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\* SPECIAL PROGRAMME OF ACTION FOR THE IMPROVEMENT  
OF THE FOOD SITUATION AND REHABILITATION OF  
AGRICULTURE IN AFRICA

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SPECIAL PROGRAMME OF ACTION FOR THE IMPROVEMENT  
OF THE FOOD SITUATION AND REHABILITATION OF  
AGRICULTURE IN AFRICA

PART I INTRODUCTION

1. It is paradoxical that Africa, so generously endowed with natural resources is today in the throes of a serious food crisis unprecedented in the history of the continent. The growing mass hunger with its human degradation and despair threatens the very survival of nationhood of some of the African countries. Hunger is an affront to humanity and unacceptable in this era of technology.
2. The rising expectations which accompanied the attainment of political independence in Africa have remained largely unrealized because of severe food shortages, among other things. This augurs unfavourably for African governments' efforts to build and forge a meaningful political and social order assuring the basic needs of the population. Even the great humanitarian vision of a world without hunger which was enshrined in the Universal Declaration of the 1974 World Food Conference still remains a dream for the African nations.
3. The African food crisis with its human suffering can be traced over the last two decades - a period which witnessed a resurgence of the political independence of the majority of African countries. The causes are a number of converging factors hitting the economies at a critical time of consolidation of nationhood which is essential for the attainment of economic independence.

Causes of the Crisis

4. Population explosion over the last two decades, drought and other vagaries of nature are some of the predisposing and aggravating causes of what is already a deep crisis. These factors have undeniably exacerbated Africa's adversities: but these have not been new in the continent's history and they alone cannot be blamed for the crisis.

5. Deep at the root of the crisis is the long neglect of African agriculture brought about by the inability or failure of African governments to formulate and implement adequate policies and programmes for the development of this sector, especially small holder farming, which cannot be built up without the support of appropriate infrastructure and incentive packages.
6. Despite public pronouncements in many African countries giving high priority to agriculture and rural development official action has not measured up to these declarations. Overall development plan allocation and actual public expenditure and associated policies and programmes in food and agriculture have frequently been inconsistent with declared priorities. The food and agriculture issues get lost in the competing battle for priorities and budgetary allocation of recurrent and development funds. There is testimony that public expenditure on African agriculture in 1978-82 was on average barely 7% of total public expenditure and although there has been an upward trend in external assistance to food and agriculture most of this has been directed to emergency aid rather than to strict investment.
7. Donors will have to reexamine their own policies and procedures relating to the forms of aid. In particular there is a need to improve approaches and techniques of project and programme selection and to liberalize the present strict conditionalities with respect to donor assistance.
8. The existing orientation and management of most African economies have been built largely on inherited structures directed to the export of primary commodities and away from balanced growth. Many countries still pursue urban-biased development strategies to the neglect of the staple food crop and livestock development required to turn the tide of growing mass hunger. This results in rural-urban terms of trade adverse to agriculture, causing, in turn, an unprecedented rural exodus which inevitably swamps nascent industrial and urban sectors.
9. Drought is not unique to the African region alone. The main difference is that while the other regions have developed mechanisms to cope with such calamities, African governments have not been able to develop the required preparedness and defences against the vagaries of nature and economic shock.

10. Inevitably, on the basis of past experience, the vagaries of nature are expected to recur in the future. For instance, the Sahel, whose droughts during the late 1960s and the early 1970s received world-wide attention, has suffered more than 20 major droughts since the sixteenth century and the historical record of other parts of Africa is similar. Observations indicate that drought occur somewhere in Africa every year; two or more droughts affect large areas of the continent every decade while extremely protracted and widespread droughts occur about three times in a century - although the precise geographical area of incidence is not predictable<sup>1/</sup>.

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11. African governments need to draw lessons from history as a basis for building food security arrangements to tide over during food emergencies. Appropriate farming systems and the right varieties of crops and livestock have yet to be introduced to stave off the effects of drought. This requires the improvement of research and delivery systems. However, with the existing weak, understaffed, underfinanced and undirected African research systems, unsupported by an effective delivery system, neither the Green Revolution nor the Great Leap Forward is in-sight.

12. Uncontrolled demographic growth is a threat to the ability of African nations to feed and provide social justice to their populations. Given the slow pace of development on the continent Africa's population growth - the highest in the world - must give cause for concern especially as population will double by the close of the century.

13. Prolonged world economic recession and subsequent slow recovery have resulted in low export earnings, mounting indebtedness, severe cut-backs on development programmes and reduced government ability to meet food needs through commercial imports. Lack of progress towards an acceptable New International Economic Order has also compounded the problem.

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<sup>1/</sup> FAO, "Famine in Africa", Rome, 1983.

14. Man-made disasters such as wars and political strife have also destabilized governments, dislocated populations and thwarted the ability of countries to produce food and agricultural products. Apart from disrupting production, the refugee problem has reached crisis proportions: some 50 percent of world's refugees are to be found in Africa

Performance of the Food and Agricultural Sector  
under the Lagos Plan of Action

15. The Lagos Plan of Action (LPA) - the strongest collective appeal to political will on African economic and social development - was adopted against the background of two decades of deepening economic crisis and stagnation. This crisis was characterized by a sharp decline in agricultural performance entailing a widening food production/food demand gap and growing import dependency. The food shortage at that time was such that the average African had 10 percent less locally produced food than he had had a decade before, and the situation has worsened.

16. The food and agriculture aspect of the LPA which was closely linked to the Regional Food Plan for Africa had the objective - in the medium term - "to bring about an immediate improvement in the food situation and to lay the foundations for the achievement of self-sufficiency in cereals and livestock and fish products". The plan set a number of targets, including a growth target of 4 percent per annum for the agricultural sector which, if achieved, would eventually have brought about food self-reliance on the continent.

17. Evidence available (see Table 1) indicates that overall food and agriculture output worsened during the LPA period and did not match population growth. On a per caput basis both agricultural and food production declined by 1.4 percent per annum. Long before this, there

TABLE 1  
FOOD AND AGRICULTURAL PRODUCTION INDICES,  
DEVELOPING COUNTRIES IN AFRICA, 1978-84

	1978	1979	1980	1981	1982	1983	1984	Annual rate of change (%) 1978-84
<b>PRODUCTION INDICES (1974-76=100)</b>								
Food Production	105	107	111	113	117	113	117	1.7
Agric. Production	104	107	110	112	116	112	116	1.7
Per capita food production	96	95	95	94	94	88	89	-1.4
Per capita agric. Production	95	95	95	93	94	88	88	-1.4
<b>POPULATION (millions)</b>								
Total	361	373	385	397	409	422	435	3.1
Agricultural	248	254	259	264	269	275	280	2.0

Source: FAO statistics printout, Rome, 11 December 1984.

was a decline in the food self-sufficiency ration (SSR) from 102% in 1967-70 (when Africa was a net food exporter) to 75% in 1978-80.

Other targets, including those for food losses and investment were also not achieved. There now exists a precarious situation aggravated by severe natural calamities causing abnormal food shortages in some 30 countries over the last two years.<sup>1/</sup>

<sup>1/</sup> These countries are: Angola, Benin, Botswana, Burkina Faso, Burundi, Cape Verde, Central African Republic, Chad, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Mali, Mauritania, Morocco, Mozambique, Niger, Rwanda, Sao Tome and Principe, Senegal, Somalia, Sudan, Swaziland, Tanzania, Togo, Zambia, Zimbabwe.

18. Chronic malnutrition is widespread on the continent and the population in some 28 countries faces a dietary energy supply (DES) below requirement (See Table 2). The proportion of populations at risk nutritionally varies from country to country, but estimates available put this at up to 30 percent or more of the total population of Africa. Most of these are women and children who still remain the most deprived section of society. The implications of malnutrition are serious for African nations, and if the trend is not reversed could result in dangerous political and social consequences.

19. To reverse these dangerous consequences requires unrelenting political commitment from all African countries. The political commitment to action enshrined in the Lagos Plan of Action was re-affirmed in the Special Memorandum adopted by the ECA Conference of Ministers on Africa's Economic and Social Crisis at the Nineteenth Session of the Economic Commission for Africa (Addis Ababa, May 1984) for presentation to the Second Regular Session of the Economic and Social Council of the United Nations 1984. The memorandum contained proposed measures to deal with the crisis. This was followed up by the report of the UN Secretary-General to the General Assembly, 1984/85, on the Critical Economic Situation in Africa, which elaborated on the measures needed to deal with the crisis.

TABLE 2  
PER CAPUT DIETARY ENERGY SUPPLY  
(DES) AS PERCENTAGE OF REQUIREMENTS IN THE  
AFRICAN SUBREGIONS

Subregions	Average DES (%)		Number of countries with per caput DES below requirements	
	1979	1981	1969 to 1971	1979 to 1981
Northern	116	120	4	1
Western	97	98	14	12 ✓
Central Western	94	94	5	3
Central	96	97	3	2
Eastern & Southern	98	100	13	10 ✓
TOTAL	98	100	39	28

Source: FAO estimates.



The Harare Declaration

20. A further powerful reaffirmation of this political determination was given by the adoption at the Thirteenth FAO Regional conference for Africa in Harare, Zimbabwe, 16-25 July 1984 of the Harare Declaration on the Food Crisis in Africa. Unlike the other declarations stemming from LPA as a whole, it is devoted exclusively to food and agricultural problems and was made in the immediate context of an examination of the current adversities. It seeks to give force and to concretize the policy guidelines of the LPA/against the background of the existing serious food crisis.

21. In it the African Ministers responsible for food, agriculture and rural development affirmed the need for major steps towards food self-reliance and food security, to be undertaken by African countries themselves, supported by the international community.

22. The Declaration identifies three key issues: that agriculture and rural development should be given the highest priority among national priorities, plans, budgets and programmes; that more effective policies need to be developed for faster food and agricultural development, and that such policies should be implemented on the basis of country specific strategies. Smallholders are identified as a special target group for the increased allocation of resources and for the provision of improved incentive packages to motivate them towards greater output. The Declaration also stresses the importance of building on what is already there: improving the implementation of existing programmes and projects and rehabilitating existing infrastructure, irrigation schemes and rural roads. The Ministers endorsed a proposal that FAO should make an in-depth review of the agricultural and food problems in Africa for consideration at the 1986 FAO African Regional Conference<sup>1/</sup>.

23. The Declaration concludes with an expression of the Ministers' conviction that Africa possesses the will and capacity, and has the full support of the international community, "to feed all our peoples and to lay the foundation for greater economic prosperity and self-reliance in Africa."

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<sup>1/</sup> This review is currently at an active stage of preparation.

24. As a declaration of policy intent, made in the immediate context of an examination of the current crisis, the Harare Declaration could hardly be bettered. As a master blueprint for action to give effect to that intent, it contains all the essentials. Its incorporation into national, and ultimately international policies will require the full endorsement and support of governments at the highest levels of decision making, as well as the mobilization of the help of the international community; and not least the active understanding, participation and effort of the agricultural, forestry and fishery communities of Africa itself.

25. Part III of the present paper indicates measures which might be taken in the context of these policies in terms of emergency, medium and long term action.

#### PART II. RETHINKING THE ORIENTATION AND MANAGEMENT OF AFRICAN ECONOMIES

26. The magnitude and extent of the present crisis clearly exposes the economic, social and political vulnerabilities of many African countries. Naturally, the first line of action to combat the crisis is to treat its most urgent and immediate symptoms. This notwithstanding, it is most important that all emergency and medium-term rehabilitation measures are conceived and implemented within a long term framework that recognizes the necessity for structural change. This will require major rethinking, orientation and improved management of African economies to accomplish the self-reliant strategy of development embodied in the Lagos Plan of Action.

27. The Lagos Plan of Action established an overall framework within which African nations were to develop strategies suited to their unique characteristics. The plan remains one of the most comprehensive blueprints and frameworks posited for the development of Africa. But as acknowledged by the Executive Secretary of the ECA, it "is an indicative plan which will have no operational meaning until it is interpreted by individual governments". One should neither underestimate the difficulties of such interpretation nor the amount of time that it would take. However, as the ECA has noted "Since Africa is not resource-poor, bringing about the desired change is not impossible.

What is necessary, if perhaps not sufficient, is for African Governments and people to resolve to break with the past concepts, habits, attitudes, approaches etc.<sup>1/</sup> But the stakes are high: as the ECA has also noted if past trends continue unchecked the result will be 'almost a nightmare' and 'the very notion of national sovereignty would be at stake'<sup>2/</sup>. In the words of the FAO Director General, "only a new political vision in which the priority presently enjoyed by urban areas is turned over to agriculture and rural development, will make it possible to usher in a new era of food production in Africa"<sup>3/</sup>. But this requires a carefully mapped out planning strategy.

#### The Planning Approach

28. If African economies are to be appropriately restructured to ensure that their resources and opportunities are fully exploited to meet the needs of African people, the exercise must be based on a well thought out planning approach. Such an approach must be able to provide answers to such key questions as to how many people can the land of each African country feed? Which countries and areas within countries are likely to have populations exceeding the capacity of their land resources to feed? What is the full extent of the threat of land degradation in each country? etc.

29. Although as a continent, Africa has substantial reserves of agricultural land, this is distributed in a highly unequal fashion. Some 47 percent of the continent's 2 878 million hectares (excluding South Africa) is too dry for rain-fed agriculture. Only 19 percent of the soils are without any inherent fertility limitation.<sup>4/</sup>

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<sup>1/</sup> Economic Commission for Africa: ECA and Africa's Development 1983-2000. A Preliminary Prospective Study.

<sup>2/</sup> Ibid.

<sup>3/</sup> Statement by Director General of FAO to the Eighteenth Session of the Committee on Food Aid Policies and Programmes, Rome 29 October 1984.

<sup>4/</sup> FAO: Land, Food and People, Rome 1984.

30. Six primary ecological zones can be distinguished in Africa (see table 3). Only in Central Africa does there exist a substantial reserve of cultivable land that could be brought into production fairly easily. Elsewhere, countries are either already pushing against the limit of land that can be brought into cultivation without major expenditure, or they are likely to reach this limit in the medium term. A graphic illustration of the ecological limits on African agriculture is provided by the ECA's perspective study of Africa's development to 2008. It forecasts that if past trends continue unchecked, by the year 2008 "the pressure on the arable land of the continent will be of the order of magnitude of about 400 persons per km<sup>2</sup> on the average". This would imply that "an average family of four persons would have on average only one hectare of arable land on which to subsist",<sup>1/</sup>

#### Potential Population Supporting Capacity as a Policy Making Tool

31. The concept of potential population supporting capacity (PPSC) can serve as a useful basis for rethinking and restructuring food and agricultural policies in Africa. The

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<sup>1/</sup> ECA op. cit.

concept combines information on agro/ecological zones with figures on population and potential agricultural output. PPSC estimates have been calculated for 117 developing countries in Africa, Central and South America, South East and South West Asia. The estimates undertaken by FAO<sup>1/</sup> are based on the FAO/UNESCO soil map of the world.

32. In arriving at PPSC estimates, the potential productivity of different parts of the world was assessed at three alternative levels of technology and input use: a low level, using traditional crop varieties, crop mixes and fallow periods, with no fertilizers or other agricultural chemicals, the use of only manual labour and simple tools, and without any explicit long-term soil conservation measures; an intermediate level in which limited use is made of improved seed varieties and agricultural chemicals, reduced fallow periods are employed, as is some animal traction, together with simple conservation measures and optimum crop mixes on half of the land; and a high level involving a switch to high yielding varieties, the optimum use of chemicals, minimum fallow, full mechanization and conservation measures and optimum crop mixes on all the land.

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<sup>1/</sup> FAO: Land Food and People

33. However, it needs to be emphasized that, when interpreting the results at country or area level, an important limitation must be borne in mind. The study assumes that the whole of the potentially cultivable land would be used only to grow food crops or where it is too marginal for crops, for the grassland production of livestock. Under these assumptions, forestry is restricted to land unsuitable for crops or grazing (which in many countries would affect for instance fuelwood supplies). Nor is allowance made for the use of land for non-food crops such as fibres, livestock feed or non-food cash crops. In practice therefore, in using the results, countries would still have to exercise choices on land use in the light of PPSC, but based also on other considerations such as those of comparative advantage.
34. The results for Africa are presented in Table 3. However, to have confidence that the dietary energy needs of the bulk of the population can be met from domestic resources, a country's PPSC should be significantly in excess of 1. The critical zones extend across the Maghreb, and through the Sahel taking in most of the northern savanna areas of Ghana, Togo and Nigeria. The most heavily populated areas of Kenya are also critical together with the densely crescent along the great lakes from south east Uganda, through Rwanda and Burundi into Malawi. In the south of the continent a critical belt runs from coast to coast from Angola through Botswana, Lesotho into southern Mozambique.
35. On the basis of the PPSC analysis, three groups of African countries can be distinguished. First, there are those countries which are unlikely to be able to feed their populations from domestic resources even given substantial changes in the agricultural sector. A second group of countries covers those which, with adequate reform, could sustain their population from domestic resources into the next century. Finally, there is the group of countries that ought to be able to produce a surplus for export given appropriate agricultural development policies. The countries that fall into these three groups are shown in Table 4.
36. This does not, however, mean that the continent would not be able to support its population, provided that appropriate steps to raise food production and arrange its distribution on a continental basis are taken. Even



TABLE 4

## PPSC RATIOS OF AFRICA

LAND AREA (Mill. ha)	YEAR 2/ 1975 popula- (mill).	YEAR 1975 popula- density	YEAR 1975.....			YEAR 3/ 2000 popula- tion (mill).	YEAR 2000 popula- tion (mill).	YEAR 2000.....			
			Low inputs	In- termed inputs	High inputs			Low inputs	In- termed inputs	High inputs	
Cape Verde	0.4	0.3	0.74	*0.01	*0.02	*0.02	0.4	1.06	*0.01	*0.01	*0.01
Western Sahara	26.6	0.1	<0.1	*0.01	*0.01	*0.01	0.2	<0.01	*0.01	*0.01	*0.01
Rwanda	2.5	4.1	1.62	*0.18	*0.88	1.99	9.3	3.53	*0.08	*0.38	*0.85
Burundi	2.6	3.9	1.52	*0.22	1.17	2.66	7.8	3.03	*0.10	*0.54	1.23
Niger	126.1	4.6	0.04	*0.17	*0.56	9.43	9.7	0.08	*0.14	*0.32	4.48
Réunion	0.3	0.5	1.92	*0.20	*1.00	3.33	0.7	2.73	*0.14	*0.67	2.23
Kenya	57.0	13.5	0.24	*0.27	*0.90	3.90	37.6	0.59	*0.17	*0.40	51.7
Lesotho	3.0	1.2	0.39	*0.46	1.15	2.64	2.1	0.69	*0.26	*0.65	1.48
Comoros	0.2	0.3	1.40	*0.42	1.78	3.48	0.6	2.07	*0.27	1.16	2.26
Algeria	237.8	15.7	0.07	*0.45	1.57	2.99	36.0	0.15	*0.33	*0.79	1.37
Somalia	63.6	3.2	0.05	*0.40	*0.75	2.18	7.2	0.10	*0.34	*0.51	1.23
Ethiopia	120.8	28.8	0.24	*0.59	2.38	10.73	55.3	0.46	*0.36	1.28	5.55
Nigeria	91.2	65.7	0.72	*0.82	3.32	11.27	150.0	1.63	*0.37	1.39	4.71
Namibia	82.3	0.9	<0.01	*0.84	2.40	36.56	1.7	0.02	*0.43	1.24	18.82
Uganda	20.0	11.3	0.57	*0.97	3.88	13.60	25.4	1.23	*0.45	1.75	6.08
Mauritania	103.1	1.4	<0.01	*0.35	1.42	5.92	2.9	0.03	*0.46	*0.97	3.08
Mauritius	0.2	0.9	4.85	*0.71	1.27	1.01	1.3	7.09	*0.47	*0.86	*0.79
Upper Volta	27.1	6.1	0.22	*0.90	4.36	22.48	11.8	0.44	*0.51	2.26	11.45
Malawi	6.8	5.2	0.59	1.27	4.63	10.88	12.0	1.35	*0.61	2.01	4.62
Botswana	60.0	0.7	<0.01	1.27	6.67	64.61	1.4	0.02	*0.63	3.32	32.13
Tunisia	16.3	5.6	0.34	*0.45	1.12	2.14	9.6	0.59	*0.70	1.06	1.62
Morocco	44.4	17.3	0.39	*0.73	1.55	2.69	36.1	0.81	*0.78	1.15	1.65
Senegal	19.6	5.0	0.215	*0.89	3.89	21.00	9.7	0.49	*0.79	2.31	10.93
Togo	5.6	2.3	0.42	1.69	7.92	22.47	5.0	0.90	*0.82	3.65	10.16
Sierra Leone	7.2	3.0	0.42	1.69	9.14	16.43	6.1	0.84	*0.89	4.52	8.12
Swaziland	1.7	0.5	0.28	1.75	7.40	13.51	0.9	0.54	*0.89	3.77	6.88
Mali	124.0	5.8	0.05	1.34	6.04	29.44	11.6	0.09	*0.90	3.21	14.73
Benin	11.3	3.0	0.27	2.08	9.34	33.60	6.5	0.58	*0.95	4.28	15.40
Zimbabwe	38.6	6.2	0.16	1.65	7.80	29.88	14.7	0.36	*0.95	3.64	13.21
Ghana	22.6	10.0	0.44	2.04	8.86	24.40	21.2	0.94	1.03	4.19	11.25



PPSC RATIOS OF AFRICA (cont'd)

	LAND 1/ AREA (mill. ha)	YEAR 2/ 1975 popula- (mill)	YEAR 1975 popula- density	.....YEAR 1975.....			YEAR 3/ 2000 popula- tion (mill)	YEAR 2000 popula- tion (mill)	.....YEAR 2000.....		
				RATIOS					RATIOS		
				Low inputs	In termed inputs	High inputs		Low inputs	In- termed inputs	High inputs	
Tanzania	88.9	15.4	0.17	2.29	9.37	32.55	34.0	0.98	1.12	4.30	14.72
Libya	175.9	2.4	< 0.1	*0.74	1.51	2.71	5.8	0.03	1.20	1.47	1.89
Gambia	1.1	0.5	0.46	1.49	6.44	21.47	1.0	0.90	1.21	3.63	11.10
Egypt	99.1	36.9	0.37	1.67	1.67	1.67	64.7	0.65	1.74	1.74	1.74
Chad	127.5	4.3	0.03	3.15	16.10	70.80	7.1	0.06	1.78	8.77	38.30
Sao Tomé and Príncipe	0.1	0.1	0.87	2.98	7.21	9.71	0.1	0.96	1.79	6.52	8.79
Guinea	24.6	4.4	0.18	3.39	12.22	39.54	8.2	0.33	1.82	6.54	21.16
Mozambique	78.3	9.2	0.12	4.14	17.01	58.07	18.7	0.23	2.17	8.65	29.33
Sudan	250.5	16.0	0.06	3.71	14.91	64.72	31.3	0.12	2.58	8.30	33.73
Guinea-Bissau	3.6	0.5	0.15	4.40	17.23	55.97	0.8	0.23	2.72	10.65	34.62
Liberia	11.1	1.6	0.14	6.03	30.35	80.52	3.5	0.31	2.77	13.62	36.14
Ivory Coast	31.5	6.7	0.21	7.15	24.56	55.57	13.9	0.44	3.41	11.65	26.98
Madagascar	58.0	7.7	0.13	6.29	25.03	72.88	15.2	0.26	3.67	12.97	37.03
Angola	123.9	6.2	0.05	8.57	45.01	150.14	12.4	0.09	4.51	23.52	78.98
Zambia	74.3	4.8	0.06	10.17	44.88	159.38	11.3	0.14	4.68	20.63	73.31
Cameroon, Rep. of	47.2	7.5	0.16	10.25	27.93	82.82	13.0	0.28	5.89	16.03	46.92
Zaire	232.2	24.5	0.11	11.91	52.27	117.83	46.2	0.20	6.29	27.77	62.26
Equatorial Guinea	2.8	0.3	0.12	12.08	35.65	104.44	0.6	0.20	6.93	20.44	59.87
Central African Rep.	62.9	2.0	0.03	22.59	106.68	301.12	3.9	0.06	12.45	58.97	105.94
Congo	34.2	1.4	0.04	29.90	120.11	299.88	2.4	0.07	16.44	65.76	164.02
Gabon	26.2	0.5	0.02	80.19	243.44	538.40	0.8	0.03	55.53	168.58	372.84
<b>AFRICA TOTALS</b>	<b>2 878.1</b>	<b>380.2</b>	<b>0.13</b>	<b>2.95</b>	<b>11.55</b>	<b>33.85</b>	<b>780.1</b>	<b>0.27</b>	<b>1.61</b>	<b>5.75</b>	<b>16.50</b>

1/ Land areas derived from FAO/UNESCO Soil Map and exclude areas mapped as bodies of water.  
 2/ UN data for 1975, millions of persons. UN 1979a.  
 3/ Projected UN data for 2000, millions of persons. Medium variant. UN 1979a.  
 \* Indicates potential population-supporting capacity less than present and/or projected population. Original data to three decimal places. Apparent discrepancies in some total due to rounding off. This table has been sorted according to increasing ratios, by country, related to low-input year 2000 ratios.

\*\* Countries are listed by ascending order of PPSC ratios at low input level for the year 2000.

under the present minimum level of technology Africa could feed three times its population, and five and one-half times its population in the year 2000 under intermediate technology. However, failure to improve production and distribution will mean that some 200 million Africans or 25 percent of the population will be at risk by the year 2000.

#### Constraints on African Agricultural Development

37. Plans to restructure African economies are bound to be confronted by a number of internal and external constraints. Some of these are discussed below with a view to ascertaining their implication for the success of a major policy restructuring endeavour.

#### Population

38. Africa presently has the distinction of having the highest population growth rate in the world. The starting point for a structural review for each country must be a realistic assessment of its population prospect. It is very unlikely that sharp cuts in population growth rates can be achieved in the short to medium-term. The children who will produce the next generation are already born. For some African countries, population pressure is not yet severe, but it is virtually certain that it will soon be a problem. The results of such pressure will be not only environmental (degradation of the land) but also political (with large scale population movements across boundaries). African governments must demonstrate political support for "administered" programmes aimed at reducing population growth and plan to accommodate the growth that cannot be avoided. The prospects for policy reform and the necessary adjustments to cope with the present crisis will be seriously compromised if African governments do not take action immediately to start reducing their high population growth rates. Even in some countries where population is not yet a major problem, child spacing may be considered a worthwhile policy.

#### Domestic Policy

39. It is generally agreed that African food and agricultural growth problems owe their origins to domestic policy inadequacies.<sup>1/</sup> These have taken

<sup>1/</sup> See for example, World Bank, "Accelerated Development in sub-Saharan Africa", 1981, and Abalu, G.O.I., "Agricultural Production in sub-Saharan Africa: Prospects for the Future". Report to the Office of the Assistant Director-General, Economic and Social Policy Department, FAO, Rome, November 1963.

the form of a consistent bias against the domestic food production sectors which has resulted in inadequate incentives for food production. This in turn has caused a steady siphoning of labour from the land, restriction in the amount of productive land being brought into cultivation, and inability to intensify the cultivation of existing farms through the application of improved technologies. This, of course, perpetuates former colonial priorities and earlier development strategies which have been biased against small holder subsistence agriculture.

40. Over the years, over-valued currencies have made food imports artificially cheap in relation to domestic production and price policies have failed to stimulate domestic production. This in turn has led to the promotion of relatively high-cost domestic supplies of inputs such as fertilizers and pesticides. In the face of highly priced essential capital and consumer incentive goods such as clothing, medicines, construction and maintenance items, the net result has been a readjustment in many African countries of family time and effort away from agricultural activities.

41. This entrenched bias against agriculture in the existing policy frames of most African countries must be removed to ensure the success of long-term reform measures. Its removal will however require difficult decisions concerning wages, retail price controls, and agricultural producer prices.

#### Agricultural Technology

42. As of now, both technology and input use in Africa are generally low. In 1979 - 1981, yields fell below what could be achieved even with low inputs in favourable environments, and fertilizer use (at 10 kg per hectare) was far below the rate in any other region. With such low inputs, almost all African countries were unable to support their population from their own resources.

43. The problem is that innovations which have proved of immense benefit elsewhere have not been introduced successfully into African farming systems and adapted to African practices. Research and training have not adequately

addressed the technical problems of pre and post-harvest food losses, livestock diseases and low yields, and the dissemination of knowledge through a continuous chain of communication in both directions from planners and researchers through extension staff to farmers is weak. In general, there is a lack of technical foundation for dealing with the problems of food production and efforts to transfer technology from elsewhere into African agriculture have often met with failure.

44. The reason for this lack of success in transferring agricultural technology into Africa from elsewhere is not hard to find. Technologies developed by and for a society whose economic, social, and political circumstances are peculiar to it cannot be expected to automatically succeed in another whose circumstances are entirely different. If Africa is to achieve self-reliance, efforts must be directed to developing technologies that are specific to African conditions. The road to the development of this type of technology is long, arduous and costly. For many African countries, the journey has not even begun.

#### Balance of Payments

45. The nature of the linkages between African nations and the developed economies of the world particularly the western world have over the years affected the way the food and agricultural sectors of African nations have evolved. The linkages have also affected the nature of exchange between African countries and the developed world. Between 1970 and 1980 sub-Saharan Africa's total imports increased at an average annual rate of 3 percent <sup>1/</sup>. During the same period, the subregions' exports of which agricultural products constituted the greater part, actually declined by one percent each year. Since the early 1970's the terms of trade facing the continent as a whole have worsened steadily, increasing the intensity of the real debt burden.

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<sup>1/</sup> The World Bank, "Toward Sustained Development": A Joint Programme of Action for sub-Saharan Africa. Washington, D.C., 1984.

46. This problem finds its best expression in the staggering debt servicing burden that is presently facing the Continent. World Bank and ECA statistics show that total outstanding debt of all African countries has been rising steadily since 1972 when it was US \$12.2 billion, to 1983, when it had reached the crippling level of US \$153 billion <sup>2/</sup>. Debt servicing payments which are already causing serious problems for several African countries are expected to increase dramatically over the coming years. The World Bank estimates that on public and publicly guaranteed medium and long-term debt alone, they will average US \$11.6 billion a year in 1985 - 1987 <sup>1/</sup>.

47. Debt servicing as a proportion of total export earnings has continued to rise sharply from 15 percent in 1976 - 1977 to 24% in 1982 <sup>2/</sup>. What this implies is that a significant part of export earnings go to servicing debt on an increasing scale.

48. Efforts by African governments to solve the food crisis currently facing their countries will not meet with much success unless African governments restructure their production, trade, monetary and financial policies both to counter the immediate balance of payment problems and to generate future growth. Of course, to guarantee success, the efforts of African governments must be matched by a willingness of international lending agencies such as the IMF and the World Bank to reschedule old loans and provide new ones under terms and arrangements suitable for each individual African country.

<sup>2/</sup> Adedeji, A. "Foreign Debt and Prospects of Growth in the Developing Countries of Africa in the 1980's". Paper presented at the United Bank for Africa Conference on Foreign Debt and Nigeria's Economic Development, Lagos, Nigeria, 5 - 6 March 1984.

<sup>1/</sup> Ibid., World Bank.

<sup>2/</sup> IMF, World Economic Outlook, Washington, D.C. 1983.

Manpower

49. Most African nations face acute manpower limitations. A recent FAO

study of 46 countries found only half of the countries with at least a minimum level of professional agricultural personnel in post. For middle level

personnel the situation is even less satisfactory. While the crop subsector is relatively well served, livestock, forestry and fisheries are much less well

supplied. Furthermore, women who constitute the majority of subsistence farmers in many African nations are seriously under-represented in training programmes.

50. These constraints are manifestations of decades of neglect of African agriculture with concomitant inadequate flow of resources into the development

of human capital for the sector. Without adequately trained manpower for all the subsectors, many reform measures, even if well formulated, will be poorly

managed resulting in a stalling of the revitalization process of African agriculture.

Infrastructure

51. The term infrastructure is used here broadly to cover such things as

marketing and credit facilities, extension and input delivery systems, agricultural research, education, health and transportation. Inadequacies in

each of these areas represent major constraints to development. Properly functioning marketing, extension, input delivery, and credit systems are

pre-requisites for rapid and sustained increase in agricultural production. Poor

Basic literacy facilitates rapid adoption of technological innovations. Poor health leads to low productivity while poor transportation facilities hinder

the timely supply of inputs, the effective marketing of produce, and the effectiveness of the extension service. Efficient and effective operation of

52. These infrastructures also often represent the principal areas of all these infrastructures are essential components of reform measures.

Government investment for agricultural development. If the majority of farmers in each of the individual countries are to benefit, these investments should be

directed to the rebuilding and creation, where necessary, of infrastructures that will give direct service to small farmers.

Environment

53. All development efforts almost always impose shocks on the environment. The ability of the environment to withstand these shocks usually determines the prevailing level of environmental quality. In Africa, population pressure, deforestation, livestock overstocking, shifting cultivation, and water wastage have had their impact on the environment. It is imperative that appropriate measures are taken now to deal with these problems so as to reverse the growing environmental degradation and lay a proper foundation for protecting and preserving each country's national resources.

Social Organization

54. A basic weakness in the development strategies that have been administered in the past has been that development planners in several African countries have had no specific sociological basis for bringing about planned change in their communities. As a result, they have either worked in the dark or assumed that the particular community for which they are responsible will approximate to some general form. Bearing in mind the diversity and flexibility of African societies, it is not surprising that so much planning in Africa backfires or produces unexpected and, quite often, perverse responses.

55. No reform measure however rational, technically feasible, or ecologically sound has the slightest chance of success unless the people want it and are determined to put it into effect. Peasant-led development must form the point of departure for all reform measures to reactivate the agricultural sectors in Africa. The general idea here is to proceed from what peasant farmers know and how they respond to changes and to build upon existing traditional social arrangements for food self-reliance and defences against the vagaries of weather.

The Basis for Structural Reform

56. The PPSC analysis distinguished three groups of African countries with different potential and needs. For purposes of discussion these groups are described here as Critical, Adequate, and Exceptional. Countries in the Critical Group will not be able to feed their population even if they adopt the highest

level of technology. Countries in the Adequate Group have enough potential to meet all their requirements provided appropriate reform measures are taken. With appropriate policies and reform measures, countries in the Exceptional Group have the resources and potential to far exceed the projected requirements of their population. The countries belonging to the various groups are presented in Table 5.

57. The prospects for agricultural revival will vary not only between the three different groups but also between countries within each group. Blanket strategies for overcoming the food and agricultural problems of African countries are, therefore, likely to be ineffective. In the discussions that follow an attempt is made to examine the prospects for agricultural revival for countries in these three groups. Because production and trade will, to a large extent, determine each country's prospects, the discussion is under these two headings.



TABLE 5

AFRICA: ESTIMATED AGRICULTURAL POTENTIAL AT  
DIFFERENT ASSURED LEVELS OF TECHNOLOGY IN YEAR 2000

Technology Level	Critical	Potential Groupings	Adequate	Exceptional	
Low level	✓ Algeria ✓ Benin ✓ Botswana ✓ Burundi ✓ Cape Verde Comoros ✓ Ethiopia ✓ Gambia ✓ Ghana Lesotho Malawi ✓ Mali ✓ Mauritania Mauritius Morocco Namibia	Niger Nigeria Reunion Rwanda Senegal Sierra Leone Somalia Swaziland Tanzania Togo Tunisia Uganda Upper Volta Western Sahara Zimbabwe	Chad Egypt Guinea Sao Tomé & Príncipe Zambia	Angola Cameroon C.A.R. Congo E. Guinea Gabon Guinea-Bissau Ivory Coast Liberia Madagascar Mozambique Sudan Zaire	
Intermediate Level	Algeria Burundi Cape Verde Comoros Ethiopia Kenya Lesotho Mauritania Mauritius	Morocco Namibia Niger Reunion Rwanda Somalia Tunisia Western Sahara	Egypt Libya Uganda	Angola Benin Botswana C.A.R. Cameroon Chad Congo E. Guinea Gabon Gambia Ghana Guinea Guinea-Bissau Ivory Coast Liberia	Madagascar Malawi Mali Mozambique Sao Tomé & Príncipe Senegal Sierra Leone Sudan Swaziland Tanzania Togo Zaire Zambia Zimbabwe Upper Volta

(II)

Production

58. Most of Africa's land resources are concentrated in the less densely populated centre and centre-south of the Continent. There are presently four countries who belong to the Critical Group who are unlikely to be able to feed their populations from domestic resources even given substantial improvements in existing agricultural technology. To this must be added seven other countries whose production potential is marginal enough for their situation to be considered as critical.

59. However, if countries in the continent do not move from their present low levels of technology and input use, the total number of countries whose production situation will continue to be critical will jump to 29 by the year 2000 representing three fifths of the total population. Even with intermediate technology and input levels, 13 countries, with a total population of 110 million will remain critical by the year 2000.

60. Each country's production strategy must be centered around its domestic environment. Clearly, the strategy required for a semi-arid country with a strong nomadic, livestock system of cultivation will differ from that required by a country in which tropical forest and a low overall population density apply.

61. Since temperature is generally high all year round in most African countries, it is the rainfall pattern that essentially defines the prevailing ecosystems within national boundaries which, in turn, determines what can be produced locally. The efficiency with which each country produces food and agricultural products is a reflection of the level of technology prevailing in each country.

62. The yields of the principal food crops - maize, millet, sorghum, and cassava - either stagnated or declined during the decade between 1969/71 and 1979/81 1/2. Most countries do not yet have improved technologies for these crops that are superior to those presently used by farmers. Each country must immediately embark on a coordinated search for improved technologies for the food commodities that are adaptable to the ecology of their nation.

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1/ Abalu, G.O.I., "Agricultural Production in sub-Saharan Africa: Prospects for the Future". Report to the office of the Assistant Director-General, ESPD/FAO, Rome, November, 1983.

63. The differences in production possibilities will influence the choices that countries make about the relative importance to be given in their development strategies to the agricultural sector as a whole, the food subsector, and the non-agricultural sectors of the economy. It is not, however, the only consideration. Trade will also play a key role in most cases.

#### Trade

64. The role of trade will be different for the three groups of countries identified in the PISC framework. The Critical Group of countries, unable to feed their populations from their own agricultural resources, will have necessarily, to trade to make good the shortfall. The Adequate Group, undoubtedly, will continue to trade and to import foods that are not available domestically as well as other goods. The Exceptional Group has the potential of becoming net food exporters and could contribute to continental self-reliance.

65. Also important are the prospects for the commodities that each country does or could export. Each country in Africa has to adopt an appropriate balance between export and domestic agriculture that takes account of its resource endowment, its demand structure and the market prospects for its export commodities.

66. The principal agricultural export commodities of sub-Saharan Africa are coffee, cocoa, tea, palm products, cotton, sisal, and groundnut products. The prospects for African exports of these commodities depend on the overall characteristics of the world market and on the extent to which African States can be competitive with other exporters.

67. The general international market outlook is rather poor. Current forecasts suggest only a modest increase in real world prices (expressed in constant US dollar terms) for beverages and fats/oils in the period to 1995. This being so, African exporting countries will need to put a heavy emphasis on increasing their competitiveness with other producers including producers of synthetic substitutes.

68. In the past 15 years, the share of sub-Saharan Africa in world exports of the Continent's traditional agricultural export commodities has tended to fall. In 1970 for example, sub-Saharan Africa exported 73 per cent (by current value) of world cocoa exports; by 1980 this figure had fallen to 69 per cent. For groundnut oil the proportion has fallen from 27 per cent to 23 per cent over the same period, while for palm oil it has slumped from 17 per cent to 3 per cent. Not all states have suffered a fall. Some African countries have managed to increase their share of world exports for particular commodities by substantial amounts. What is required for the future is for the other African exporters to emulate their success.

69. However, even with a substantial effort to increase competitiveness, it is unlikely that agricultural exports will provide a buoyant foundation for African development over the next ten years. Parallel to efforts to maximise revenue from traditional exports, African States must seek to develop new, higher value-added exports. Some notable successes have already been achieved.

### PART III: A PROGRAMME OF ACTION

#### A. EMERGENCY MEASURES

70. By far the most recurrent and pervasive form of emergency in Africa is drought-induced famine. In extreme cases this leads to massive population movements, misery and death, often on a huge scale. Man-made disasters leading to refugee movements produce similar problems. Both turn the agricultural producer into a resourceless consumer. In some African countries floods produce equally devastating though usually less durable effects. Earthquakes also occur in some African countries. To these might be added the desertification. However, because its effects (and possible remedies) are more long-term, it is dealt with later in section D of this part.

71. Measures for the management of emergencies divide into two categories:

- (a) Management of the immediate catastrophe;

(b) Improving preparedness against emergencies.

Management of the Immediate Catastrophe.

72. The management of immediate catastrophe boils down to a proposition simply expressed but difficult of achievement: the organization of supplies to a stricken area of the basics of existence: food, water, shelter and medical assistance to prevent epidemic diseases associated with disaster, such as cholera. Emergencies may be long drawn out in the form of lasting acute food shortages, or assume catastrophic form. Sometimes the one leads to the other. The emergency may or may not involve the movement of the affected population from the disaster area. If it does not, the problems are less difficult. Acute food shortages in urbanized areas are more easily controllable. If on the other hand crop disasters hit the rural poor, who most usually are living in remote areas badly served by communications, the logistic and other problems are magnified many times. Apart from the failure of production for own consumption, sharply reduced purchasing power, induced as a side effect of the emergency, often deprives the food producer and especially the livestock owner of the alternative of buying food for his family and feed for his cattle.

73. Drought-induced famine in rural areas entails more than the imperative need to set up relief camps against starvation. Where whole populations are forced to abandon their lands or pastures in search of food, there are more lasting effects: distress sales of cattle by livestock owners in order to buy food; abandonment of tools, storage and other farm equipment. Even if they do not move, there is often consumption of seed set aside for the next sowing; sales of valuables for consumption; in short, not only impoverishment but also disinvestment, all of which must be addressed.

Measures to be taken at the National Level

74. The management of the immediate emergency demands as a first step the mounting of a national effort in support of the victims, and the mobilization of all possible national resources for their relief. As a first step in a national relief campaign, the emergency should be announced through the radio, the press and all other communication channels. Control and coordination of the effort needs to be invested in a specially organized headquarters headed by a senior minister but under general supervision of the Head of State and should be supported by a task-force at its disposal for the execution of plans. The magnitude, nature and location of the disaster needs to be established by the control unit, and relief measures appropriate to the situation devised. These should be made known through the various media to the public, as well as the austerities demanded of them in support of the campaign. The preparatory organizational measures required are dealt with in more detail in paragraphs 81 - 83 below.

Measures to be taken at the International Level

75. The provision of immediate relief by the international community once disaster has struck needs little further comment in a paper of this scope. International emergency relief through organizations with much experience, such as UNDR0, the International Red Cross, the World Food Programme of UN/FAO, bilateral agencies and non-governmental agencies, have shown themselves able and willing to respond rapidly and effectively to sudden emergency situations where local resources were insufficient to meet the emergency. (See also paragraphs 87 - 88 below).

Improving Preparedness Against Emergencies

76. The efficacy of any emergency measures will be much enhanced, and the extent of disaster perhaps reduced, if measures are taken in advance to mitigate the vulnerability of disaster-prone areas to shock. The following measures are recommended for adoption on a national, and where appropriate, regional or sub-regional basis.

Establishment of Early Warning Systems

77. Where this is not already being done, African countries should set up national early-warning systems based on a set of indicators signalling the advent of food emergencies. These would include the regular collection of data on crop conditions, rainfall, abnormal market indications such as high levels of disappearances (through hoarding, black marketing, etc.), price trends, accelerated sell-off of cattle, the levels of food reserves, population movements and the influx of refugees, diseases due to nutritional deficiencies, and the selling-off of assets by poor families. This would strengthen, and be strengthened by, participation in the FAO's Global Information and Early Warning System on Food and Agriculture, which has been in operation since 1975 and which has devoted particular attention to providing early warnings of shortages in African countries. Cooperation between African countries and FAO, as well as other organizations, is already in existence. Many have been helped in establishing and developing such systems at national and regional levels. The original AGRYMET programme for meteorological forecasting in the Sahel is being supplemented by FAO in cooperation with WMO by similar projects in SADCC countries as well as others in Africa. Such measures would be much strengthened by the establishment of sub-regional early-warning systems acting in conjunction with the national and international systems.

78. Early-warning systems based on an agrometeorological information component should also be established to cover floods.

Logistics

79. The identification of alternative sources of food for those hit by disaster, whether obtained commercially (from national resources or external suppliers) or provided by donors, is less difficult than ensuring its distribution. A key constraint is logistics. Bottlenecks occur in the transfer of bulk and bagged cereals and other relief supplies because of port congestion, inadequate transport facilities, inadequate storage capacity to cope with unusually large quantities of food which have to be moved quickly. Landlocked countries are dependent on the logistic cooperation of neighbours who may be under the same stress.

80. A useful measure of preparedness would be for disaster-prone countries to draw up in advance a logistic profile showing port and airport capacities and handling facilities, railway routes and capacities, storage facilities, road and other distribution systems to likely disaster areas, capacity of the national transport fleet suitable for likely relief routes, fuelling and spare parts systems available, and sources of water supply. Such logistic profiles might be deposited with international emergency relief agencies such as UNDRO, UN/FAO World Food Programme, FAO, the International Red Cross, etc., who would thus have a ready-made planning instrument for the rapid deployment of relief in the event of an emergency.

#### Organizational Measures at the National Level

81. Disaster-prone countries need to strengthen national institutions concerned with emergencies, or to establish them where they do not already exist. Such action needs to be accompanied by the establishment of a national emergency fund for immediate use. An organizational framework and a check-list of action, drawn up in advance, is a necessary measure of preparedness.

82. The organizational framework needs to be headed by a permanent central committee for emergency preparedness, backed up by an organizational network reaching down to community level through the established layers of local administration to provide a two-way channel of intelligence and administration. The central committee should be located at a high level at government, such as the President's office.

83. This committee should lay down responsibilities for:

- (i) the urgent announcement of food emergencies;
- (ii) rapid assessment of overall food and other relief requirements of the affected people;
- (iii) assessment of the state of logistic preparedness including storage facilities and the pre-positioning of stocks at key points in disaster-prone areas.



- (iv) mobilisation of the required material and human resources as well as internal and external emergency assistance including food, feed, medicine and technical expertise, as well as provision of adequate water supply for drought stricken people;
- (v) rationalisation of channels of distribution and strengthening of logistics and other supporting services to ensure an accelerated distribution of relief supply;
- (vi) setting up of a national task force in the event of an emergency.

#### Emergency Stocks

84. The stocking of staple foodstuffs for use against emergencies is an essential element of preparedness, and measures should be taken to establish such reserves. Each country should set its own target at a level based on assessment of its own risk and production. Similarly, emergency stocks of seed need to be organized. During the recent drought which afflicted its neighbours, Niger was the one country which escaped disaster because it possessed an effective system of storage, from which it was, furthermore, able to offer supplies to its neighbours.

#### Regional Preparedness

85. Regional and sub-regional preparedness needs to be strengthened, and policies and arrangements co-ordinated, not only in the spirit of African co-operation and solidarity, but also because food emergencies tend to spill over frontiers. An important measure which needs to be taken is for governments to make the necessary financial contributions in order to bring into operative existence the special Emergency Assistance Fund, created by resolution AHG/133 of the Twentieth Assembly of Heads of State and Government to deal with drought and famine in Africa. Such a fund would provide interim assistance and relieve human suffering while larger scale help is being sought.

86. Other measures of regional action which might be taken on the notification of an emergency are the announcement by countries in the possession of food surpluses of availabilities (as was done by Niger in the emergency noted above) and the supply of food aid by African countries in a position to extend it.

#### Action at the International Level

87. Experience has shown that the international community is able to respond quickly to appeals for assistance. This requires close cooperation between donor countries, international relief organizations, non-governmental organizations and other agencies, and the government of the country. Governments should make standing arrangements for liaison through an earmarked central liaison office notified to all concerned. Appeals for collective action should cover not only increased international food aid but also technical and financial assistance for the transport, storage and distribution of food to the victims of the emergency. The logistic planning requirements are dealt with in paragraphs 79 - 80 above.

88. In so far as possible, food aid should be adapted to the food habits of the disaster victims and be in the form of staples with which they are familiar. Triangular operations whereby donor agencies purchase such staples from neighbouring countries with available stocks should be encouraged.

#### B. IMMEDIATE MEASURES - REHABILITATION

89. While in disaster situations the provision of emergency food needs must take precedence, priority attention also needs to be paid to promoting the rapid recovery and rehabilitation of the affected zones and populations as more favourable conditions return. In the immediate aftermath of an emergency, the situation of the victims is dire indeed. Livestock herds are depleted by starvation or as the result of distress sales made earlier by the farmer to provide money for food. Fertility is seriously reduced, land is overgrazed and eroded. Seed stocks have been eaten, tools and other farm equipment have been lost or are in disrepair, and the

farming family is penniless. Work for wages, whether on or off-farm is scarce. At the national level, funds and foreign exchange reserves and the reserves of trained technical manpower, are diverted to other activities. It is in this situation that quick impact measures are needed to restore the ability of the farmer, herdsman and fisherman to restore the production capacity of the resources.

90. The key areas of action are clearly: to provide food production inputs, especially seed and fertilizer, in sufficient quantity, and in time, to meet the needs of the coming growing season; to provide access by the farmer to these inputs, under government relief schemes, or by credit or other means, to provide guidance and farmer training in the use of the inputs; to rehabilitate infrastructure and water supply installations; to ensure logistic and physical access for the delivery of such inputs and for repair and maintenance services and supplies; to encourage the reactivation of fair marketing systems and tenure arrangements, as an incentive to the restoration of production.

91. Rehabilitation programmes for food and agricultural programmes have to be designed specifically to suit the circumstances of each country or area, government priorities and local ecological conditions. It is usually more economical and efficient in these situations to restore and build up existing construction such as access roads and irrigation works, than to embark on new construction.

92. FAO experience in handling the technical problems of food and agriculture has increased our understanding of how to go about the issues of rehabilitation after emergencies. The example set by FAO forms the basis for this section.

93. Rehabilitation programmes should be based on fuller use of existing capacity and programmes in the selected areas and better use of new programmes and resources. They should be seen as complementary to and reinforcing on-going programmes and long-term development efforts to overcome structural problems. To ensure success the following criteria for the selection of country rehabilitation projects are recommended:

- (i) the project should preferably be complementary to on-going or planned programmes and projects;
- (ii) it should be possible to start most of the projects within a few months, and to achieve a significant impact in less than three years;
- (iii) the project should concern a large number of food producers and benefit populations recently affected by calamities;
- (iv) the project should normally include a technical and training component, especially for in-service training;
- (v) the logistic and institutional structure, and the delivery/support services available at the project site should be sufficient to guarantee reasonable prospects for impact. If necessary, the project may help strengthen these infrastructures and services.

94. A monitoring element should be incorporated in the projects.

#### A Programme of Action

95. In order to come to grips with the needs of immediate rehabilitation, a programme of action is required consisting of national projects selected on the basis of the criteria suggested in paragraph 93 above.

96. The FAO scheme recommends projects in the fields of crop production and protection; irrigation and water supply; loss prevention; storage and processing; extension and training; livestock and pastures, fisheries; and forestry. These categories provide a framework for African country programmes of action.

(1) Crop production and protection: projects for the supply to the farmer of the physical inputs needed to increase production,

notably good seed, fertilizer, pesticides and implements, at prices he can afford, and in time for the next season. Such projects will be required by most of the affected countries.

(ii) Irrigation and water supply: projects for water use, marshalling new sources of water, water harvesting the rehabilitation of irrigation systems, the repair of existing pumps and wells, the supply of spare parts and fuel, the rehabilitation of earth dams, the training of farmers in water use in irrigated areas. The choice of type of project will vary considerably from country to country and region to region, according to the water resource endowment, climatological and ecological conditions and type of agriculture practised.

✓ (iii) Loss prevention, storage and processing: projects relating to the reduction of pre- and post-harvest losses. Such projects would include the supply of pesticides, fungicides and other means for the control of birds and rodents; equipment and supplies for improved storage at farm level, campaigns for the control and reduction of food losses at all stages from the field to the urban market, projects for the simple processing of food.

✓ (iv) Extension and training: projects for farmer education in improved farm practices and in-service training for extension workers.

(v) Livestock and pastures: projects as appropriate to remedy shortages of feed and water, the strengthening of field veterinary services and the supply of vaccines and other pharmaceutical and biological necessities for the eradication of diseases, control of tick-borne diseases, de-stocking and meat-drying and marketing to relieve stress on pastures and to allow herdsmen the opportunity of reconstituting their herds, livestock production centres for the replenishment and upgrading of herds, and improved fodder production.

(vi) Fisheries: projects to improve fish supply and distribution. Such projects will relate mainly to the development of artisanal fisheries: the rehabilitation of net making and mechanized yards; improving soil utilization and the rehabilitation of freezing and cold storage facilities.

(vii) Forestry: projects for the rehabilitation of productivity of soils under stress from the expansion of cultivation into areas of lower rainfall, leading to widespread soil erosion and desertification of once arable land. Projects will be in the areas of the use controlled conditions and to provide tree cover on watersheds and slopes to help prevent erosion and reduce flooding and silting downstream.

An indicative list of costs of some elements of agricultural investment at 1980 prices, applicable also to medium and longer term measures, is attached as an appendix. Great caution should be exercised in applying these to individual programmes, since various sources estimate that current prices may be greater by up to 25 per cent.

#### C. MEDIUM TERM MEASURES

97. In setting out its food and agriculture objectives, the LPA recognised that "the primary responsibility for a breakthrough in food and agriculture lies with individual Member States operating in their respective national contexts". Further, it called upon Member States, as an initial step, "to determine the manner in which the .... recommendations should be applied in the specific contexts of their respective countries" and later to "set up specific yearly goals for food and agriculture and establish effective national and regional machineries to monitor progress towards them". The Harare Declaration reflects these recommendations and stresses the need to give the highest priority to agriculture and rural development among national priorities. Details of some of the medium term measures needed are discussed in the following paragraphs.

#### Policy Formulation on a Country Basis

98. The first requirement for a medium-term action programme for African food and agricultural rehabilitation is the preparation and adoption of explicit, clearly defined and internally consistent medium-term policy frameworks on a country basis. The criticism has been made that all too often the policies of

v3 African countries consist only of the sum total of projects and programmes which, under various pressures including donor preferences, happen to have been initiated. In the first place, the role of food and agriculture in national development plans has to be defined. Secondly, the food and agricultural policy should itself be a clear and succinct statement of the objectives to be achieved, of the priorities set, and of the means by which they will be pursued. This will require action and endorsement at the highest echelons of national government.

99. The African ministerial signatories of the Harare Declaration recognized the primacy of increasing domestic food production and promoting food self-reliance. The translation of this into policy terms will require certain basic decisions, including the self-sufficiency ratio to be achieved, taking into account the growing populations to be served, and hence the relative reliance to be placed on cash crop-production for export (as an earner of foreign exchange to provide i.a. for imports of food and agricultural inputs, as well as other goods), and domestic food production (in terms of a national target). In the prevailing situation, it is likely that, for most African countries, the conclusion will be the encouragement of a greater rate of growth in domestic food production than in export crops. Given that the small-farmer accounts for some 80 per cent of African food production, the inference is that he (or she) will be the focus of the main target group.

✓ Budgetary re-orientation in support of agricultural production and smallholder production

100. In Africa in general, the share of food and agriculture allocations in public expenditure has declined. This trend must be reversed. At the initial stages in particular, programmes to increase production will involve heavy costs, (for example fertilizer programmes) and while financial and material support from the international community may be invited and obtained, national funding will also be not only desirable but necessary, and a proper calculation will be required of the recurrent costs of programmes and projects to be sustained, even if these are

planned to be progressively phased out by transferral or otherwise over the medium or longer term. As the Harare Declaration stresses, the allocation of resources should be made with special emphasis on smallholders.

101. In the context of this exercise, existing programmes and projects would need to be thoroughly and rigorously reviewed in order to ensure that they remain relevant to the newly defined policy aims and priorities. Modifications to some may prove to be necessary and others may have to be discarded, and the resources switched to more efficient purposes.

#### Development of a system of incentives

102. Programmes of upgrading the technology of the small farmer will not result in greater food production unless the farmer is assured of a fair return for his labour. Incentives extend beyond the establishment of remunerative producer prices, necessary though this is. The internal terms of trade need to be adjusted so that the costs of fertilizers, pesticides and tools, as well as of consumer goods, are not weighted against the farmer in relation to his earnings. Although this process may begin by such measures as subsidization of inputs, it should be so phased that a new and self-sustainable internal market equilibrium is achieved.

103. This means that market systems must be improved so as to provide not only an assured outlet for the farmers produce, but also an adequate supply of consumer goods, spare parts and services at fair prices. A large element in consumer prices is high distribution costs which need to be reduced through greater efficiency. In this respect, local private enterprise may have a role to play. Access to credit for small farmers must be assured. The provision of services such as local maintenance and repair of agricultural machinery should be encouraged.

104. The involvement of the farmer in decision making is also a necessary incentive. The required policies and mechanisms are discussed in more detail in paragraph 119 below.



Re-orientation and training of existing manpower

105. There is urgent need for African governments to draw up well-coordinated plans for the training of skilled manpower, including women and youth, at all levels. Attention is also needed to the re-deployment of trained manpower to those activities in which talent and experience will be most efficiently employed. To achieve the declared aims of the Harare Declaration to develop country-specific strategies and to increase the efficiency of resource use in government institutions, it will be necessary to train high-level manpower in the fields of planning, policy analysis, programme preparation, research in appropriate technology, and other appropriate disciplines such as the assessment, management and protection of fishery resources. A good balance needs to be struck between theory and practical training.

106. At the other end of the scale, farmers need training in the safe and efficient use of technical inputs, and schemes to improve the knowledge and skills of extension workers are needed in order to convey the necessary knowledge of improved practices to farmers. Moreover, it is also necessary to improve the working conditions in rural areas so as to avoid the exodus of skilled manpower. Manpower development at all levels is an essential element of food and agricultural development, and consideration should be given to the training need as a component of all programmes and projects.

Re-building existing rural infrastructures

107. The implementation of existing programmes and projects for the rehabilitation of infrastructure needs to be improved, and new projects started. In the process, some dead wood might be cut away. Access and service roads are essential to the development of markets, and the provision of services. The question of market and credit facilities has been touched on in paragraph 103 above, in the context of providing incentives for greater food and agricultural production, and programmes in this area are needed. In this connection, the role of the farmer in decision-making, discussed in paragraph 119 below, should be given full value. Road

development schemes may be all the better for having resulted from local community initiative and participation.

108. Again, as regards the provision of services such as the delivery of inputs supply of spare parts and the repair and maintenance of farm equipment, etc., a greater and more competitive rôle for local private initiative should be encouraged.

#### Medium-term national food security arrangements

109. In the hard-hit countries, action is needed to refurbish national food security arrangements. Stocks need to be replenished, and strategically located stocks and food reserves need to be established. On-farm storage needs to be developed. The development of early warning systems has been covered in section A of Part III of the present document (paragraphs 77 - 78 above). Specialized advice and assistance are available to countries in this connection from various international agencies.

110. Programmes and projects for the reduction of pre-harvest and post-harvest losses should be strengthened through farmer education, public information, campaigns and the expansion of pest control and related activities and measures.

#### Improved husbandry and other practices

111. The small farmer must be familiarized with, and taught the use and benefits of agricultural inputs such as fertilizers, pesticides and improved seeds, as well as improved tools and machines. National input programmes will need to cover not only their timely supply at prices the farmer can afford, but, in the case of fertilizers and pesticides, also provision for ensuring their suitability to the soils and crops for which they are intended or to the destruction of the pests they are meant to control. In association with this, small farmers will need to be trained in the correct and safe application of inputs, both as to time of application and quantity, through improved extension services, which in turn need to be up-graded through in-service training and encouraged to extend their reach to the small food producer, as well as the larger-scale grower of cash crops.

*on-farm reserve*

112. As regards fisheries, for many countries the main thrust for the medium term lies in the development of coastal and inland fishing on an artisanal basis, together with aquaculture and fish-farming. Investment is needed in shore installations for the processing and conservation of fish, and in its distribution.

113. Measures are urgently needed to improve forest management and to arrest the rate of depletion. The protection and conservation of forestry resources must become a matter of national policies, and their exploitation must be controlled. Mass education campaigns on conservation, controlled and economic use of wood as domestic fuel and on re-afforestation are required.

Adaptive Research and the Transfer Chain to the  
Farmer

*on-farm user*

✓ 114. An essential input for up-grading technology and productivity at farmer level is agricultural research. As the World Bank has pointed out <sup>1/</sup> agricultural research is being wasted by ineffective use of existing research capacity, by inadequate dissemination of research results at the national level and by lack of focus, continuity and coherence in research programmes. In many African countries, the chain of transfer of research results from the research station to where they count - the farmer's field - is very weak. This weakness has often led to the promotion of so-called "improved technologies" which the majority of farmers are either unwilling or incapable of adopting. In most cases, the situation has led to premature and costly emphasis on extension systems and agricultural support services.

115. Steps must be taken to end the isolation of the researcher from the policy-maker and, at the other end of the scale, the extension worker and farmer. A beginning might be made here by charging national research organizations with the responsibility for technology development. These organizations should use an on-farm adaptive research procedure to move and

<sup>1/</sup> World Bank, "Toward Sustained Development in Sub-Saharan Africa: A Joint Programme of Action", Washington D.C., 1984.

adapt available technology into areas of assured relevance. Moreover, since to be effective, research must be appropriately linked to the extension system, it might be useful to start in service training schemes for extension workers, attaching them for familiarization courses at appropriately selected research centres.

*inservice  
training for  
exte*

116. National agricultural research is, however, an on-going and continuous process. It needs to be initially given strategic direction and reviewed from time to time in accordance with national agricultural and food production objectives. The necessary measures for this are discussed in Section III of this paper under needed long-term measures.

#### D. LONG-TERM MEASURES

117. Because the causes of the food crisis in Africa are profound, it is necessary for African governments not only to take measures that would treat the symptoms of the crisis, but to identify and treat the underlying causes as well. The long-term measures for the revival of African agriculture discussed below are intended to promote self-reliant development in Africa through implementation at the community, national, regional, and international levels. Each country will need to set its own unique development strategy within the general policy frames defined by these measures.

##### At the Community Level

118. The following measures if successfully implemented at the community level will enhance the success of other long-term measures at higher levels of implementation.

##### Community level organization

119. The majority of village level organizations in Africa have evolved over time, surviving different governments. In many cases, these organizations have established credibility by serving farmers interests. More attention should be paid to this type of organization with a view to moving the focus of action to

the grass-roots level. Some organ for the expression of farmers' views, needs and especially initiatives is required. The formation of local social organizations, including women's groups in countries where women are the food producers should be encouraged. Corresponding linkages will need to be developed, through the extension system or otherwise, so as to provide a two-way dialogue between such groups and authority. This would be most helpful in preserving and developing traditional defences against the vagaries of nature. In addition, decision-making authority and responsibility should be appropriately decentralized to the community level through these groups.

#### Rural energy systems

120. The demand for energy in rural areas is likely to increase significantly in the future and urgent attention is required to develop more rural energy systems, particularly those using renewable resources such as biogas, solar, and wind energy, and small hydro-power installations for village use.

#### At the National Level

121. A number of measures will need to be taken at the national level. Because of the limitations on the magnitude of the basic resources available to many African governments, it will be necessary to emphasize simple, replicable mechanisms which, once implemented, will filter into and become self-supporting at the local level.

#### Research and technology

122. An essential element of all development strategies must be to improve the technology of agriculture. This applies to both food and export crops (given the need to improve international competitiveness), but applies with particular force to staple food crops which have been neglected by past and present research policies.

123. National research should have specific aims such as the genetic improvement of staple cereal and root food-crops and, in arid and semi-arid countries, the development of drought-resistant

varieties; techniques of soil moisture conservation and appropriate water management techniques; farming practices and the development of appropriate tools; forestry and conservation.

124. A permanent shift to a higher level of technology is essential if the majority of African countries are to support their own populations to the end of the century. This will involve the adoption of an integrated farming systems research approach adapted to the different ecological zones of the country, which of course, should be complemented by basic and other types of scientific research designed to break new ground.

125. But new technology by itself is not enough. Without an effective delivery system, it will not have the desired effect on output. When suitable improved technologies are available, among the factors responsible for their slow or non-adoption are inadequacies in the supply of inputs, credit, extension and marketing support, and the incentives necessary to motivate the farmer to increase productivity and production.

#### Pricing policy

126. Many different government measures affect the incentives to farmers to adopt new techniques: procurement and consumer prices, exchange rates, taxation structures, the utilization of food aid, and transport facilities. Rarely do governments examine systematically the relationship between these policies and their net effect. Increases in producer prices may not always achieve their intended aim of increased agricultural production particularly if the supply situation is relatively inelastic. Because of this, it is not advisable for African governments to institute price reform measures in isolation from the other reform measures discussed in this report. Together, these all interact to affect production and, predictably, farmer incentives. Even so, appropriate price reform measures will have the greatest effect. There is a need for phased improvements to the rural-urban terms of trade and investment to improve the quality of life in rural areas and employment prospects there.

Food habits

127. The tastes and preferences of the citizens of each country, to a large extent, determine what is produced or consumed. The idea of food self-sufficiency implies that African populations should not develop food habits which their economies cannot support. One of the principal causes of the growth in food imports is the change in consumption patterns in favour of foods that cannot be produced locally on which can only be produced at high cost or in limited quantities. This shift in taste patterns is associated with generally rapid rates of urbanization, and may also be partly due to the side effects of food aid.

128. While it is unrealistic to expect that these new found food tastes and preferences can be easily reversed, the immediate task of governments is to formulate well articulated campaigns designed to minimize their adverse impact and, at the very least, to avoid policies that encourage and accelerate the shift.

129. Policies that accelerate the shift are those that make imported commodities cheaper or more available than domestic production, thus encouraging consumers to switch their purchases for income rather than taste reasons. Two obvious policies that have such an effect are the maintenance of artificially high exchange rates and the unplanned distribution of food aid.

130. Among the measures that can minimize adverse effects are those which increase the attractiveness of traditional staples (e.g. simple processing to make them more "convenient" for urban people to consume) and those that foster domestic substitutes for imported commodities. A good example of both the potential and the problems of such policies is provided by the attempt to mix local cereals with imported wheat when making bread. FAO began a programme on composite flour in 1964, and as early as 1965, UNDP financed a project in Niger to mechanize production of flours from locally available sorghum, millet and cowpea. The technology for making composite flours is available. The principal constraint limiting its utilization has been that of "getting the price right" so that it is profitable for millers

to produce the flour and for consumers to buy it. This has proved to be extremely difficult to achieve.

#### Management capacity

131. Management capacity is either lacking or ineffective in many institutions in Africa. There is urgent need to restructure and rationalize existing management activities in public and parastatal organizations in order to render them more efficient. Training and retraining in the management and administration of programmed activities including financial and budgetary practices will need to be undertaken in many cases to improve management efficiency and effectiveness.

132. Specifically, improved management capacity should be developed in terms of the provision of more effective extension systems, better organization of input delivery systems, and improved marketing arrangements. This will require an effective system for coordinating and collectively managing the activities of the various ministries and institutions charged with providing farmers with the supportive services that they require if they are to adopt new agricultural technology or improve upon existing ones.

133. Also the lack of basic data on agricultural activities and the inability to utilize existing data fully and systematically has often seriously constrained management capacity in many African countries. There is urgent need to improve upon the scope and quality of the basic data available in many African countries as well as their timeliness. Data collection is a costly business especially in the case of African countries faced with severe financial constraints. Governments must, therefore, develop systematic but prioritized data collection, analysis and utilization in support of improved management.

#### Industrial Base

134. An efficient and self-reliant industrial base is a prerequisite for sustained agricultural development and growth. It is therefore important to emphasize the contribution that industry can make to modernizing and diversifying the food and agriculture sector. The food and agricultural sector is at once a customer



and a supplier of industry: a customer in respect of African-produced agricultural implements, tools and machinery including spare parts; of fertilizers, pesticides and seeds, of irrigation equipment and of equipment for food storage, packaging and transportation; and a supplier of raw materials for agro-based industries such as food-processing, textile manufacture, etc. Industrial development plans aimed at reinforcing the food and agriculture sector need to pay attention to the food and agriculture strategies adopted in respect of the levels of technology to be served, the location and scale of industrial enterprises, and the possible degree of decentralization, taking account of infrastructural problems, delivery systems and distributional costs. For example, whereas chemical fertilizer plants must be of a considerable minimum size because of high unit investment costs, the formulation of fertilizer packages in the right proportions for the small farmer is highly location specific as to the soil and the crop involved, and might profitably be decentralized to intermediate local mixing plants.

#### At the Regional Level

135. As a continent, Africa is blessed with substantial physical and human resources. As individual countries, many of its Member States have areas of weakness. The imperative for continental collaboration is strong "given the organization of the region and the large number of small economies, given the many land-locked countries and given the disparities in resource endowments". 1/. "Regional cooperation" as the ECA has pointed out, "becomes a critical complement to national self-reliance".

136. The EPA established a continent-wide framework within which each state could develop its own plans in conformity with its unique characteristics. The next step - after completion of national plans - should be a return to the continental level of analysis. It is clear that some states have more room for

1/. Economic Commission for Africa ECA and Africa's Development 1983 - 2000. A Preliminary Perspective Study (Addis Ababa, April 1983).

manoeuvre than do others. Some will produce an agricultural surplus while others, at least in the medium term, face an increasing deficit.

137. The LPA objective of continental self-reliance would be better served by inter-regional trade and cooperation. The areas in which this should be developed are discussed below.

#### Trade

138. The World Food Council reports that low demand, monetary disorder, less adequate credit and protectionism in developed countries are sufficient incentive for developing countries to step up trade among themselves. <sup>1/</sup> This is particularly true of African countries. An expansion of regional trade in food products would not only provide alternative sources of food supply but also enhance the collective food security of the region.

139. There is also need for African governments to find ways of increasing inter-regional trade in processed agricultural and mineral raw materials. This will require inter-governmental arrangements, to reduce tariffs, meet investment requirements and establish the necessary cooperative arrangements between national institutions and private corporations.

#### Food Security

140. Up until recently discussions on food security in Africa have often emphasized what needs to be done at the international level. A case has already been made in this report for the need for food security arrangements to be carried out at both the community and national levels. These would need to be complemented by food security arrangements at the regional level. African governments must arrive at an "Accord on Food Security".

<sup>1/</sup> United Nations, World Food Council, "Developing Country Trade", Report by the Executive Director to the Ninth Ministerial Council, New York 27 - 30 June 1983.

141. A framework must be worked out between and among African governments, both in policy and implementation, to establish viable regional or sub-regional food security systems.

There is need for African governments to adopt common mechanisms, whenever possible, in their effort to achieve national and regional food security. These mechanisms would link the national food security arrangements in neighbouring countries in a spirit of collective self-reliance. Explicit and monitorable commitments on the part of the members of the regional or sub-regional groups, taking into account economic, technological and other complementarities existing with national borders, would enable many African countries to close ranks in the quest for national and regional food security.

#### Research and Technology

142. Research costs are often high in Africa and many African countries will not have the resources for the magnitude of research effort needed to solve their agricultural problems.

There is therefore need to examine the possibilities of organizing research programmes to deal with agricultural problems common to groups of African countries. Favourable consideration should be given to a suggestion by the World Bank that a regional research fund should be set up (for which outside donor support might be sought). In association with this, a system of regional "networking" should be developed, whereby research institutes

keep in touch with the directions of one another's work, compare programmes, and identify those areas where one line of research might contribute to another, and exchange research results. The CGIAR could be asked to play the role of general sponsor to such

a system.

#### Training and Manpower Development

143. Most training in agriculture in Africa is conducted by national institutions. Training programmes in agriculture are also conducted by international and bilateral agencies as well as by a few regional training centres. Without minimizing the importance of these institutions, there is need for African

*Regional cooperation  
in training and manpower  
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governments to encourage regional cooperation in training and manpower development.

144. Existing regional agricultural training centres should be supported and strengthened. Staff exchanges between agricultural training institutions in different African countries should be encouraged, and whenever possible, regional training efforts should be undertaken in areas of common interest. For example, inadequate manpower training in the area of project planning, analysis, and implementation has been identified as a common problem area for many African countries.

#### Exploitation of Natural Resources

145. The exploitation of natural resources within national boundaries often has use and implications which transcend these boundaries. This is particularly true for water resources. Lack of accurate basic data on these resources and ineffective cooperation and coordination of their exploitation is bound to lead to serious conflicts in the future.

146. African governments need to enter into bilateral and on multilateral agreements on the collective exploitation of natural resources whose use implications cut across national boundaries. A few such agreements like those for the Niger and Senegal river basins are already in operation. Initially, these agreements should emphasize the collection of accurate data on the relevant resource and provide opportunities for the exchange of technical information across borders.

147. With time, the agreements could be broadened to include issues of development based on accumulated facts. This would have the effect of preventing unnecessary economic and political conflict in the future.

#### Environmental Protection

148. There is need for exchanging information about degradation of the environment at the regional level. The exchange of information in this area, on experiences, techniques and

methods is already well developed under the follow-up to the United Nations Conference on Desertification, especially under the auspices of the United Nations Environmental Programme (UNEP) and FAO's programme for the Ecological Management of Arid and Semi-Arid Rangelands (EMASAR). Governments should avail themselves more actively of the assistance available from these sources.

#### Drought and Desertification

149. The problem of reduced rainfall has afflicted over 30 African countries over the last twenty years. In the Sahel, it has been estimated that rainfall has dropped by some 30% compared with the averages of half a century before. This has led to the disappearance of ground water, the drying up of lakes and wells and the siltting of rivers, and vegetational cover has been drastically reduced.

150. The phenomenon of desertification is, however, not due to climatological causes alone. The intensification of human activities is also a primary cause. Population increases and the phenomenon of urbanization have increased food and energy needs which have created increased pressure on agriculture, stock-raising and forestry, to the extent that intensified land use has in many areas gone beyond the point of ecological balance. The rate of exploitation of the natural resources has exceeded the capacity for regeneration, with consequent land degradation.

151. The primary object of policy to check desertification and to ensure conservation is to ensure a self-sustaining balance between the exploitation of the land and its capacity for regeneration in the affected areas. This involves devising systems of exploitation, based on an assessment of the productive capacity of the environment and the size of the population it is required to support. Techniques to favour soil regeneration and conservation should be applied. Irrigation requires the national management of water, both surface and ground water. In this respect, forest and forest trees have an important contribution to make.

They help to ensure a regular flow of water from catchment areas to rivers and irrigation dams. For this reason, the deforestation of upland slopes must be reversed, and felling controlled.

Furthermore, forests and trees provide protection in other ways, from fixing moving sand dunes to sheltering crop land against winds and checking soil erosion and providing organic cover, and offer opportunity for the development of agro-forestry systems without entailing environmental damage.

152. The means of policy execution are twofold: informational action and forestry management and reforestation. Control of over-exploitation is essentially a matter of integrated management of rural areas, and if measures for conservation are to be made effective, understanding and participation must be secured at the community level, through farmers' and livestock holders' associations, and similar groups.

#### The Framework for Regional Action

153. The principal requirement underlying successful regional cooperation in all these areas is a strong political commitment by African governments. Sub-regional and regional tensions need to be eased and the legal and administrative restraints on the movement of people and goods should be removed through harmonization policies. Many measures, such as the control of desertification, can only be successfully undertaken at a sub-regional level. Others, such as export development, would be more effective if pursued within a sub-regional framework that minimizes friction between the plans of neighbouring countries.

#### At the International Level

154. The implementation of a medium- and long-term programme of action of the kind suggested in the foregoing sections will require massive resources. The need for African countries to increase budgetary allocations to food and agriculture has already been mentioned. However, assistance from the international community will also be required on a large scale.

155. Recent initiatives within the international community encourage the view that there is a new awareness of Africa's predicament, and that there is a willingness to get to the root of the problems and to assist in finding remedies.

156. At a meeting of donor countries organized by the World Bank in Paris on 31 January and 1 February 1985, about US\$1.1 billion was pledged for a Special Facility for sub-Saharan Africa. The Facility is to provide fast-disbursing financing in support of reform programmes undertaken by a number of African governments. Such action is complementary to food relief efforts and is intended to address underlying problems affecting food production.

157. At yet another meeting of donors in Rome on 29 March 1985, the Director-General of FAO presented the proposals, costed at US\$108 million referred to in Section III B of the present paper, for an immediate rehabilitation programme.

158. The response of the international community to African emergencies has been generous. While there may be conditions attaching to some of these pledges, and while responses may be incomplete, there are grounds for thinking that international assistance in substantial amounts will become available specifically to Africa in the near future.

159. The mobilization of technical assistance does not, on the whole, present any great difficulties. If anything, the problem is one of identifying the technical assistance needed, and absorbing and managing the technical assistance which is on offer. Often, and with benefit, technical assistance is incorporated into programmes and projects financed by multilateral and bilateral donors.

160. As regards increased volume of financial aid from the international community to Africa, it will be necessary to ensure that it is applied with maximum cost-effectiveness to purposes which will in fact serve developmental ends clearly stated and accepted by both parties. This will require adjustments by both.

161. In the past, donors have shown a marked preference for project aid, the aims, modalities and forms of which were much

influenced by the donors own criteria of selection, and sometimes other considerations of a commercial or strategic nature. Lip service was paid to the principle that the aid should be consistent with government policies and priorities, but too often it was honoured in the breach. In fairness it must also be added that too often government aims were so vaguely formulated and priorities so numerous and incoherent that it was seldom difficult to find a priority to fit the case. The result has, in many countries, been a duplication of effort and conflicting focus.

162. Donors, especially bilateral donors, should open their minds to new modalities and forms for aid flows. For instance, the massive aid which now goes to famine relief should, as the emergencies recede, be channelled to the more constructive ends of rehabilitation and the structural reform of food and agricultural production on a self-sustaining basis. For instance, the flows could be switched from food aid to input supply programmes.

163. It is in the interests of the donors and of Africa that assistance be provided within the framework established by government programmes and in accordance with government priorities. These in turn must be clearly formulated and internally consistent. It is important and urgent for Africa and for donors that the new aid flows should support those policies and be channelled into those programmes which will have strategic developmental effect.

164. An essential task of the new funds established, which must be tackled at an early stage, is to establish the modalities of continuous and manageable dialogue and coordination. These will need to be agreed and laid down between the recipient governments and donors acting as 'consortia'. Only thus will it be possible to ensure that the use of financial resources is efficiently geared to the purposes for which it is provided.



CONCLUSION

165. The African food and agricultural crisis poses the biggest challenge of our time to African governments and the international community. The widespread famine and mass hunger which have been plaguing the continent since the beginning of the 1980s threaten to undermine the very fabric of African society. The human suffering and misery which accompany the food crisis are reservoirs of political and social discontent which are dangerously explosive.

166. Africa has immense potential which, if properly harnessed and realized, could adequately feed its present population. The development of such potentials requires a serious commitment and rededication of all concerned and especially the African governments themselves in the drive towards greater self-reliance. This cannot be brought about by yet more resolutions and pronouncements. What is required is action, resolute action and implementation. It is for this that the international community is called upon to provide concerted support to match African efforts.

167. This paper has revealed serious shortcomings in African policies and strategies in relation to food and agriculture. It is emphasized that to achieve greater food self-sufficiency and lay the foundations for agricultural revival, African governments must take the measures indicated in this document. It is recognized that this will be an uphill and painful task but failure to do this could only lead to political catastrophe and possible economic collapse.

168. Central to the measures outline in the document come major policy adjustments and institutional reforms required to accelerate African agriculture. A serious disengagement from past development strategies is called for in order to reverse the presently unfavourable rural-urban terms of trade on the African continent. This must entail striking the right balance between the production of staple food crops and other agricultural

commodities in order to turn the tide of present and future mass hunger on the continent. Perpetuation of colonial legacies and increasing dependency on foods which Africa cannot grow are fraught with serious political consequences. Food habits must therefore be developed in such a manner that they can increasingly be met from local resources.

169. The policy realignments being called for put emphasis on the African small-holder as the key to the continent's economic destiny. The long neglect of African agriculture - especially the small-holder sector - and the resulting mass hunger constitute an indictment of African governments and all those concerned with African food and agricultural development. External assistance must also be properly redirected and geared to the needs of African countries to develop the food and agriculture sector as a basis for general economic development.

170. In the interim, food aid will be required to meet emergencies. However, the crisis facing the continent must be removed through stepped-up food and agricultural production, improved distribution and consumption and the establishment of viable food security. Improved incentive packages, strengthening of research and technology transfer, development and up-dating of manpower and a wide range of services and institutions constitute the best way to achieve production and consumption goals.

171. African food and agriculture must be developed as a matter of political imperative which requires placing the highest priority on this sector and raising food and agricultural issues to the highest political level. The currently miserably low level of public expenditure in agriculture (7% of the total) must be stepped up if the unfavourable and unacceptable production trends are to be reversed. Of course, the variation in inter-country resource endowment means that the achievement of greater self-reliance can only be brought about through increased cooperation in trade and shared development of resources and services between and among African countries.

172. Measures to improve preparedness of African countries are emphasized as the best way of tiding over emergencies. At the heart of this preparedness is the establishment of national sub-regional food security arrangements backed by strategic food reserves and Early Warning Systems. However, in the short to medium term, African agriculture must be rehabilitated now along the lines outlined here. Since this is the only way to lay the foundation for agricultural revival and growth, this must then be followed by the implementation of the long-term structural reforms aimed at bringing about a lasting solution to the African food and agricultural problems.

173. As the Lagos Plan of Action emphasized, African governments and peoples are the arbiters of their own destinies. Therefore, the question of achieving greater self-reliance and providing social justice to the populations rests squarely upon the shoulders of African governments and peoples. This is an inescapable political reality that must be faced now if social and political upheavals are to be avoided.

## APPENDIX

AFRICA: COSTS OF SELECTED AGRICULTURAL INVESTMENT  
ITEMS AT 1980 PRICES

INVESTMENT ITEM	UNIT	UNIT COST (US\$)
<b>I. LAND DEVELOPMENT:</b>		
(a) Low rainfall Land	Hectare	88.00
(b) Good rainfall Land	Hectare	440.00
(c) Problem areas	Hectare	1,056.00
(d) Naturally flooded Lands	Hectare	1,056.00
<b>II. IRRIGATION DEVELOPMENT*:</b>		
(a) Gravity schemes	Hectare	11,000.00
(b) Pump and Tube wells	Hectare	6,000.00
(c) Weighted Average of (a) + (b)	Hectare	9,500.00
(d) Rehabilitation of irrigation works	Hectare	1,760.00
<b>III. ENVIRONMENTAL PROTECTION:</b>		
(a) Flood control and drainage	Hectare	528.00
(b) Reversal of Environmental Degradation	Hectare	50.00
<b>IV. PERMANENT CROP ESTABLISHMENT:</b>	Hectare	1,760.00
<b>V. TRACTORS AND ASSOCIATED EQUIPMENT:</b>		
(a) 45 HP four-wheel tractor	Unit	12,000.00
(b) 3 bottom mouldboard plough	Unit	3,000.00
(c) Offset disc harrow	Unit	3,000.00
(d) Seed box	Unit	1,000.00
(e) Trailer	Unit	2,000.00
(f) Total "Tractor Unit"	Unit	21,000.00

(Cont'd)

INVESTMENT ITEM	UNIT	UNIT COST (US\$)
<b>VI. ANIMAL TRACTION:</b>		
(a) Trained pair of bullocks	Pair	704.00
(b) Draught equipment (set)	Set**	325.00
<b>VII. LIVESTOCK PRODUCTION:</b>		
(a) Additional meat production	Ton	7,040.00
(b) Additional milk production	Ton	528.00
(c) Pig housing	Pig unit	1,000.00
(d) Poultry housing	Bird unit	8.00
(e) Grazing land development	Hectare	176.00
<b>VIII. DRY STORAGE:</b>		
(a) Farm level	Ton	20.00
(b) Village	Ton	90.00
(c) Central warehouse	Ton	150.00
(d) Central upright silo	Ton	300.00
(e) Buffer stock warehouse	Ton	150.00
(f) Buffer stock silo	Ton	300.00
<b>IX. COLD STORAGE:</b>	Ton	2,000.00
<b>X. MARKETING:</b>		
(a) Cereals	Ton	20.00
(b) Fruit and vegetables	Ton	100.00
<b>XI. TRANSPORT***</b>	100 km/ton	120.00
<b>XII. PROCESSING:</b>		
(a) Cereals milling	Ton	125.00
(b) Oilseeds	Ton	180.00
(c) Sugar	Ton	2,323.00
(d) Fruits and vegetables	Ton	850.00
(e) Cotton ginning	Ton	528.00

Source: Various FAO Estimates.

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Special programme of action for the  
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ASSEMBLY OF HEAD OF STATE  
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