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Briefing Paper

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AFRICA'S FOOD CRISIS

Twenty two countries in Sub-Saharan Africa are currently affected by a major food crisis, the latest of several to have affected the region in recent years. This Briefing Paper sets out the background to the crisis, isolating the immediate and long term causes, and goes on to examine efforts made by governments and aid agencies to confront the structural problems facing agricultural production in Sub-Saharan Africa (SSA). It also seeks to explain why some apparently simple remedies do not provide real solutions or cannot be practically implemented.

The Immediate Crisis and its Causes

The current crisis is the result of a marked fall in local food production which countries cannot remedy by commercial imports because of their balance of payments problems. The 22 SSA countries affected to a greater or lesser extent represent some 40% of the region's population. They are: Angola, Benin, Botswana, Cape Verde, Central African Republic, Chad, Ethiopia, Gambia, Ghana, Guinea, Lesotho, Mali, Mauritania, Mozambique, Sao Tome, Senegal, Somalia, Swaziland, Tanzania, Togo, Zambia, and Zimbabwe. The Food and Agriculture Organisation (FAO) of the United Nations estimated the cereal production of these 22 countries in 1983 as 13.9 million tons, 1.2 million tons below the 1982 harvest and 3 million tons below the good 1981 harvest. The gap between needs, and production plus their normal level of commercial food imports was 3.2 million tons.

In some countries food shortages are widespread, while in others only certain regions have been affected.

Drought is a major, but not the sole, cause of the immediate problem. Poor rains in both 1982 and 1983, in the southern African countries, led to the worst food crisis of the century. The Sahel countries (which had a severe drought 1972-74) and the countries in the horn of Africa (affected by drought in 1980) have had more localised droughts in 1983, which in some but not all cases followed very good harvests in 1982; eg. in Somalia and the extreme north of Nigeria. Ghana and the Ivory Coast had poor rains in 1983 and longer than usual dry Harmattan winds causing crop fires.

Not all countries with bad rains have a food problem — the Ivory Coast can afford to buy additional food and in Nigeria the few affected areas can purchase from elsewhere in the country.

In some countries the food crisis arising from a localised drought had been accentuated by other problems. For example, in 1981 it was estimated that there were over 5 million refugees in Africa, concentrated in Ethiopia, Somalia and Sudan. These do not always have access to farm land — many become non-producers in town or

camp. In South Africa, people ejected from the cities have been squeezed onto poor land in the Bantustans.

Civil wars and insurgency affect Mozambique, Chad, Angola, Uganda, Ethiopia, etc., and disrupt government services. Elsewhere, services have become less efficient because shortage of foreign exchange has led to a failure to provide essential imports. For example, some veterinary services have been unable to maintain anti-rinderpest measures, and as a result there have been many cattle deaths.

Shortage of foreign exchange has also accentuated transport problems, causing shortages of fuel and spare parts for vehicles, and making it difficult even to move food relatively short distances from areas of plenty to areas of famine.

Long Term Causes

The present acute crisis comes after many years in which growth in food production has failed to keep pace with rising population (Table 1). In SSA this decline in per capita agricultural production, as it is usually described, has occurred at a time when comparable per capita production in Asia has registered a 15% increase. As Box 1 shows, the statistical basis of the SSA per capita figure is unreliable, and especially misleading if interpreted to suggest that production per farmer has declined. Nevertheless, Africa's performance has been poor compared with Asia's. Some of the reasons given for this are considered in the following section. First the effect of the particularly harsh environmental conditions which confront Africa's farmers must be considered, coupled with the lack of scientific knowledge available to meet this challenge. Additional factors that must be examined are differences in demographic trends and internal policies within Africa, and the impact of world economic conditions, which appear to have hit African countries particularly severely. Finally, there is a need to look at assumptions about the performance of Africa's peasant farmers.

The Environmental Background

Large areas of Africa have an arid or semi-arid climate, with high variability of rainfall from year to year. Historical research shows that in the 87 years ending in 1945, one Sahel group experienced 53 years of food crises. The Akamba in Kenya recall a series of bad seasons in the 1890s that may have halved their population; they survived a fresh series of bad seasons in the 1930s by labour migration and some food aid.

It is disputed whether the droughts of the 1970s and early 1980s are part of a long-term change for the worse, or just

Box 1: African Statistics

1. Population

Population data in sub-Saharan Africa is based on incomplete censuses. In some countries census results have been politically manipulated. Nigeria, which accounts for 25% of the region's total population, has not had an undisputed census since 1952. Its population is now variously estimated at 80-100 million. No national registers of births and deaths exist and age data is unsound. A World Bank Report estimated that 52% of SSA's population was working age, i.e. 15-65, in 1979. The Population Reference Bureau, in a 1982 publication, puts this age group as nearer 45%. Agricultural labour force statistics are particularly unreliable. They are a residual figure, arrived at by deducting those known to be in the 'modern', i.e. wage earning, sectors and those estimated to be engaged 'informally' in trade, crafts, services, small industries etc. from the total population of working age. Those still in education are often forgotten in these calculations. Figures for production per capita, or for production per labour unit, are therefore doubly flawed, based on unreliable production figures (see below) divided by unreliable population figures.

2. Area, Yield and Production

One data source is crops passing through official marketing channels, with an estimate of what is eaten on the farm, sold informally, given to urban relatives, or smuggled. Occasionally these guesstimates are based on rural household surveys, but accurate information on production and marketing in such surveys is particularly difficult to obtain.

In Africa farmers are not required to provide information on their cropped area and only in special projects is satellite imagery available. As a result, official data on the cropped area is based upon an aggregate of the 'eye estimates' of agricultural field staff who rarely have training in such work and often do not have the transport to visit their entire area anyway. Yield estimates are similarly uncertain. Systematic crop-cutting exercises are rarely undertaken in Africa and yield estimates are based upon national averages with allowances made for seasonal variations in rainfall, pests, level of fertilizer use, etc.

With information on area under crop, and yields, so uncertain, it is difficult to have much confidence in production figures as the following estimates for the same crop in the same year indicate.

Nigeria, production in 000 tons, 1980

Source	Maize	Cassava	Groundnuts
Nigerian Govt, 4th Plan, 1981-85, Lagos	1330	6660	180
United States Dept of Ag, World Indices of Agric & Food Production, 1981	1720	14800	400
FAO, FAO Production Yearbook, 1981	1550	9167	600

part of this historical pattern. The typical traditional economy of areas with very variable rainfall was based on a combination of crop growing and semi-nomadic livestock keeping.

People stored food from a good season to meet the risk of a bad season following. The number of livestock was also built up in good years, to provide for sale in disastrous conditions. Farmers now probably store less than they did, because it is normally possible to buy food in bad seasons. In some areas their livestock reserve has been diminished.

Since the disastrous 1972-4 drought, the camel and goat herds of the Sahel have been reconstituted, and sheep are believed to be even more numerous than before, but cattle numbers may still be below 1972-4 levels. In other areas, particularly in the horn of Africa, the livestock reserve has been reduced by wars and raiding.

Drought occasionally penetrates even into areas which normally have adequate and less variable rainfall for crops, causing, for example, the 1914 famine in northern Nigeria and the current crisis in southern Africa.

On the other hand, in equatorial regions, there may be too much rain. In areas which receive 1200-1400mm per year, careful management of the tree cover and the soils is required to prevent erosion and the leaching away of nutrients. In these areas land should only be partially cleared, leaving in stumps and roots to bind the soil and allow rapid regeneration during fallows. Tractors cannot therefore be used, and the presence of tsetse flies prevents the use of oxen and ox drawn implements. In such cases the hand held hoe remains the main agricultural tool, and in these circumstances farmers find it difficult to produce a large surplus of food beyond their family needs.

Traditional farming methods, characterised by long periods of fallowing and movement of herds, have been associated with low population densities. Even today, the very densely farmed areas, such as those found in parts of Nigeria and Malawi, the highlands of Rwanda/Burundi and Kenya, are untypical. The average density of population in SSA is only 16 per km², less in rural areas and as a consequence the costs of assembling and transporting small farm surpluses of grains and roots to the cities are prohibitively high.

Demographic Trends

A high population growth rate is widely regarded as a major cause of the food problem. The SSA population, around 210 million in 1960, was 344 million in 1979, and is currently growing at 2.7% per year. But just as important as overall population growth rates is the distribution of this increase. A World Bank report estimates that urban population climbed from 11% to 21% between 1960 and 1980, with growth concentrated in the largest cities. While in 1960 population exceeded 500,000 in only three SAA cities, in 1980 28 cities in the region had a population in excess of that figure.

According to the same World Bank data, 71% of the age group 15-65 still work in agriculture. But detailed studies cast doubt on this. In Kenya, in one rural district, the 1979 census showed 74% of the age group 15-19 still at school. Everywhere most of the urban migrants are young men. In Botswana, 40% of rural households are without adult men; in some provinces of Cameroon, almost half the men have migrated. Even those who remain seek non-agricultural work; in Senegal one third of rural people have a main occupation outside farming. The situation generally seems to be that a farm labour force qualitatively weaker than in 1960, and numerically not much larger, is failing to feed an urban population growing at 5-10% p.a. though they have, in some cases, increased their productivity.

Table 1: Sub-Saharan Africa: Indices of Cereal Production, Cereal Imports and Population
(including South Africa; excluding Algeria, Egypt, Libya, Morocco and Tunisia)

Year	A Production	B Imports	C B as % of A	D Population
1969/71	100	100	3.2	100
1972	108	—	—	105
1973	89	92	3.4	108
1974	114	50	1.4	111
1975	111	—	—	119
1976	110	97	2.8	120
1977	114	193	5.5	123
1978	120	177	4.8	127
1979	111	242	7.0	134
1980	120	287	7.7	138
1981	139	277	6.5	142
1982	121	318	8.5	147

Source: FAO Production and Trade Yearbooks.

Urban biased internal policies

It is now generally accepted that policies followed by many African governments have contributed to reduced farmer income and incentives, especially overvalued exchange rates favouring imports, heavy taxation of export crops, inefficient state marketing and other agricultural service organisations, subsidised food imports and food aid. Urban incomes, often indirectly derived from agricultural taxation, are substantially above those of the farmer. Cheap food in the cities, where other social amenities and consumer goods are also concentrated, has contributed to the rural-urban migration.

Since most of the cities are ports, or on railway lines built for mineral exports, it is usually cheaper to feed them by imports than to collect the scattered surplus from farmers accessible only by unmade roads or paths. The cheapest imported grains, rice and wheat, sometimes subsidised by the EEC, sometimes free 'food aid', sometimes commercial imports from the USA or from efficient Asian producers, have encouraged a taste for products which cannot easily be locally produced. (Box 2 details traditional staples.) The escalating demand for food imports has added to balance of payments problems of countries already hit by the surge in oil prices. (Table 1). The result is often a cutback in imports essential for agricultural production and marketing (pump fuel, fertiliser, transport spares, tools, etc.).

External Factors — Trade and Aid

While the current food gap can be filled by imports, the real cost of this is presently high. This is attributable to the widespread decline in foreign exchange earnings resulting from fluctuations in demand for SSA exports, over 62 per cent of which remained agricultural commodities at the end of the 1970s. Few SSA economies have any major degree of export diversification and this has become *more* pronounced in recent years. Through the 1970s the net barter terms of trade for oil-importing countries in SSA declined by 1.5% p.a. and this has been sharply accelerated post-1978. While oil-exporting states — such as Nigeria and Gabon — have seen an enormous increase in the unit value of oil exports, in recent years output levels have had to be substantially reduced. One consequence has been the emergence of major balance of payments deficits and

frequently severe debt servicing problems. In this context, the additional burden on the economy through the need to import food — currently comprising over 15% of the value of SSA merchandise imports — is clearly not offset by gains through the agricultural export sector.

The quantity of aid has been substantially higher per head than in Asia. In 1979, excluding Nigeria which received only \$0.3 per capita, the rest of Black Africa received \$22.4 per capita, with Mauritania and Botswana getting over \$100. The percentage of this aid devoted to agriculture has increased. Unfortunately, not all this aid has been productive. There has been a problem of misapplied aid, backed by insufficient research and understanding. In some countries, too much aid tied to specific projects, from too many sources, has competed for the time and ability of a limited cadre of top officials and left countries with unsustainable recurrent costs and insufficient qualified staff for operations and maintenance. Aid has gone via central government officials, while the power and revenue of local government authorities aware of rural needs has declined.

African Peasant Farmers

Contrary to general belief, the African peasant farmer does not lack enterprise. In this century a wide range of new crops have been developed in Africa, particularly high value export crops. Ghana's farmers became the world's leading cocoa producers between 1900 and 1950. In addition, African farmers have shown a willingness to open up new areas for farming, for example, thousands of northern Ivorians are developing food and cocoa farms in the previously uncultivated south eastern forest zones. Given physical security, efficient government services and economic price levels, the capacity to increase production does exist. The significance of differing policies and varying degrees of bureaucratic capacity are well illustrated by statistics for the production of export crops like tea and cocoa (for which more reliable data exists). In Kenya, with an efficient smallholder tea authority, tea production increased by 110% between 1969/71 and 1981, while in

Box 2: Staple Foods of sub-Saharan Africa

The traditional staple foods of the arid and semi-arid regions are millet and sorghum. From the late nineteenth century onwards, maize became the replacement staple in many areas, its higher yield compensating for its higher variability, as the possibility of purchase in the bad years increased. In the humid areas, yams, other roots and bananas are the main rural staples, with rice traditionally grown in some swamp areas and on some wet uplands. Cassava has been increasingly substituted for yams in the humid areas and for grain crops elsewhere, because it is less labour-demanding, tolerates poorer soils, (and therefore can delay fallowing and clearing new fields) withstands drought, and is storable in the field. Dried and processed, it is a portable commodity for urban sale. Like the potato, it needs supplementing with a protein and vitamin enriched sauce to ensure a balanced diet.

Wheat can only be grown with difficulty as a dry season winter crop in irrigated areas. Traditionally, it was confined to northern and southern Africa.

Zaire it rose only by 10% and in Uganda it fell by 75%. During the same period, cocoa production increased by 73% in Ivory Coast, and 2% in Nigeria, while it fell in Ghana by 18%.

However, the ingredients of the 'green revolution' in Asia — suitable new varieties, appropriate fertilisers, reliable water supplies, etc., are not available in most parts of Africa for traditional staples. There have been isolated success stories with maize where special programmes in environmentally suited areas have ensured the availability of inputs of better seed, fertiliser, etc. Two World Bank aided projects in Nigeria showed measured maize yield rises from 234 and 270 kg/ha in 1976/77 to 571 and 1444 in 1980/81. Similar examples can be found in parts of eastern and southern Africa. If the appropriate technology can be found there is no reason why African farmers should not achieve similar results to their counterparts in Asia.

The Outlook

The World Bank, in its 1981 report on Sub-Saharan Africa, called on African governments to remove price distortions, to improve the management of state bureaucracies, to reduce the load on the state by privatising marketing and input supply as much as possible, and to increase the production of the export crops in which they had comparative advantage, in preference to subsidised industrialisation. The Bank has also emphasised improvements in incentives and services for small farmers and the encouragement of individual or group private investment, eg. in small scale irrigation. Some African countries are attempting to follow these prescriptions.

However, as the recent experience of some Western developed countries demonstrates, reductions in the size and cost of state bureaucracies can only be achieved with great difficulty. Leaders have to take account of their salaried power base. In some countries, there are few private enterprise traders ready and willing to take over marketing. Permitted price rises have often been matched by inflation and have not affected production. To be effective, a price rise has to be sufficient either to induce a farmer to invest in new technology (if it exists) or to attract urban labour back to the farm. In Nigeria, many farmers are now buying petrol pumps to replace hand operated irrigation devices for their vegetables; in many cases, however, suitable labour saving tools are not available and the obstacle to increased production posed by labour shortages cannot be overcome.

The World Bank and other donors such as USAID have also emphasised export crop production as a means of earning foreign exchange to finance imports of essentials for agricultural and industrial production. The necessity for all countries to aim for self sufficiency in food has been questioned. Against this, many African leaders, while blaming the drought for the immediate crisis see poor terms of trade as the underlying problem. They therefore want a more rapid rate of industrialisation and seek food self-sufficiency, to reduce their dependence on world trade. This approach was embodied in the 1981 Lagos strategy of the Organisation of African Unity, which, amongst other things, advocated direct investment in the food sector, especially through large scale schemes based upon irrigation and mechanisation where appropriate. Self sufficiency in food (rather than an export led growth strategy) was also accepted as appropriate by the donors of the Club du Sahel, who responded to the 1972-4 Sahel drought through a hastily drawn up programme of irrigation and river control. Nigeria also plunged into irrigation development, using its oil revenues.

But the results of these schemes have been disappointing and the costs substantially underestimated. Production of rice and wheat by intensive methods and at high capital cost in areas remote from markets and with a shortage of skilled and unskilled manpower is proving problematic. In some countries, an effort to feed the cities from mechanised state farms has been made, but organisational difficulties have been underestimated and production possibilities over-estimated.

The problem is to identify the kind of government investment that will stimulate agricultural production. In many cases, the need is for investment, not in agriculture itself, but in complementary sectors of the economy — feeder roads, rural amenities, small industries in market towns and secondary cities, or in agricultural research stations, for example into improved cassava and maize varieties that will fit into African mixed cropping systems.

Meanwhile, people are suffering and dying. Assistance is obviously essential for victims of drought and war, to help countries overcome the immediate crisis. Financial aid is usually the most flexible form of assistance for emergency victims, since it can be used to purchase food, medicines, transport or whatever is required from the nearest source. But the international donor community usually prefers to provide food aid. This has its dangers, but can be used to advantage provided due care is taken. The essential requirement is that it should not make matters worse, for example, by overloading the local administration and transport system, or by adding to the disruption already caused to the farming community by weakening incentives. Similarly, food aid can be a valuable form of assistance to countries that need to import food, but care must be taken that it does not undermine efforts to boost domestic food production either by competing with local produce, or by enabling governments to avoid the consequences of neglecting their agricultural sectors.

Unfortunately, even when governments have the will to change their economic policies to provide incentives to farmers, it takes time for results to show. There will not be large or rapid benefits from improvements in agricultural policy conducted by governments and aid agencies.

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