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Item 5 of the provisional agenda**

**LAND USE POLICIES AND FARMING SYSTEMS
THE CASE OF SOMALIA AND SUDAN**

Executive Summary

* E/ECA/TPCW.8/1.

** E/ECA/CM.13/1.

I. INTRODUCTION

1. The report addresses itself to the subject relating to national policies and management in land use and farming systems in Somalia and the Sudan. This is a follow-up to a similar report presented to the 1986 ECA Conference of Ministers which covered four countries in Eastern Africa. The Ministers' discussion of the paper resulted in the directive that the study be extended to other countries in Africa. The extension of the study to other countries in the continent was also requested in resolution 2 (IX) on land use policies and management adopted by the ninth meeting of the Council of Ministers of the Lusaka-based MULLOC.

2. This report notes the deteriorating situation in the food and agricultural production of the continent in the period 1975 to 1985. It makes special reference to the analysis and estimates relating to the likely performance of the African agriculture sector in the next 25 years by the FAO in-depth studies. It notes also the following:

(a) The per capita agriculture production index for Africa has declined from the 1975 level of 108.5 to 95.5 in 1985;

(b) Food self-sufficiency ratios estimates based on past trends may decline in the next 25 years from the 1985 level of 52 to 34 per cent in North Africa and from 82 to 56 per cent in sub-Saharan Africa;

(c) The deficit in cereals production would increase almost fourfold to 100 million tons by the year 2010;

(d) The cost of importation of cereals is forecast to increase from the 1985 level of \$US5 billion to \$US30 billion in real terms by the year 2010.

3. The report emphasizes that reforms must be introduced to avert the deterioration of the African agriculture sector. The concern of the paper is with those aspects which relate to planning, management conservation and rational utilization of the basic agricultural resources; land, water and farming systems in Somalia and the Sudan.

II. TYPES OF LAND USE

4. Land use policies are discussed in the context of the following subsectors: rainfed and irrigated agriculture, pasture and livestock husbandry, forestry, national parks, and game reserves.

(a) Rainfed agriculture

5. The countries are predominantly agricultural. Rainfed agriculture provides the bulk of agricultural output. In the Sudan, 14 million inhabitants or two thirds of the total population is dependent on rainfed agriculture. It is noted that this is a difficult sector for government intervention. Rainfed agriculture is dominated by small farmers who are not well organized and lack production resources. The bulk of the staple food in these countries is, however, produced by these farmers. The sector has also the feature of low productivity resulting from the low technology applied in farming.

(b) Irrigated agriculture

6. In both Somalia and the Sudan, irrigated agriculture has been developed significantly. In the Sudan, a total of 4 million feddans have been brought under irrigation. The irrigation schemes include: Gezira-Managil, New Halfa, the Ranad, Blue and White Nile pump schemes. In Somalia, there were two types of irrigation schemes. These are the controlled and uncontrolled irrigation schemes. Controlled irrigation in Somalia was initially developed by foreign investors. These have since independence been taken over as state farms. Uncontrolled irrigation is practised by peasant farmers and comprises mainly of flood water irrigation, principally in the valleys of the Shebele and Juba rivers. It is estimated that uncontrolled irrigation covers 1,000,000 ha and controlled irrigation covers 35,000 ha. Experience has demonstrated that peasant farmers in Somalia have performed better than state farms.

7. In the Sudan, irrigation schemes are managed by public agricultural corporations. Cotton is the principal crop grown in irrigated areas. Cotton cultivation is closely supervised by the Government through corporations. Farmers have only a minor role in farm management in irrigated lands.

(c) Rangelands

8. A significant percentage of the inhabitants in the two countries practise nomadic pastoralism. In Somalia, it is estimated that 60 per cent of the population is nomadic with 5.1 head of cattle, 6.1 million camels, 13.6 million sheep and 17.1 million goats. The Sudan has even larger herds of livestock. The important aspect of the rangeland livestock husbandry is that the animals receive their feed on communal grazing grounds. This is a major cause of over-grazing which has emerged in the two countries. In the Sudan, for example, it is estimated that 5.6 million animal-units cannot be supported on a long-term basis. Over-grazing has contributed to land degradation and in severe cases to desertification.

(d) Land use for forestry

9. Past experience in the two countries points to a general failure on the part of the authorities to manage forest resources on a sustainable basis. There has been widespread deforestation and in many instances desertification. The problems the Governments have faced in forest management have included the following:

- (a) Lack of reliable and ready accessible data base on forests;
- (b) Lack of reliable estimates of present and future production and demand for various forest products;
- (c) Lack of up-to-date legislative regulations;
- (d) Poor implementation of available legislation;
- (e) Shortage of managerial and professional local staff; and
- (f) A low level of financial resources available for the forestry sector.

10. In Somalia, although rapid regeneration results in forest resources being adequate to satisfy national needs, inaccessibility to most forest areas causes the problem of over-exploitation of accessible forests. Charcoal and fuelwood of urban and other human settlements today have to be transported from supply points as distant as 500 to 1,000 km. Furthermore, the afforestation programmes in Somalia have largely been ignored. Tree planting in the country in recent years is estimated to cover only 100 to 200 ha per annum.

11. The Sudan's forestry programmes have faced problems arising from incursion of agricultural activities including mechanized farming schemes on forestland. Mechanized farms in recent years claimed approximately 4 million ha. Although large areas of land brought under these schemes have been abandoned, tree replanting has been delayed considerably. Only 28,500 ha of this category of land has been reafforested since 1982.

(e) National parks and game reserves

12. Somalia and the Sudan have abundant and diverse wildlife resources. As they are largely sparsely populated and with large marginal land areas, the exploitation of these areas for wildlife management is desirable. Some of the largest game parks on the continent are found in these countries. Examples are the Sudan's Southern National Park (1.6 million ha) and Boma National Park (25,000 km²). Juba, Lower Shebelle, Galgudud, Bakool, Mudugh Bari and West Galbeed are some of the 11 game parks in Somalia.

13. One of the major problems that the countries face in this area is their omission to develop the infrastructure for protection of wildlife and tourism facilities. These would have enabled the parks to generate income from wildlife. Today wildlife is not generating income to the Governments' treasuries.

14. Another formidable menace wildlife management faces in these countries is poaching. Hunting and trapping are banned but the severity of the problem of poaching is demonstrated by the extinction of such species as the white rhino in Nimule Park in the Sudan. This specie was once abundant there. This problem can also be addressed through a concerted effort being made to develop income - generating park management systems.

III. MISCELLANEOUS ASPECTS OF LAND USE

(a) Population land use interrelationships

15. The Governments of Somalia and Sudan have not established systematic land use planning. From ad hoc efforts, only a few maps have been prepared on soil, climate, hydrology and environment. There is, however, now an emerging awareness on the part of governments for comprehensive land use and farming systems planning. In Somalia, the Government has initiated a comprehensive land use study financed by UNDP and UNEP. In the Sudan, a high-level Land Use Commission is to be established. These efforts, however, must be given political commitment and financial resource support for them to succeed.

(b) Constraints to land use planning

16. The paper notes a number of constraints that are obstacles to the establishment of systems for comprehensive land use planning. Lack of trained manpower is cited as a leading obstacle. Training of personnel in disciplines relating to land use is therefore given emphasis. It is recommended that imbalances in the numbers of staff trained in various disciplines relating to land use be addressed. Furthermore, frequent turnover of personnel in the public sector leads to a loss of institutional memory and should be avoided. Government employment should also be made more effective and rewarding.

(c) The lack of data

17 Inadequate trained manpower and limited hardware and other related facilities are often a cause of seriously incomplete or only nominally complete data bases. Accessibility to data by policy makers also presents problems. Data pertinent to land use planning should be stored in data banks that should be readily accessible to policy markers and planners.

IV. POLICY OPTIONS AND RECOMMENDATIONS

18. The paper outlines policy options that should be adopted by the governments in the two countries under various subject headings, including the following:

- (a) Development policy and planning capacity;
- (b) Resolution of land use conflicts;
- (c) Rainfed agriculture land use;
- (d) Irrigation land use;
- (e) Rangeland and forestland management;
- (f) Data collection and management; and
- (g) Manpower development and training.

19. Land use planning should be considered an integral part of development planning. It is necessary that the governments define clearly the macro-economic and social development policy framework within which to develop land use planning and management. A clear definition of responsibilities of ministries with regard to land use is necessary. Appropriate land use legislation is also necessary to provide a basis for policy formulation and implementation. Furthermore, an effective co-ordination mechanism is also essential.

20. Resolution of land use conflicts can be achieved when a coherent land use policy has been clearly elaborated. Land use plans should be formulated to properly match the various principal characteristics of land, such as soil quality, water availability, climatic and socio-environmental considerations with proposed types of land use. The review of these plans is also essential.

21. As rainfed agriculture offers the highest comparative advantage with the least dependence on foreign exchange, it is recommended that it should be given the attention it deserves. In the Sudan, the attention of the Government and its resources have in the past been directed to irrigated agriculture. Priority is also recommended for rehabilitation of existing irrigation infrastructure and small-scale irrigation projects that are cost-effective.

22. The reversal of range degradation is urged. In this regard, it is recommended that information should be compiled on technical, sociological and economic aspects of traditional grazing systems. This information is vital for the formulation of appropriate policy intervention.

23. Governments are urged to exercise more commitment to forestland management. Long-term social and environmental costs should be given more weight than the short-term gains from exploitation of forest products. The technological packages for reafforestation of marginal land in arid and semi-arid areas should be developed. The report also recommends that governments should make every effort to increase the areas of savannah woodlands under their management.