced professionals in the Central Statistical Department, with three more being currently trained in the United States of America. All the statisticians work at Mogadiscio; there are none in the regional or the

sectoral ministries. Fellowships are needed to train some of the 40 statisticians who are needed, in the medium term, to staff the Central Statistical Department, the units in the Ministries and the regional offices.

40. A project has been prepared by the Government to upgrade the existing Institute of Statistics, which is engaged in the training of intermediate-level statisticians and development planners. Lecturers and equipment are needed, particularly furnishings, library materials and a small off-set printing facility.

41. The mission can only reiterate last year's recommendation for urgent support to the establishment of an efficient statistical system.

42. The Government is implementing the Three-year Development Plan, 1978-1981, and actively preparing for the Five-year Development Plan, 1982-1986. It receives the assistance of a team of experts assigned to the Ministry of National Planning, under a UNDP/United Nations project.

43. In the past, plans concentrated on creating an adequate social and economic base and a physical infrastructure, and on expanding the productive capacity of the economy. The Five-Year Plan, 1982-1986, places emphasis on crop production, irrigation, livestock and fisheries. The rate of growth of those subsectors, including forestry, is expected to be 4.4 per cent annually, somewhat above the rate of population growth. The sector will absorb about 58 per cent of the total investment during the Plan. Given Somalia's limited national resources and the demographic pressure on them, those priorities seem well conceived. Among the several hundreds of projects to be implemented in the period 1982-1986, few are directly related to drought, but a great many of them are indirectly related to it or will help to mitigate its effects.

44. In spite of United Nations assistance, the machinery for planning remains weak in many ways. Together with the lack of financial resources, it shares responsibility for the low rate of implementation of projects and programmes, especially in the productive sectors. Under the 1974-1978 Development Plan, crop production and irrigation were allotted 29.1 per cent of the total investment planned, but only 55 per cent of that figure was actually invested - well below the 61 per cent average implementation rate for the Plan as a whole. The situation did not improve significantly during the Three-Year Plan period, 1979-1981: during the first year of the Plan, only 10 per cent was implemented in the agricultural sector.

45. An effort must be made to speed up the implementation of the projects included in the Plan. It would encompass improvements in project design, the setting up of monitoring procedures, the training of more managerial staff and provision of better incentives for them, and more efficient co-ordination of development activities.

46. A programme to organize some form of regional planning, with special reference to the drought areas, is also recommended. One of the striking features of much of the thinking about development is the quasi-exclusive preoccupation with

technical problems, and the probably excessive confidence in "scientific" solutions. That orientation tends to overlook the need for the nomadic and settled population to grasp their own particular situation, aspirations, opportunities and constraints. Regional planning provides for an institutional framework and operational procedures that take into consideration those specific factors when projects are planned.

47. If all the projects included in the Five-Year Plan, 1982-1986, were to be executed within the next five years, a good deal of the potential for further development in the agriculture and livestock sector would by then be taken up. In the nomadic area, the carrying capacity of rangeland seems to have been surpassed, which points to the necessity of looking beyond the immediate years and of formulating a long-term comprehensive strategy for national development. Should the Government wish to organize a specific emigration policy, and, at the same time, a strategy to get highly qualified staff to return from working abroad, steps would have to be taken quickly, especially in the fields of planning, education and training.

48. The mission recommends an extension of the UNDP-financed planning project and suggests that, within that project, more consideration be given to the problems of implementation, regional planning and long-term strategy, taking into account in a systematic and comprehensive manner both opportunities and constraints to economic and social growth in the country.

B. Food

1. Follow-up to the 1980 mission

49. The recommendations included in the report of the 1980 multiagency mission have to be seen in the light of the physical conditions prevailing in Somalia at the present time (A/35/560). Approximations of the national food balance for the first half of 1981 show that the cereals requirement exceeded the available input. Owing to the prolonged droughts from 1974-1975 onwards, there was no chance to build up a national reserve from stocks. Although concessional sales and special drought relief imports of cereals were substantial, they did not come close to satisfying local demand and, therefore, no stock accretion was possible. Furthermore, in that period no national crop was available. The one expected from the November/December rains in 1980 was a failure, owing to delayed rainfall.

50. The harvest from the spring rains of 1981 was above average, but only a relatively small proportion of the crop has become available to the Agricultural Development Corporation (ADC), the state trading organization for grain; even if all ADC purchases from producers were put into a strategic reserve, they would barely equal half the required amount.

51. Although there was no specific response to recommendations on the restoration of the depleted national grain stock, the Government launched an international appeal on 8 March for assistance in drought relief. In response, the United

States Agency for International Development (USAID) agreed to the sale of 40,000 metric tons of maize under their Title II programme of free distribution in support of drought victims; the World Food Programme allocated a further 7,200 metric tons of maize through the Director-General of the Food and Agriculture Organization for the relief of drought victims. As an additional emergency relief measure, USAID, in co-operation with WFP, agreed in March to release to ADC, for sale to the general population, a further 6,160 metric tons of maize, which was to be repaid by the ADC from a Title I delivery later in the year.

52. No results were forthcoming on the issue of defrayal of freight costs although in connexion with flood relief, a number of donors provided air transport, which may be considered to have covered the intention of the specific recommendation.

53. In late March 1981, heavy rains in the Ethiopian highlands swelled the river systems in Somalia; they were followed by heavy local rains, which caused widespread flooding along the main rivers in the south. The Government launched a further appeal for flood relief in May.

2. Action on proposed emergency projects to offset drought damage and to increase preparedness

54. The question of an increased wage for workers together with the need for further capital input, was raised by WFP at the Co-Finance Meeting held at Mogadiscio in June 1981. In November 1981, the World Bank will mount an evaluation mission for the central rangeland projects, which will provide an opportunity for further follow-up.

55. Several potential donors have been approached on the need to accelerate forestry activities in the World Bank/IFAD/WFP-assisted project and in Somalia in general. A number of voluntary organizations are funding and providing personnel for small projects, in the vicinity of refugee camps aimed at providing woodlots for fuel with quick-growing species and fruit trees. Nurseries for the provision of the stock are included in the projects, and it has been recommended that the nurseries be expanded to provide seedlings over and above the needs of the refugee camps, in order to help the national needs.

56. One thousand metric tons of sorghum seed, purchased in the Sudan through FAO/OSRO, with funds donated by the Netherlands, were shipped to Mogadiscio from Port Sudan in April. Regrettably, a fire broke out in the vessel in Mogadiscio port, and only 650 metric tons were left for distribution to ADC.

3. National food needs, food security and distribution

57. Despite the drought and flood conditions, the national cereal crop in 1981 will certainly be well above average. The greater part of it is likely to be retained by the farmers in the countryside. At the end of September, only some

20,000 metric tons of cereals, mostly sorghum, were available to ADC to satisfy urban requirements. This means that there will be a shortfall of cereals of around 120,000 metric tons for the general population for 1982, all of which will need to be met by commercial purchase, concessional sale, or outright donation. That excludes requirements for the refugees, which are all donated and are handled through an independent supply system, National Refugee Commission/CARE. A decision must be made as to how to bridge the shortfall between national production and national food requirements - by planned commercial purposes, requests for food assistance or increased crop yields. Somalia has had to import wheatflour and hardwheat, rice and edible oil for the past decade. Sufficient sugar for most national needs seems likely to be available by late 1982.

58. An emergency grain reserve at the proposed level of 50,000 metric tons of cereals would seem inadequate for future national needs, given the growing population and possible further influxes of drought victims from neighbouring areas. Nevertheless grain storage for emergency reserve purposes should not be considered unless there exist appropriate storage facilities, including rodent, insect and infestation surveillance and control at regular intervals, with the appropriate equipment and chemicals available on demand.

59. Somalia is not well placed to handle large food imports. In the first place the port system was not designed to handle large cereal movements. As a result, there is no bulk grain-handling capacity. All grain has to be bagged, which adds considerably to donor costs or commercial purchase costs, and furthermore causes delays in both shipment and discharge. There is also the question of storage: the facilities of the two state trading organizations have a reasonable capacity, but they were designed mainly to collect crops in small district stores for distribution to urban centres through larger regional stores. The system was also not designed for major imported quantities. In the course of implementing the drought assistance given in 1981, the 40,000 metric tons of maize donated by the United States caused considerable port congestion, since the port of Mogadiscio was already heavily utilized for refugee assistance and commercial purchases. Some cargoes had to be diverted to Kismayo, which as it had a smaller capacity, also became overloaded. The WFP emergency drought assistance also had to be diverted to Kismayo.

C. Agriculture and livestock

1. Present situation

60. There are seven grazing animals in Somalia for every human being. The economy is pre-eminently pastoral: livestock accounts for 80 per cent of the foreign exchange earnings. The people are also pre-eminently pastoral, 60 per cent being nomadic herdsmen. Given the arid or semi-arid climate of most of the country, that way of life is well adapted to the environment. The demand for Somali live animals and livestock products is high, particularly in Arab States, and livestock will continue to be the mainstay of the domestic economy and foreign exchange earnings for the foreseeable future.

61. However, the nomadic pastoral way of life suffers from two serious weaknesses. One is that it requires the free movement of herds and people in search of grazing and water, and that movement may be curtailed by political events. The second weakness is vulnerability to drought. All agriculture is in some degree vulnerable to drought, but particularly so in the case of semi-arid and arid rangeland, where the ecological balance is delicate at the best of times and irreversible deterioration quickly follows from excessive human and livestock pressure on that balance. Rangeland deterioration and increased drought vulnerability of the people can be seen in Somalia as a result of increasing human and livestock populations. Between 1973 and 1975, close to 7 million head of livestock died and in 1979 and 1980, some 4 million to 6 million were said to have died. Moreover, the effects of drought on a subsistence pastoral people is felt for years afterwards, through the break in breeding cycles and subsequent loss in milk production and in the availability of animals for sale. If a number of drought years succeed each other, the result can be catastrophic, effects being felt for 20 to 25 years, even if the meteorological severity of each annual drought in the succession is not remarkable.

62. With that background to the importance of the livestock sector and its vulnerability, it can be readily appreciated that the Government of Somalia gives the highest priority to increasing drought resilience in the livestock sector, and at the same time to limiting population pressure and national dependence on the rangeland by stimulating the crop production side of agriculture.

63. Only about 13 per cent of the total area of the country has a rainfall permitting crop-growing, and even there, with the potential evaporation exceeding rainfall by a ratio of 3 or 4 to 1, agriculture is marginal by the standards of Somalia's neighbours. The rainfall is erratic; sowing may have to be repeated from three to four times, owing to dry spells, and even then a crop is not certain. It is not surprising, therefore, that only about 14 per cent of the population is engaged in dryland farming. Investment has, in the past, been low, and dry farming is still basically a subsistence economy. Farmers would clear the land, cultivate it for some years until yields became too low, and then leave it to revert to "bush" fallow. In general, farmers still have little knowledge of practices to conserve soil moisture, maintain soil fertility, and avoid high post-harvest losses. There is, as yet, little integration between crop and livestock farming. Under those conditions of low input/low output, it is clear that only a combination of improved practices will significantly raise yields. But it is also clear that, starting from the present very low yields, the potential for improvement is great.

64. Although the rainfall resource of Somalia is rather poor and erratic, affecting both pastoral and dryfarming agriculture, Somalia benefits from two large rivers, which have their headwaters in the high rainfall Ethiopian mountains. They offer great scope for irrigation. Already over 100,000 hectares are under flood irrigation through canals in the river banks which fill when the river level rises, and some 50,000 hectares are under controlled irrigation, pumped or gravity fed. Unfortunately, soil and water resources are not evenly matched: the Shebelle River valley has plentiful resources of good soil but limited water, while in the

Juba valley, the situation is the reverse. None the less, irrigated agriculture supports about 6 per cent of the total population and provides about 8 per cent of Somalia's export earnings. The main constraints on irrigated crop production are poor water control and inadequate management. However, as with rainfed farming, the potential for expansion, both in yields and in increased area, is great.

65. In recent years the economic situation in the agricultural sector has deteriorated. Between 1972 and 1979, the volume of exports declined from 100 to 91 for livestock and from 100 to 37 for other exports, mainly agricultural. The decline in the second index was owing mainly to irrigated banana production falling from 188,000 tons in 1972 to 87,000 tons in 1978. That illustrates very starkly the weak situation in the irrigation subsector, where water supplies are uncertain, headworks need repair, canals need desilting and drainage is inadequate. The result is soil salinization, and water application practices to the crops are poor.

2. Agricultural development

66. The Government of Somalia is well aware of the problems in the agricultural sector. Many development projects have been launched, valuable experience gained, and there are some significant successes to note. Among those that have a direct effect on alleviating drought are the two large-scale rangeland development projects funded by Kuwait, USAID and the World Bank, among others, one in the north and one in central Somalia, which together cover 55 per cent of the total area of the country. Those projects aim specifically at alleviating the effects of drought by development and management of grazing reserves, provision of stock water points, improvement of veterinary services and the establishment of fodder production units utilizing water-spreading and water-harvesting techniques; range resource surveys, range management, informal education of pastoralists and formal training of government staff are also included. Although both projects are somewhat behind schedule, initial problems have been overcome, momentum has been generated, and the achievements to date are significant. The Mission considers that maintaining the momentum of proved projects is of very high priority, particularly through the second phases of the Northern Rangeland Development Project and the North-west Region Agricultural Development Project, which are at present under discussion. Particularly notable for crop agriculture are the Agricultural Extension and Farm Management Training Project and the Bay Regional Agricultural Development Project - the first of which is responsible for building up the national extension services, which must be the channel of communication for all improvements in crop agriculture, and the second of which is an integrated rural development project in the higher potential dryland areas of southern Somalia, with a programme which includes water supplies, rural roads, animal health and extension.

67. The North-west Region Agricultural Development Project, funded by the World Bank, is in the distant north-west part of the country. That area, with a mean annual rainfall of around 500 mm, has considerable potential for agriculture and livestock. Investment to date by the World Bank project and by private investors has been promising.

68. The mission is not of the opinion that the continuation of the North-west Project into phase II should be conditional on resolving the present difficulties in the ground-water exploration programme. In the plateau area, ground water is limited in quantity, is deep and costly to exploit. It is therefore questionable whether ground water should play a major part in the immediate development programme. In contrast, surface water offers considerable scope for development at costs which landowners can afford, by cisterns, excavated tanks and small dams. There is also a large storage of shallow ground water in the sands of the wadi beds, which is recharged twice a year by floods and which can be exploited by simple technology.

69. A settlement programme was initiated in response to the drought of 1973-1975 and has been receiving capital and technical assistance from various donors and food assistance from WFP for a number of years. Its aim was to assist the nomad drought victims by offering them a new way of life in settled agriculture or fisheries. The programme arose out of necessity, not out of policy, and Government notes that mistakes were made in the early stages. Later on progress was achieved in settling some nomads into new environments and totally different ways of life. While both agricultural and fisheries projects are not yet economically viable, it must be remembered that the cost of having the nomadic people remain in the overpopulated rangeland would be high. Moreover, the settlement is a long-term activity, and the children in particular will benefit from settled homes, schooling and health services. Since government policy is rightly against any increase in the nomadic pastoral pressure on drought-prone grazing land, settlement in one form or another is one of the few available options. Based on its experience with the first settlements, the Fisheries Department considers that the situation is now favourable for the development of further fisheries settlements at well selected sites, as a significant way of removing people from drought-risk areas.

70. Research into dryland crop farming and rangeland improvement and management is clearly an essential element of any drought mitigation plan. The national research station at Afgoi has suffered many changes of fortune in the past several years. The mission believes that a new look is required at the purposes and cost/benefits of research, and believes that the question of the vulnerability of agriculture to drought, including livestock, should be considered in a single national applied research programme, and its findings incorporated into the curriculum of the agricultural secondary schools established with World Bank assistance. The mission was encouraged to hear that the Government was currently formulating an agricultural research strategy, and believes that liaison with other government and international research institutes, such as the International Crops Research Institute for the Semi-Arid Tropics, (ICRISAT), working in similar climatic zones, would be fruitful.

71. A unit of government that has received too little assistance in the drought context is the Forestry Department. Trees provide fuel, timber and forage, and without a systematic tree planting and protection programme, a serious consequence of drought will be - and indeed already is - increased desertification through the destruction of trees to fulfil basic needs.

72. There is a connexion between drought and wildlife. Apart from the value of wildlife to tourism, it is not always realized that the natural wildlife in a region is the form of animal life best adapted to the environment, and that meat production from game - within proper husbandry limits - is much greater than that from domestic livestock for the same area of land. Legislation and control are needed, together with a small wildlife service to implement the wildlife policy. The mission recommends that the question of wildlife be examined in the over-all context of reducing vulnerability to drought.

73. There have been several missions to discuss various national food security proposals with the Government (see para. 49), and negotiations with a donor are at an advanced stage for the construction of two grain stores. Enlarging and improving storage at all levels, down to the farm, are needed. Although small in scale, an existing FAO-sponsored food loss prevention project is performing significant work in demonstrating improved drying methods, which not only save an important proportion of the grain from loss through mould, but also reduce the danger to health from toxic moulds. The mission recommends the expansion of that work and its continuation at very modest cost, after the present termination date of June 1982, together with the inclusion of Somalia in the FAO Regional Farm Storage Structures project.

74. Another aspect of food security is the Early Warning System. The project is already under way but will need to be continued when the present phase is completed in 1983. It also can benefit from a regional association backed by satellite interpretation and other facilities in the FAO Global Information and Early Warning System on Food and Agriculture.

75. Drought is a risk to all forms of agriculture throughout Somalia. The entire development plan in the agricultural sector has, therefore, a bearing on reducing vulnerability to drought. However, for the purposes of the present report, the mission has focused its recommendations more narrowly on those projects that can have the clearest impact on drought alleviation in relation to the investment required. In particular, the mission has emphasized those projects in which considerable investments in terms of funds and effort have already been made.

76. As has already been explained, several projects have taken off slowly owing to early problems, but now that momentum has been generated, the mission is acutely aware of the risks of that momentum being lost through institutional and management weakness or a break in continuity through delays in financing. The mission is also aware that some of the recommendations of the previous mission were medium-term and long-term ones, most of which have not been implemented and are therefore still valid.

3. Livestock development

77. One of the most effective ways of assisting the livestock sector is through the improvement of the veterinary services. That includes disease control, where the provision of reliable transport and maintenance services would have an immediate

and positive effect, and assistance to training through the Institute of Animal Sciences. Regional co-operation is to be encouraged in disease control.

78. The mission believes that efficient rangeland development, control and management are fundamental to a healthy livestock industry and recommends that support should be continued in order to build on gained experience, including local participation of the people in the two major rangeland projects. Although for practical purposes of funding, monitoring and review, the programmes can be executed in stages, they must inevitably be of 10 to 20 years duration in order to be successful.

79. The mission believes that a major forestry input involving rangeland rehabilitation and the control of desertification following drought will be required in order to restore the forest resource, which supplies the pastoral community's basic needs for fuel, building materials and browse, and to continue the successful sand-dune fixation programme.

80. Fodder reserves, emergency slaughtering facilities for times of drought, and an improvement in the marketing structure all require attention in the livestock component of a formal drought mitigation plan.

81. Relieving the pressure of people and livestock on grazing land is of the highest priority. Some costly lessons were learned in the emergency settlements programme after the 1973-1975 drought; they should lead to well planned, steady - through unspectacular - settlement of nomads, voluntarily, in fishing and farming.

82. The integration of livestock with arable farming is a promising area for development, giving greater stability than reliance on either activity alone, and easing the transition from nomadic pastoralism to settled agriculture.

4. Research, food security, land use and irrigation

83. The national research effort in the agricultural sector needs to be replanned on a multidisciplinary basis, covering both livestock and crop production needs. The approach should be oriented towards direct application to the farmer through the extension services. The purpose is to build on proved experience, both in Somalia and under similar environmental conditions in other countries. The programme is therefore likely to benefit from regional co-operation. In that way time, money and effort can be saved, and research could concentrate on adapting the knowledge gained for widespread dissemination to the Somali pastoralist and farmer.

84. Food losses through mould due to poor drying techniques at the farm level can be greatly reduced by inexpensive methods; the ongoing project described in paragraph 73, which has produced good results at modest cost, is recommended for continuation. Attention to pest control in general is also needed. The management of the emergency food reserve will also require some formal organization. Short-term consultancy assistance may be needed for integrated and comprehensive planning of all elements of the National Food Security Programme.

85. The mission was attentive to government proposals for assistance to the Land and Water Department of the Ministry of Agriculture to establish a land use survey, planning and control unit. There is no doubt that basic information is needed if the land resource potential of the country is to be realized. Given the shortage of funds and of manpower, however, the mission believes that assistance now could be limited to one expert to ensure co-ordination of the land-use survey already undertaken by different projects and ministries and to lay the foundation for a gradual build-up of the national land-use survey, planning and control unit.

86. On the basis of the criterion of supplementary effort to realize benefits from investments already made, the mission believes that assistance in improving irrigation schemes should be given high priority. Four programmes in particular are worthy of urgent attention:

(a) Improvement of water management at the field level on irrigation projects on the Lower Shebelli River. Large improvements in irrigation efficiency and water and soil management practices could be made with small additional investments, which would mainly be in the form of expert advice and the demonstration and rehabilitation of machinery.

(b) Spare parts are needed for equipment used for desilting and repairing some 2,000 kilometres of main canals. Sixty per cent of the existing equipment is idle for want of spare parts. A limited amount of new equipment and workshop repair facilities are also needed as part of the project.

(c) The hydrological measurement of the water resources of the two main rivers and their management on a river basin basis are of the highest priority for the irrigation subsector. Projects are ongoing in both those fields, but are scheduled to end in 1981 and 1982. Their continuation, at modest cost, is recommended. The restarting of such activities after a lapse of time is slow and costly, and the avoidance of a break in the continuity of the hydrological data collection is essential;

(d) Localized irrigation from seasonal streams in northern Somalia offers considerable scope for food and fodder production in drought-prone areas. Advice may be needed on a modest programme of gradual and systematic development.

87. The mission is convinced that the involvement of local people in the development process, from planning to execution, is a pre-condition to any hope of success. The mission was impressed by the degree of decentralization, to the regional and district levels, of authority for rural development, mentioned in a recently drafted rural development strategy paper, which the mission understands has been accepted by the Government, and it recommends that the momentum generated by the UNDP/FAO-financed Rural Development Project be maintained with continued modest assistance.

88. In discussions with government officials, the mission's attention was drawn to the generally slow and poor implementation of previous development projects. The mission also noted the characteristic enterprise and initiative of the Somali

people, and the upturn in productivity when they are rewarded. Devolving authority and responsibility in the civil service was seen as one way of reducing absenteeism and raising morale and thereby overcoming the poor and slow implementation referred to above.

89. There were a number of technical problems in which the mission thought that regional co-operation might be helpful in the search for answers - for example, rangeland survey, planning and management; dryland farming services; Early Warning System; control of migratory pests; and international river basin management.

D. Water resources

1. Present situation

90. Except for the two main rivers, the Shebelle and the Juba, which may dry up at times of drought, the country does not have any perennial water course, and the rural population depends on ground-water supplies. The 1980 multiagency mission recommended certain measures needed for the development of the country's water resources as an important tool in the mitigation of drought.

91. At present, in addition to the small contribution by the Government, the main technical assistance programmes in water resources are provided by:

- (a) China: project for drilling 26 wells in rural areas;
- (b) Federal Republic of Germany: project in urban communities' water supply;
- (c) USAID: a three-year project for the completion of 70-75 bore holes intended for agricultural and rangeland development;
- (d) UNICEF: a two-phase project to provide water for the refugee camps and for rural communities;
- (e) World Bank: drilling programme under the Trans-Juba Livestock Project and the North-western Agricultural Development Project.
- (f) FAO/Technical Co-operation Programme: assistance in water legislation and planning and in hydrological measurements of the two main rivers.

2. Medium- and long-term plans in rural areas

92. The medium-term strategy is to redress the situation resulting from the 1979-1980 rainfall shortages, when only 40 per cent of the human and livestock needs were satisfied with the then available water sources. The main objective is the provision of water for communities in the rural districts, refugee camps, new settlement sites, health centres, schools and, as far as possible, on the routes traversed by nomads.

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93. The projects mentioned below are complementary to the ongoing activities, and it is therefore recommended that they start as soon as funds become available:

(a) The rehabilitation of some 150 bore holes scattered in various districts;

(b) The drilling of 40 to 50 bore holes in the areas most affected;

(c) The construction of 50 shallow wells in certain sites already demarcated by the Government's Water Development Agency;

(d) The construction of 10 excavated reservoirs in areas where ground water is not available and drilling for water is not recommended, for example, in the vicinity of Hargeisa.

94. The long-term strategy should aim at preparing the country to cope better with the effects of future droughts by providing adequate and safe water for human and animal consumption in settlement schemes, for livestock production, and for the irrigation of food and cash crops. The success of such a strategy would depend upon: comprehensive planning of rural development; sufficient external financing and technical assistance; and careful preparation of government machinery for effective follow-up. A number of water activities are either now operational and will soon require follow-up inputs, or are in the pipeline (see para. 70).

95. There are other projects to which the Government accords high priority:

(a) The importance of hydrogeological surveys can not be overemphasized, considering that the absence of basic studies has frequently caused delay in programming development projects in need of ground-water assessment and that exploration drilling is very costly, which has been reported in many drilling programmes;

(b) Water projects in Somalia mainly cover the development of artesian aquifers in the central part of the country which are needed for rangeland improvement. Dams and reservoirs are needed in certain identified sites, to make use of flood waters, which are usually lost, and to increase the cultivable areas;

(c) Strengthening the capabilities of the government agencies responsible for the implementation of drilling and irrigation programmes, with machinery, equipment and a transport fleet, will be essential;

(d) The establishment of a water technician institute is greatly needed, since the country lacks trained personnel in many disciplines and at all levels.

96. In discussions with the Government and international personnel engaged in the field of water resources development, it was agreed that government participation should be stepped up by seconding more personnel to the ongoing projects. A great

number of the present water projects are either exclusively, or to a great extent, dependent upon foreign funding and expatriate personnel and, as a matter of urgency, the Government should prepare to assume responsibility for those projects. Co-ordination between government organs and foreign agencies badly needs strengthening in order to avoid the risk of losing valuable data, duplicating of effort, and wasting valuable opportunities for the training of national personnel.

E. Transport

97. The transport system in Somalia is relatively limited: four principal ports; three airports with paved runways; and about 21,000 kilometres of roads. There are no railways and no waterways. Coastal shipping has been of minor importance but is now gaining attention, owing to fuel shortages limiting road transport, which, however, is still the principal means of linking production areas to consumption centres and export gates and of providing social services to remote areas. This is especially so in the areas in the north which have been stricken by recurrent droughts.

1. Road infrastructure

98. The highway network has not increased significantly in length during the past decade, but considerable progress has been made in upgrading the existing roads. The length of asphalted highways has tripled since 1975. The network consists of over 9,200 kilometres of primary and secondary roads and, at a rough estimate, some 12,000 kilometres of rural/feeder roads. Its backbone links Mogadishio to the Kenyan border in the south and the Djibouti border in the north. Roughly half of those 2,700 kilometres are in good condition, with some 300 kilometres requiring rehabilitation and 1,300 kilometres upgrading. Projects currently under execution will add another 500 kilometres to the existing 2,300 kilometres of paved all-weather roads.

99. Given the stage of development of the country, and its size, a major improvement in the road infrastructure is required. It should include an improved feeder-road network, particularly in the southern agricultural areas and in many parts of the north-west. If fisheries are to be developed nationally, all-weather roads will have to be constructed to connect the small ports on the coast to the north/south trunk highway which runs through the interior parallel to the ocean.

100. Most improvements in the infrastructure have been financed by foreign loans and grants - up to 98 per cent of total investment. To preserve such assets, more funds should be made available for the maintenance of the road network, which suffers from the heavy traffic to refugee camps, and from frequent flooding at every rainy season. Only 1 per cent of total expenditure for the highway sector is devoted to maintenance. The sector is also hampered by inadequate professional and skilled labour, lack of appropriate facilities (equipment, machinery), the

shortage of foreign exchange for spare parts, and the high cost of local material (sand and gravel), owing to long-distance haulage.

2. Transport fleet

101. The following fleets are operating in the country:

(a) The National Transport Agency, with about 80 operational vehicles, most of them of the older Italian type, often crippled by a chronic shortage of tyres and spare parts.

(b) The National Refugee Commission (NRC). Its Emergency Logistics Unit has developed a growing transport capacity. The fleet - with some 160 vehicles by the end of 1981, mostly large and modern trucks with trailers - is used exclusively for refugee needs and seems able to meet them at least until the end of 1982.

(c) The Agricultural Development Corporation maintains its own fleet of 21 trucks for the movement of cereal from ports to stores and regional depots in the interior. The capacity is insufficient and is supplemented by trucks hired from the private sector.

(d) The State trading corporation runs a small fleet for moving all imported staples which are price-controlled: rice; wheatflour; sugar; and vegetable oil.

(e) The Coastal Development and Settlement Development Agencies have some 10 large trucks, tractors and earth-moving equipment.

(f) The police have recently received a donation from the Federal Republic of Germany of 50 trucks to be loaned to other government agencies in cases of emergency, such as flood or drought. They are able to reach places inaccessible to other trucks.

(g) The private sector, usually organized in co-operatives, has at least 400 operational trucks of various capacities and payload, but much of the equipment is old.

102. Whereas the total fleet of vehicles seems to be able, in quantitative terms, to meet traffic requirements, its operation is hindered by the lack of repair and maintenance facilities, (with the exception of the police and of the NRC Emergency Logistics Unit, which have good workshops). Spare parts and tyre supplies are in perpetual shortage, and there is also a lack of properly trained drivers and maintenance personnel.

F. Meteorology and operational hydrology

103. Available meteorological data for Somalia show that for the country as a whole, annual rainfall was normal during the past two years. Although the spring rains in 1979 arrived about six weeks late, the amounts were above average. In March 1981, heavy rains in the Ethiopian highlands and in Somalia brought a flow of water back to the two main rivers, which had gone dry, resulting in damage from flooding.

104. The maldistribution of rain throughout the year appears to have been the main contributor to the deficit in production and availability of food commodities.

105. Nevertheless, in Somalia the consequences of even the slightest deviations from normal weather, climatic and hydrologic conditions are becoming more and more serious. Accordingly, the mission feels that there is a need for improved collection and transmission of the climatic and hydrological data throughout the country and its effective use; the establishment of a system for the dissemination and use, by the appropriate agencies, of early warnings of drought conditions and forecasts of floods; increased use of weather, climatic and hydrologic information and results of studies by the authorities responsible for development projects, particularly those that are drought-related.

1. Present situation

106. The above-mentioned activities exist to some extent in Somalia, albeit scattered and unco-ordinated. The Meteorological Service in the Department of Civil Aviation within the Ministry of Transport is in charge of a number of stations, half of which are not operating for various reasons; the other half are reporting rather irregularly. The interest of the Service is limited to aviation.

107. The Early Warning System, started in January 1980 within the Ministry of Agriculture, absorbed the Agricultural Meteorology Service of that Ministry, created about three years earlier. The goal is to correlate climatic factors, principally rainfall amounts, with agricultural production, with a view to forecasting food production. The System plans to establish and rehabilitate a number of agro-meteorological stations, the first of which became operational in April 1981. The project receives support from the Federal Republic of Germany and is due to expire in December 1981. A two-year extension is under active consideration, provided that a guarantee can be obtained for a longer 10-year project to follow. In addition, other agricultural projects, including State farms, operate their own rainfall stations, independent of the Meteorological Service or the Early Warning System.

108. In operational hydrology, the same scattered responsibility is apparent, with limited activities. The Ministry of Agriculture, with support from FAO, started a water hydrometry project in 1980, aimed at the repair and reopening of hydrometric stations on the two main rivers. The project is small, and due to

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expire in December 1981. A bigger project, extended to cover the semi-arid and arid zones, is clearly needed.

109. Responsibility for ground-water hydrology rests with the Ministry of Mineral and Water Resources and the Water Development Agency.

2. Regional aspects

110. The mission was informed that a UNDP/WMO project entitled "Institute for Meteorological Training and Research" at Nairobi was being implemented and was open to English-speaking students from all countries in Africa.

111. The mission also learned that several WMO projects, aimed at providing regional support to the drought-stricken countries in eastern and southern Africa, had been discussed during the interagency meeting for the preparation of the UNDP 1982-1986 regional programme for Africa, and that the following three projects were retained in the priority list of WMO proposals:

(a) Extension of the project concerning the Institute at Nairobi;

(b) Strengthening of existing meteorological institutes for research, training and planning;

(c) Establishment of regional environmental data banks. A data bank for meteorology and hydrology in eastern Africa would make it possible to study drought over the region as a whole.

(d) A project entitled "Assistance to the drought-stricken countries in eastern and southern Africa in the fields of meteorology and hydrology", prepared in response to a recommendation addressed to WMO by the interagency meeting on desertification and protection of the environment, held at Geneva in March 1981. Under the project, one regional and several national components would be developed so that together they formed an integrated approach to the problems of drought monitoring, studies and warning systems and of the mitigation of the consequences of drought for agricultural production, water resources and rangeland development.

112. The mission wishes to draw attention to the need for intercountry exchanges of hydrological data and other relevant information concerning river basins common to Somalia and neighbouring countries. Such information is crucial for flood forecasting, among other things.

113. The mission recommends a systematic and continual study of drought occurrence, severity and frequency in Somalia, in addition to the following measures:

Medium-term

- (a) Ensure, as a matter of urgency, the extension and continuity of the Early Warning System and water hydrometry project;
- (b) Bring the existing network of stations of the Somali Meteorological Service back into full operation;
- (c) Complete the establishment of the agrometeorological stations proposed within the Early Warning System;
- (d) Improve the collaboration between the Meteorological Service and the Early Warning System;
- (e) Improve the use of available meteorological data, which should all be kept by the Meteorological Service, by all authorities concerned.

Long-term

- (a) Create, as planned, a National Meteorological Service into which the Early Warning System would eventually be incorporated, revise the existing proposals for strengthening of the National Meteorological Service, so as to reduce the input expected from the Government - the levels of which, in the view of the mission, are high and unrealistic, and increase substantially the duration of the assistance;
- (b) Strengthen the Hydrological Service as envisaged in the project document prepared with the assistance of FAO and entitled "Assistance to Hydrological Service and Establishment of National Water Centre", it being understood that the establishment of the Water Centre should be deferred;
- (c) Consider government participation, as applicable, in the projects listed in paragraphs 110 and 111 above, and to consider all ways and means of securing, as needed and feasible, the hydrological information mentioned in paragraph 112.

G. Drought and desertification

114. The climate of Somalia is hot and arid to semi-arid. Both high temperatures and localized torrential rainfall contribute to the arid nature of the land. Large quantities of water are lost as run-off, since the soil is unable to absorb all that falls in a relatively short time. Furthermore, the high temperatures cause excessive evaporation of most of the water in the soil. Given those circumstances and the fact that rainfall distribution patterns vary greatly within the country and from year to year, drought is a frequent occurrence, and serious drought occurs every five to seven years. The fragility of the ecosystem makes it especially subject, during periods of drought, to the processes of desertification, either by natural causes or, more frequently, by man-made causes. When desertification occurs, the land does not easily recover, even after the return of normal rainfall.

115. The Government is keenly aware of the relationship between drought and desertification. Following the drought of 1973-1975, during which a substantial portion of the livestock perished, the Government initiated a concerted effort to address the problem of rangeland degradation in the country. A number of activities were begun, including a project for rangeland conservation and development and a food-for-work programme for reforestation and rangeland development, described in paragraph 68.

116. The mission believes that the work thus far on the two major rangeland projects has been sufficiently positive to merit continuation and recommends that additional donors contribute to their sustained support. The two projects are illustrative of a larger number of ongoing activities which have far reaching implications in mitigating the effects of drought and strengthening the environment against desertification. In addition, a number of equally well conceived projects, addressing, either directly or indirectly, the medium- and long-term problems of drought and desertification, have not gone beyond the planning stage, because of lack of funding.

117. The plans of individual ministries or agencies, such as the Ministries of Agriculture and of Livestock and the National Range Agency, include strategies for combating desertification, and those are implemented through programmes and projects in the concerned technical sectors.

118. The mission believes that it would be most useful for the Government to prepare a national plan of action to combat desertification, which would incorporate a national policy on desertification control and reflect the appropriate recommendations adopted by the United Nations Conference on Desertification. A national plan would serve as a mechanism for strengthening the co-ordination and complementarity of the desertification control activities of the separate ministries or sectors and give added emphasis to the importance that the Government attaches to the fight against desertification.

119. The mission also recommends that, because of the close interaction between drought and desertification, the policies and plans of the Government addressing those two threats should be closely co-ordinated.

120. A further problem, which the mission was not able to cover substantially, related to energy for cooking in rural areas. Fuel wood and charcoal are urgent needs, and sources are becoming increasingly depleted, contributing to desertification. Alternative sources of energy should be developed, and the planting of woodlots should take priority in a nation-wide anti-desertification campaign.

H. Health

1. Current situation

121. Keeping in mind the findings and recommendations pertaining to health in the report of the 1980 United Nations mission to Somalia (A/35/560) the present mission

suggests that the following elements relative to drought preparedness be given consideration:

- (a) As the Government noted in the memorandum that it presented to the mission, there was little material response to the recommendations of the previous mission including those relating to the health sector. Health inputs have mainly concentrated on the refugee camps, with negligible impact on the health status of the average rural Somali.
- (b) The massive and generous effort on behalf of the refugees was absolutely necessary to save lives, but the consequence has been a serious distortion of health service development, and of the perspective of government and donor sources alike relative to the health needs of the overwhelming mass of the Somali people.
- (c) There seems to be a growing awareness on the part of both Government and external donor agencies of the need of systematic development of rural health services, as the main basic answer to emergency and long-term health needs of the country.
- (d) The Government's Five-Year Health Plan, which has been reviewed by the mission, seems an excellent initial step towards the goal of health for all by the year 2000.
- (e) The Government would be able with assistance from appropriate sources, to establish policy and procedures in the health sector.

2. Recommendations

122. The mission recommends that a secretariat should be established for the close co-ordination of health services. The secretariat would enable the Government to rationalize inputs from both Government and other sources. The Government should assume a much greater leadership role in both policy and operations, especially in the primary health care programme, which would develop a plan for the mid-term use of available in-country and external resources, for the support of a single strategy in any given segment of the health services delivery; assess the probable situation and resource needs in the long term, when the present massive external aid input will either lessen or end entirely.
123. It is recommended that the World Health Organization act in an advisory capacity to the Government in that initiative and be a focal point or clearing house for non-governmental inputs to the health sector.
124. The mission supports the initiative of the Government in joining the present two units, Primary Health Care and Mother and Child Health, in one Community Health Department, to achieve improved efficiency and better management. It is recommended that the present emphasis upon health care in refugee camps be gradually refocused upon the general population, especially those near the camps, without, of course,

depriving refugees of basic health services. As far as the referral system is concerned, the mission strongly recommends support of the existing district hospitals. No new physical facilities should be constructed in the mid term, but emphasis should be placed upon strengthening present facilities with water services, equipment and staff. Top priorities are curriculum, reformulation, retraining of staff and increased efforts to motivate assigned, qualified staff to stay in rural areas.

125. As a first step towards the implementation of the above recommendations, the mission suggests that a round-table workshop be held immediately, under the chairmanship of the Government and including representatives of all donors for the purpose of:

(a) Settling upon a single working policy for rural health services (especially as they apply to the present conflict in primary health care development);

(b) Agreeing upon more systematic procedures for proposed action by external sources in the health field, monitoring that action, and making corrections, as necessary, to bring diverse inputs into focus under the guidance of the Ministry of Health.

126. The mission strongly recommends that the Government of Somalia should establish clear guidelines and standards for the health services development to be followed by Government and donor sources. The objective would be for all inputs to be measured against a scale of replication and continuity within the Somali context. Both budget and time of inputs, from whatever source, should be strictly relatable to the capacity of the Government to carry those activities, and expensive health programmes should not be encouraged outside the strictly limited scope of present and future resources.

I. Nomadic education

1. Background

127. Education was not specifically identified as a drought strategy by the United Nations mission of 1980. Nor did the Government, in the memorandum which it presented to the current mission, explicitly emphasize education, although implicit recognition was given in the sections reviewing progress in development, stating priorities, and underlining urgent needs, to the role of training and education in the implementation of major projects. At the request of the Government, the current mission agreed to review the question, determine how and if education could be utilized in a drought strategy, and what present and future action could be recommended.

128. The special problem of the refugee population, which arrived in the country in 1980/81 in unprecedented numbers, tends to obscure the questions of drought effect and response. The exact composition of that population - whether nomads, semi-nomads or formerly settled farmers of transborder origin - is simply not yet known.

It is certain however that in so far as drought is a causative factor, it is a reasonably cyclical phenomenon that has affected undoubtedly and will continue to affect the rural Somali population - whether nomadic, semi-nomadic or settled.

129. The Government memorandum presented to the present mission, the submissions to the International Conference on Assistance to Refugees in Africa, and other documents presented to the United Nations Conference on the Least Developed Countries, all clearly define the following actions and strategies now being undertaken or proposed by the Government of Somalia for immediate implementation:

(a) Major agricultural programmes, such as the Northern Rangelands Development Project and the North-west Region Agricultural Development Project, directed primarily towards improvement of facilities, services and farm management skills of the small settled farmer;

(b) Projects directed towards the improvement of existing nomadic pastoral patterns or towards strengthening the capacity of the nomadic family to undertake a mixed - thus more secure - pattern of pastoral/agricultural life. The non-formal education centres programme supported by the World Bank might be taken as an example of that type of project;

(c) Projects directed towards the refugee population, whatever the reason for their flight to Somalia or the specific population element they represent in areas touching child care, literacy and self-help. That sort of initiative is represented by actions such as the UNICEF-funded project on family life education and day care assistance to refugee women and children and the projects on basic education to school-age refugee children and on functional literacy and adult education;

(d) Numerous strategies, programmes and projects directed towards the nomad, semi-nomad or settled farmer, who moves towards non-agricultural employment in town and city.

130. The mission finds it difficult to see that any of the above initiatives and strategies would be open to successful implementation unless those involved as implementors or recipients - that is, senior planner and administrator, trainer community worker, or farmer-herdsman-refugee - were systematically trained and educated. Change is being sought in all such programmes, and change is obtained, inter alia, through learning. Learning can, to a large degree, be guided and directed towards specific goals through low-cost measures that should be considered, in the first instance, as part of the initial design of a programme or project. Human stress, in the face of change in traditional life patterns, and the risk of programme failure, can be reduced by a considered approach to the constraints inherent in the human element. Finally, the apparent difficulty of identifying "drought" and "non-drought" education disappears when one grasps the fact of cyclical climatic impact and the size and scope of the measures now being urged by Government and external donor sources alike for a population that represents 60 per cent of the total population of the country. Education and training are vital components for the achievement of the developmental goals now being established in Somalia.

2. Recommendations

131. The mission wishes to lay special emphasis upon the following recommendations, while making it clear that action could and should extend well beyond the measures mentioned:

(a) Education and training should be clearly identified in drought plans and programmes and be recognized by Government as a basic strategic factor in drought programming.

(b) The educational and training components of programmes seeking a change in living or employment styles of nomads, semi-nomads or settled farmers should be utilized as a means of evaluating, monitoring and determining human constraints to change in those programmes.

(c) An evaluation should be made of the many educational and training programmes and projects now in hand, and a list of priority programmes established on the basis of the stated government criteria of, first, funded programmes now in operation and, secondly, programmes for which evaluation has been completed and funding likely. The resulting short list of projects should be given equal weight with technical agricultural/livestock programme elements in the consideration of planner and implementor alike. In that respect the mission recommends special consideration of the following:

- (i) Functional literacy and adult education;
- (ii) Non-formal education centres (nomad training);
- (iii) Family life education and day care assistance to women and children;
- (iv) Basic education to school-age refugee children.

(d) In so far as the nomad population is concerned, greater attention should be given to the use of the refugee camp as a point of contact between Government and recipient for those and other programmes. Education and training to improve the capacity of the nomadic family in child care and nutrition, animal health and management, income generation skills (dry milk production, improved camel husbandry, cheese making, tanning, glue making etc.) would both ease the life of that segment of the population and, of course, reduce the dependency of the nomad and semi-nomad in any future crisis.

(e) Primary and secondary school teachers and agricultural instructors who will live and work in rural areas should receive, as part of their normal pre-service training, a thorough grounding in drought technology, which should include instruction in the prevention of water misuse and desertification. That might be extended, considering the importance of cyclical drought conditions in the Somalia area, to any person receiving an advanced level of education in the country, and should include government administrators and health workers.

VI. REGIONAL CO-OPERATION - THE GOVERNMENT'S VIEWS

132. The mission noted that the Government would like to see a mechanism established for co-operation among Governments in the region on problems of common concern. The Government's preference would be for a regional programme aimed at the technical problems that are preoccupying the Governments concerned - for example, the crossing of frontiers by human beings and cattle, especially during periods of drought and other crisis, with the attendant risks of transmission of disease, deterioration of security and so on.

133. The mission was advised that the Government had already discussed with some other Governments the idea of an office for regional co-operation, and felt that there was some acceptance of the idea in principle, but that details of how the office should function and where it should be located were still to be examined.

134. The Government noted that there were already a number of bilateral agreements between Governments of the region. Somalia had already had discussions with Kenya and Djibouti relating particularly to major road links, on which preparatory work was well advanced. The task was now to widen the existing co-operation in various technical matters focusing on drought preparedness to a multinational basis. The Government of Somalia had not given detailed attention to other subjects for co-operation, but thought there could be quite a number of them. In considering a large range of activity, the Government thought it would be necessary to give careful attention to the possible obligations and benefits for each partner. The mission was reminded that at one time the Government had applied for membership in the East African Community.

Appendix

PARTICIPANTS IN THE MULTIAGENCY DROUGHT MISSION TO SOMALIA

(1-8 October 1981)

Mr. John Saunders	Assistant Secretary-General/Head of Mission
Mr. F. W. Mumm von Mallinckrodt	United Nations Development Programme and Rapporteur
Mr. S. Mbele-Mbong	World Meteorological Organization
Mr. Claude R. Joffroy	United Nations Department of Technical Co-operation for Development
Mr. Abdalla H. Ishag	United Nations Education, Scientific and Cultural Organization
Mr. Leonard Maynard	United Nations Sudano-Sahelian Office and United Nations Environment Programme
Mr. Marc De Bruycker	World Health Organization
Mr. Harry Underhill	Food and Agriculture Organization of the United Nations
Mr. M. Shawki	FAO Representative, Mogadishio
Mr. John Wood	World Food Programme, Deputy Representative, Mogadishio
Mr. D. J. Njau	Economic Commission for Africa
Mr. D. Roen Repp	United Nations International Children's Fund
