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COOPERATIVE AGREEMENT ON SETTLEMENT AND RESOURCE SYSTEMS ANALYSIS

DROUGHT AND FAMINE IN AFRICA, 1981-1986:

THE US RESPONSE

by

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This report has an accompanying appendix entitled "The Africa Drought and Famine, 1981-1986: Chronologies of Ethiopia, Sudan, Mozambique, Mali, Kenya, and Botswana."

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PREFACE

In the fall of 1986, the Administrator of the US Agency for International Development (A.I.D.), M. Peter McPherson, asked Clark University to write a chronology and brief history of the African drought and famine, covering the years between 1981-86. The Agency had put forth a considerable effort during the African food crisis and McPherson wanted this effort recorded. Though the Ethiopian famine received the most publicity, severe drought affected much of the continent, the Sudano-Sahelian region, East Africa, and Southern Africa. The US Office of Foreign Disaster Assistance (OFDA) was accustomed to organizing and adapting to crises by working twelve hour days, but this was a different kind of emergency. The duration of the crises could be measured in years rather than in weeks. For OFDA, as well as for A.I.D.'s Bureau for Food and Peace and Voluntary Assistance which managed the food aid, and for many others in the Agency in Washington and in the missions, this meant an enormous sacrifice in terms of hours worked and energy expended.

The Administrator wanted a history written which would chronicle both the factual events leading up to the African food crisis and the exceptional efforts of the Agency in dealing with the situation. Thus, the purpose of this document is both to provide a factual chronology and to tell a more personal story provided by those at A.I.D. who were intimately involved in the emergency operation. This story of A.I.D.'s experience in Africa during the 1980s is incomplete in a number of instances due to time limitations and the inability to interview USAID staff working in the field. Unfortunately, the experiences of those in A.I.D./Washington are generally better represented than the hardships and obstacles of those working in-country.

The approach taken by Clark University in writing this historical overview was to choose a sample of six African countries, representing cases where severe drought led to famine and cases where food shortages due to drought were managed so as to avert a crisis. While all countries experienced severe meteorological drought, the ability of the national or international community to manage the situation varied considerably. This sample of case studies allows for some observations to be made concerning drought management which can be relevant to future crises of this kind.

This document was conceived by McPherson to be an input for a future book. Therefore, this report focuses on presenting an accurate chronology of the facts and a limited number of personal experiences which illustrate the situation in the six African countries.

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July 1987

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Much appreciation goes to the staff at Clark University's Center for Technology, Environment, and Development. This document could never have been completed within the short time allotted without their administrative support. Thanks are due for this support to Mary Jo Beckett, Gloria D'Ascanio, Sharilyn Geistfeld, Jeanne Kasperson, Donna S. Martin, and Walter Zisette, Jr. In addition, Dorsey Burger, Jean McMurray, Juliette Monet, and Eagilwe Segosebe, graduate students in the Department of International Development at Clark, are thanked for assembling the lengthy chronologies of Ethiopia, Mozambique, Mali, and Botswana respectively.

CHAPTER 1. AN OVERVIEW:

DROUGHT AND FAMINE IN AFRICA, 1981-1986

From 1980 to 1985 meteorological conditions in Africa produced rainfall well below normal over large areas of the continent, from Botswana and Lesotho in the south, to the Sudan and the West African Sahel in the north. The series of dry years peaked in 1984, and by 1986 few areas were receiving below normal rainfall.

Although it is difficult to get comprehensive data that allows for comparisons with past years, a number of indicators show that at its peak, this drought was one of the most severe in recorded history for many areas. In the dry regions of Kenya, it was the worst in living memory; for Mozambique, Botswana, and Mali, it was similarly characterized; and in Sudan and Ethiopia, only the drought of 1913 approached in intensity.

Drought in some countries was accompanied by other natural disasters. In Mozambique, the 1980s has seen cyclones, floods, and drought. In a number of East African and Sahelian countries, the end of the drought was followed in 1986 by the threat of locust and grasshopper infestations which were averted in most areas by concerted international and national action.

Drought is a common phenomenon in most African countries; crop production shortfalls resulting from a dry year or two are not unusual and can be managed with stored food or with transfers from one region to another. Multi-year drought can have a cumulative effect when shortfalls in one year are followed year after year by below normal production. This was the case in many African countries between 1981-86. Some signs of the decline in production of staple grains and foodstuffs are indicated in Table 1.1. This table shows one country, Sierra Leone, where food production was lower in 1985 than in the late

Table 1.1

Indices Of Food Production In Sub-Saharan Africa, 1981-1985
(Index: 1976-78=100)

	Total Food Production					Per Capita Food Production				
	1981	1982	1983	1984	1985	1981	1982	1983	1984	1985
Angola	98	101	101	100	101	85	85	83	80	79
Benin	99	97	92	115	126	87	83	77	93	99
Burkina Faso	112	113	107	102	131	104	102	94	87	109
Burundi	106	106	108	101	107	95	93	92	83	85
Cameroon	102	98	96	103	110	92	86	82	85	89
Ethiopia	108	123	111	102	106	102	113	99	89	93
Ghana	101	96	86	106	111	95	89	74	87	88
Guinea	99	106	103	109	119	91	96	92	93	96
Ivory Coast	141	135	132	159	166	120	110	103	120	120
Kenya	105	115	113	100	114	89	93	89	75	82
Liberia	114	115	122	127	129	100	98	100	101	99
Madagascar	101	104	109	108	110	90	90	92	89	88
Malawi	115	124	121	125	126	102	106	101	100	98
Mali	120	120	113	96	117	110	107	99	82	97
Mozambique	111	110	86	93	104	99	96	73	78	84
Niger	116	116	117	77	113	102	99	96	61	88
Nigeria	113	115	101	114	117	99	98	84	93	94
Rwanda	121	127	132	110	126	104	106	105	84	93
Senegal	110	115	83	91	103	97	98	69	72	80
Sierra Leone	97	98	103	96	97	88	86	89	80	79
Rep. So. Africa	121	107	93	102	109	109	94	80	85	90
Sudan	119	98	97	86	132	103	82	78	67	98
Tanzania	110	109	112	112	121	96	93	92	90	94
Togo	116	114	106	121	130	103	98	89	98	102
Uganda	101	108	113	117	120	90	94	96	96	95
Zaire	112	117	119	115	120	100	101	100	95	96
Zambia	105	98	111	110	120	93	84	91	87	92
Zimbabwe	112	101	78	89	124	99	87	65	71	96
Sub-Saharan Africa	113	112	105	109	118	101	97	89	90	94
Sub-Sahara (less Rep. So. Africa)	111	113	106	110	119	99	98	90	90	95

SOURCE: USDA (1986a).

1970s, and twenty-five countries where per capita food production was below that of the late 1970s. Of course, these national totals hide much larger deficits of regional production in the countries concerned. In 1984/85, wheat production in Kenya was 57 percent below average, with average totals based on 1976-78 production levels; in Sudan, sorghum production was 43 percent below average; and in Ethiopia some parts of the country experienced production levels equal to 65 percent of average totals. However, a normal year in Ethiopia is a food deficit year. Nevertheless, the cause and effect between shortage of rain in successive years and shortfalls in production is clear.

At the peak of the drought, food deficit estimates were staggering. In 1984, the food deficit in grains was estimated at 384,000 MT in Sudan; 917,000 MT in Ethiopia; 61,000 MT in Kenya; and, 14,000 MT in Botswana. Total production in Botswana was only 8,000 MT in 1984, 25 percent of the average for the 1981-83 harvests.

Another numerical device for gauging the magnitude of the famine is the total estimated number of people affected (Table 1.2). According to the United Nations (UN), at the peak of the drought, some 30 million people were severely affected, the largest groups were in Sudan and Ethiopia. Apart from the dramatic scenes of the worst of the conditions depicted on television and in newspaper reports, these figures highlighted a food shortage of staggering magnitude, a problem that was global in its import and which resulted in an unprecedented range of responses from much of the industrialized world.

This report defines the dimensions of the drought and famine in six African countries and the nature and extent of the international response to the crisis. We focus mostly on the US response and on the successes and difficulties in mobilizing and delivering resources to the affected areas and people. This chapter summarizes the results of our survey of Ethiopia, Sudan,

Table 1.2

Drought Affected Populations in Botswana, Ethiopia, Kenya, Mali, Mozambique, and Sudan, 1983-1985 (in thousands)

Country	Fiscal Year 1983	1984	1985
Botswana	409.8	1,370.3	880
Ethiopia	2,000	5,000	7,750
Kenya	-	600	800
Mali	-	1,500	1,500
Mozambique	4,000	4,750	2,466
Sudan	40	1,000	8,400

SOURCE: A.I.D. (1987b).

Mozambique, Mali, Kenya, and Botswana and outlines some lessons learned from the US effort. Following this overview, we describe the pattern of drought in Africa during the 1980s. For each of the six countries, we analyze the impacts of the drought on agricultural production and construct a chronology of meteorological, political, and economic events and donor reactions. We also identify some of the most important issues that influenced the US response to each country and evaluate some of the early lessons learned from the in-country experiences.

This material is compiled from volumes of documents and data made available by the Agency for International Development (A.I.D.) and the United Nations (UN), together with a large number of interviews with officials in A.I.D., the US State Department, and the UN. Unfortunately, interviews with

citizens of the affected countries and officials from other bilateral donors were impossible given time and travel constraints. This document primarily represents the US view of the situation, many of the US government personnel interviewed were involved both in the US and in the field.

Table 1.3 summarizes the magnitude of the drought, its impacts, and the presence of "other internal factors" which influenced the situation in each country. It is clear that these "other factors" were important in many places, and that the situation in each of the six countries we analyzed was influenced by internal and external events. Our review of news reports suggests that there was no direct correlation between the intensity of drought, the shortfall of food production, and the severity of the impact on humans. Many other factors intervened, including:

1. Civil unrest.
2. State of the economy.
3. Degree of a country's preparation for drought.
4. Ability of the country and donors to gather credible data.
5. Destabilization attempts of neighboring countries.
6. Internal communication networks.
7. Government organization.

The six countries reviewed in this report fall into two main groups. Mozambique, Ethiopia, and Sudan make up one group where "other factors" greatly magnified the deleterious effects of the drought, while Mali, Kenya, and Botswana form another group where the impact of "other factors" was present but less important.

In Mozambique, Ethiopia, and Sudan, problems of internal communication, domestic conflict, and a depressed economy were all important. In the case of Ethiopia, the Marxist-Leninist oriented government was not viewed favorably by

Table 1.3

Acuteness of Food Crisis in Botswana, Ethiopia, Kenya, Mali, Mozambique, and Sudan, 1981-1986

Country	Prevailing Weather Conditions	Major Effects on Food Production	Other Internal Factors
Botswana	Drought 1981 to 1985; most severe in 1983/84; rain shortfalls of 40-60% common in many areas	Production drops from 54,000 MT in 1981 to 8,000 MT in 1984; government requests and receives aid; famine averted	Effective monitoring and early warning system; decentralized, institutionalized, drought management and donor coordination systems; strong economic structure
Ethiopia	Drought conditions 1981 to 1986; most severe drought 1983/84	Rapid drops in production until 1984/85; crop failure 1982/83; estimated 7 million people at risk in 1984; widespread famine results in high death rate especially in northern provinces	Internal conflict; difficult terrain; poor transportation network; inaccessible and incomplete information; soil degradation; poor agricultural policies
Kenya	Severe drought in 1984 in most important production areas including Rift Valley; overall rain shortfalls 1983 to 1985	Maize production down 63%, wheat 70%, sorghum and millet 60% from 1983/84; considerable cattle mortality; government estimates 1.5 million people severely affected	Established emergency response and monitoring program; employment generation programs; decentralized response
Mali	Drought conditions 1982 to 1985; most severe in 1983/84; rivers at record lows	Significant drops in cereal production 1981 to 1985; 1985 levels 70% of 1981 levels; 1.2 million people affected by drought in June 1985.	Some drought mechanisms in place based on 1973/74 drought experience; backlogs in ports when shipping food; poor agricultural policies

Table 3 - continued -

Acuteness of Food Crisis in Botswana, Ethiopia, Kenya, Mali, Mozambique, and Sudan, 1981-1986

Country	Prevailing Weather Conditions	Major Effects on Food Production	Other Internal Factors
Mozambique	Drought 1981 to 1984; in 1982/83 rainfall as low as 25% of normal levels in central and southern regions; intermittent floods and cyclones 1983/84	Significant decreases in production 1981 to 1984; 20% decline from 1982/83; one million MT cassava lost in 1983 due to drought; 4.7 million people estimated at risk in 1984	Internal strife; poor, export-biased infrastructure; RENAMO insurgencies weaken economy, disables large agricultural zones
Sudan	Drought conditions 1980 to 1985; worst recorded drought in 1984	63% drop in production in 1982 and 57% in 1983 from 1980/81 levels; western provinces severely food deficient; 8 million people at risk in 1984	Few mechanisms for drought management; internal strife; significant refugee population; weak economy; transportation backlogs and barriers; Nimeiri coup 1985

the US; and A.I.D. often had difficulty securing reliable data. In Sudan, the Nimeiri regime experienced increasing domestic political pressure from all sides and was finally overthrown in a coup at the height of the drought. In the case of Ethiopia, there was already an established government committee empowered to collect information and to coordinate activities on drought and famine. In the case of Mozambique, the government relief organization was ineffective until late 1985 when CARE, funded by A.I.D., helped to transform it into a competent agency. Nevertheless, without donor assistance, these committees would not have been able to mobilize the resources and information necessary to combat drought and famine conditions. In Sudan, despite the large semi-arid areas, there is not a tradition of government activities dealing with periodic drought. It has formerly been dealt with on a regional level and by means of traditional systems. This time, however, the scope of the crisis demanded a less fragmented central management effort.

Communications is an essential component of a nation's ability to move food from one area to another, whether it is food aid or marketable crops. In all three countries, terrain and distance greatly hamper all kinds of movement. Deep gorges and steep escarpments divide Ethiopia; the country has the lowest road density in Africa. In Sudan, the lack of roads cuts off large areas during the rainy season and long distances create major logistical problems. In Mozambique, food distribution suffered from an inadequate railroad system and a lack of north-south highways and access roads to remote areas.

Economic conditions in these three countries represented another hindrance to mounting an effective drought response. Sudan had a foreign debt of over $9 billion in 1985 and a severe shortage of foreign exchange. The economy of Mozambique had been paralyzed by an increasing debt burden, labor restrictions in South Africa, and internal strife. Finally, the Ethiopian economy experi-

enced declining production and an unstable international market for its major cash crop, coffee. In each case, there were little or no reserves of convertible exchange to pay for sufficient quantities of imported foodstuffs.

Most importantly, in this list of "other internal factors," Mozambique, Ethiopia, and Sudan were all depredated by ongoing insurgencies. In Ethiopia, the Eritrean Peoples's Liberation Front (EPLF) and other groups had been fighting for political autonomy for nearly two decades. The Ethiopian government was not able to effectively control large portions of the rural population in the north. In Sudan, the Sudan People's Liberation Army (SPLA) and Anyanya II groups in the south had been fighting the national government intermittently for fifteen years; a successful internal coup, combined with the presence of refugees from Ethiopia, Uganda, and Chad all further complicated the drought response. In Mozambique, insurgents supported by South Africa, known as the Mozambican National Resistance (MNR), made the planting of crops dangerous in some areas and impossible in others. These wars magnified the scale of human suffering in the early 1980s.

In each of these three countries, internal conflicts forced donors to provide transport and to work directly with the host governments to ensure that those in need actually received food assistance.

Before the US could confront these impediments to relief in Mozambique, Ethiopia, and Sudan, US decision makers had to contend with the foreign policy aspects of providing food aid and emergency assistance. In two countries, the US was dealing with Marxist-Leninist regimes with whom diplomatic relations were strained. Since it was difficult to get precise information on famine conditions, even on the shortfalls of rain, decision makers in Washington, DC were hesitant to address the severe problems confronting these politically sensitive countries. Mozambique was the first country to show unusual levels

of distress. Requests for emergency aid started to come from the country in 1982. In Ethiopia, although there were alarming reports from the Food and Agriculture Organization of the UN (FAO) in 1982, they were partly contradicted by Canadian and National Oceanic and Atmospheric Administration (NOAA) reports. By 1983, however, there were incontrovertible reports of high levels of need in Ethiopia. In Sudan, there was a considerable USAID presence but given the instability of the government and the remoteness of some affected areas, food-related information was difficult to obtain.

Initially, the US response was insufficient. When problems in Mozambique were first reported to Washington, DC, there were disagreements over the appropriate level of response, be it humanitarian or political. US government policy makers needed to be given clear information on the number of people affected; a credible measure of the degree of distress; and some assurance that the aid could be distributed to affected areas and monitored effectively.

After a period of many months and many cables, US officials received the necessary assurances, and the notion of "The Hungry Child Knows No Politics" became the policy basis of the US response to famine in Africa. That notion was tested in the fall of 1984 when the full dimensions of the crisis in Ethiopia became known. Good numerical data and graphic pictures began arriving in Washington, DC in early October. The combination of data and graphics supplemented by national and international media coverage meant that everyone from the President, the Office of Management and Budget (OMB), the State Department, and Congress, to the general public were aware and ready to support a response. Individual senators and congressional members played a large part in gathering and communicating information.

As the Ethiopian situation became front page news in the US, the massive need in Sudan also became apparent in 1984. The US response was forthcoming,

though it was not accompanied by the high degree of publicity given the Ethiopian effort.

It is interesting to note the variation in the US response in each of these three countries. In Mozambique, USAID was able to work with the government in distributing aid. In Ethiopia, on the other hand, the US was put in the position of pressuring the government to provide transport and, in some cases, to facilitate the implementation of humanitarian policies. The management of the food crisis in Ethiopia was therefore often confrontational. In Sudan, the government was equally unable to deal with the situation and in effect "handed the problem to A.I.D." However, the US political attitude was more sympathetic in this country. A.I.D. worked with the government, but in many ways independent of it, with its tacit approval. The details and implications of these different US relief efforts are spelled out later in this document.

The second group of three countries had a different profile. They had less coverage in the news, although each country was affected by severe drought and major shortfalls in food production. In Mali, the drought of the 1970s had resulted in some improvement in rural marketing and in communication networks, as well as an enlarged USAID presence. Average rates of rainfall had been declining in Mali for approximately 30 years, so the arrival of the recent drought was not a sudden occurrence. From 1982-84, however, the decrease in levels of precipitation and food production resulted in a massive loss of livestock and low grain production totals. Distress and hunger occurred over a wide area in north and north central Mali. The result was "unusual migrations," both by nomads and those populations who are usually sedentary, outside the traditional territory of transhumance to southern Mali, to encampments on urban fringes, and to bordering countries. Government institutions working

with drought and famine were fairly well established in Mali by the 1980s and were able to work with private voluntary organizations (PVOs) and USAID in the distribution of free food as well as the foodstuff channelled through the market. While drought was severe and the logistics of distributing food were difficult, the crisis in Mali was not well publicized. It received much less attention than did the situations in Ethiopia, Sudan, and Mozambique.

Botswana and Kenya are two countries where, apart from the drought, other conditions were more favorable. In both countries, the economy was stable and reasonably strong by African standards. Foreign exchange was available to handle the massive shortfalls in production. In addition, Kenya had a national food reserve. In both countries, the governments were relatively stable and well established, staffed at upper and middle levels with a good cadre of professionals. Both countries also had a reasonably good internal communications network as well as strong planning and information gathering capabilities.

Among the countries' differences are the fact that Botswana had a well-established drought policy which the government could follow as the emergency evolved. Kenya had little experience in this area and had to formulate a policy. However, the 1982 coup attempt in Kenya may have stimulated the government to do contingency planning in order to anticipate any domestic unrest that would result from harsh drought related economic and social conditions. In Botswana, the effects of the drought were felt nationwide. In Kenya, however, while the western and coastal zones were not seriously affected, central and eastern Kenya were suffering from the worst drought in living memory.

Another common factor was a coordinated and well-timed response to the request for aid from the US and other donors. In both Botswana and Kenya, this aid was channelled wherever possible through existing market mechanisms. In Botswana, a well-established food for work program provided food for those

individuals unable to buy it. In Kenya, there was an attempt to differentiate between the people in areas who could afford to buy food at low prices from those who were impoverished and required free food. In both countries, there was distress but little or no loss of life, and a reasonably effective recovery once the rains returned.

There are many lessons to be learned on all sides from the experience of drought and famine in Africa during the 1980s. Not all the lessons can properly be addressed in this overview or even in this document, given our case study approach and the short time available. The following are some initial findings:

1. There are a range of different approaches to famine, depending on the nature and state of preparedness of the country. In general, A.I.D. was responsive to these diverse needs.

2. Information is a vital factor in all circumstances. Conflicting or missing information was the largest single factor in delaying donor responses. An important issue was credible information. If the country did not have an A.I.D. mission or did not have good relations with the US, information was harder to collect and harder to validate. Information is most credible when all parties have confidence in it, or when they all "own" it. Thus in developing information systems such as FEWS (Famine Early Warning Systems), it is important that governments in Africa, together with all donor governments and organizations, jointly collect, analyze, and act on information.

3. It is clear that the US position on food aid was often dependent on the political orientation and status of the African government. In each case, this barrier took vital time to overcome. But perhaps as a result of this disaster, a new method and philosophy of food aid management has been established. These lessons need to be remembered.

4. In the long run, each country needs a drought/famine policy which is understood by the ministries and by the donors. Coordinating mechanisms within governments are vital to an effective response. It is best to establish these mechanisms before a crisis arises.

5. If government systems are not able to provide the coordination needed, a cooperative effort between governments and donors should be maintained.

6. In periods of non-drought, special development efforts should be made to improve marketing, communication, and transportation systems.

7. Special consideration should be given by donors and recipients to the effects of free and subsidized food distribution on cereal markets in drought afflicted areas. In addition, food aid planners should examine the attitudes of host governments and food aid recipients in regard to food assistance and coordinate their distributions accordingly.

To conclude, the US response to the African drought and famine was an immense achievement for all parties involved. Our dominant impression is one of dedicated people working extraordinarily hard to counter the deleterious effects of a prolonged crisis. It would be a tribute to these people and to all Africans if the US and other donors would use the experience gained in the 1980s to improve drought watch systems and to reconsider aid and development policy in Africa. This would better enable African countries still vulnerable to the hardships of drought to follow Botswana's example of drought preparation.

CHAPTER 2. CLIMATE OF AFRICA, 1980-1986

I. INTRODUCTION

After a period of relatively favorable climate in the 1950s and 1960s, the African continent was severely affected by a prolonged drought both in the early 1970s, and again, with even greater rainfall deficiencies in the 1980s. Drought can be defined according to several criteria (Hounan et al., 1975). Meteorological drought, the focus of this report, refers to a shortfall in expected moisture from the atmosphere. An understanding of meteorological drought requires a knowledge of the normal climate and its relationship to general circulation and rain-producing mechanisms. While a thorough description of the climate of Africa is outside the scope of this study, a brief summary of its important features are presented below. This provides the basis from which to view and to describe the drought of the 1980s on an African-wide scale. Drought patterns for the years 1980-86 are discussed as well as mapped. This information, in turn, provides the meteorological basis for analyzing the impacts of the drought in the six African countries examined in this document. A definition of African regions is given to facilitate the description of the climate and the occurrence of the drought. These phenomena can be illustrated on a regional scale.

Africa may be divided into several physical zones. These are:

1. North Africa - Mediterranean and northwest coast.
2. Horn of Africa - Ethiopia, Somalia, and Djibouti.
3. Sahel - Mauritania, Senegal, Gambia, Mali, Burkina Faso, Niger, Chad, and Sudan.
4. Coastal West Africa (Guinea zone) - Guinea Bissau, Guinea, Sierra Leone, Liberia, Ivory Coast, Ghana, Togo, Benin, and Nigeria.

5. Central Africa - Cameroon, Central African Republic, Equatorial Guinea, Gabon, Congo, and Zaire.
6. East Africa - Kenya, Tanzania, Uganda, Rwanda, and Burundi.
7. Southern Africa - Zambia, Malawi, Mozambique, Zimbabwe, and Botswana.
8. Southwest Africa - Namibia and Angola.
9. South Africa - Republic of South Africa and homelands.

II. THE AFRICAN CLIMATIC CONTEXT OF THE DROUGHT

This section briefly outlines the precipitation patterns of Africa and then examines a number of factors which influence rainfall.

Figures 2.1a and 2.1b depict the annual average rainfall and its average departure from normal for Africa. The Congo Basin is the wettest region in Africa (over 1,600 millimeters per year), and has the least variable rainfall regime (the average departure from the mean is 10 to 20 percent). This region was not affected by drought in the 1980s. The average rainfall north, east, and west of the Congo decreases and becomes more variable, with the exception of the isolated, wetter highlands in East Africa. The areas receiving an average of 200 to 800 millimeters experience frequent drought. The driest areas, receiving under 100 millimeters, expect to receive so little rain on the average that the term "drought" has little meaning. Where the average departure of rainfall is over 20 percent, the average rainfall is significantly higher than the median rainfall (the 50 percent cumulative probability), and is not a good guide to agricultural potential. However, in a general discussion of the incidence of drought, departures from the long-term average are an acceptable indicator of the extent and magnitude of drought.

The climate of Africa is the result of a number of influences. The most important, at the regional level of the global atmospheric circulation, is the movement of the Intertropical Convergence Zone (ITCZ) and the subtropical high pressure zones (STH). The ITCZ is the meteorological "equator," a region of unstable, rising air resulting from the convergence of the northeast and southeast trade winds and the thermal convection from the overhead sun. It is generally associated with rainfall as it migrates north and south following the

Figure 2.1a

Climatological Mean Annual
Rainfall Distribution Over Africa

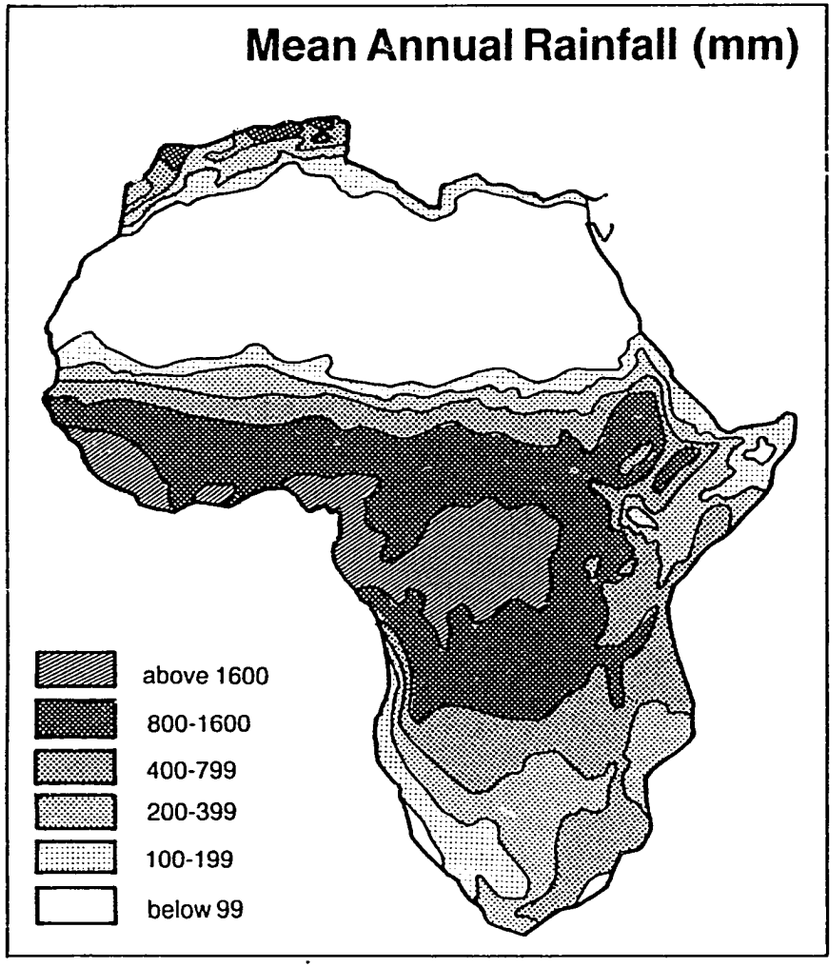
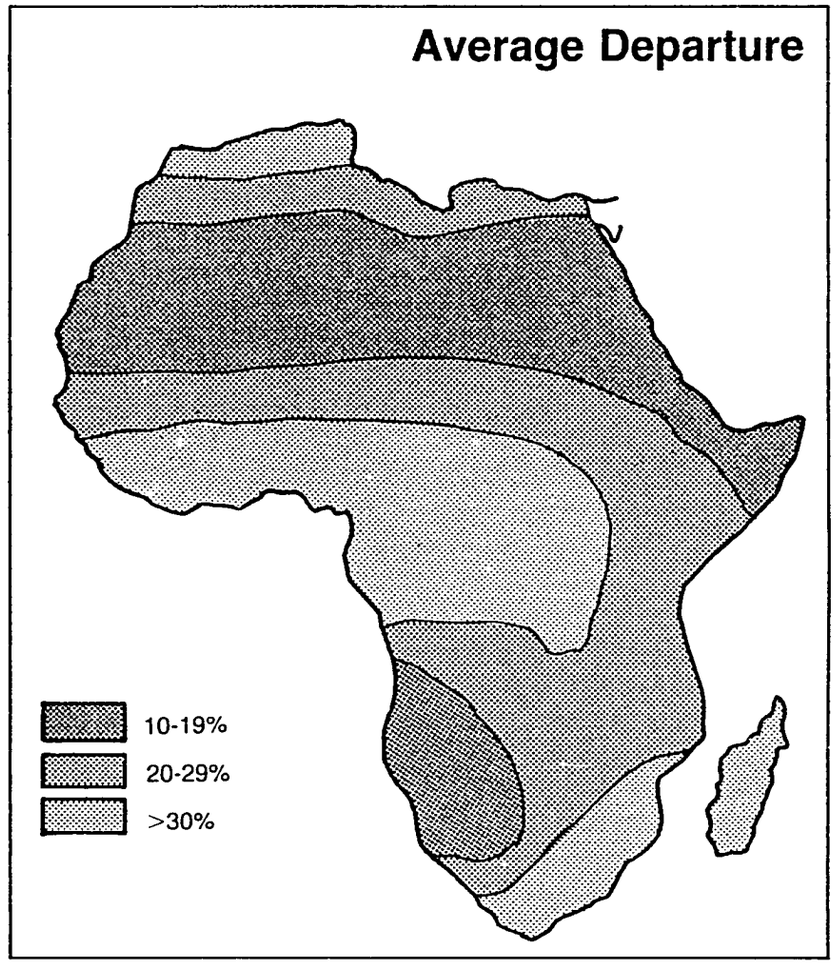


Figure 2.1b

Distribution of the Average Departure
of Rainfall in Africa from the Long-Term
Mean Expressed as a Percentage



SOURCE: World Meteorological Organization (1985).

progression of the overhead sun. The air converging in the ITCZ rises, cools, and moves polewards; and then descends to form the subtropical high pressure zones. The descending air is dry and stable, and inhibits convection and rainfall.

The relative positions of the ITCZ and STHs, at a continent-scale, influence the location and timing of wet and dry seasons. During January, the ITCZ covers the coast of southern West Africa and extends through the center of the Congo Basin and over Southern Africa to the Indian Ocean. By July the ITCZ has moved northward to the edge of the Sahara Desert and northern Sudan. Central Africa, coastal West Africa, and most of East Africa have two rainy seasons per year, corresponding to the double passage of the ITCZ. Areas at the extremes of the ITCZ's migration have one season. Areas located beyond the migration of the ITCZ (North Africa and the tip of Southern Africa) receive rainfall from mid-latitude storms, rather than convective rainfall associated with the tropics.

The distance of a region from the sea or other large moisture sources also influences climate. The further from a moisture source, the less humid are the winds that might bring rain. This is especially apparent in the gradient of rainfall from the West African coast to the Sahara Desert, and in the rain-shadow of Madagascar. Rainfall at inland locations far from large permanent moisture sources may be more dependent on moisture from the local land cover.

At the local scale, aspect and altitude affect the amount and timing of rain. Moisture-bearing winds which are forced aloft are cooled and the water vapor is forced to condense and precipitate. Windward locations receive more rain and sooner in the season than leeward locations, and hence are less prone to drought. The availability of nucleii for condensation of water vapor may also be important.

III. DROUGHT PATTERNS IN AFRICA, 1981-1986

The following sections document and map the extent of drought in Africa from 1980-86. The description of drought draws heavily upon three sources. Maps of percentage rainfall departure from the long-term mean for 1981-84 for sub-Saharan Africa north of the equator were published by Nicholson (1985 and 1986). The second major group of sources consists of reviews of extreme climatic events published in Weatherwise (LeComte 1981, 1982, 1983, 1984, 1985, and 1986), in Climate Monitor or as compiled by the Climate Analysis Center. These maps and short descriptions are highly eclectic. Reporting of events in Africa almost certainly represents a perception of drought, rather than systematic evaluation of climatic data. The reports do reflect an analysis of available data from the Monthly Climatic Data for the World published by the National Oceanic and Atmospheric Administration (NOAA) and the World Meteorological Organization (WMO), and reports from an extensive network of observers. The third group of sources are specific reports and data from individuals and the meteorological services in Africa, including Agrohydromet and institutions such as the Climate Analysis Center.

Drought is defined on the following maps in a fairly rough fashion. Where percentage of annual average rainfall data are available, 20 percent to 40 percent below the long-term average (which varies with each data set) is considered a moderate drought, and over 40 percent below the average is a severe drought. The long-term means for the Sahel are considerably wetter than the average rainfall for the last decade or so. Therefore, some areas are shown as having drought, when in fact they were wetter than the previous few years.

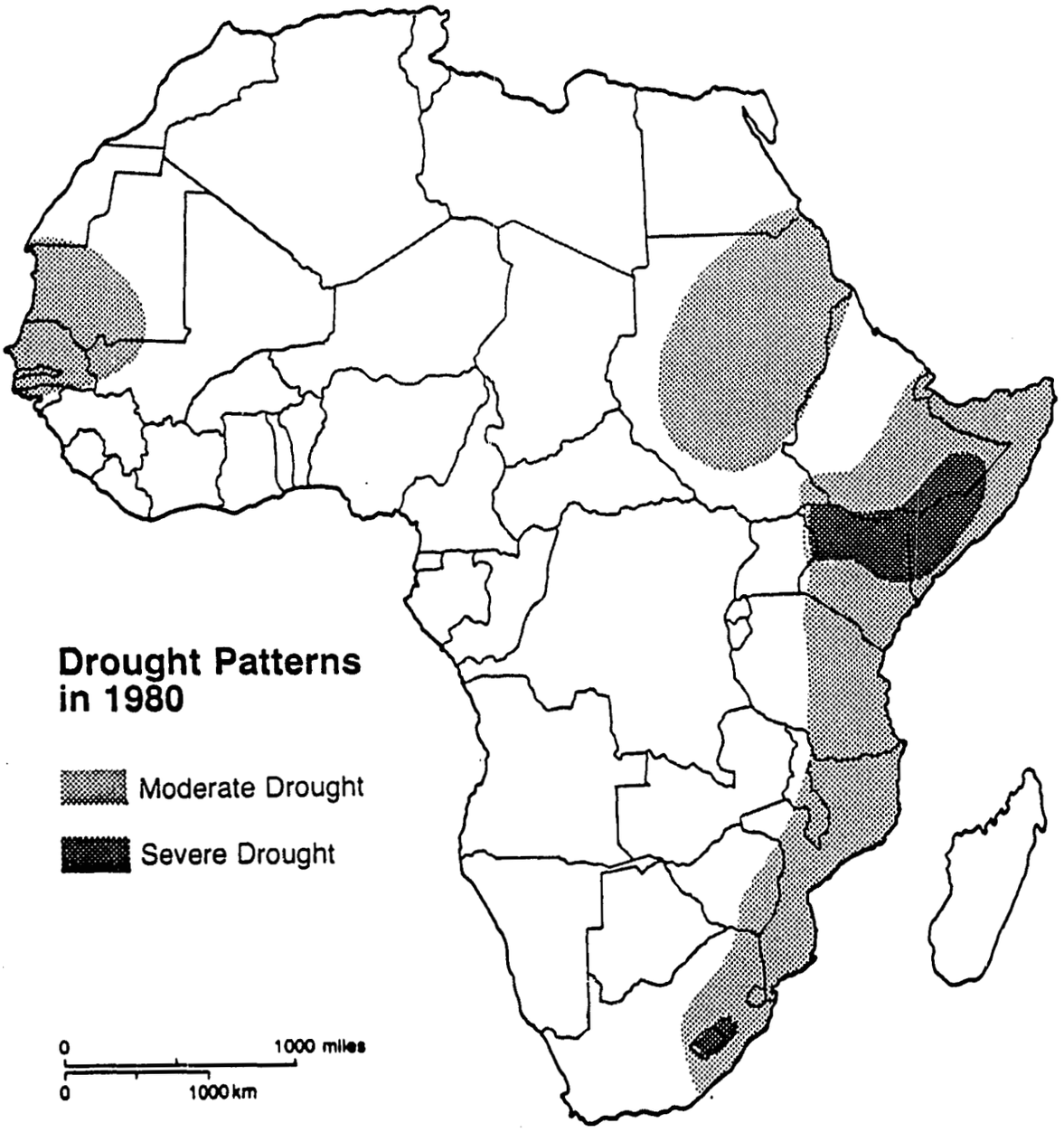
Qualitative data from descriptions of the drought affected areas have been merged with the rainfall departure maps as systematically as possible, using

the reported assessments of intensity. The moderate drought areas may include small areas of average or above average rainfall. In all of the figures, the depicted drought patterns should be interpreted as generalized drought affected areas, rather than a complete review of the rainfall patterns in Africa. Several of the maps suggest that large areas of Africa were unaffected by drought; but in general, there is little or no data for the Mediterranean coast and Central Africa. In some cases, such as during the years 1980 and 1981, drought most likely existed in places not shown on the map, but the international monitoring systems had not yet been tuned to report on Africa; and minor droughts, in terms of area or intensity, went unnoticed. The Sahara Desert has been excluded from the maps of drought patterns. The boundaries of the drought affected areas should not be considered definitive, but are intended to portray broad areas of rainfall deficits rather than actual isolines of rainfall. No attempt has been made to include the wet areas, which might indicate zones of surplus crop production.

A. Drought Patterns in 1980

Moderate drought affected East and parts of Southern Africa in 1980, especially in Ethiopia, Somalia, Uganda, Kenya, Tanzania, Zimbabwe, and Mozambique (Figure 2.2). Somalia was particularly affected, in combination with the impacts of war and a large influx of refugees, while five million people were estimated to be "at risk" in Ethiopia. The pastoral areas of northwestern Kenya and northeastern Uganda experienced severe drought. The extreme western portions of West Africa reported a continuation of the 1970s drought and monthly rainfall frequently less than 25 percent of the average. This caused significant livestock deaths in Senegal, Mauritania, and Gambia. In 1980, Zimbabwe was in the second year of a severe drought; and South Africa

Figure 2.2


Drought Patterns
in 1980
Moderate Drought
Severe Drought
0
1000 miles
0
1000 km

was also affected. The drought in KwaZulu was reported to be the worst in living memory with severe losses to sugar and cattle.

B. Drought Patterns in 1981

In 1981, Europe experienced low temperatures accompanied by snow; this weather also affected parts of North Africa. Moderate to severe drought affected West Africa and the Sahel (Figure 2.3). The autumn rains failed in Morocco; rainfall from September to early December was 10 percent of average and Casablanca reported 228 millimeters for the year against a long-term mean of 426 millimeters. Pastures, water supplies, and hydroelectric production were affected. Heavy rains at the end of the year broke the drought in North Africa. In West Africa the rains were fair and moderate crop yields reported. However, western Senegal, much of Mauritania, northeastern and parts of southern Niger, Chad, and central and northern Sudan continued to experience drought. Moderate drought affected Kenya and Angola, and severe drought was reported in Mozambique, Namibia, and Ethiopia.

C. Drought Patterns in 1982

1. Southern Africa

In 1982 weather extremes throughout the world caused extensive damage; the beginnings of the African drought of the 1980s were apparent, at least in retrospect (Figure 2.4). Drought in the summer rainy season, December to March, affected Zimbabwe, Botswana, and the Transvaal in South Africa. In many places the rains were half of the average. Namibia, Angola, Zambia, parts of Mozambique, and Swaziland were also dry. Crop failures, livestock deaths, water shortages, higher incidences of malnutrition and diseases, and some deaths were reported. Economic losses in the Republic of South Africa were reported between $600 million and $1 billion in crop losses. The total maize

Figure 2.3

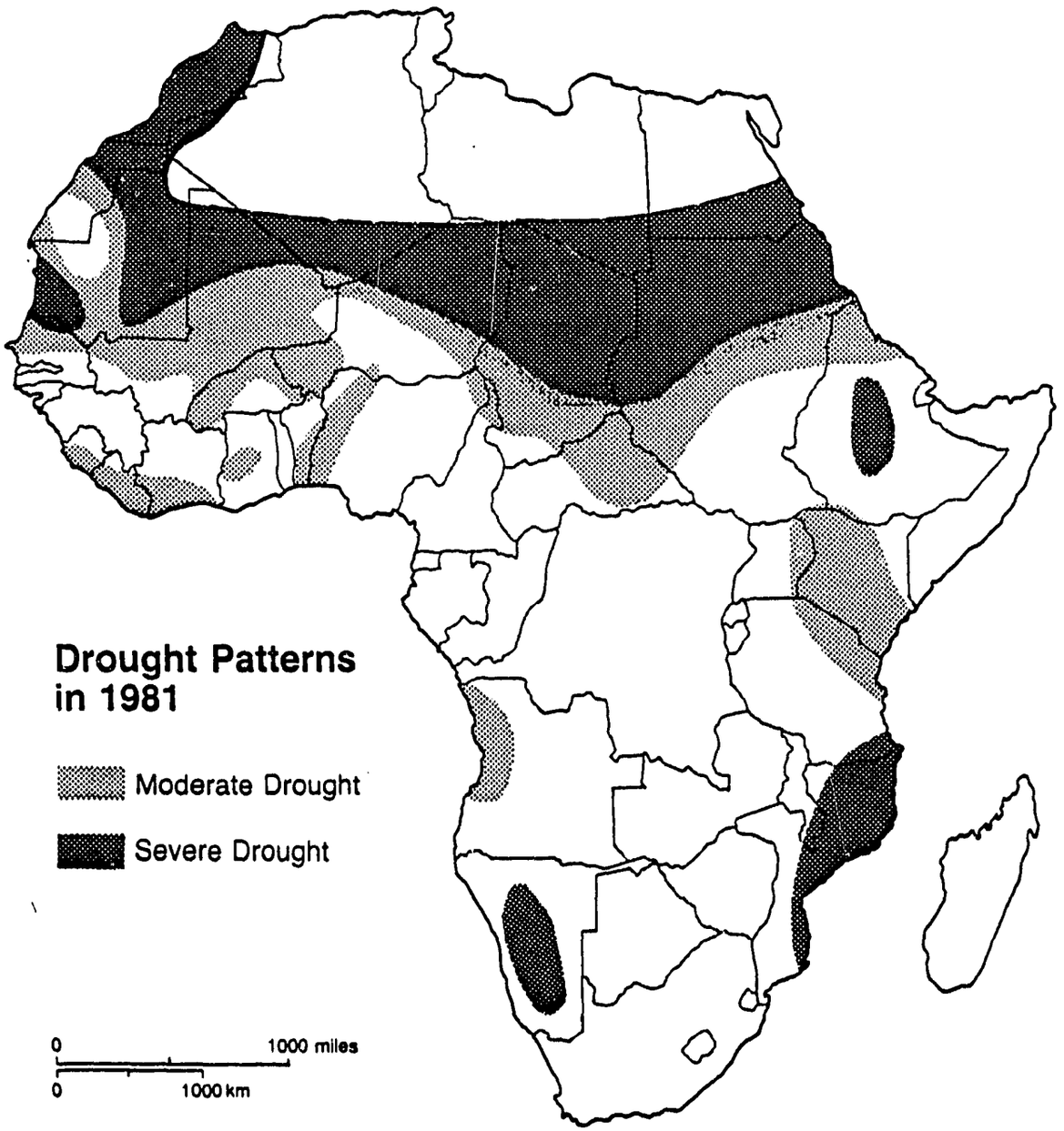
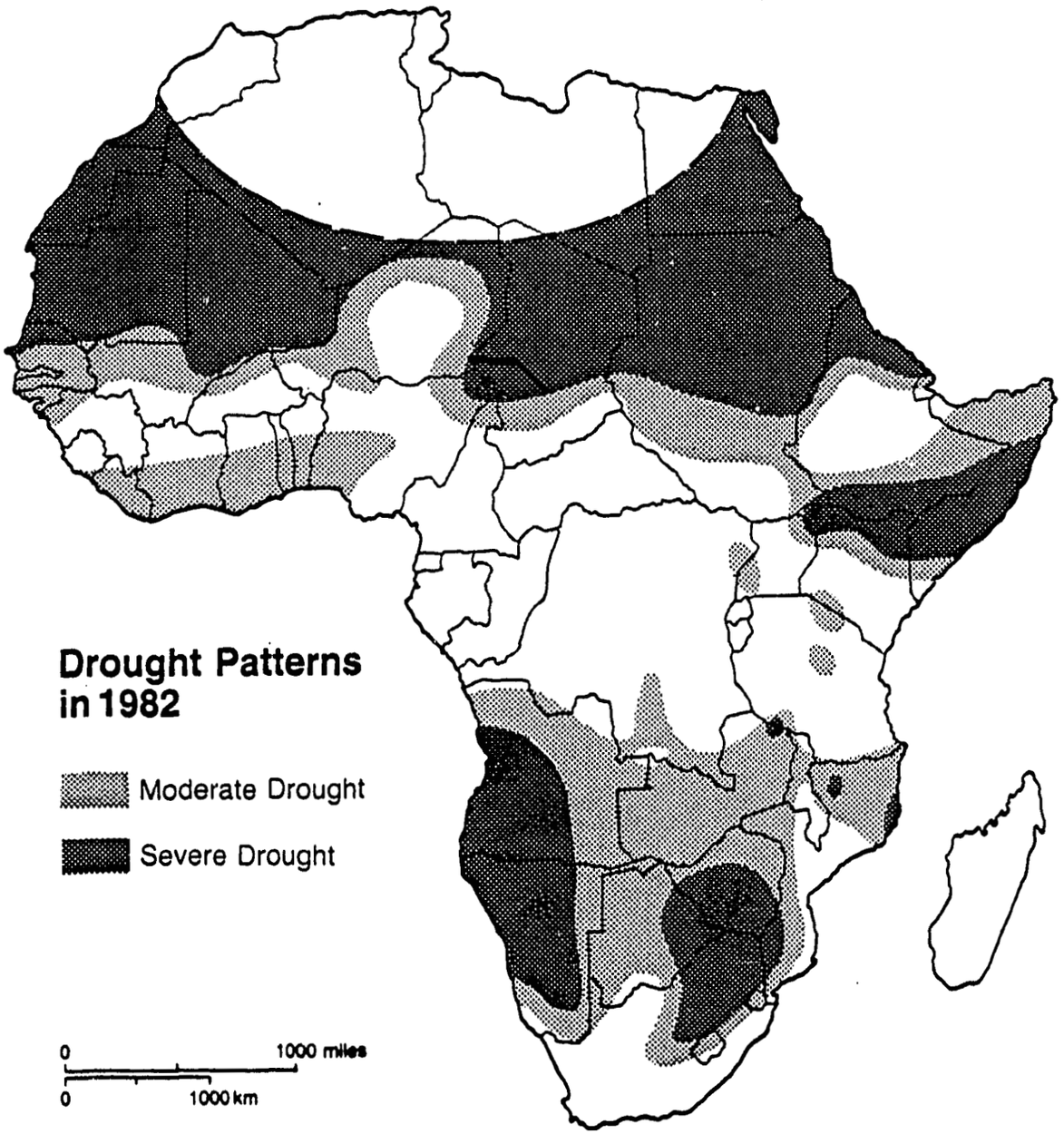

Drought Patterns
in 1981
Moderate Drought
Severe Drought
0
1000 miles
0
1000 km

Figure 2.4


Drought Patterns
in 1982
Moderate Drought
Severe Drought
0
1000 miles
0
1000 km

crop was 40 percent lower than the record 40 million MT of 1981; the 1982 maize crop for northern Natal was a total failure in May. Persistent dry conditions were experienced in Zimbabwe, with low wheat yields but a record maize crop. Livestock was slaughtered, especially in the south due to depleted grazing.

2. East Africa

In central Ethiopia, rainfall was near average, although food production was reduced due to drought conditions occurring early in the year and to socio-political problems. Severe famine was reported in the northern regions. Severe drought affected northeastern Uganda, northern Kenya, the Ogaden, and Somalia.

3. West Africa

The 1982 seasons in West Africa were variable, generally poor, but not as bad as in 1972/73. Morocco, Mauritania, Mali, Chad, and Sudan experienced the worst drought in the region, with a fairly narrow belt of moderate drought in the Sahel zone.

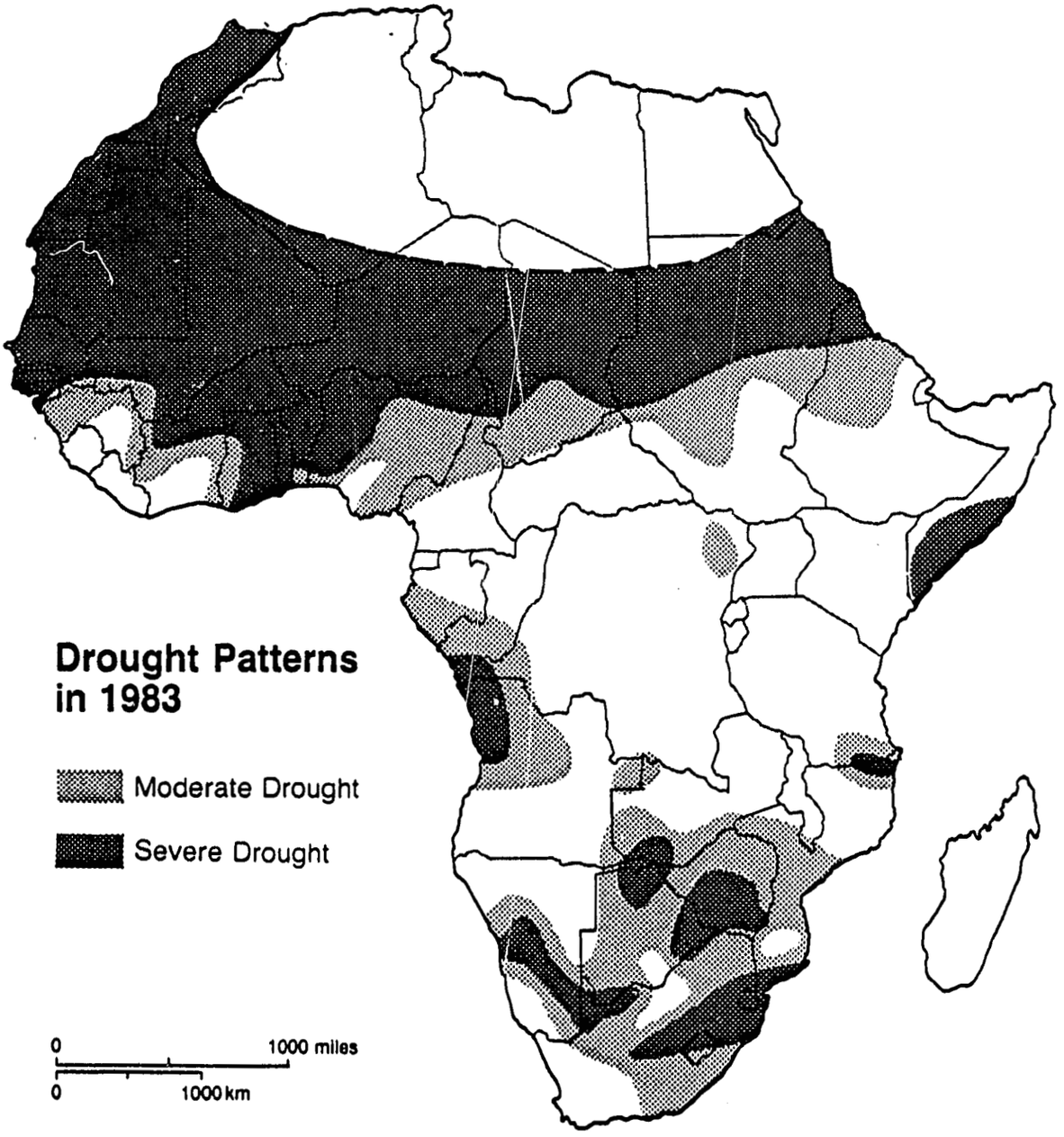
D. Drought Patterns in 1983

During 1983 the magnitude of the record African drought was clear as indicated in Figure 2.5.

1. Southern Africa

The 1982 drought continued in Southern and South Africa. The summer rainy season (December 1982 to February 1983) was less than half of the average in rainy parts of Namibia, Botswana, Zimbabwe, Mozambique, Lesotho, Swaziland, and the Republic of South Africa. Livestock deaths were widespread; and water

Figure 2.5


Drought Patterns
in 1983
Moderate Drought
Severe Drought
0
1000 miles
0
1000 km

restrictions were enforced in Harare, Durban, and Pietermaritzburg. Moza was the worst affected country in Southern Africa, with reports of over four million people affected, thousands dead, and hundreds of thousands malnourished.

2. West Africa

Rainfall was below average in much of West Africa. July to August totals were less than half of the average in southern Mauritania, northern Senegal, and parts of Mali. Crop yields were 30 percent of normal. Coastal West Africa reported rainfalls 20 to 40 percent of average from November 1982 to March 1983. The Ivory Coast, Ghana, Togo, Benin, and Nigeria reported continued drought in the summer and autumn. Chad and Sudan also suffered severe drought. The rains ended early in Morocco which continued to be affected by the previous drought. The drought in 1981/82 caused extreme low flows in the Volta River and low levels in Lake Volta, with considerable economic impacts (Table 2.1). The Volta River drains a river basin of 150,000 square miles, two-thirds of which is in Ghana, but including six West African states. The major source area is in northern Ghana, where the White, Black, and Red Volta join; although rainfall in the Sahel zone of Burkina Faso is also important. The low flows continued in 1984, but improved in 1985. The impact of the low flows on hydroelectric production forced the Volta Aluminum Company, Limited (VALCO) smelter to reduce production and energy consumption to the extent that very little power was supplied to the smelter by June 1983, and production halted completely in November. A national conservation program was introduced in December 1983, although by the end of 1984, VALCO was still not producing at its former capacitiy.

Table 2.1

Hydrological Impacts of the 1980s Drought in the Volta Basin

ITEM	1981	1982	1983	1984
Annual inflow - 10^3 MCM	22.8	12.9	7.6	24.1
Lake storage volume on 31 December - 10^3 MCM	106.9	87.3	75.6	85.7
Lake elevation on 31 December - m	78.8	75.3	73.0	75.1

SOURCE: Volta River Authority Annual Reports (1981, 1982, 1983, 1984).

3. East Africa

Millions of people in northern Ethiopia continued to feel the impacts of the 1982 drought, although rainfall was generally normal in most of the country during 1983.

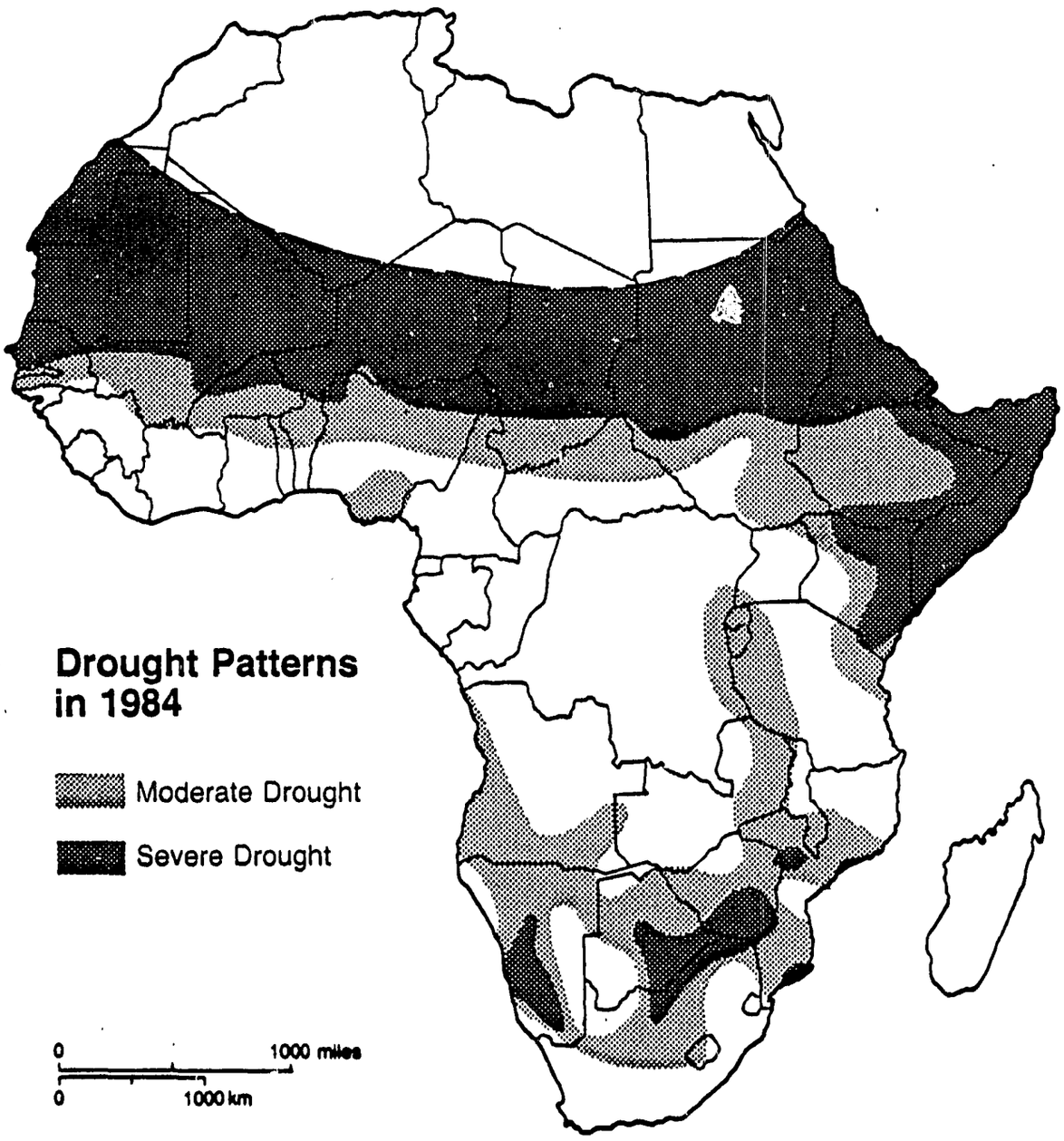
E. Drought Patterns in 1984

African drought was the dominant headline in 1984. Although most of the countries of Africa were affected by drought (Figure 2.6), there were many places with average or above average rainfall. For example, while the long rains (March to May) in eastern and central Kenya were about 25 percent of the average, the rainy season in western Kenya, where most of the maize is grown, was normal. In reading the following account of drought in 1984, the variability of drought, both during the year and in different areas, must be borne in mind.

1. Southern Africa

In Southern Africa, hot, dry weather in January to March, with afternoon temperatures near 100 degrees F, reduced the maize crop by 50 percent. This

Figure 2.6


Drought Patterns
in 1984
Moderate Drought
Severe Drought
0
1000 miles
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1000 km

was the second year of serious crop failure, with Zimbabwe, Botswana, Namibia, the Republic of South Africa, Lesotho, Zambia, and parts of Mozambique affected. The Republic of South Africa was forced to import over one billion US dollars of maize following a harvest below half of normal. The 1984/85 season started well throughout Southern Africa, with rainfall above average in October and November. These rains ended the drought in the region. Malawi was the only country in the region to report above average rainfall and crop production during all of 1984.

The impacts on southern Mozambique were exacerbated by flooding and crop damage from Tropical Cyclone Domoina in January. In April a second storm, Tropical Cyclone Kamisy struck Madagascar. The storm resulted in rainfall of almost 250 millimeters with a 24-hour period.

2. East Africa

Kenya experienced a severe drought during the long rains (March to May) in the central, eastern and northern areas. Nairobi's rainfall totaled about 20 percent of the average. In Ethiopia, the winter was drier and longer than normal, resulting in reduced soil moisture and delayed planting of the spring (March to June or July) season crop, locally known as the "belg" crop. In the northern provinces of Tigray and Wollo, rainfall in February to April was less than 10 percent of the average, and June to July rainfall was less than 40 percent of the average. The belg crop was an almost total failure. Dry weather in the first rainy season also reduced crop yields in Somalia, Tanzania, Uganda, Burundi, Rwanda, and eastern Zaire.

The second season in most of East Africa was above average with abundant rainfall in October and November. Shortages of seed and localized flooding reduced crop yields somewhat, but for the most part the 1984 drought had ended.

Ethiopia experienced heavy rains during the month of October, reaching over 300 percent of the average level in the north and in Addis. The rains continued into November ending the drought, but without mitigating the food shortages. Excessive rains in late 1984 damaged crop prospects in Rwanda.

3. West Africa

The Sahel experienced hot and dry weather in July and August. While August is usually the peak of the rainy season in the Sahel, the rainfall for this month in 1984 was the lowest in 40 years in many areas. From July 1983 to March 1984, rainfall was below half of the average. In Sudan, 1984 was the driest year. Crop losses were acute in Mauritania, central Mali, and Niger. Northern Senegal, Cape Verde, northern and eastern Burkina Faso, northern Nigeria, western and central Chad, and central Sudan were also affected; Chad was concurrently impacted by armed conflict. In Sudan, June and September were dry in the east-central region, as well as in Darfur and Kordofan. The southern areas of West Africa were wetter in the main 1984 season.

Heavy rainfall in September ended the drought in southwestern Burkina Faso, but was too late to affect production in the northern and eastern areas. The far north reported one of the worst droughts on record. The same rainstorm brought about 400 millimeters in Cape Verde, which ended the drought there; although the flooding caused 31 deaths. Late season rainfall occurred throughout most of the Sahel, benefiting water supplies, grazing, and late-planted crops. Heavy rains fell in September in southwest Sudan, but not in the major cereal producing areas.

The 1982-84 drought continued to have major hydrological impacts. From 1951 to 1980, the 30-year period used to define the current climatic normal, runoff of the Senegal River at Bakel averaged 710.6 cubic meters per second.

The runoff in 1983/84 was only 30 percent of the 30 year mean (Table 2.2). River flows in 1985/86 indicated wetter conditions in the Sahel, but still far below the 30-year average.

Table 2.2

Mean Annual Runoff and Maximum Height of the Senegal River at Bakel

Year	Runoff (cu.m./s)	Max Flood Height (m)
1971	598	10.72
1972	263	6.24
1973	361	8.38
1974	760	11.91
1975	602	10.14
1976	470	6.96
1977	324	7.06
1978	523	7.87
1979	301	6.20
1980	388	8.66
1981	424	7.71
1982	305	6.95
1983	218	4.92
1984	216	4.31
1985	355	7.28
1986 *	330	7.87

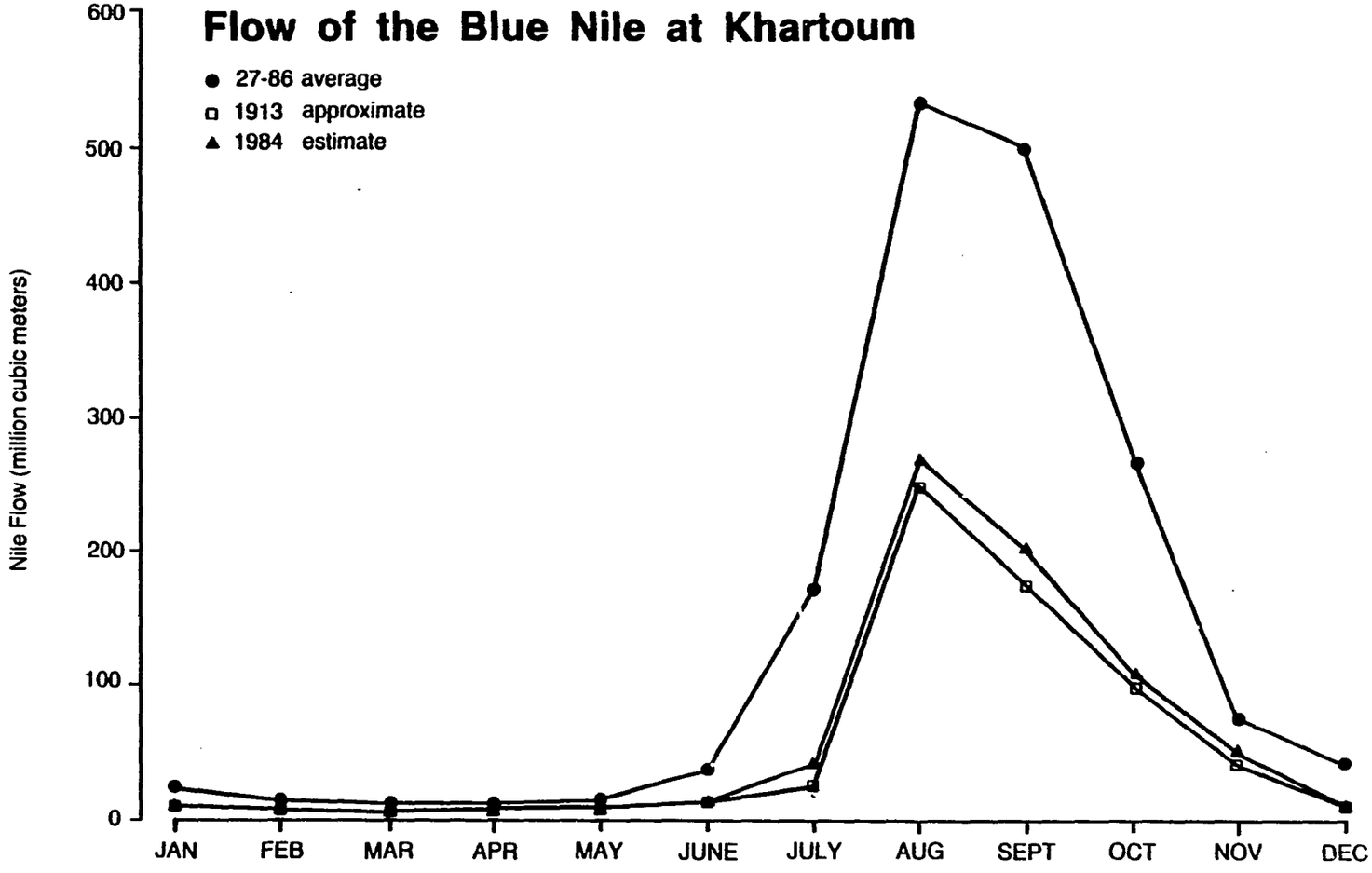
SOURCES: Faure and Gac (1981); personal communication from Gac (1987).

* Estimated.

NOTE: Data are for the hydrological year beginning in May of the year shown.

The Nile was also affected by the drought in Ethiopia and Sudan. The 1984 flows in the Blue Nile at Khartoum approached the record low flow of the year 1913 (Figure 2.7). Values for the hydrological year beginning in August for the main Nile at Aswan and the Blue and While Nile are presented in Table 2.3. The 1984/85 discharge was 65 percent of the average for the 1970s. The peak

Figure 2.7



SOURCE: D'Silva (1985).

flow in August was only slightly above half the 1927 to 1966 average for the month. The 1984 Nile flood was reported to be the lowest in over 350 years.

Table 2.3

Discharge of the Main, Blue and White Nile River

YEAR	ASWAN	BLUE	WHITE
1971/72	90.297	50.966	35.790
1972/73	64.931	31.066	29.450
1973/74	90.129	57.041	30.420
1974/75	95.358	50.335	33.160
1975/76	116.836	57.492	35.180
1976/77	80.482	42.811	30.760
1977/78	90.659	53.367	32.710
1978/79	85.470	46.869	33.850
1979/80	69.860	37.554	32.230
1980/81	79.616	42.220	30.560
Average Annual Flow 1971/72-1980/81	86.364	46.972	32.411
1981/82	81.898	42.945	30.700
1982/83	64.903	34.327	27.200 *
1983/84	73.189	39.964	31.420 *
1984/85	56.400 *	29.607	31.46
1985/86	80.000 *	45.195	30.15

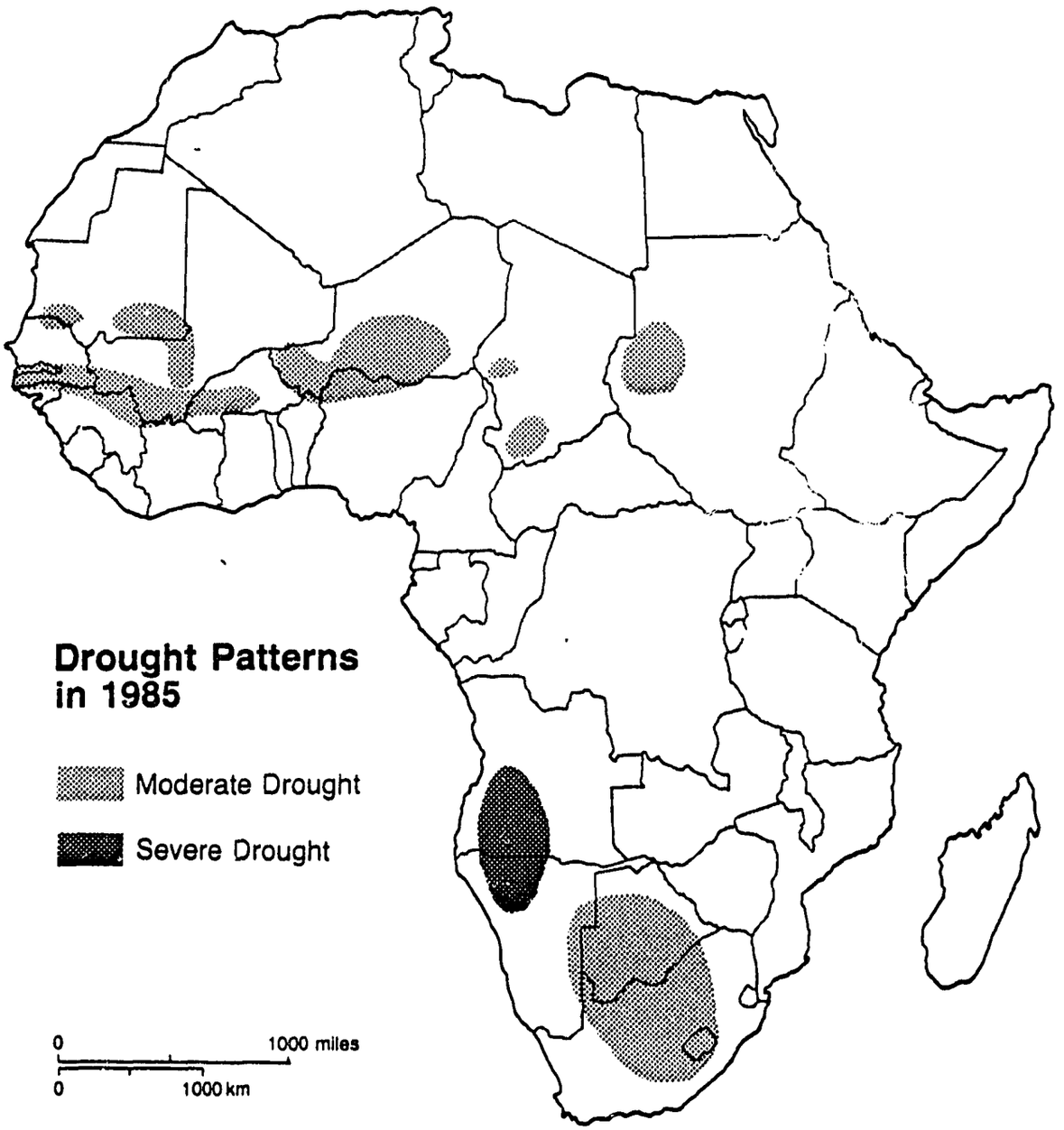
SOURCE: Personal communication from Ali, Ministry of Irrigation, Sudan (1986).

* Estimated values.

F. Drought Patterns in 1985

In 1985, seasonal rainfall continued to be below the long-term average in the West African Sahel, from Cape Verde and Senegal to Chad and Sudan (Figure 2.8). Cape Verde was again affected by severe drought, and where only early planted crops yielded. The maize crop there was 20 percent of a good

Figure 2.8

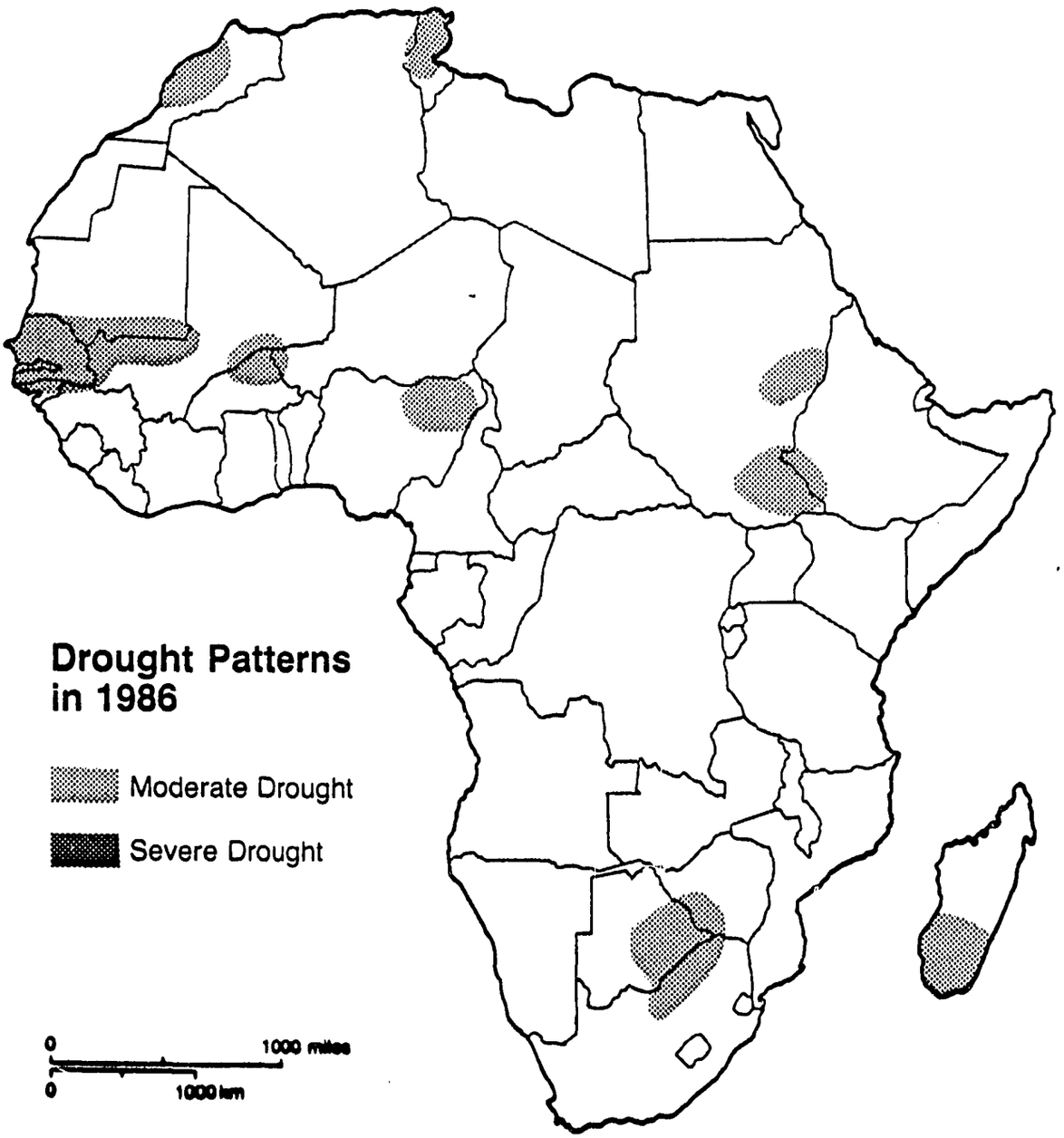

Drought Patterns
in 1985
Moderate Drought
Severe Drought
0
1000 miles
0
1000 km

year and below the 1984 production. Drought affected the southwest and southeast of Mauritania, far north of Senegal, south central and far east of Niger, central Mali, the Sahelian zone in Chad, and northern Darfur in Sudan. For much of the Sahel, rainfall was 200 millimeters below average. With these exceptions the rest of West Africa reported generally good crop yields (particularly for early varieties of rainfed crops), with rainfall regularly spaced throughout the season. Pastures began to recover as well. Flood levels in the Senegal, Gambia, and Niger basins were far less than in good years, but well above the previous year, and flood recession crops benefited. However, the wetter weather in 1985/86 contributed to a plague of locusts which threatened large areas of the Sahel. Moderate drought persisted in Botswana and Southern Africa, and severe drought was reported in Angola and Namibia.

G. Drought Patterns in 1986

Few places reported drought in 1986; the rainy seasons were generally average or above average. Moderate drought occurred in local areas in the Sahel, eastern and southern Sudan, part of North Africa, eastern Botswana, and southern Madagascar, where the rice crop was affected (Figure 2.9).

Figure 2.9


Drought Patterns
in 1986
Moderate Drought
Severe Drought
0
1000 miles
0
1000 km

IV. CONCLUSION

From 1982-84, Africa experienced widespread drought, as measured by a marked deficiency of rainfall from the long-term average. In West Africa the last two decades have been marked by a persistent decline in rainfall, which makes the importance of the 1980s drought even more critical. In some places such as Kenya, drought was short-lived, although intense. In most of Africa, however, drought occurred for extended periods of time, or recurred several times during the 1980s.

CHAPTER 3. COUNTRY SPECIFIC ANALYSES: THE METHODOLOGY

I. INTRODUCTION

The remainder of this report focuses on the drought and famine in six African countries; country-specific analyses were done in order to permit the African-wide generalizations given in the overview. Drought in Africa in the 1980s varied at both the regional and local scales. For example, Southern Africa experienced drought earlier and for a longer duration than the Sudano-Sahelian region, and the duration and intensity within countries was dependent in part on latitude and topography. The spatial variation of famine can be better explained by using the country as the unit of analysis. An understanding of why famine was more severe in some areas than in others, or why it was sometimes managed and other times reached crisis proportions, is best revealed by examining the political and economic characteristics relevant to the specific countries.

The six countries chosen for analysis include Ethiopia, Sudan, Mozambique, Mali, Kenya, and Botswana. Of all the drought affected countries in Africa, Ethiopia, Sudan, and Mozambique experienced the worst famine in terms of the numbers of people affected and deaths due to starvation. And yet, if severity of meteorological drought is compared with severity of famine, the correlation is not high. Severity of drought measured in terms of intensity, duration, and land area would show Mali to be most affected, followed by Sudan and Botswana.

The political situation in Ethiopia, Sudan, and Mozambique was a significant factor contributing to the severe food crises in these countries. Cumulative drought combined with internal conflict was also generally accompanied by economic problems. This combination of factors existed in all three cases of

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severe famine: Ethiopia, Sudan, and Mozambique. Because these political and economic factors are country-specific, the methodological approach was to focus initially on the country and then on the African continent as the unit of investigation. The introductory overview represents a synthesis of the chapters to follow.

II. THE COUNTRY SPECIFIC ANALYSES

The country-specific analyses are presented in the following order: Ethiopia, Sudan, Mozambique, Mali, Kenya, and Botswana. The countries of most severe famine are presented first and then followed by Kenya and Botswana, where drought was severe but the situation was well managed and, therefore, a crisis was averted. These latter two countries were chosen to portray successful drought management, to clarify why drought did not always result in famine.

The analyses begin with a synopsis of the salient characteristics of the drought and famine crises in these countries, and offer background information explaining the context and constraints of the international and national relief efforts. While the responses of all donors and the host government are reviewed, the emphasis is on the US emergency operation. The second section entails a survey of the impacts of drought on the national economy, agricultural production, and movements of people. The third section is a summary chronology, outlining the major events leading up to and associated with the crisis and the recovery. Section four is an analysis of food aid pledges and deliveries by the US and other donors; while section five is a synthesis of all material pertaining to the specific country. This section attempts to assemble the facts and to understand their implications; it questions why events occurred as they did and what lessons were gleaned from the experience. The last section

briefly relates the achievements of the US relief effort in each individual country. There is also a supplemental appendix of factual chronologies for the six countries which represent the events leading to the crises; they also chronicle the local, national, and international response to the situation.

Two additional issues need to be explained in order to understand the analyses which follows. One concerns food aid and the other the country-specific chronologies.

III. FOOD AID: DEFINITIONS AND ENABLING LEGISLATION

The fourth section on the food aid situation is investigated in order to survey the major donors and their commitments in each country. The ability of the recipient's institutional structure to administer and distribute food aid is reviewed and an examination is made of the discrepancy between pledges and deliveries, in particular the delays. In order to understand the US system of food assistance, the legislative authority for giving food aid is reviewed below.

A.I.D. distinguishes emergency food needs from regular program food needs. Other donors, such as the US Department of Agriculture, FAO, and PVOs, focus on overall need. Emergency food aid is donated to populations considered to be "at risk" by the African Bureau's FEWS. Recipients are often required to contribute financially toward food acquired under the regular food program.

While FAO relies on assessing shortfalls in crop production to estimate food needs, A.I.D. asserts that this technique neglects important sources of food: commercial food imports, interregional trade, and food stocks.

The Agricultural Trade Development and Assistance Act of 1954, as amended, PL 480, provides several methods of providing food aid assistance (Table 3.1).

Table 3.1

Legislation to Enable Famine Relief Efforts in Developing Countries

Legislation	Uses	Key Features/Authorities
PL 480 Title I Title II	Commodity sales Donation of commodities	Concessional commodity sales to developing countries. Commodity donations to needy people through US or foreign private voluntary agencies, bilateral programs or multilateral agencies, including the WFP. Also permits inland transportation when there are "extraordinary relief requirements."
Title IV Section 403	Discounted commodities	Discounted prices of CCC stock in inventory.
Agricultural Act of 1949 - Section 416	Donation of commodities	Includes any commodity in stock or purchase by CCC (e.g., dairy, grains, offseeds).
Food Security Wheat Reserve Act of 1980	Donated wheat	Up to 300,000 MT of 4 milliom MT reserve may be donated in any FY for use under Title II, PL 480 to provide urgent humanitarian relief. The emergency reserve was first used in late 1984 for African famine relief.
PL 98-107 Section 101	Commodity sales	Waiver of any price restrictions regarding minimum price at which a commodity may be sold.
Foreign Assistance Act Chapter 9, Part 1 Section 49	Relief and rehabilitation to alleviate human suffering from natural and man-made causes	"Notwithstanding any provision of this or any other Act."
Section 492		Up to 50 million in any FY may be borrowed from development assistance accounts.
Section 493		The President can appoint a Special Coordinator for International Disaster Assistance to coordinate responses to foreign disasters among US agencies and between the US and other donors. One responsibility of the Special Coordinator is to formulate and update contingency plans to provide disaster relief.

Table 3.1 - continued -

Legislation to Enable Famine Relief Efforts in Developing Countries

Legislation	Uses	Key Features/Authorities
Chapter 1, Part 1 Section 101	Development for humanitarian relief of hunger	"Congress reaffirms the traditional humanitarian ideals of the American people and renews its commitment to assist people in developing countries to eliminate hunger..."
Section 103	Development in agriculture, rural development and nutrition	Furnish assistance to "alleviate starvation, hunger, and malnutrition."
Section 104	Development in population and health	Assistance for health and disease prevention, and safe water and sanitation.
Section 106	Reconstruction, early warning	"Programs of reconstruction following natural or manmade disasters and programs of disaster preparedness, including the prediction of and contingency planning for natural disasters abroad."
Part III, Section 610	Transfer of funds between accounts	Up to 10 percent of funds appropriated for any FAA account may be transferred to any other account. The account to which funds are transferred cannot be increased by more than 20 percent.

SOURCE: Siegal, et al. (1986a).

A.I.D. is responsible for the overall administration and management of the PL 480 Title II program. This section of the 1954 act authorizes donations of food principally for humanitarian purposes. Such donations are used to mitigate the immediate effects of famine and alleviate the causes of the need for food assistance through programs for malnourished children and adults under Food for Work projects. Title II emergency food is provided on a government-to-government basis, directly to PVOs for transport and distribution, to WFP for use in its program, as well as bilaterally. Requests for emergency food aid are developed in the needy country by the implementing program sponsor together with the in-country A.I.D. mission. They are then reviewed by A.I.D.'s Bureau for Food for Peace and Voluntary Assistance, which generally requires two to three weeks from receipt of request. The Working Group of the Food A.I.D. Subcommittee of the Interagency Development Coordination Committee gives final approval before the Department of Agriculture is requested to acquire and ship the commodity.

Titles I and III of the 1954 act provide for concessional commodity sales designed to meet the food deficit in urban areas and to generate counterpart funds for development purposes.

Funds to provide assistance are appropriated annually by Congress. In exceptional cases, Congress has made specific supplemental appropriations to address specific relief needs.

IV. CHRONOLOGIES

The lengthy chronologies in the supplemental appendix represent the sum of political, economic, cultural, and meteorological events which led up to the crisis as well as the details of the response by the US, other donors, the host

government, and the affected people. These chronologies are sizeable collections of qualitative and quantitative data, in essence, histories of drought and famine between 1981-86 in specific countries. They are constructed from excerpts from various A.I.D. and UN documents, academic books and articles, as well as interviews with A.I.D. and UN officials. As quotations, the text of the chronologies reveal different perceptions of events by various agencies and individuals within agencies. Thus, it is a history without the single bias of a particular historian, but rather told from the view of many people.

Ethiopia

Ethiopia
International boundary
Province boundary
National capital
Province capital
Railroad
Road
0 75 150 Kilometers
0 75 150 Miles
Port Sudan
SAUDI ARABIA
Red Sea
ERITREA
Ak'ordat
Asmera
Massawa
Tesenay
Tekeze
Adwa
Mek'elê
TIGRAY
SUDAN
GONDER
Gondar
YEMEN (SANA)
YEMEN (ADEN)
Assab
Aden
DJIBOUTI
Djibouti
Gulf of Aden
WELO
Dessê
GOJAM
Debre Mark'os
Blue Nile
WELEGA
Nek'emtê
SHEWA
Addis Ababa
Dire Dawa
Hārer
Jijiga
SOMALIA
Bazrefa
HĀRERGĒ
Baro Wem
Gerê
ILUBABOR
Jima
ĀRSĪ
Asela
Bongê
KEFA
Uma
Awasa
Goba
Arba Minch'
GAMO GOFA
Kibre Mengist
BALĒ
SIDAMO
Dawa
Dolo
UGANDA
KENYA
INDIAN OCEAN
Mogadiscio
Boundary representation is not necessarily authoritative

CHAPTER 4. ETHIOPIA: THE DROUGHT AND FAMINE, 1981-1986

I. INTRODUCTION

The attention of the world focused on Ethiopia after the BBC publicized the severity of famine in late 1984. This was not the first word of a food crisis in Ethiopia; reports by FAO, the Government of Ethiopia (GOE), the Canadian International Development Agency (CIDA), and A.I.D. were made in 1982 and 1983 concerning rain and crop failures. While FAO announced that the problem was critical in mid-1984, they were unable to highlight the seriousness of the problem to the world. According to a number of A.I.D. officials, the reports were inconsistent or unsubstantiated. The lack of clear reliable information was not the only hindrance to initiating an assistance program; resolving the political issues involved in providing aid to a Marxist-Leninist country with strong Soviet ties was also essential. President Reagan supported the adopted policy of the "Hungry Child Knows No Politics." With both executive and popular support, A.I.D. implemented an aid program which provided approximately 40 percent of the total emergency food for Ethiopia. The most salient characteristics of the drought and famine in Ethiopia are presented below:

1. Ethiopia had a history of drought and famine, and well-developed institutions for dealing with it. According to the International Disaster Institute (IDI), Ethiopia's Relief and Rehabilitation Commission (RRC) has a staff of approximately 10,000.

2. Conflicting information from a number of different sources coupled with a lack of trust of the GOE's reports resulted in delays in the US response.

3. The politics of giving assistance to a Marxist-Leninist government with close ties to the Soviets was a critical constraint to the US relief effort, both initially and throughout the emergency.

4. The media was crucial in publicizing the African-wide crisis and facilitating the US response.

5. US-Ethiopian relations were characterized by mutual distrust, necessitating a number of negotiations and sometimes confrontations which tended to hinder the relief effort.

6. The hardest-hit provinces were in the northern guerrilla-controlled areas and were difficult for relief workers to reach.

7. The terrain of Ethiopia, the poor infrastructure, and an unwillingness on the part of the GOE to assign famine relief a higher priority, all exacerbated the difficulty of distributing food.

To fully appreciate the disaster in Ethiopia, it will be useful to examine the environmental and cultural context in which it took place and the constraints this context engendered for the relief effort.

The environmental context of the Ethiopian crisis will entail a discussion of topography, climate, and vegetation; while the cultural context will include an examination of the national economy, national and international politics, and ethnic diversity.

A. The Environmental Context

The central core of Ethiopia is an enormous highland plateau region. The southern half of the country is bisected by the Rift Valley and occupied by several large lakes. At the latitude of Addis Ababa, the western wall of the rift turns north and runs parallel to the west coast of the Arabian peninsula, leaving a wide plain between the escarpment and the Red Sea coast. This plain gradually narrows until, north of Massawa, it meets the foothills of the escarpment very close to the coastline. The eastern wall of the rift turns east at the latitude of Addis Ababa, forming an escarpment above the Afar Plains. These escarpments are usually abrupt, rising from the lowland plain below and are broken at only one point near Addis Ababa. It is at this point

where the Awash River descends from the rim of the plateau that the railroad from Djibouti reaches the highland. The Amhara plateau of central Ethiopia is marked in the contours of steep and sometimes impassable gorges and valleys and scattered with mountains having nearly sheer sides. A number of rivers cross the plateau, notably the Blue Nile rising from Lake Tana. This rugged topography creates obstacles for communication and transportation within the country. Because of the terrain, many areas are poorly served, if at all, by roads. There are some 13,000 kilometers of gravel and tarred roads, but they provide access to only 12 percent of the country. Ethiopia lies within the tropics, but the wide range of altitudes produces significant variations in temperature, creating three climatic zones: the dega (temperate plateau), the woyna dega (an intermediate frost-free zone), and the quolla (hot lowlands). The seasonal shifts of the convergence zone over Ethiopia cause a main rainy season from June through August, although there is a shorter spring rain called the Belg.

In general, climatic conditions can be described in terms of well-watered highlands and uplands, and dry lowlands. These generalizations, however, mask the considerable local variation in climate and in duration and intensity of rainfall. The prevalence of these local variations often makes predictions of famine and estimates of food needs difficult.

The drought prone regions in "normal" years are the low-lying pastoral areas and the area along the eastern escarpment. During the extraordinary years of the mid-1970s, the drought and famine were centered in the highlands of Wello and in Harerge. The more recent drought of the 1980s affected a larger, northern area which includes the provinces of Eritrea, Tigray, Wello, and, to a lesser degree, the southern and eastern provinces of Bale, Sidamo,

Gamo Gofa, and Harerge.

The natural vegetation of Ethiopia has been significantly disrupted over time with the growth of population and the resultant deforestation and soil erosion. For example, the climax vegetation of the highland plateaus is coniferous forests, but they have largely disappeared and now are found only in more inaccessible areas. In the southwest, where elevations are lower and rainfall and temperatures are higher, there are broad-leaf forests and coffee bushes growing wild. But again, this natural vegetation has been encroached upon by shifting cultivators. In the lowlands, there is a range of dryland vegetation including limited areas of desert, thorn scrub, and acacia savannah. There are extensive natural rangelands in the south and southeast which have given rise to pastoral economies, though these have been severely affected by the droughts of the 1970s and 1980s.

B. The Cultural Context

The different ecological zones of Ethiopia are largely inhabited by distinct cultural groups. Abyssinians, including Amharans and Tigrayans, occupy the dega and are characterized as Semitic highland agriculturalists. The Cushites inhabit the woyna dega; the largest Cushitic groups are the agriculturalists and agro-pastoral Oromo and Sidama. The lowland quolla regions are home to pastoral Cushitic groups such as the Somalis in the east, and the Nilotic peoples in the west. Of the more than 40 different ethnic groups, the Amhara, Tigrayans, and Oromo make up more than three-fourths of the population. In general, most of the highlanders are Christians, while Muslims and animists tend to live in the lowlands. Traditionally, the Amharans have

been the ruling group. This political dominance persists today.

The ethnic diversity of Ethiopia has made political unity difficult. This was true under Haile Selassie's regime and continues to be true today under the Marxist-Leninist government of Mengistu Haile Mariam. Both leaders refused to allow regional autonomy, making internal strife a perennial problem. Apart from this commonality, however, the former and present governments depart radically. The monarchy of Haile Selassie was overthrown in 1974 and replaced by the Provisional Military Administrative Council (PMAC) headed by Mengistu. The goal of this new government is to transform Ethiopia into a Marxist-Leninist state. To achieve this objective, the government instituted far-reaching land reform, consisting of a redistribution of land to individual farmers (though the government held ownership), an encouragement of cooperatives, and the establishment of state farms. While the government has particularly promoted the formation of cooperatives, this movement has proceeded slowly.

C. Constraints to the Relief Effort

The rugged terrain, coupled with the inadequate infrastructure, were major obstacles to the logistics of distributing food, particularly to remote rural areas without access to roads. The inadequate road system, the limited port facilities, and the railway which was often disrupted by civil war, made food aid transport difficult and costly.

The political situation greatly exacerbated the relief efforts of the donor community, the government, and the insurgent groups, some of whom had their own relief organization. For example, in the fall of 1984 the northern provinces most affected by drought, Tigray, Wollo, and Eritrea, were not only disabled by extremely limited road and transport networks, but were also

precarious security areas. They are provinces of longstanding anti-government rebellion. The major insurgent group in Eritrea is the Eritrean People's Liberation Front (EPLF), in Tigray it is the Tigrayan People's Liberation Front (TPLF); but there are numerous others in Eritrea, Wollo, and Harerge. Because of the tense security situation along the roads in these provinces, food distribution was often inadequate and irregular.

Another major constraint to the emergency operations was US-Ethiopian relations. After the revolution in 1974, relations became progressively strained for a number of reasons: 1) the differences over compensation for expropriated US property; 2) the refusal of the US to provide military assistance in the face of the Somalian invasion of Ethiopian territory in 1977; and 3) the strong ties the Marxist-Leninist regime developed with the Soviets. On the whole, Americans in Ethiopia working for the relief effort described the government's attitude toward the US as hostile. According to one A.I.D. official, the Ethiopians were reluctant to let Americans or "anyone other than their ideological sympathizers outside the cities." This clearly hampered the ability of the US relief workers to assess the magnitude of the crisis. According to individuals at the State Department, poor US-Ethiopian relations also hindered US negotiations with other donors and the GOE. Nevertheless, A.I.D. is emphatic that at no time was food delivery delayed as a result of hostilities between the two governments.

A final constraint is related to the serious lack of information about the severity of the drought in 1984, the extent of food shortages, and the number of people seriously "at risk." IDI places some of the blame on the Ethiopian government for its "secretiveness." Nevertheless, this lack of information was crucially important, and the lack thereof delayed the response by donor governments which required information before sending assistance.

II. THE IMPACTS OF THE DROUGHT AND FAMINE IN ETHIOPIA, 1981-1986

A meteorological description of drought is presented in this section, followed by an examination of the impacts of Ethiopia's drought in the 1980s on the overall economy, agricultural production, and movements of people.

A. Drought in Ethiopia

The seasons in central and northern Ethiopia coincide with:

1. The Kiremt, or main rains, which last from June to September and provide moisture for the main grain crops, or about 85 to 95 percent of the national food production.

2. The Bega, or dry season, which lasts from October to January, and corresponds with the harvest seasons. It consists of occasional and sporadic rainfall that is important for grasslands.

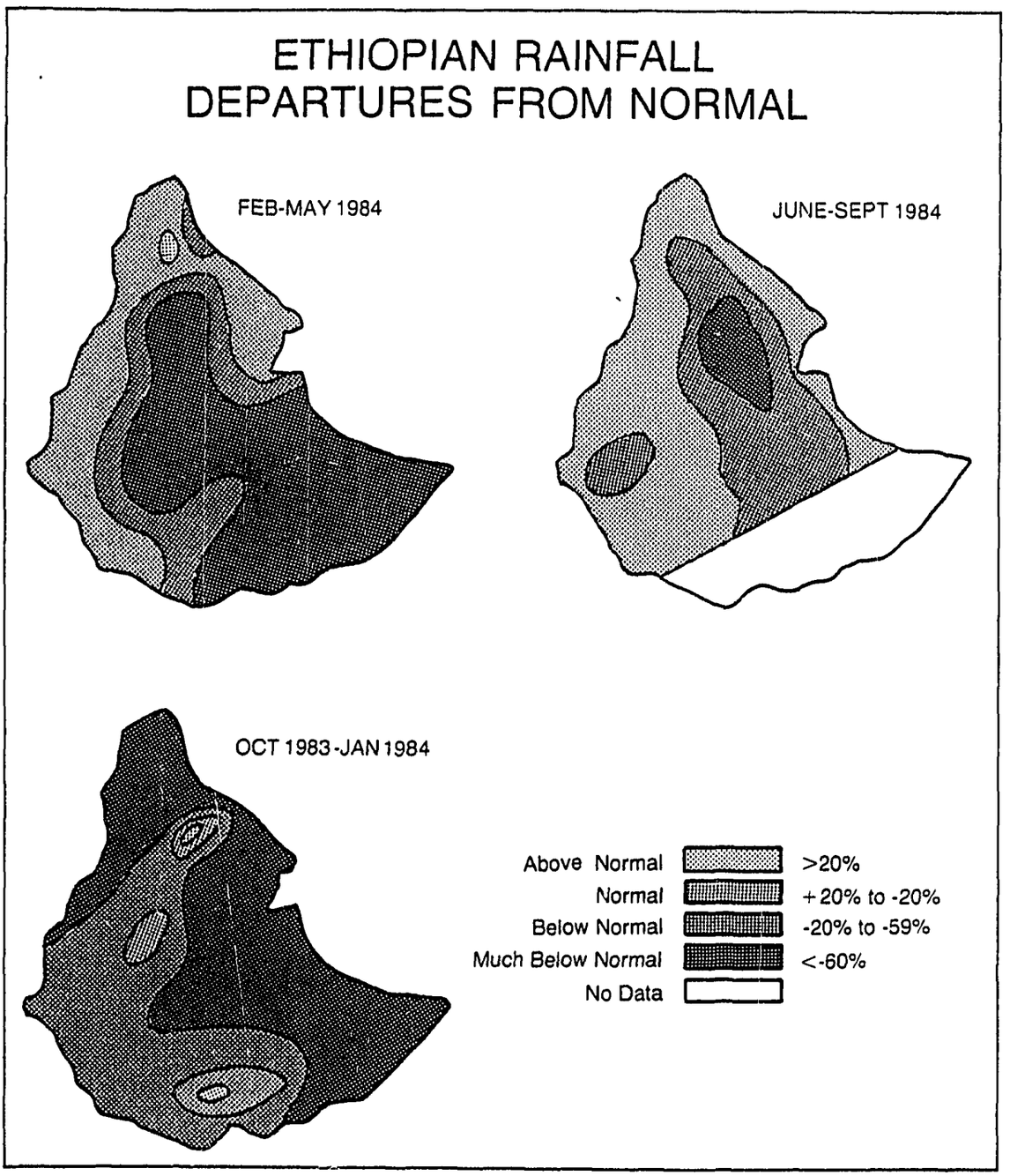
3. The Belg, or short rains, extends from February to May when long season crops such as maize and sorghum are planted. It is important hydrologically for livestock water supplies.

In the southern and southeastern lowlands the rainfall pattern is normally bimodal, with rainy seasons lasting from March to May and from September to October. The rainy season in the southwest is from February to November. Rainfall variability is highest in the north, east, and southern crescent around the central highlands. These areas are traditionally drought-prone.

In 1980, the Belg rains failed in southern Ethiopia causing a significant loss of livestock. Rainfall increased in 1981, except in the central highlands. The Kiremt rains were delayed for two months in 1982, and the north, south, and east were particularly affected. The Belg and Kiremt seasons were favorable in 1983, although they fell slightly below normal in northern Ethiopia. The severe drought of 1984 started with an unusually dry Bega season in November 1983, and lasted through January 1984 (Figure 4.1). The following

Figure 4.1

Ethiopian Rainfall Departures from Normal, 1984



SOURCE: World Meteorogical Society (1985).

rainy season, the Belg or short rains, failed throughout most of the country, thereby preventing the planting of maize and sorghum crops. The Kiremt season began early, but was dry during the period critical for crop growth. Although most of Ethiopia's rainfall stations reported that the rains in 1985 were better than in 1984, many reported rainfall as still being below normal (USAID/Addis, 1987).

B. The Economy

Economically, Ethiopia is one of the least developed countries in the world. It suffers from unfavorable climate, environmental degradation, inadequate infrastructure, high illiteracy, and, in recent years, declining terms of trade. These economic difficulties have been exacerbated by years of civil war waged by numerous insurgent groups, and by drought. Since the overthrow of Haile Selassie in 1974, the economy has had to bear the sweeping changes made by the regime of Mengistu, including land reform and nationalization. The new regime has attempted to transform the country from its former feudal-like system to a Marxist-Leninist state. Initially, there were great hopes that changes like land reform would bring economic recovery, after negligible economic growth in the early 1970s. And, in fact, the period of 1978-81 saw considerable improvement. But by 1981/82 economic growth had once again declined. This was partially the result of a 40 percent decrease in the terms of trade over the 5-year period, reflecting a fall in the price of coffee, Ethiopia's major export crop.

Since 1982, economic growth has remained stagnant. The balance of payments has lingered in the red, with imports consistently exceeding exports (Table 4.1). Foreign exchange earnings, however, improved in 1984 and 1985

Table 4.1

Financial Indicators for Ethiopia, Actual and Projected
(million dollars)

Year	Exports and Other Credits	Imports and Other Debits	Balance of Payments	Debt Service	International Reserves	Foreign Exchange Available	
						Total	Share to Major Food Imports
1980	592	887	-295	43	118	549	9%
1981	607	1,015	-408	55	179	553	6%
1982	675	1,022	-347	68	107	607	4%
1983	743	1,182	-439	84	165	659	4%
1984	906	1,381	-475	62	150	844	3%
1985	915	1,303	-338	120	97	795	
1986	880	1,375	-495	82	97	749	4%
1987	830	1,450	-620	77	97	696	4%

SOURCE: United States Department of Agriculture (1986b).

over previous years. According to the US Embassy in Addis Ababa, this improvement can be attributed to a rise in coffee exports in 1983/84 and a concomitant increase in world coffee prices. Nevertheless, the rise in available foreign exchange which peaked in 1984 declined again in 1984/85 and 1985/86 as Ethiopia began increasing its commercial food imports.

Ethiopia's economy is primarily agricultural and pastoral. Agriculture contributed 48.3 percent to the total Gross Domestic Product (GDP) in 1983/84, and provided approximately 90 percent of Ethiopia's export earnings. Revenue from coffee accounted for more than 60 percent of all export receipts. Apart from coffee, Ethiopia's major exports include hides and skins, pulses, oilseeds, and refined petroleum products.

With the land reform program instituted in 1975, the structure of the agricultural sector has changed. Land reform entailed a partial "land to the tiller" redistribution. While 400,000 hectares were distributed to landless peasants in 1981, producer cooperatives and state farms have also been important components of the new land tenure system. Producer cooperatives (PCs) are considered to be the ultimate form of socialized agriculture and have been vigorously encouraged, although not forced. However, PCs accounted for less than 2 percent of the total production in 1983/84, while state farms provided 3.6 percent and peasant farms contributed by far the most with 94 percent to total agricultural production. And yet, despite the smaller contribution to overall production made by PCs and state farms, investments and available inputs in these subsectors are vastly greater than in the individual peasant farms.

PCs receive incentives not available to peasant farmers, including more

land per member, a lower cost for fertilizer, lower taxes, interest free loans, priority access to loans, support from the Ministry of Agriculture (MOA) extension staff, and access to training centers (A.I.D., 1986c). Despite these advantages, however, PCs are the least productive subsector. State farms have "absorbed 43 percent of all expenditure on agriculture over the past 5 years, compared to 37 percent absorbed by the peasant sector." USAID/Addis reports that state farms make a "negative economic contribution," actually draining government resources. Operating costs are high and efficiency is low, despite the disproportionately large share of inputs. According to government records, losses have increased annually, although productivity has been the highest of all subsectors for a number of cereals.

C. The Impacts of the 1982-1984 Drought on Agricultural Production

The drought of the 1980s had a devastating impact on agricultural production, affecting exports and imports as well as food crops. However, these impacts were not the same in all subsectors; some suffered more than others. A survey of these differences are presented below.

1. Agricultural Exports and Imports

Throughout the past decade, agricultural exports have accounted for 85 to 94 percent of total exports, with coffee contributing the largest part. In 1983, coffee contributed 62.6 percent to foreign exchange earnings; this percentage rose to 63.5 in 1984, and dropped to 60.0 in 1985, reflecting the impact of drought.

Table 4.2 displays changes in tons of coffee produced and exported between 1981 and 1986. These data indicate that coffee production sustained itself

relatively well throughout the early 1980s. This is probably due to the rain failures in 1982/83 which affected the northern provinces more severely, while coffee is grown in the more fertile and well-watered southern region. However, all of Ethiopia's fourteen provinces eventually felt the impacts of drought. Clearly, by 1984/85 coffee production had declined significantly.

Table 4.2

Ethiopia's Coffee Production and Exports
(1,000 tons)

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
Production	202	202	198	201	155	186
Exports	88	80	91	98	69	99

SOURCE: United States Department of Agriculture (1986a).

The amount of coffee exported in 1984/85 dropped sharply from the previous year's production. According to an article in New Africa (October 1985), coffee exports were also affected by civil strife. The Oromo Liberation Front (OLF) evidently confiscated two million dollars worth of coffee grown in the southern provinces. Nevertheless, by 1985/86 coffee exports were at a high point for the 6-year period beginning in 1980/81; this reflected improved weather conditions in most parts of the country.

The value and revenue from exports of pulses, oilseeds, oilcake, fruits, and vegetables have fallen sharply and are still at low levels. Exports of hides and skins have, for the most part, been sustained at modest levels. In 1986, USAID/Addis reported that quantities of agricultural exports "... have

declined overall, although rises in prices of a number of export items have increased export revenues from an average of Birr 507 million in 1974/75-1975/76 to Birr 863 million in 1983/84 - 1984/85."

The GOE has shown an unwillingness to spend foreign exchange on commercial food imports until recently; it had previously reserved it for military support. Commercial food imports stagnated around 60,000 MT per year for the 5 years between 1979/80 through 1983/84. However, USAID/Addis estimated that commercial food imports amounted to 253,000 MT in 1984/85 and 300,000 MT in 1985/86.

2. Food Crop Production

Food production in the 1980s has been plagued by drought, soil degradation, growing population, and, according to A.I.D., poor agricultural policies. After dramatic increases in production between 1975/76 and 1979/80, cereal and pulse yields declined in 1980/81 and remained stagnant until the improved crop year of 1982/83. However, the impacts of drought were felt from 1982/83 to 1984/85 (Table 4.3); cereal production fell over 25 percent and production of pulses dropped almost 35 percent. The GOE's Central Statistics Office (CSO) estimated that cereal production increased almost 50 percent between 1984/85 and 1985/86; however, the USDA's Economic Research Service (ERS) wrote in June 1986 that crop estimates for 1985/86 were revised downward to less than 10 percent above the disastrous 1984/85 crop. In 1987, USAID/Addis asserted that: "many people think the CSO's estimate for 1985/86 is understated." Nevertheless, the speed of recovery was hindered by a lack of seeds, population dislocation, and a loss of oxen. By 1986, many rainfall stations were reporting good rains, although pockets of drought persisted in parts of the west and the

Table 4.3

Estimated Domestic Crop Production and Available Grain Equivalent Supply in Ethiopia[a]

	1975/76	1979/80	1980/81	1981/82	1982/83	1983/84[b]	1984/85[b]
Total agriculture - index	100	119	111	109	118	118	111
Total crop - index	100	117	110	107	119	119	109
Total field crop - 000 tons	5,290	7,496	6,556	6,291	7,798	6,337	5,684
Cereals	4,698	6,397	5,605	5,388	6,711	5,527	4,970
Teff	1,037	1,826	1,312	1,083	1,371	1,090	N/A
Barley	537	1,051	1,075	936	1,168	814	N/A
Wheat	582	537	614	707	917	666	N/A
Maize	1,271	1,524	942	1,194	1,596	1,533	N/A
Sorghum	876	1,643	1,411	1,207	1,356	1,202	N/A
Millet	379	215	205	197	240	199	N/A
Oats	-	-	46	65	62	22	N/A
Pulses	462	1,010	848	820	965	712	631
Others - oil seeds	130	89	102	82	122	99	83
Industrial crops - 000 tons[c]	361	404	425	418	404	481	484
Grain equivalent of available local production - 000 tons[c]	5,158	6,712	5,881	5,668	6,940	5,687	5,133
Population estimate - mil.[d]	33.4	37.5	38.6	39.7	40.8	42.0	43.2
Per capita available grain equivalent[e]							
Kilograms	154	179	153	143	170	135	119
Index	100	114	100	92	111	88	[illegible]

SOURCE: A.I.D. (1986c).

[a] CSO - pre 1979/80 data adjusted upward by 32% to give rough comparability to two statistical series.
[b] Excludes Eritrea and Tigray.
[c] Coffee, sugar, cotton, and tobacco.
[d] Total production minus allowance for seed required and post harvest losses.
[e] January 1984 population census adjusted by annual growth rate of 2.9%.

Rift Valley, and estimates of the 1986/87 harvest were predicted to be at "normal or below normal" levels (USAID/Addis, 1987). FAO estimates indicated a definite below normal harvest, and the A.I.D. estimate showed peasant production to be 7 percent below normal.

There is a scarcity of available hard data on the livestock subsector, but USAID/Addis reports that many herds were hard hit by the 1984/85 drought. USDA/ERS reports that rangelands in most areas improved in 1985, resulting in a sharp recovery in milk production. However, continued drought in the east resulted in herd movements into Somalia in early 1986.

The only available data on production by subsector (private holdings, PCs, and state farms) are given for the years 1982/83 and 1983/84. Table 4.4 reveals not only the differing yields for the three subsectors, but it also suggests varying impacts of drought. The private holdings had enormous decreases in "all cereal" yields (65 percent), while the PCs experienced a decline of 23 percent and the state farms showed only a negligible change. These differential impacts most likely reflect the varying agricultural inputs available to these three subsectors. The result of Ethiopia's policies is that agriculture as a whole, despite its dominant role in the national economy, received only a very meager allocation of financial resources. The peasant subsector which accounts for 94 percent of total production received only 37 percent of the total allocation to agriculture between 1980/81 and 1984/85. USAID/Addis has suggested that these investment and pricing policies are a binding constraint to the expansion of agricultural production in Ethiopia. The meteorological and production data also show that rain failure coupled with the GOE's agricultural development policies may be the primary constraints to food self-sufficiency in Ethiopia.

Table 4.4

Ethiopian Cereal Yields (Main Season)
(Quintals/Hectare)

Crop	Private Holdings		Producer Coops.		State Farms	
	1982/83	1983/84	1982/83	1983/84	1982/83	1983/84
All cereals	13.51	4.79	8.62	6.68	15.68	15.29
Teff	9.88	8.30	6.62	7.17	4.69	4.15
Barley	13.29	10.94	6.72	1.87	23.44	12.08
Wheat	12.73	10.48	9.49	8.54	15.80	12.78
Maize	20.15	18.69	10.52	18.41	20.13	21.25
Sorghum	15.38	13.25	14.28	11.35	5.87	8.31
Millet	10.72	9.23	3.36	13.15	-	-
Oats	12.20	8.57	12.35	-	-	-

SOURCE: A.I.D. (1986c).

NOTE: Quintal = 100 kilograms.

D. Movements of People

There were massive movements of people in Ethiopia between 1982-85. These migrations accrued from a combination of drought and civil strife, and consisted of both refugee movements into the bordering countries of Sudan, Somalia, and Djibouti, as well as internal displacements.

1. Refugees

The guerrilla-controlled provinces of Tigray, Wello, and Eritrea were hard hit by drought and the logistical problems of the area made it difficult for relief workers. The insurgencies in this northern region were a hindrance to food distribution. Some reports stated that the GOE was intentionally not delivering food to these areas, as a way of controlling dissident groups and safeguarding national security. Regardless of the cause, the result was severe famine which led to vast out-migration from Ethiopia into eastern Sudan. By late 1983, 400,000 people had out-migrated, overwhelming the refugee camps in Sudan. To counter these movements, A.I.D. and other donor agencies, initiated a cross-border program in mid-1983 and expanded support for it in 1984.

Influxes of Ethiopians into Sudan again mounted in 1985 due to growing unrest and prolonged drought. Within months, 300,000 refugees migrated across the border in search of food and shelter. They flooded camps such as Wadi Koweli and Wadi Sherife, located outside of Kassala. Relief workers were unprepared and without sufficient supplies; children were dying at horrendous rates (US Congress, Senate Committee on the Judiciary, 1986). By April 1986, there were 852,000 Ethiopian refugees in Sudan, a figure which includes earlier arrivals.

Ethiopians also fled to Djibouti and Somalia. By 1983, 700,000 Ethiopian refugees had poured into Somalia, primarily from the Ogaden region. These people were generally ethnic Somalis or from closely related ethnic groups such as the Oromo. Their flight was the result of the Somali-Ethiopian dispute over the Ogaden. The scale of this political migration, which began in 1978, has been enormous. By 1984, the number of refugees was estimated by one author to be as high as 1.5 million (Rogge, 1985: 15). Earlier migrants were primarily political refugees. Drought became more of a problem in southern Ethiopia in 1984/85 and resulted in an influx of 107,000 new Ethiopian arrivals in Somalia in 1984/85. In-migration continued into 1986 because of dry conditions in the east and southwest. As of mid-May 1986, new arrivals were crossing the border at the rate of 250 per day (UNOEOA, 1986f).

By 1983, 35,000 refugees had immigrated to Djibouti from northern Ethiopia. The UN estimated the refugee population in 1985 to be 16,000. This significant reduction may be due to Djibouti's repatriation program. While there are reports that some refugees are reportedly being coerced into returning to their homeland, an A.I.D. official asserts that there are few reports of the settled refugees being treated in such a manner. However, unregistered refugees have forcibly been made to return. According to this A.I.D. official, "there was an incidence in which a number of Ethiopians were crowded into a metal cattle car and some suffocated before the trip was completed."

2. Internal Displacements

There have also been significant internal movements in Ethiopia, in reaction to drought, civil strife, and also resettlement programs initiated by the GOE. Although the official policy of the government was to try to keep

people in their villages, the situation in 1984 worsened such that "tens of thousands" left their homes because of starvation. Although feeding camps were set up in response to these spontaneous migrations, the government's desire to keep people in their villages was graphically illustrated by the dismantling of the feeding camp of Ibnet. It was forcibly closed by local officials at the end of April 1985 "at the cost of an untold number of human lives in what turned out to be one of the worst single human rights violations of the entire drought period in Ethiopia." After pressure from the West, the feeding camp was reopened. The GOE also conceded to a centralized feeding strategy in the rebel-controlled areas; some say in order to resettle these people, and others say in order to control the distribution of food and to assure that it did not get into the hands of the rebels. Nevertheless, where feeding camps did prevail, people had to walk as long as three days to get food. These concentrations of vulnerable populations fostered the spread of epidemics.

Korem, a much publicized feeding camp in the northern province of Wello, was one of the worst scenes of devastation and death from famine and epidemic. The normal population of this town was approximately 7,000; but by March 1983, the population figure had risen to 17,000. By May of the same year, the inflow of displaced persons brought the population to 45,000. According to the UN, this figure surged to over 100,000 people two months later. In his book, An African Winter, Preston King describes the conditions in Korem:

> The overall picture of Korem is one of swelling population, certainly from 1982, but with various irregularities depending upon season and security. There were insufficient stores, shelter, and personnel, so that only a proportion of those in need could actually be helped. There was a great and rising crush of people, coming and going, in search of aid, despairing of finding it, moving out of Korem to other towns, or as far as their physical resources would allow. At first people died because there was simply not enough food. In November 1984, the food supply haltingly began to improve, but death from cold, exposure, disease, and exhaustion increased. Interwoven with these developments, security was tenuous, despite the

> presence of soldiers (sporting AK-47 rifles) and armoured vehicles. Supplies were interrupted. The road leading north from Addis Ababa was not safe. Many of the towns around Korem (and indeed Korem itself) had been attacked. Ethiopian troops drove many refugees south from Korem to resettle them (1986: 29).

The chaos created by famine and growing numbers of displaced persons spontaneously migrating in search of aid was added to by the GOE's resettlement and villagization programs. According to USDA'S ERS, the resettlement program resulted in the movement of 600,000 people from the north to the more fertile south. Table 4.5 presents statistics on the number of people moved, the area of resettlement, and the area of origin. Given the physical vulnerability of the population affected by famine as well as the disruption already engendered, the timing of the program was ill-conceived. According to field reports, out-crys against the program came from cases where people were "brutally" coerced and trucked to resettlement sites which were often inadequately prepared for them. In 1985, after negotions with the donor community, the program was temporarily halted.

The villagization program will ultimately affect more people than the resettlement program. It is designed to move dispersed populations to concentrated villages where services can better be provided. The impact of the program is difficult to decipher from all the conflicting reports. The report "Ethiopia and Sudan One Year Later" stated that local officials were overly zealous and forceful, causing thousands of refugees to flee into Somalia (US Congress, Senate Committee on the Judiciary, 1986). It may be that such occurrences were related to local individuals and not to the program itself. Nonetheless, the villagization program, like the resettlement program, did contribute to internal movements at an unfortunate time. However, it too was suspended as the situation in-country worsened. According to an A.I.D.

Table 4.5

Statistics on the Ethiopian Government's Resettlement Program

I.

Area of Resettlement[a] Region	Number of Persons
Kaffa	76,640
Illubabor	146,216
Shoa	6,149
Wellega	253,282
Gojjam	101,122
Gonder	6,387
TOTAL:	589,796

II.

Area of Resettlement	Area of Origin				
Region	Wello	Shema	Tigre	Gonder	Gojjam
Kaffa	47,492	6,514	22,634	--	--
Illubabor	72,226	28,275	45,715	--	--
Shoa (Tadele)	--	6,149	--	--	--
Wellega	220,336	11,279	21,367	--	--
Gojjam	29,839	54,858	--	--	16,425
Gonder	--	--	--	6,387	--
TOTAL	369,893	107,075	89,716	6,387	16,425

SOURCE: United States Congress, Senate Committee on the Judiciary (1986).

[a] The RRC further reported that the figure 589,796 represents 203,971 families or an average of 2.89 persons per family.

official, villagization was temporarily suspended so that it would not compete with agricultural operations as it had in 1985, when villagers were often unable to plant their crops because they were building housing in the new villages.

In 1986, migrations still took place despite the return of the rains. Many refugees from neighboring countries returned to till their fields, while others continued to migrate in order to escape the warfare between the insurgents and the GPRM as well as in reaction to localized dry conditions.

III. A SUMMARY CHRONOLOGY OF MAJOR EVENTS RELATED TO THE DROUGHT AND FAMINE IN ETHIOPIA, 1981-1986

Time	Event
March 1981	UN documents first reports of drought [2].
April 1982	RRC requests assistance for 695,000 MT grain [2].
September 1982	EWS report lists 3.8 million people affected by drought and crop failures [2].
October 1982	Under Food Security Reserve, WFP makes first donation of 12,000 MT [2].
February 1983	UNDRO requests assistance for one million severely affected residents of four northern provinces [21].
Spring 1983	Two PVOs visit Tigray Province and report acute malnutrition and serious drought [30].
Summer 1983	Congress encourages A.I.D. Administrator to seriously address the crisis in Ethiopia [30].
July/August 1983	Rain shortfalls in growing number of regions; crop failures expected [2].
April 1984	FAO reports failure of spring crop [30].
September 1984	The Workers' Party celebrates their tenth anniversary and spends $140 million [30].
October 1984	NBC broadcasts BBC film vividly depicting Ethiopian crisis [4].
March 1985	From FY 1983 to this date, the US commitment to Ethiopia is valued at $209.9 million, including 381,796 MT of food [30].
October 1985	Relief operations reach more than 7 million people; as the 1985 harvest begins, many leave refugee camps and return home [8].
1986/87	Pockets of drought persist in Tigray and Eritrea Provinces despite improved rains in rest of country [1e].

IV. FOOD AID: PLEDGES AND DELIVERIES, US AND OTHER DONORS

This section traces the events preceding the international community's assistance program to Ethiopia, the US response in the form of food aid, and the expediency of food deliveries by major donors.

A. Events Leading Up to the US Emergency Response

Drought-induced famine was forecast in northern Ethiopia for 1980/81 and 1981/82, before the first serious signs of distress became evident in 1982/83. The United Nations Disaster Relief Organization (UNDRO) launched an appeal in April 1982 for drought victims in the provinces of Eritrea, Tigray, Wello, and Gonder in response to an Ethiopian government request. The Ethiopian RRC did report the situation in late 1982, but famine conditions were not substantiated by the MOA.

The extent of the famine and the validity of food shortages was difficult to determine. USAID and other international donors made repeated requests in 1983 and 1984 to the Ethiopian RRC for information on:

1. Food stocks and harvest statistics.
2. Commercial food imports.
3. Warehouse capacities.
4. Transportation capacities for food distribution.

Throughout 1983, the general belief was that, while food shortages existed in the low northern provinces, ample food was either pledged by external donors or reserves in-country were available to meet immediate needs. The biggest donors of grain in 1983 were CIDA, WFP, and the EEC; WFP provided 130,221 MT (Table 4.6).

Table 4.6

Official Agency Grain Shipments to Ethiopia, 1983

DONOR	TONNAGE
WFP	130,221
CIDA	40,283
EEC	35,000
Australia	15,000
USSR	9,500
Austria	2,000
ICRC	900
USA (PL 480 Title II)	10,160
TOTAL	243,064

SOURCE: Cutler and Stephenson (1984).

In February 1984, a special mission of the FAO's Office for Special Relief Operations (OSRO) assessed the consumption deficit at 684,000 MT. But a major emphasis of the FAO report was that Ethiopia's distribution capacity was limited to 125,000 MT. "There is little doubt that assessments like this from Rome provided governments in the West with the means to challenge more alarming reports of deterioration in Ethiopia" (Gill, 1986:46). On the basis of data provided by the RRC, however, the number of people affected by food shortages as a result of crop failures increased to 5.3 million in 1984 against 3.6 million in 1983 (Table 4.7.)

Table 4.7

Estimated Cereal Requirements of Drought Affected People in Ethiopia, 1984

Region	Total Population - 000's -	Affected Population - 000's -	Cereal Needs[a] -tons-
Northern Regions			
Eritrea	2,704	827	107,459
Tigray	2,410	1,332	163,616
Wello	2,912	1,791	237,435
Gonder	2,289	377	48,359
Subtotal	10,315	4,327	556,869
Southern Regions Subtotal	24,307	937	127,350
GRAND TOTAL	34,622	5,264	684,219

SOURCE: Adopted from Relief and Rehabilitation Commission data and A.I.D. (1986c) estimates.

[a] April-December 1984.

Erratic weather and an outbreak of pests in the major grain producing regions resulted in a grain shortfall in excess of 2 million MT in August 1984. The RRC's stocks were meager at 46,189 MT while cereal requirements for the affected area were given as 684,219 MT (Table 4.8).

Table 4.8

Overall Cereal Supply Balance for Drought Affected People in Ethiopia
April-December 1984

Supplies Available	- tons -
-AMC stocks[a, b]	190,000
-RRC Stocks[a]	46,189
Subtotal	236,189
Undelivered Food Aid Pledges	76,100
Total Availabilities	312,289
Cereal Requirements of Affected Population	684,219
April-December 1984 Deficit	(371,930)

SOURCE: Food and Agriculture Organization (1984a).

[a]AMC (Agricultural Marketing Corporation).
RRC (Relief and Rehabilitation Commission).

[b]"According to USAID/Addis, it is unlikely that AMC stocks, which are chiefly supplied to urban dwellers, went to the drought-affected population."

NOTE: USAID/Addis has updated this information since it was reported.

Food aid donations channelled through PVOs and international organizations made the US the principal donor beginning in 1983. In 1985, however, the US also provided some emergency food directly to the Ethiopian RRC. According to USAID/Addis, this direct donation to the Ethiopian relief agency was done because of its reputation as an effective institution and because of its outreach. The PL 480 Title II emergency food aid donation to the RRC in 1985 amounted to 50,000 MT. The overall contribution to Ethiopia was much larger (Table 4.9). The second harvest was reduced as a result of the limited areas

Table 4.9

Approved US Government Food Aid Assistance to Ethiopia
Fiscal Years 1984, 1985, and 1986

	Fiscal Year 1984[a]		Fiscal Year 1985[b]		Fiscal Year 1986[c]	
	Metric Tons	Value	Metric Tons	Value	Metric Tons	Value
TLE II - REGULAR PROGRAM						
Catholic Relief Service (CRS)	11,863	$6,035,000	11,869	$5,577,500	11,922	$4,983,300
Total, Regular Program	11,863	$6,035,000	11,869	$5,577,500	11,922	$4,983,300
TLE II - EMERGENCY PROGRAM						
CRS	11,980	$5,601,200	40,559	$19,104,600	-	-
Christian Relief and Development Association (CDAA)	-	-	58,732	$57,141,000	-	-
CRS Missionaries of Charity (CRS/MT)	-	-	3,338	$1,378,500	4,658,900	$1,871,400
LICROSS	-	-	4,943	$2,934,100	10,000,000	$6,556,900
Lutheran World Relief*	5,000	$1,790,300	-	-	-	-
World Food Program	145	$68,700	-	-	-	-
World Food Program/IEFR	12,500	$3,775,900	9,973	$5,165,100	-	-
Save the Children	-	-	1,914	$1,402,200	22,755,800	$7,834,200
World Vision	-	-	6,153	$18,436,800	40,362,300	$21,968,800
ICRC	-	-	18,370	$10,411,600	21,499,900	$10,636,700
CARE	-	-	3,026	$5,351,500	64,355,200	$27,996,700
Government-to-Government	-	-	50,000	$14,472,600	-	-
Save the Children-FFS	-	-	-	-	530,000	$136,600
EDC	-	-	-	-	4,463,000	$1,326,900
CARE-FFS	-	-	-	-	2,000,000	$457,900
CRS-FFS	-	-	-	-	4,150,000	$1,178,500
AJJDC-FFS	-	-	-	-	2,055,000	$265,000
WVRO-FFS	-	-	-	-	9,030,000	$3,107,300
JRP	-	-	-	-	70,074,300	$28,123,800
CRDA-FFS	-	-	0	$360,000	3,000,000	$667,900
CRS-N	-	-	5,000	$3,000,300	29,092,900	$13,035,600
FHI	-	-	-	-	6,960,500	$2,686,400
WVRO-N	-	-	-	-	20,150,600	$9,822,700
Total, Title II Emergency Program	29,625	$11,236,100	202,008	$139,158,300	315,138,400	$137,673,300
Total, Title II	41,488	$17,271,100	213,877	$144,735,800	327,060,400	$142,656,600

Table 4.9 - continued -

Approved US Government Food Aid Assistance to Ethiopia
Fiscal Years 1984, 1985, and 1986

	Fiscal Year 1984[a]		Fiscal Year 1985[b]		Fiscal Year 1986[c]	
	Metric Tons	Value	Metric Tons	Value	Metric Tons	Value
SECTION 416 - EMERGENCY FOOD**						
CDAA	-	-	16,146	$16,040,800	4,449	$3,336,700
CRS/MT	-	-	1,316	$1,455,300	-	-
World Vision	-	-	7,200	$9,252,000	-	-
Save the Children Fund	-	-	1,377	$1,149,800	246	$184,800
CRS	-	-	-	-	20,867	$7,305,600
Total, Section 416	-	-	26,039	$27,897,900	25,562	$10,826,900
FOOD SECURITY RESERVE-EMERGENCY FOOD***						
CARE	-	-	29,982	$10,943,400	-	-
CDAA	-	-	86,316	$31,505,300	-	-
World Vision	-	-	24,267	$8,857,400	-	-
Save the Children	-	-	14,110	$5,150,200	-	-
LICROSS	-	-	6,667	$2,486,800	-	-
ICRC	-	-	30,284	$11,227,700	-	-
Total, Food Security Reserve	-	-	191,626	$70,170,800	-	-
Total, Emergency Program	29,625	$11,236,100	419,673	$237,227,000	340,700,400	$148,500,200
TOTAL, ALL FOOD COMMODITIES	41,488	$17,271,100	431,542	$242,804,500	352,622,400	$153,483,500

SOURCES: [a] A.I.D. (1984c).
[b] A.I.D. (1986d).
[c] A.I.D. (1986e).

* USAID/Addis asserts that this figure represents the food aid donations for the cross-border operations.
** Dairy products (nonfat dry milk and butter oil) authorized by Section 416 of Public Law 480.
*** Up to 300,000 metric tons of wheat made available by the Food Security Wheat Reserve Act of 1980 for emergency distribution through Public Law 480, Title II.

planted, scarcity of agricultural inputs, and population displacement. The affected population was given at 6.83 million (UNOEOA, 1986e: 37).

B. An Overview of the US Food Aid Response

Prior to fiscal year 1985, US-funded PL 480 Title II emergency food programs in Ethiopia were administered by the WFP, IEFR, CRS, and LICROSS. During 1983/84, A.I.D. approved 11 requests for emergency food assistance. These initial requests required 5 to 6 months for approval. The US General Accounting Office (GAO) reported in April 1985 that the: "Initial US response was delayed because of strained relations between the two governments and several policy and administrative concerns related to the provision of relief aid to Ethiopia." Ethiopia was declared a "friendly" country in November 1984 so that a direct government-to-government food aid program could be initiated. Emergency food aid escalated from 29,625 MT in 1984 to 419,673 MT in 1985 (Table 4.9). An additional 37,458 MT was approved in 1985 under the Africa Supplemental Appropriation; this includes food aid for refugees (Table 4.10).

The provision of food aid to the most needy people in the northern rebel-controlled regions of Ethiopia was a concern for the US government. Of the 7.9 million Ethiopians affected by the drought in 1985, 5.5 million were located in the provinces of Eritrea, Tigray, and Wello; and an estimated 2 million in "insecure" areas. The Interagency Group on Ethiopia and the Sudan (IGETSU) was established to address this problem. A cross-border feeding program operating from Sudan was approved in mid-1983 (GAO, 1985) and expanded between 1984-86.

Despite the massive increase in aid to Ethiopia, USAID was limited to 5 permanent expatriate staff responsible for administering a $250 million

Table 4.10

PL 480 Title II
FY 1985 Africa Supplemental for Ethiopia
Approved Attributions Against $400 Million

Country	Sponsor	Commodity	Quantity MT	Value $000 Commodity	Ocean Freight	Inland Freight	Internal Freight	Total Cost
Ethiopia			28,228	12,803.2	3,532.5	3,800.0	44,831.6	64,967.3
Ethiopian Refugees			9,230	5,883.9	1,192.8	0.0	0.0	7,076.7
TOTAL Approved FY 85			565,913	124,546.8	42,448.5	14,660.5	82,763.9	264,419.7

SOURCE: A.I.D. (1986d).

operation in FY85 and a $170 million in FY86. A.I.D., however, felt that this was sufficient given the numerous temporary duties (TDYs), policy considerations, and the difficulties with the GOE.

C. Pledges and Deliveries by the US and Other Donors

The international community recognized that the drought-induced famine had reached crisis proportions in mid-1984. They estimated that Ethiopia required 1.5 million MT of food relief aid between October 1984 and November 1985. The food aid gap was reported at 740,000 MT in February 1985. Throughout the year, however, there was a steady flow of cereal aid into the country reducing the gap to 297,000 MT towards the end of the year (Table 4.11). By October, 1.2 million MT had been pledged of which .9 million MT had been delivered to the port.

The US was consistently the major donor in 1985/86. The A.I.D. mission in Addis Ababa provided a breakdown of percentage pledges by donor for both years. Table 4.12 reports that the US pledged 36 and 34 percent of the total food aid for 1985/86, respectively. According to the former USAID/Addis mission director, however, actual US deliveries amounted to 50 percent, as other donors did not fully match their pledges. In fact, WFP estimates of deliveries (Table 4.13) for 1985/86 reflect this proportional increase in the US commitment. Food aid requirements in 1986 amounted to 1.2 million MT for an affected population of 6.8 million. Requirements were partially met by 81,500 MT of carry-over pledges and 306,000 MT of carry-over stocks (UNOEOA, April 1986).

Table 4.11

Food Aid (Cereals Only) and Food Aid Gap for Ethiopia, 1985

Month	Food Aid Requirement	Already Delivered	Undelivered Pledges	Food Aid Gap
February	1.5 million	280,000	480,000	740,000
April	1.5 million	440,000	521,000	539,000
May	1.5 million	673,000	441,000	386,000
June	1.5 million	745,000	362,000	393,000
July	1.5 million	804,000	362,000	334,000
September	1.5 million	888,000	292,000	320,000
October	1.5 million	935,000	271,000	297,000

SOURCE: Food and Agriculture Organization (1985)

Table 4.12

Food Aid Assistance for Ethiopia
Pledges by Major Donors FY 1985/1986

	1985 (1 Dec '84 - 31 Dec '85)	1986 (1 Jan '86 - 31 Dec '86)
Food Aid Requirements	1,300,000 MT	900,000 MT
Pledges		
Total	1,232,753 MT	887,197 MT
US	443,985 (36%)	300,000 (34%)
EEC	198,026 (16%)	178,644 (20%)
Canada	166,568 (13%)	112,135 (13%)
WFP	22,423 (2%)	65,011 (7%)
All Others	401,751 (33%)	231,407 (26%)

SOURCE: A.I.D. (1986e).

Table 4.13

Food Aid Assistance
Deliveries by Major Donors FY 1985/1986

	1985[a]		1986[a]	
Deliveries				
Total	1,104,993	MT	780,748	MT
US	463,903	(42%)	315,845	(40%)
EEC	317,826	(29%)	239,382	(31%)
Canada	80,894	(7%)	50,500	(6%)
WFP	46,357	(4%)	54,640	(7%)
All others	196,013	(18%)	120,381	(16%)

SOURCE: Food and Agriculture Organization (1986).

[a]Calendar year.

V. SYNTHESIS: LESSONS LEARNED, QUESTIONS RAISED

The historical chronology of the drought and famine presented in the supplemental Appendix tells two stories: one of starvation and extreme hardship on the part of the Ethiopian people, and another which involves both national and international politics. The story of the response to the crisis also has a dual focus. On the one hand, the US response was motivated by humanitarian concerns and yet, on the other hand, the political issues raised by giving assistance to a country with strong Soviet ties needed to be resolved.

The synthesis presented in this section primarily focuses on the emergency response. The purpose of this section is to analyze the facts and events detailed in the chronology, but also to examine the perceptions of those involved in the relief effort. What is sought from this analysis is an understanding of the lessons learned as well as answers to critical questions raised by the food crisis in Ethiopia between 1981-86. The synthesis which follows is presented in the form of questions and answers.

A. Why was the famine allowed to reach such crisis proportions in Ethiopia before an effective response was made?

1. According to IDI, there was a serious lack of information about the magnitude of the disaster until the fall of 1984.

> There was a lack of information about both the food stock position and indeed the magnitude of the disaster right up to November 1984 when people began to pour into relief centers in the thousands. Although it was known that the population of most of the northern provinces were close to, and in many cases past, the point of destitution and social collapse; the position in most of the rest of the country was simply not known in any quantifiable terms throughout 1984. At the time of the consultant's study,

> there was still no scientifically credible data on the size of population at or near the point of destitution and no organization had defined responsibility for collecting or processing such data. The result was serious uncertainty about the scale of the problem being faced by the relief system in Ethiopia (1985: 53).

This lack of information was critical to the timeliness of the response. The US and other donors require information on the magnitude of food shortages and the number of people at risk before they are willing and sometimes politically able to commit relief assistance. The necessity of information on the part of A.I.D. accrues from two factors. First, A.I.D. needs some assessment of how much food aid is needed in order to gauge an appropriate response. This is critical because excessive food aid can be destructive to the economy of the host government. Second, information is so important to a timely response and related to A.I.D. is required to justify their "numbers" to other agencies like the OMB.

Nevertheless, there is always a gap between the level of information which is desired by the donor government and that which is available in the host country. An Ethiopian at the UN illustrates this problem:

> There must be a degree of accountability, but a problem exists for these poor countries, for not only are they economically poor but their facts are also poor. The problem is how to reconcile the high technology of the United States which demands lots of data and the low level of technology in developing countries for which there is very little data. In this sense, the donor and the recipient are at extreme opposites. In trying to reconcile this situation a lot of human lives are lost, though there is no intention to let people die.

The IDI places some blame on the GOE for the lack of information. Individuals from the institute assert that the government's secretiveness about its food stocks exacerbated its credibility with food donors. USAID/Addis contends that the "Red Terror coupled with the xenophobic attitude of the GOE prior to

1985" contributed to the government's reluctance to provide information. While some outsiders perceived this reluctance as evidence of the GOE's untrustworthiness or of their desire to cover up the situation, the IDI contends that the problem was also related to the internal politics of the RRC and other governmental agencies.

> The RRC is seen as an ambitious body, constantly seeking to expand its operations; this necesssarily brings it into conflict with other regional and central systems and the result is that very little information is actively shared between the various government departments or, indeed at times, between the different RRC sections. Thus for example, the CSO, almost as a policy, refuses to reveal its information, treating it as classified data. The CSO records on crop production are thus rarely released to the RRC Early Warning System (International Disaster Institute, 1985: 49).

An A.I.D. official believes that the problem was more fundamental. He argues that CSO has fairly good and extensive data which could considerably help the donor community and the RRC. However, the CSO does not analyze this data to estimate the size of the harvest until almost a year after it is collected, when it is no longer useful for forecasting food shortages.

An additional interpretation of the GOE's unwillingness to share information was that the Ethiopians were intentionally concealing the famine in order to starve the insurgents. This view is countered by an A.I.D. official who argued that the GOE was not attempting a "cover up" but rather had other priorities. The perception of a "cover up," according to this official, accrued from the GOE not giving famine relief as high a priority as the donor community believed it warranted. The highest priority was given to the internal warfare and the resource requirements of the military.

Another event given a higher priority than the famine in 1984 was the GOE's Tenth Anniversary. The attention and money given the celebration clearly

indicate its importance; an A.I.D. staff person believed that the GOE spent $140 million on the ceremony. The contention made by a number of sources is that information on food shortages in the northern provinces was suppressed because the GOE did not want the anniversary marred by the news of famine. Such news would have only taken away from an event which was designed to celebrate the successes of the Marxist-Leninist government.

The problem in 1984, however, was not only a lack of information from the GOE but also an inability to trust the information which was disseminated. One A.I.D. official argued that "our reason for distrusting their reports was not that they were Marxists, but that about five years earlier they had made false reports of a famine." The lack of reliable information in 1984 has also been attributed to FAO's "tendency to overestimate the needs of the host government." In the case of Ethiopia, FAO disseminated conflicting and often confusing reports to international donors. Part of FAO's problem is institutional in that their reports must be approved by the host government. Therefore FAO reports coming out of Ethiopia in 1983/84 tended to reflect the views of the GOE. In 1982/83, the GOE generally inflated their needs and in the spring of 1984, they held back as they were preparing for their Tenth Anniversary. The result of these events was that FAO only added to A.I.D.'s inability to piece together a reliable picture of the situation in 1984. An A.I.D. official clarifies these problems:

> In 1984, FAO was giving us unsubstantiated horror stories based on reports from the GOE, while Canadians were saying the weather was good. This was verified by the satellites. Then in July and August, both the GOE and FAO 'clammed up.' Finally we made an official appeal to FAO to define the problem better.

Another evaluation from a senior official at A.I.D. added to this perception of

FAO's lack of consistency and/or reliability:

> FAO was not especially helpful. In the early days, they came out with great pronouncements with no scientific foundation. Though they were basically right; they could have just as easily been wrong. Also their data did not help us in working with OMB. FAO was talking huge numbers. These ended up being used against us. They put things in such flamboyant flash and that made it harder for us to justify our numbers to OMB.

But while FAO was most often accused of overestimation, in 1984, according to an analysis by A.I.D. agricultural economist David Atwood (September 1985) which was widely accepted within A.I.D., FAO underestimated the food shortfalls in Ethiopia.

A final reason given for the inadequate information on the magnitude of the disaster was the lack of US presence in Ethiopia in 1984. An FFP official stated:

> Clearly we should have started earlier (in Ethiopia). We didn't because of political and substantive reasons. There was not enough presence in Ethiopia to give us adequate reporting. There was no A.I.D. presence, no reporting from the country. The GOE had restricted travel so that we were working off of a UN report which said that there was no problem, until late in the year. The GOE said that there was a problem, but we did not give them a lot of credibility.

2. The poor relations between the US and the GOE contributed to delays in the initiation of an Ethiopian assistance program and hampered necessary negotiations once the program was instituted.

The US and Ethiopia were close allies before the 1974 revolution and the takeover by Mengistu's Marxist regime. Relations grew more strained as the ties between the GOE and the Soviet Union became progressively stronger and reached a nadir at the point when the GOE asked the US to leave. USAID/Addis pulled out on their own initiative.

While the areas of sensitivity are numerous and the hostilities mutual,

the delays in initiating an assistance program accrued from the US's reluctance to give aid to a Marxist country in 1984. According to a senior level A.I.D. staff person, the first problem in establishing an Ethiopian food aid program was finding convincing evidence of the magnitude of the problem. Once A.I.D. was convinced, others in OMB were reluctant. "There were those who strongly felt that we should not give food to Ethiopia, that we would be taken." But once the issue became public (after the BBC and NBC film footage was shown), the implementation of an assistance plan for Ethiopia was greatly facilitated. President Reagan was convinced, once shown pictures of starving children. Once he was convinced, A.I.D. moved forward with the relief effort.

A.I.D. established a mission and an aid program in late 1984 but problems and distrust continued to permeate the relief effort. The following example is given by a State Department official:

> In the summer of 1985, there were reports or rumors that the Government of Ethiopia was deliberately trying to starve its people, that they had a deliberate starvation policy. We looked into this issue and found no evidence of it. Their policies may have led to starvation, but they were not deliberate policies. In August 1985, there were many media reports about Ethiopia that simply were not true. They were exaggerated. "Doctors without Borders" wrote a number of articles that were very negative about Ethiopians and that tended to be exaggerations or lies. They talked about people getting kicked out of resettlement camps and about inflated death statistics. The Readers Digest also published an article, "Famine Aid, Were We Duped" in 1986. This article also made allegations that were not true, that were exaggerated, and did more damage than anything else. All of these exaggerated reports were really harmful to the US. They allowed the Government of Ethiopia to laugh at us and make us look illegitimate. The situation in Ethiopia was bad enough without any need to exaggerate.

An A.I.D. official contends that what really made the Medicins Sans Frontieres (MSF) article in The Reader's Digest awkward was that it came out when the resettlement program was temporarily halted, and because it implied

too broadly that US food was being used to support the resettlement program. Nevertheless, this official argues that much of what MSF publicized was true. Perhaps the numbers they reported of deaths due to brutality on the part of Ethiopian officials involved in the resettlement program were not correct; but, according to this A.I.D. official, the brutality was undeniable.

The GOE made accusations against the US as well, alleging that we were trying to destabilize the Ethiopian government by providing training and arms to the guerillas.

> Stunned by recent accusations (mainly from the US) of its misuse of aid and its failure to secure a truce which will allow the distribution of famine relief in its northern provinces, normally reticent Ethiopia has struck back in the war of words.
>
> Speaking exclusively to New African, Mr. (formerly Colonel) Goshu Wolde for the first time publicly accused the US of training and equipping Ethiopian refugees in camps in eastern Sudan "in order to permanently destabilize the Government of Ethiopia."
>
> The Foreign Minister said this activity was happening with the connivance, even cooperation of the United Nations High Commissioner for Refugees (UNHCR). He named an official of the UNHCR as organizing the politicization of the refugees. "It is no secret why all these American troops are off to see the refugees in eastern Sudan. The whole operation there is a CIA operation now. Sudanese officials (in the UNHCR) have been displaced and five to eight Americans put in their place" (New Africa, 1985a: 39).

While the hostilities between the two governments created difficulties particularly for State Department officials attempting to negotiate with the GOE, A.I.D. emphatically asserts that at no time was food aid delayed because of these disagreements. However, these hostilities were a hindrance to US efforts when trying to negotiate over sensitive issues, like human rights. A State Department official asserts that unfounded or exaggerated accusations were sometimes publicized and that these were harmful to US efforts to win the

support of the European Community in using conditionality against the GOE. This support was important in the case of Ibnet, for example, where concerted pressure was essential in convincing the GOE to reopen the feeding camp.

3. According to a number of sources, the priorities of the Ethiopian government meant that available resources were diverted for purposes other than relief.

The US was a leader in the donor community in asserting that the GOE was not contributing its part to the relief effort because of other priorities. These priorities were almost always defined in military terms, related either to the internal wars with different insurgent groups or to the international threat posed by the Somalis. The US view is that the GOE's priorities hindered the relief effort and resulted in the unnecessary loss of many lives.

The book, Africa's Agrarian Crisis (Commins et al., 1986), claims that the GOE used food aid to punish and deprive areas of anti-government rebellion. "Outside observers of that deep tragedy were almost unanimous in their conviction that the problem of large-scale starvation was substantially worsened by the government's indifference or outright opposition to food deliveries to districts of the country identified with regional or ethnic opposition."

Another story which supports the thesis that the GOE was negligent is described by a senior A.I.D. official. He asserts that the problems of food distribution were related to the GOE's diversion of trucks away from relief effort for military purposes. This meant that food was piling up in the port. The United States Government was outraged at the severity of the food shortages in rural areas and the growing death rate when there was plenty of food in-country. But because of the lack of trucks, food aid sat rotting in the port

of Assab. A.I.D. put a great deal of pressure on the GOE concerning this issue and enticed other donors into doing the same by threatening to give the media pictures of their respective food aid piled up at the port of entry.

Another perspective concerning the truck issue described above is given by a State Department official:

> Many blame the Ethiopian government for using the trucks for military reasons rather than food aid. But the GOE had their own perspective and their own problems. They were fearful of losing control, they were fearful for their own survival, and political security. They probably felt that their security was more important than the relief effort. Perhaps this is understandable.

According to this official, the priorities of the government were to fight the wars in the northern provinces and to stay in power. The issue is further explained:

> The truck issue was a big one, the Americans thought the Ethiopians should use their own trucks and were outraged when they didn't. But the Ethiopian army trucks were only big Russian things which couldn't carry much. We were right to constantly keep pressure on the GOE, but the major security problem was their major priority.

The point made by these State Department officials is that the GOE's priorities were based on their fear for their own survival. An A.I.D. official counters these arguments with the assertion that the Ethiopian government's survival was at no time at stake. The insurgents did not have as their goal to overthrow the Mentistu regime, rather they were separatist movements. This argument may again be countered by the point that the Mengistu regime did not fear overthrow but rather the loss of political power which they had won only after much competitive in-fighting in the mid-1970s. If this is the case, then the GOE's unwillingness to divert their resources away from the military may be explained by their fears rather than by their lack of humanity, as some in the West contended.

The resettlement program which the Ethiopian government attempted to implement in the midst of the famine was also a priority which many contend took precedence over the relief effort. According to the critics of the Mengistu regime, the aim of the mass resettlement plan was to transfer peasants out of the dissident provinces in the north to distant lands in the south. The regime denies this charge and argues that, in fact, resettlement is their solution to famine. They insist that the perennial famine conditions in the northern provinces can be permanently alleviated only by reducing pressures on infertile, overcrowded areas. The south which is more fertile, less developed, and less subject to drought is better suited for settlement. The regime also defends the program on the ideological grounds that "peasant collectivization is essential to a socialist rural society." (New African, August 1986: 24).

When the program was first proposed in November 1984, the GOE declared its intent to resettle 1.5 million people. They began their program with "humanitarian assistance from the USSR" in the form of transport equipment. According to an article in The Washington Post, 3 January 1985:

> The Ethiopian government has proclaimed resettlement as its most important priority and with the help of 12 Soviet built Antonov cargo aircraft and more than 300 Soviet built trucks, about 20,000 peasants are moving south each week.

By March, over 300,000 people from the northern provinces of Tigray and Wello had been relocated. According to Cultural Survival, Inc.: "it was clear that 'logistical' problems confronted in the distribution of donated food from the West would not impede the resettlement program." This group argues that instead of using vehicles to clear food aid from the docks, these vehicles were used for resettlement.

Although, the US strongly criticized this program; all donor governments,

including the US, acknowledged that a long-term, well-planned resettlement program, on a voluntary basis is justified. The criticisms were related to the coerciveness of the plan and the lack of facilities at the resettlement sites; some referred to it as an "evacuation" of people rather than a relocation.

Medicin Sans Frontieres argued that peasants were being dumped on unprepared new lands without adequate health and social services, and without adequate food or the basic tools needed to farm. Cultural Survival, Inc. claimed that the famine conditions were exacerbated by the regime's priority of resettlement. The French doctors estimated that as many as 300,000 would die under the conditions existing in the resettlement sites.

A State Department official has a different view of the program.

> Some thought that they were deliberately trying to disperse the people who were opposed to the government. But those people who made those allegations can't answer the question; why didn't they touch Eritrea? The resettlement program rounded up people in Tigray and Wello; but they never touched Eritrea. I am not sure of their motives in terms of the resettlement program, maybe they were completely sincere.

Regardless of the GOE's motives, however, the program did divert resources away from the relief effort and likely did lead to the loss of lives. Under pressure from the US and other donors, resettlement was temporarily halted; today the GOE concedes that the plan had flaws.

B. What factors contributed to Ethiopia's vulnerability to famine in the 1980s and intensified the devastation of the drought?

An obvious reason for Ethiopia's vulnerability to famine is its climate. But like other areas in the Sudano-Sahelian region, crop failures occur not

only from rain failure but also from untimely or inappropriate rainfall. Heavy downpours or hailstorms just before harvest can flatten standing crops and encourage pest infestation.

> Another important aspect of the Ethiopian climate is the extreme variation in patterns of precipitation between years. Rain failures can affect one valley and not the next; or precipitation can be adequate in the highland (dega) areas yet hopelessly inadequate for crop growth at the lower altitudes. This makes it difficult to generalize from scattered rainfall reports as to the extent and intensity of rain failures in the country. Only twenty meteorological stations report regularly (10 daily) and yet the Meteorological Office makes generalizations from these. Satellite imagery, where available, is of little use in discovering local level differences and cannot distinguish between various kinds of vegetation on the ground. (International Disaster Institute, 1985: 3-4)

The rainfall variability is also a problem because so much of the country (41 percent) receives an annual rainfall which is considered to be minimum for crop production. Thus fluctuations can result in crop failure, and the peasants have no way of adjusting to it. (Mariam, 1984)

Drought in Ethiopia is intensified by environmental degradation. The IDI claims that high population growth, especially in the northern areas has increased pressure on the land due to overcultivation and severely depleted soil. The severe degradation of soil in the northern highlands over the years has intensified to the point that the area of land incapable of sustaining cropping has increased fivefold.

> Losses in agricultural production due to erosion in 1985 were estimated at Birr 60 million. These losses are expected to rise sharply in the future, and could reduce production by 5 percent per year throughout the 1990s. Erosion not only reduces productivity, but also water holding capacity, thereby increasing drought frequency (A.I.D., 1987e).

Deforestation has also occurred on a wide scale. At one time, as much as

three-fourths of the country was forested. Now significant stands of timber cover less than 4 percent of the country. Clearing for cultivation, burning to create pastureland, and cutting trees for fuel and timber needs are responsible for the reduction of the forest.

Although soil erosion and deforestation have reduced the amount of land available for agriculture, there is still much that can be utilized. Of the potentially arable land, only 40 percent is under cultivation according to USAID/Addis. With the increased pressure of population, one would expect some expansion in the land under crops; and yet for the most part the level has remained stagnant and crop production has not increased. Following a substantial upward movement from 1974/75 to 1979/80, total agricultural production stagnated, while total food production has actually declined. The per capita availability of grain equivalent has dropped 22 percent over the last 10 years, resulting in a decline in consumption between 1980-84. Data suggest that even in a normal year (1981/82) deficits are as large as 300,000 MT. These declines in production and consumption clearly add to Ethiopia's vulnerability and affirm the description given by a UN official that life in Ethiopia is marginal. Even in normal years, life is marginal and rain failure, particularly in the northern provinces, is enough to push the region into crisis.

Numerous sources blame declining food production on government policies. USAID/Addis contends that the "most binding constraint to expanding, or even maintaining, production are government policies relating to: a) prices paid to peasant producers, and b) the rigorously enforced requirement for delivery by peasants and merchants of fixed quotas of commodities to the Agricultural Marketing Corporation (AMC) at the low fixed prices." Calculations by the

World Bank's Regional Office in Nairobi indicate that farm-gate prices paid by AMC in 1983/84 equalled only 63 percent of the equivalent import parity prices for maize, 70 percent for sorghum, and 77 percent for wheat.

The combination of these low prices to peasants, forced deliveries under the quota system, and the prohibition of movement of commodities across administrative boundaries has discouraged production and restricted normal marketing.

One author summarizes Ethiopia's vulnerability to famine as follows.

> Between 1970 and 1981-before drought hit the region-per capita food production had declined by 15 percent, and that even with normal climatic conditions the food situation had become quite precarious. Had food production in Ethiopia increased at the same rate as in much more densely populated South Asia since 1970, it would have been possible for most people to have withstood the recent drought conditions with a minimum of hardship. But more than a decade of policies inhibiting agricultural production--collectivization, state farms, heavy taxation of export crops, and concentration of investment in urban areas--took their toll. As if these ill-founded policies were not enough, more than a decade of civil war and strife have added immeasurably to the misery of millions. (Johnson, 1986: 51).

C. Did the US deal with the GOE in a manner which best expedited the relief effort?

There are a number of different perspectives on this issue within the State Department itself. One asserts that the US was the most "aggressive" and vociferous western donor about injustices done by the GOE. While other European donors would, in many instances, follow suit in expressing objections to actions of the Ethiopian government, it was most often the US which took the leadership.

Below are two instances of the success of US aggressiveness related by different A.I.D. officials:

> 1. The Americans were the only ones who were aggressive enough to take a stand against the Ethiopians. We yelled at them; we were assertive and aggressive. We fought the GOE on all issues and dragged other Western donors along with us. Sometimes they were not too eager. McPherson took on the GOE here. We pushed as hard as we could internally, but there were three times in which relations got so bad that we feared we would get kicked out. The first time was when we took the government on with the resettlement issue. We pushed for human rights; we said that people were dying. We pushed on the truck issue, and we pushed on the port charges issue. This aggressiveness paid off when the GOE stopped the resettlement program after our outcries about the injustices and the violations of human rights. They said that they would be more careful in the future.
>
> 2. Sometimes you do have to call international attention to an issue. Sometimes it is useful to make noise. For example, in the case of Ibnet, a local official was brutal in his treatment of people. Mengistu denied that he approved of this action, and it was reversed. Then in October 1985, a letter was sent to the NGO's (non Government organization) demanding that all expatriates be replaced by Ethiopians within one month's time. This demand was made at the peak of feeding eight million people. But there weren't enough qualified Ethiopians, and the NGO's already had some Ethiopian staff. This was another case in which making noise helped. In this situation we held a press conference denouncing the government's actions. Brad Morse brought the issue to the attention of Mengistu. Mengistu said that he didn't know anything about it, and it was withdrawn.

In other situations, however, US aggressiveness may have done more harm than good. A senior Foreign Service officer argued that this aggressiveness was not always in the best interest of the relief effort.

> My job was to move food, therefore I needed to work with the government the best I could. We live in a real world, the Ethiopian world; therefore we have to work with them. We may minimize our involvement, but still we need a degree of cooperation. If there is a problem like not enough trucks, then all the donors need to get together and try to work it our with the GOE. This is the only way to get anything done. It's a miracle that given the lack of communication

that we were able to get on with it. Some felt that we had to sledgehammer the government; some felt that that was the only reason things worked. I don't believe it's true. It's not true.

Ninety percent of what did go through, went through because of educated people working together. Ethiopia was not unlike Sudan; it was really no better. Did the Government of Sudan (GOS) give food aid any more of a priority than they did in Ethiopia? Likely not, and yet no one asked questions, and such criticisms were not made. Why, because we had to work with the GOS. In Ethiopia we tried to avoid working through the government, and therefore we were more free to be hostile and critical.

VI. ACHIEVEMENTS OF THE US RELIEF EFFORT IN ETHIOPIA

Given the myriad of problems and obstacles which hindered the relief effort in Ethiopia, it was an immense achievement for all donors involved and certainly for the US. Probably the most important achievement was the number of lives saved. And while the A.I.D. Administrator, M. Peter McPherson regrets that his Agency did not act sooner, all donors were slow to act. One important reason for this discussed earlier was the lack of information to reveal the situation clearly. There was simply too much conflicting data from too many sources. Contentions have been made that the "politicization" of the relief effort in Ethiopia was responsible for US delays. Regardless, the US did not respond more slowly than other donors with fewer ideological conflicts with the GOE. A.I.D. asserts, "our food was among the first to arrive."

The US gave nearly half a million MT of emergency food between October 1984 and September 1985. Combined with transport costs, non-food relief, and medical supplies; this aid was valued at about $280 million.

Those working in-country had enormous obstacles with which to contend. The GOE was very hostile to the American presence in Ethiopia. In 1984, they would only give USAID officals 30 day visas, while constantly threatening to expel them from the country and refusing them travel permits to allow for an assessment of the problem.

In addition, relief workers had to deal with the difficult logistics in Ethiopia due to a very rugged terrain, an inadequate transport network, the insecurity posed by the numerous insurgent groups, the disruption caused by the resettlement program, and the severity of starvation of so many people. The famine had reached such a critical point that many peasants had already left

their homes for feeding camps. Migration is usually the most desperate and final reaction to famine (Cutler, 1984).

USAID people who worked in the field were faced with the horrors of a situation which had reached a crisis too long before a response was made. And yet despite these hardships, USAID had more volunteers than they could use. A memorandum had been circulated in Washington asking for volunteers to work in Ethiopia. The response was immense, as McPherson expressed; "we had tremendous 'esprit de corps.'"

Other achievements observed by those at A.I.D. were related to their ability to improvise given an immense bureaucracy, the degree of cooperation among donors, and the immense effort put forth by the A.I.D. staff.

> I feel excellent about the ability of A.I.D. as an institution to stretch and improvise. People say government isn't flexible but we proved otherwise. People talk about a non-responsive bureaucracy and I get testy. USAID was doing incredible things. It was decided at the upper levels (McPherson) that we would do what you have to. It was fun; it was great.

People at A.I.D.'s FFP office confessed that they did everything within their powers and beyond to get food aid in the pipeline as quickly as possible. Working with the US Department of Agriculture (USDA), they found innovative ways of dealing with the bureaucracy. These "innovations" improved their ability to respond quickly.

Those in-country remarked at the coordination among donors, even between East and West.

> There was a lot of East-West cooperation. There were donor meetings once a month with Cubans, Bulgarians, Soviets, East Germans, as well as Westerners. The UN did a very good job in coordinating them. Many different countries, from both the East and the West, provided resources. For example, there was an air drop operation handled by three Polish helicopters. They would find the drop zone and radio to ground, then British or German planes would come in

> and drop American food. There were 64 different aircraft from 11 and 12 different countries. East Germans, West Germans, Soviets, Libyans, British, the Red Cross, Belgians, all had aircraft helping to transport food.

The 1984/85 famine consumed A.I.D. for almost a year and a half. A number of officials stated that 90 percent of their time was spent on the African drought and famine. The USOFDA, was accustomed to working in an emergency context; this was its modus operandi. What was unusual, however, was a crisis which lasted almost two years. Those at OFDA commonly work around the clock in the midst of a crisis until it is finally under control. But with this crisis, their health and their personal lives were disrupted for such a long period of time that the pressure was immense.

According to FFP:

> The situation in 1985 was unprecedented; it was an African wide drought. For such an event you don't have a special emergency system. I'm not sure if it's possible. Reports came in various forms and from various sources. And really we muddled through using very talented people. The unsung heroes were the people who put in eleven to twelve hour days trying to keep track of all the shipping and of all the availability of foods. The unsung heroes were those who cared so much that they gave so much.

Sudan

Sudan
International boundary
Province boundary
National capital
Province capital
Railroad
Road
Track
0 50 100 150 Kilometers
0 50 100 150 Miles
EGYPT
LIBYA
SAUDI ARABIA
Red Sea
CHAD
CENTRAL AFRICAN REPUBLIC
ETHIOPIA
ZAIRE
UGANDA
KENYA
ASH SHAMÂLIYAH (Northern)
AL BAHR AL AHMAR (Red Sea)
Port Sudan
Sawâkin
Wadi Halfa'
Halâ'ib
Dunqulah
Kuraymah
Taqatu' Hayya
'Atbarah
Ad Damir
AN NIL (Nile)
DÂRFÛR ASH SHAMÂLIYAH (Northern Darfur)
KURDUFÂN ASH SHAMÂLIYAH (Northern Kordofan)
Omdurman
Khartoum
Jabal al Awliyâ'
Halfa' Dughaym
Kassala
KASSALA (Kassala)
Ak'ordat
Asmara
Wad Madani
Ad Duwaym
Al Junaynah
Adrâ
Al Fâshir
Zalingei
Nyala
Al Ubayyid
Kûsti
Sannâr
Doka
Al Hawâtah
An Nuhûd
AL BAHR AL ABYAD (White Nile)
Al Dalalayn
AN NIL AL AZRAQ (Blue Nile)
Gondar
Ad Damazin
DÂRFÛR AL JANÛBIYAH (Southern Darfur)
KURDUFÂN AL JANÛBIYAH (Southern Kordofan)
Babanusah
Kâduqli
Kurmuk
Debre Mark'os
Bambilahi
Malakal
Addis Ababa
BAHR AL GHAZAL (Bahr el Ghazal)
Nâsir
Wâw
JUNQALI (Jungle)
AL BUHAYRAH (El Buheyrat)
Awasa
Pibor Post
Rumbek
Bor
AL ISTIWAYAHAL AL GHARBIYAH (Western Equatoria)
AL ISTIWAYAHAL ASH SHARQIYAH (Eastern Equatoria)
Yambio
Juba
Administrative line
Yei
Nimule
Niangara
Mangbela
Fakwach
Gulu
Boundary representation is not necessarily authoritative.

CHAPTER 5. SUDAN: THE DROUGHT AND FAMINE, 1981-1986

I. INTRODUCTION

Unlike many of the other drought affected African countries in the 1980s, Sudan had no previous history of severe famine; and it had little in the way of institutional mechanisms to deal with such a crisis. For a variety of reasons, the Government of Sudan (GOS) did not focus its attention on the drought in the western provinces of Darfur and Kordofan during 1983/84. President Nimeiri had many problems which were more proximate, such as near bankruptcy of the country, civil war in the south, and resistance to the government's imposition of Sharia, Islamic law. These difficulties culminated in a political coup, creating even more constraints to any adequate response the Sudanese government could give to the drought exacerbated food crisis. This was the setting when the US stepped in to aid the growing numbers of starving people. In the final analysis, the US provided between 85 and 90 percent of the necessary emergency food aid for 1984/85. The following characteristics represent the most salient aspects of the famine in Sudan and the US response:

1. Sudan had no prior history of famine, and consequently, few institutional mechanisms existed to manage a relief effort.

2. The economy of Sudan was near bankruptcy and had no reserves to contribute to the emergency.

3. The political coup created a decision-making vacuum in the midst of the famine crisis, adding to the chaos in the country.

4. The terrain, the poor infrastructure, and the torrential rains of 1985 made the logistics of any response difficult and costly.

5. The US response was untimely in that food was not positioned in advance of the rainy season and therefore the supply did not arrive when it was most needed.

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6. The US was the major donor in Sudan, providing 85 to 90 percent of all food aid during the crisis.

In the next section, the environmental and cultural contexts in which the crisis took place is examined in order to more fully demonstrate the constraints to the relief effort. These constraints include the economic, political, and logistical obstacles which resulted in delays in food distribution.

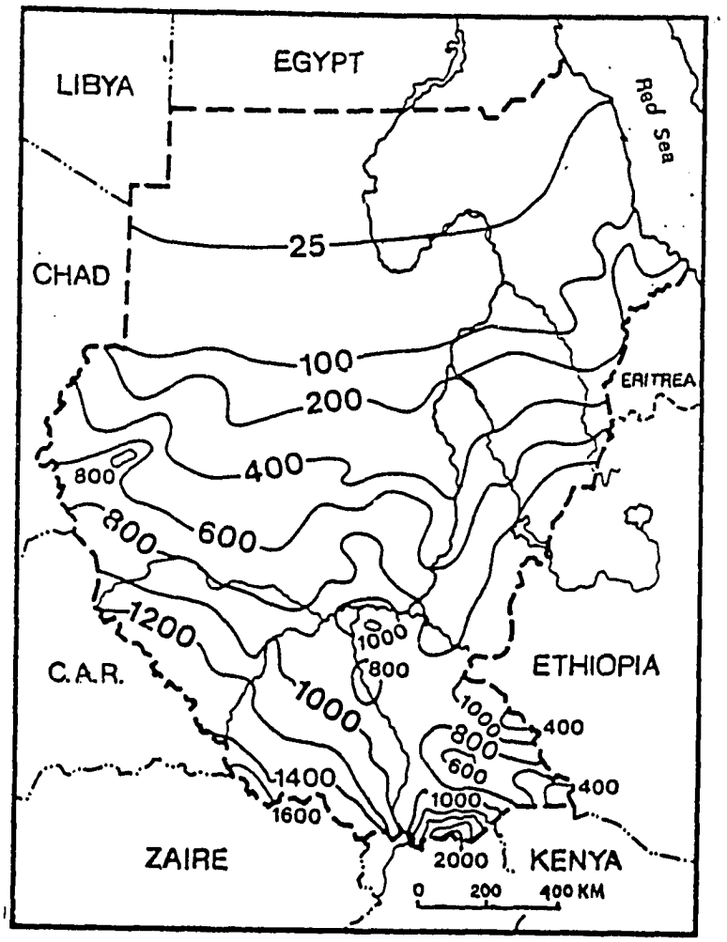
A. The Environmental Context

Although Sudan is the largest country in Africa, climate limits the utilization of its enormous land resource. The climate ranges from desert in the north to almost equatorial conditions in the south. Located between these two areas are the semi-arid and savannah regions which have rainfalls of varying intensities and durations. The local populations of these regions are the ones most affected by drought.

The impact of climate on human activity in this area of the world is derived more from precipitation than from temperature. In north central Sudan, the extremely hot temperatures, between March and October, are tolerable because of quite low humidity. This situation changes with the coming of the rainy season between June and September. The amount of rainfall is "very close to the minimal-margin required for cultivation . . . and the annual variability in amounts is very great" (Rogge, 1985:24)(Figure 5.1). This irregularity of precipation significantly impacts the agricultural production level of the north. For example, in years with below-average rainfall, production of sorghum, the staple food crop, becomes less than marginal. Crop failures may also occur if the frequency of the rains are not right; if there are a number of heavy downpours four to six weeks apart, then most of the water will be lost in runoff.

Figure 5.1

Mean Annual Rainfall in Millimeters in Sudan



SOURCE: Rogge (1985).

In terms of topography and vegetation, Sudan is a country of plains and low plateaus: sandy and rocky desert plains in the north, grassy clay plains in the center and south center, and an ironstone wooded plateau in the south. The few upland areas of the Red Sea Hills in the east, Jebel Marra in the west, and the mountains of the extreme south are all marginal to the country. As rainfall increases in amount and duration from the north to south, there is a steady change in vegetation. The landscape of the north consists of bare desert, around Khartoum there is annual short grass and short shrub-like trees, and surrounding Kusti one finds wooded grassland, and from Malakal southward there is a mixture of tall dense grassland and trees except where poor drainage reduces tree growth. In the extreme south of the country there is a natural vegetation of tropical woodlands with thick forest in some areas (Figure 5.2).

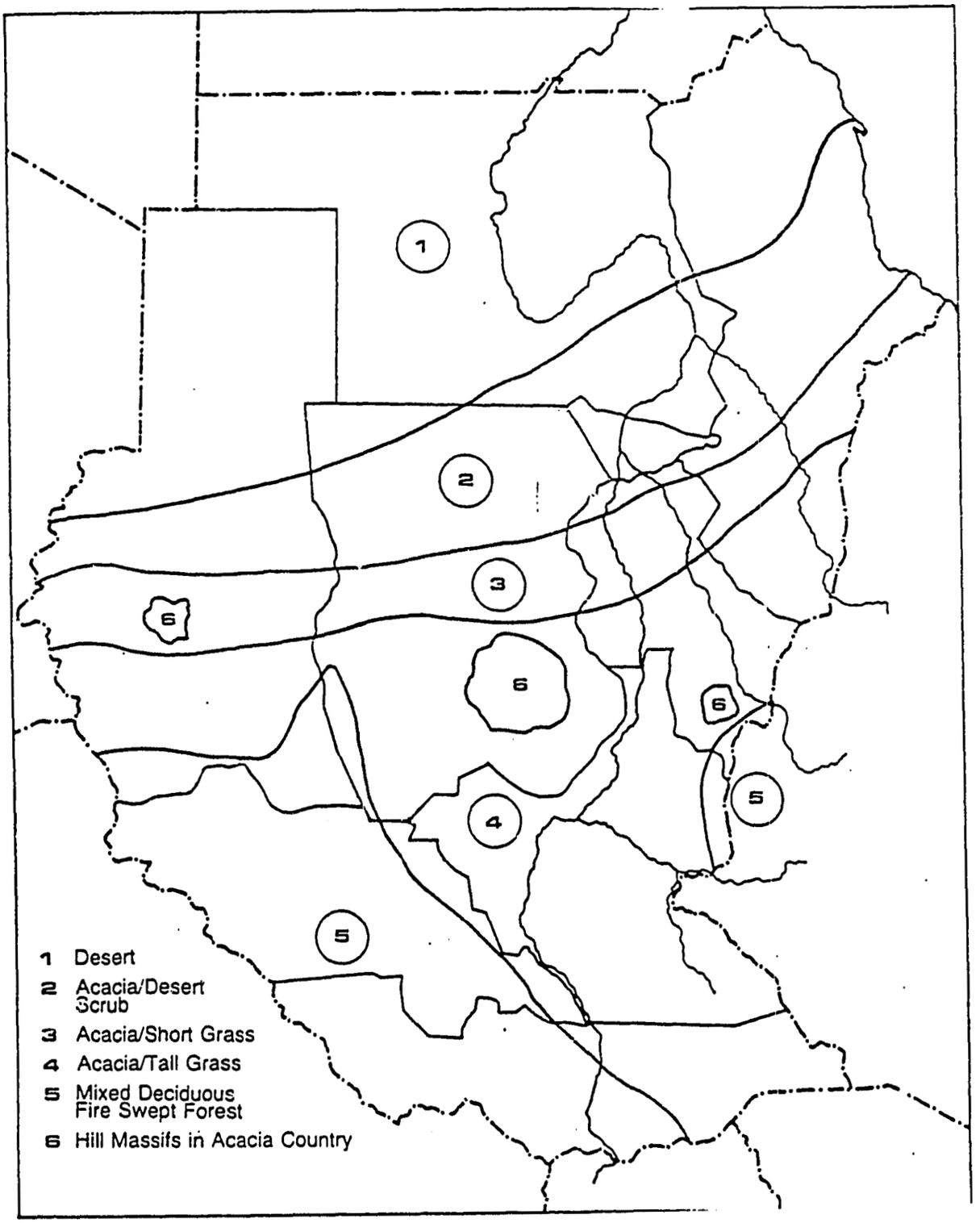
B. The Cultural Context

The Nile and its tributaries form the central artery of the plainlands and serve as a locator for people and agriculture throughout the length of the river. Away from the Nile, in Southern Kordofan, Southern Darfur, and the eastern regions, extensive agricultual schemes exist as well as traditional livelihood systems which involve animal husbandry. In the north, pastoralism is an environmental necessity given the lack of rainfall in certain areas where camel, sheep, and goat are herded. In the south, pastoralism is more of a cultural response associated with the Nilotic societies of the region (Rogge, 1985:26) where cattle are the dominant livestock.

The semi-arid and short grassland area of eastern Sudan traditionally had an economy based on pastoralism supplemented by agriculture during the rainy season. These pastoralists migrated northward during the rainy season and southward during the dry season. The migratory and economic patterns of these

Figure 5.2

Sudan Vegetation



SOURCE: Berry (1987).

people has been altered in recent years by the increase of human and animal population which has created pressures on grazing lands and has often resulted in desertification of marginal lands. Drought has exacerbated this situation, causing larger-scale migrations, added pressures on marginal lands, and greater desertification. The increased competition of land during the dry years of the 1980s has created friction in the east between pastoralists and commercial farmers. The competition has been worsened with the influx of Ethiopian refugees since the 1970s.

In southern Sudan, population densities (refugee and Sudanese) are low whereas land is more abundant. Not only is this region very different from the north climatically, but also culturally and politically. Unlike the Arab Muslims of the north, southerners are Christian or animist Africans who engage primarily in subsistence-oriented shifting agriculture.

While the major cultural differences are between the Arabs of the north and the Africans of the south, contrasts also exist between east and west. The peoples of the west are considered less Arab and less acculturated than those of the east. There is a blend of ethnic groups in both the east and west, but the east tends to have more Arab Muslims and Copts, while western Sudan has Arabs blended with Africans. Sudan has a great ethnic diversity which creates regional divisions and exacerbates the poor communication engendered by the physical environment.

Sudan in 1986 is a land of contrasts. The capital at Khartoum is a city of over two million people; the irrigated areas of Blue Nile Province constitute the largest area of modern technology irrigation in Africa; and huge mechanized farms produce sorghum and simsim on the clay plains of central Sudan. Yet in rural areas, particularly in the west and in the south, small-scale agriculture and livelihoods based on local products and produce prevail. This

other Sudan is the area where consumer goods are rare and where the population is afflicted by famine if the rains fail.

C. Constraints to the Relief Effort

One of the most obvious constraints to the relief effort associated with the famine of 1984/85 was the physical environment. The size of the country and the soils which turn to mud during the rainy season made the transportation of food difficult. These obstacles presented by the environment were worsened by the poor quality of the roads and the antiquated rail system. Sudan's poor infrastructure is not only an obstacle to development, but was the most difficult problem for the emergency operations in-country. The Sudanese railway system is habitually hampered by breakdowns created by torrential rains. According to a State Department official, the efficiency of the Sudan Railways Corporation (SRC) had declined substantially over the last decade due to the lack of updated railcars and spare parts as well as to ineffective management under the Nimeiri regime. The road network is wholly inadequate for a country of this size. There is only one paved road between Port Sudan and Kusti, while many others are mere tracks in the desert. During the rainy season, these dirt roads often turn to mud, thus making them impassable.

According to USAID/Sudan, however, the lack of support from the GOS in responding to the drought was at least as great a hindrance to the relief program as was the physical environment. USAID argues that "if there had been full cooperation from the start of the program, many of the problems created by the deterioration of the physical environment would have been avoided." The in-country staff spent much of their time trying to mitigate the obstacles engendered by the GOS, the railroad and dock workers unions, and sometimes the

regional and local governments. These were problems the central government could have taken charge over but often refused.

Another important constraint was the number of USAID staff persons devoted to the immense emergency operation in 1984/85. Although USAID/Sudan had a large staff of 130, only 3 people were assigned to the relief effort until August 1985 when 3 additional persons were hired. This extremely small staff was expected to manage the relief program from the mission and in the field. According to one individual, it was impossible to assess the problems outside of Khartoum and also to keep up with the administrative work of managing the requests and deliveries of food aid. Therefore, USAID was dependent on other agencies to provide information and to do the monitoring at both the port and at the point of destination. This situation must have contributed to some of the problems associated with the relief effort in 1984/85.

The unstable political environment in Sudan was partly to blame for the lack of support by the Sudanese government. Nimeiri's lack of concern coupled with his poor economic policies, and poor management of the railroad clearly did not help the relief effort. However, that the political coup occurred in April 1985, before the rainy season, was most unfortunate. The transitional government temporarily filling the leadership gap refused to sign any contracts at this critical period of time. This meant that no one would sign the trucking contract in time to allow for the transport of the food aid before the onset of the rains. These events contributed to the lack of timeliness of the relief effort in 1985. USAID/Sudan argues that "if priority had been given to relief food by the GOS, then the targeted quantities would have arrived in time."

The disastrous state of Sudan's economy only added to an already difficult situation. The economy had begun a downturn in the 1970s due to the oil

embargo. Until the crisis of 1984/85 and the new government of 1985, imports spiraled, while exports generally stagnated, with the exception of 1981/82 following a very good crop year. The balance of payments became increasingly negative as the foreign debt skyrocketed. With the added burden of the famine and a burgeoning refugee population, Sudan could contribute little to the emergency operation.

II. THE IMPACTS OF THE DROUGHT AND FAMINE IN SUDAN, 1981-1986

In this section, a description of the meteorological drought in Sudan is presented, followed by a discussion of the impacts of the drought and famine on economic activity. An overview of the agricultural economy of Sudan, including an analysis of the different sectors and their importance to production, provides a foundation from which to examine the impacts of the 1984/85 drought on the overall economy, on food crop production, and on movements of people. What is sought here is an understanding of the degree of the crisis' impact which differs from previous trends.

A. Drought in Sudan

The main growing season throughout Sudan begins in June and ends in September, although in some areas the harvest of several major crops occurs as late as December. Average rainfall decreases from south to north; whereas the rainfall variability increases from south to north, and the semi-arid fringe of the desert is the most drought-prone. In 1980 Sudan experienced a moderate drought throughout much of the country, which was followed by a severe drought in the north in 1981. The severe drought extended to central Sudan in 1982, affecting most of the country. The next year was slightly wetter, but the rainfall was still far below normal. The 1984 growing season was worse than the years 1982/83, and no rain fell north of 13 degrees latitude. Western Sudan was the most seriously affected region. As in most of Africa, the drought ended in 1985, except for a small area in western Sudan. Areas in the east and south were still experiencing drought in 1986, but they were local droughts compared to the 1982-84 national crisis. In the critical zone of

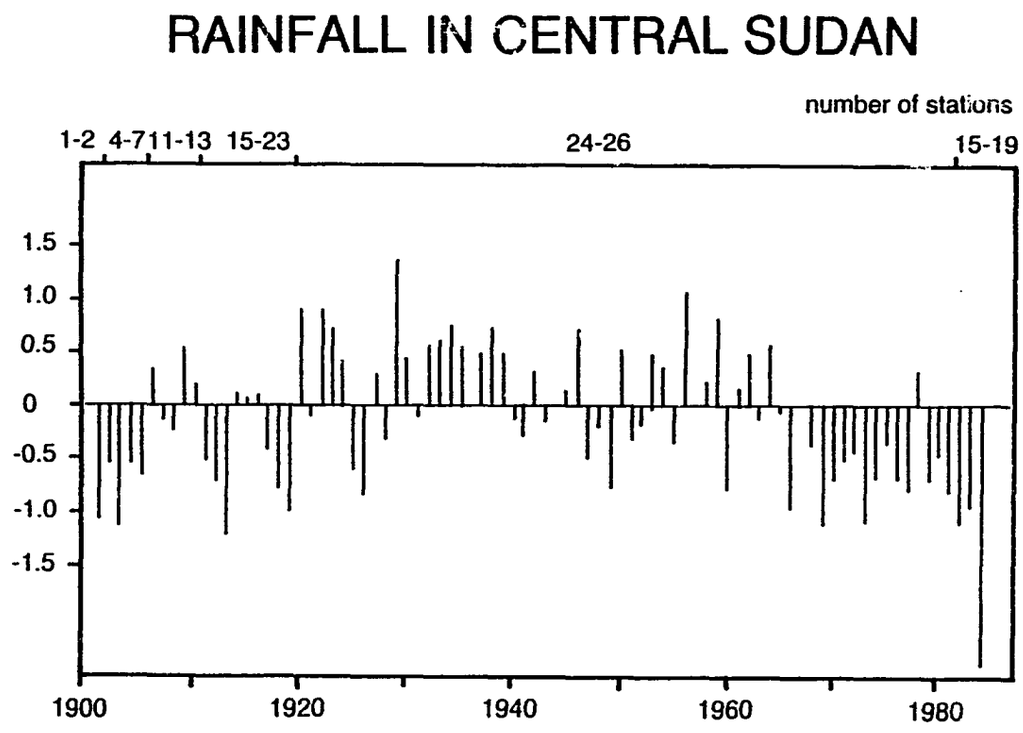
central Sudan, from 12 to 16 degrees north latitude, 26 stations were used to compile a regional index of rainfall (Figure 5.3). The 1984 drought was twice as severe as the previous worst drought on record, in 1913. The drought marked the nadir of fifteen to twenty years of below average rainfall, a trend also found in West Africa. At present, it is too early to know whether the trend will continue, or whether wetter conditions will return at the end of the 1980s.

B. The Economy

The financial situation in Sudan ranks among the worst in the world. Since the 1970s, imports have increasingly outstripped exports, resulting in a progressively negative balance of payments. Sudan's foreign debt has also accelerated to such a point that debt service obligations exceeded foreign exchange in 1985. In the early 1980s, the World Bank and the International Monetary Fund (IMF) assisted Sudan in initiating policy changes to increase the country's foreign exchange earnings (D'Silva, 1985). Table 5.1 shows declining imports after 1981 and some improvement in balance of payments; but exports remained generally stagnant, as Sudan lost some of its competitive edge on the world market.

Agriculture is the backbone of Sudan's economy, accounting for over 90 percent of its exports and earnings. It is structured into three subsectors: irrigated, mechanized rainfed, and traditional rainfed. The irrigated sector is located in the east and, to a limited extent, the north, along the Nile. The techonology used in this sector is some of the most sophisticated in Africa. The mechanized rainfed sector is also located mainly in the east, although there is a significant number of feddans in mechanized agriculture in

Figure 5.3



SOURCE: Hulme (1985a).

Table 5.1

Financial Indicators for Sudan, Actual and Projected
(million dollars)

Year	Exports and Other Credits [a]	Imports and Other Debits [a]	Balance of Payments	Public Debt [b]	Debt Service [a]	International Reserves [a]	Foreign Exchange Available [a]	
							Total	Share to Major Food Imports
1980	689	1,127	---	---	104	49	585	8%
1981	793	1,634	-841	4,540	145	17	648	13%
1982	401	750	-349	5,120	115	21	286	33%
1983	514	703	-189	5,680	87	17	427	19%
1984	519	546	27	5,660	107	17	412	23%
1985	500	1,300	-800	9,000 [c]	808	12	(308)	
1986	525	1,150	-625		111	12	403	25%
1987	550	1,200	-650		116	12	422	25%

SOURCE: [a] USDA (1984); USDA (1986b).
[b] Economic Intelligence Unit (1986).
[c] D'Silva, 1985.

Southern Kordofan. The rest of Sudan consists of traditional rainfed farming. Various combinations of cash crops and food crops are grown in all subsectors, with the rainfed sector also producing a majority of the livestock.

The cultivated area in each sector varies significantly. Rainfed agriculture dominates in terms of the number of feddans cultivated, it has approximately nine million. The mechanized rainfed sector consists of approximately six million feddans, while there are only between two and three million feddans in irrigated agriculture.

C. The Impacts of the 1984/1985 Drought on Agricultural Production

The impacts of the drought on agricultural exports and imports as well as on food production for domestic use is examined in this section.

1. Agricultural Exports and Imports

Cotton, which is grown largely in the irrigated sector, has been Sudan's most important cash crop. Yet its foreign exchange earnings declined during the 1970s, contributing only 23.2 percent of export revenue in 1981. Donors have since assisted with the rehabilitation of cotton production in the irrigated areas. The scheme was initially successful with production rising from 518,000 bales in 1980/81 to 1.2 million bales in 1983/84. However, reduced world prices and the declining importance of long staple cotton have contributed to Sudan's unsold stock, which may increase to 2 million bales after the harvest of the 1985/86 crop.

Table 5.2 reveals the impact of the drought on cotton production. While 1982 was a good year for cotton growers, with increasing rain failures, the Nile water level dropped substantially. This event is likely related to the

Table 5.2

Sorghum, Cotton, and Groundnut Production in Sudan, 1981-1986

Item	1981	1982	1983	1984	1985	1986
FOOD CROPS:						
SORGHUM						
Prodn '000 MT	2,100	3,300	1,100	1,100	1,200	2,650
Area '000 feddan	3,106	3,583	3,500	3,500	-	-
Yield kg/feddan	901	541	520	414	-	-
COMMERCIAL CROPS:						
COTTON						
Prodn '000 MT	259,060	475,000	217,000	260,000	625,000	327,000
Area '000 feddan	397	363	392	407	-	-
Yield kg/feddan	808	1,244	1,509	1,572	-	-
GROUNDNUTS						
Prodn '000 MT	707,000	721,000	497,000	522,000	-	-
Area '000 feddan	-	782	781	800	-	-
Yield kg/feddan	-	629	586	525	-	-

SOURCE: FAO (1986).

concomitant decline in cotton production during 1983/84. Although cotton yields increased in 1985, Sudan has had difficulty selling its cotton on the world market. This factor coupled with the declining world price has meant that cotton may not retain its former importance for Sudan in terms of export earnings.

Sorghum, however, may replace cotton as a major export crop. In 1985, with the return of the rains, Sudan's sorghum crop was the largest in recorded history. The advantage of sorghum over cotton is that it is a food crop which can be sold both domestically and abroad. Sorghum is the staple food crop and leads the cereals in meeting Sudan's domestic consumption and exports needs. Irrigated, mechanized rainfed, and traditional rainfed methods are all involved in its production (Table 5.3).

Table 5.3

Sorghum Production in Sudan, 1982-1984

	1982/1983			1983/1984		
Type of Agriculture	Area (1000 feddan)	Production (1000 tons)	Yield (kg/feddan)	Area	Production	Yield
Irrigated	579	233	402	719	333	463
Mechanized Rainfed	5,305	1,185	223	5,502	1,129	205
Traditional Rainfed	2,708	520	187	2,837	357	126
TOTAL	8,592	1,938	812	9,058	1,819	794

SOURCE: Sudanow, (1984: 4).

Rather than being irrigated, 90 percent of Sudan's sorghum is grown in the rainfed areas. The mechanized rainfed sector concentrated in the east accounts for 60 percent of the produce for the urban and export markets. High yielding varieties have been introduced, but yields are disappointing partially due to the loss of soil fertility. Although the traditional rainfed sector supports the majority of the population, it only provides six percent of the country's sorghum production. During the 1984/85 drought, only 1.1 million MT of sorghum was harvested (Table 5.2); this required Sudan to import over 1 million MT of food.

According to USAID/Sudan, the traditional rainfed sector may not be a substantial contributor to the country's sorghum production during drought years, although during normal years it contributes significantly because the area under cultivation is readily expanded as a result of normal supply and demand expectations. This was demonstrated in 1985 when there was a dramatic increase in the cultivated areas resulting from the high drought prices for cereals and the good rains.

Sudan has traditionally been a food surplus country. However, between the good crop year of 1981/82 and the worst drought year of 1984/85, cereal production (sorghum, millet, and wheat) declined dramatically. The 1982/83 crop was only 63 percent of the good 1981/82 crop year, 1983/84 cereal production was only 57 percent of the 1981/82 level, and 1984/85 production was only 35 percent of the 1981/82 harvest (FAO, 1986). The poor harvests in the 3 years before the record 1986 crop forced greater dependence on cereal imports.

Gum arabic and groundnuts are also contributors to Sudan's export earnings and are grown in the traditional rainfed sector. Gum arabic production has declined significantly since 1980 due to cutting of trees for fuel and to

declining prices. Groundnut production increased slightly between 1981/82, since then it has declined substantially (Table 5.2). Production was hard hit by the 1984/85 drought; there was no available data at the time of this study for the 1985/86 crop year. Declines in both gum arabic and groundnuts have had a deleterious effect on badly needed foreign exchange for the country.

The potential for Sudanese livestock exports in the traditional rainfed sector is substantial if the rinderpest problem can be solved. A scheme with donor funding has been developed to facilitate the delivery of cattle and sheep to Port Sudan. However, according to the UN, livestock numbers were seriously diminished by the 1984/85 drought and famine, thus it will take time and investments to replenish the herds back to their former numbers.

2. Food Crop Production

The 1984/85 drought affected all three agricultural subsectors. The mechanized sector in South Kordofan, which had previously been self-sufficient in sorghum, became a food deficit area. In 1982 and 1983, the mechanized areas made up for the reduced production of sorghum in the traditional rainfed sectors, but in 1984 overall sorghum production declined by 50 percent. The demand for sorghum increased with the arrival of Ethiopian refugees, making the shortfalls in production even more serious. The rise in demand for sorghum was reflected in the 60 percent increase in price in August 1984. By December 1986, it was estimated that there was a 33 percent reduction in the per capita food supply in Southern Kordofan Province (Price, Williams and Associates, Inc., 1986a: 9). The situation was compounded by an additional 250,000 displaced people in the southern region, where the SPLA is fighting.

A shortfall in wheat production in the irrigated sector also exacerbated

the food shortage. Very little wheat was planted due to the decrease in the water level of the Nile; only 15,000 MT were harvested in 1984 as shown in Table 5.4. Sudan's economic situation prohibited imports of wheat in sufficient quantity to meet urban demand. The deficiency was met by food aid. The 1985/86 estimates for wheat production in the irrigated sector were lower than average.

Table 5.4

Production Data for Sudan Food Crops, 1981-1984

	Production Seasons (000 Metric Tons)			
Crop Production	1981	1982	1983	1984
Sorghum	3,277	2,000	1,819	1,300
Millet	573	341	314	300
Wheat	163	180	162	15

SOURCE: United States Congress, Senate Committee on the Judiciary (1986).

The effects of the drought in the traditional rainfed sector were evident in the large-scale out migrations from northern and western Sudan. The major food crops of sorghum and millet virtually failed in 1984/85. At the same time, traditional farmers' income from cash crops, such as groundnuts and gum arabic, were minimal and gave them few reserves from which to sustain themselves. The situation was substantially alleviated in 1985, with the heavy rains of June and July. Cereal production estimates for Northern Kordofan's 1985/86 harvest show a 63 percent increase in the estimated per capita food

supply (Table 5.5). This per capita increase, however, was achieved by lowering the per capita grain consumption rate in Northern Kordofan to the national average.

Poor rainfall in May, August, and September 1986 coupled with civil war and insecurity in the countryside, reduced crop yields in parts of the Southern Region by up to 75 percent. There was a projected grain shortfall of 284,000 MT.

D. Movements of People

While seasonal migrations are a part of life in Sudan, reflecting an adaptation to climatic changes, large-scale migrations can also flag the onset of local or regional famine. And yet because peasants in Northern Kordofan and Darfur provinces traditionally migrate, some argued that this masked the situation in these areas in 1983. But with the harvest and virtual crop failure, 900,000 Sudanese migrated from North to South Darfur. At the same time refugees from bordering countries were pouring into Sudan. These massive movements of people were clear signals of a growing crisis. In this section, refugee movements and internal displacements due to drought and famine are surveyed.

1. Refugees

In 1985, Sudan hosted the largest number of refugees among countries in Africa. Over one million from nearly every neighboring country have sought food, relief, and peace in Sudan over the past several years. Sudan experienced a rapid acceleration in the number of refugees during the 1970s. However, as early as the mid-1960s, refugees from Zaire and Eritrea had fled to Sudan.

Table 5.5

Estimate of Cereal Production and Requirements for Sudan by Province, 1985-1986

	Estimated 1986 Pop.	Cereal Recd (000) MT	Sorghum/ Millet	Wheat	Maize	Rice	Net Sorghum Caloric Equivalents Surplus / (Deficit) Total (000) MT	Per Capita (Kilograms)
			Gross Production (000) MT					
PROVINCES								
Central Region	4,426,173	589	1,754	135	2	6	953	215
Kassala	1,676,564	223	1,100	18	0	0	681	406
Khartoum	2,103,702	280	29	0	0	0	(256)	(122)
Nile	672,224	89	20	6	2	0	(67)	(99)
Northern Region	443,881	59	15	40	1	0	(11)	(24)
Northern Darfur	1,268,543	169	101	0	0	0	(87)	(69)
North Kordofan	1,823,065	242	158	0	0	0	(115)	(63)
Red Sea	795,861	106	23	0	0	0	(87)	(110)
Southern Darfur	1,990,044	265	242	0	0	0	(69)	(35)
South Kordofan	1,444,450	192	347	0	4	0	91	63
Southern Region	5,478,894	729	261	0	25	6	(496)	(90)
TOTAL	22,123,501	2,942	4,050	199	34	12	536	24

SOURCES: Combined from MOA and other documents.

Net Sorghum Caloric Equivalent is calculated for production of each grain type minus losses (milling, waste, feed, industrial uses and seed stocks). Net cereal surpluses/deficits are based on per capita annual cereal requirements estimated at 133 kilograms.

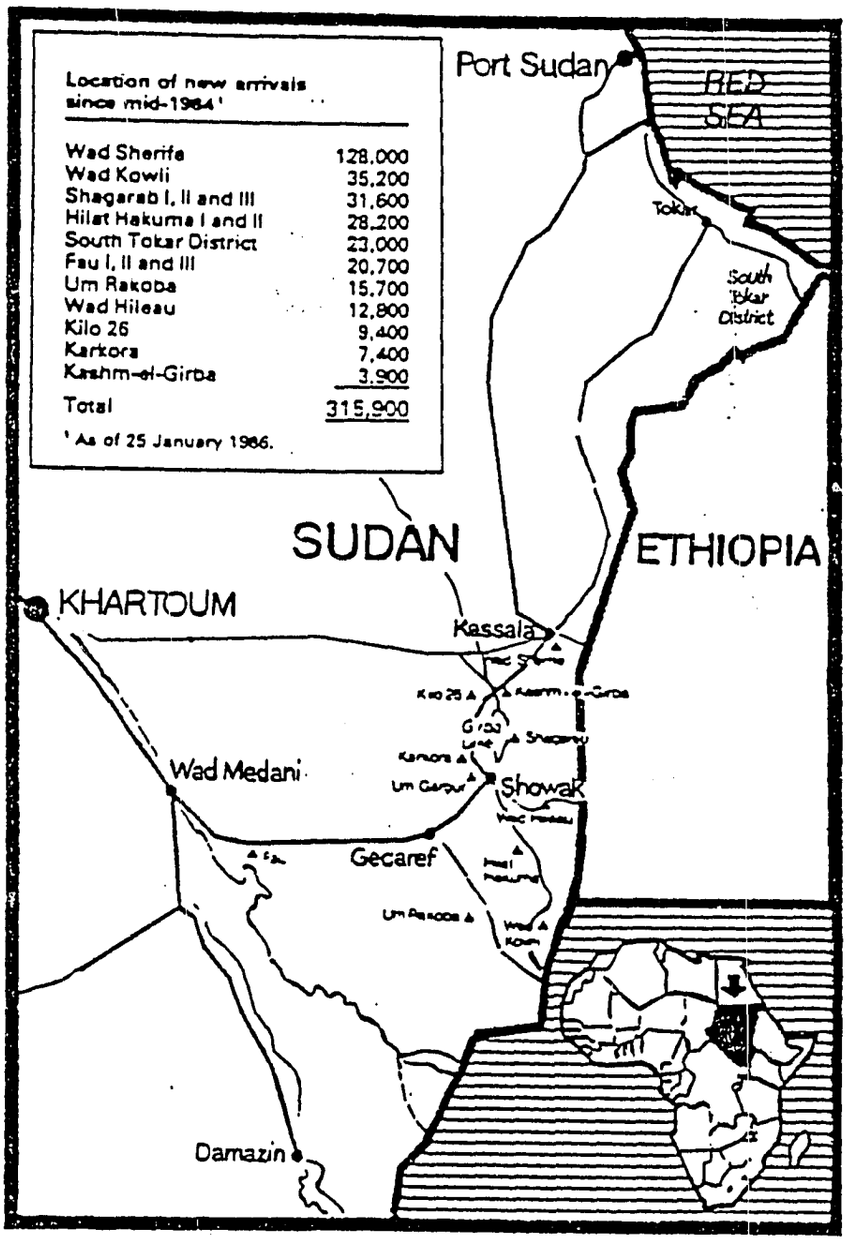
By late 1983, the exodus from Eritrea had reached 400,000; these individuals were concentrated in 2 provinces: Red Sea Province and Kassala Province (Figure 5.4). Again in 1985, another dramatic influx of 300,000 refugees from Ethiopia crossed the border fleeing famine and civil strife. Relief preparations and supplies fell behind what was needed as camp populations grew overnight with new arrivals. At Wad Sherifie; outside Kassala, there was chaos; prepared for only 40,000 refugees, there were actually double that number. In April 1986, the camp numbered 120,000 refugees. The long-range plan is to move the refugees who do not wish to return, and that appears to include most of the Eritreans. However for several more years, UNHCR will need to provide care for those refugees in camps as they are moved to resettlement sites. Transitional assistance is also needed to help them become self-sufficient.

A growing anti-refugee sentiment among the local population has occurred in Kassala. This has worried Sudanese and UNHCR relief officials. Local Sudanese have begun to feel that the large refugee population is adversely affecting local resources such as water, foliage, and civic services. There are growing complaints that while the international community has given massive food and relief assistance to the refugees, the local infrastructure and community services have been ignored. The Sudanese in Kassala feel that the presence of the refugees have had a negative impact upon them. Recent events, however, have encouraged Ethiopians, especially Tigrayans to return. It is estimated that 65,000 people returned to Tigray during the first 5 months of 1986, and a total of 80,000 people are expected to relocate during the year.

In 1985, there were 60,000 refugees from Chad in western Sudan; many were fleeing the full-scale civil war in their country. Chadian refugees were moved to an agricultural settlement scheme near el Geneina in 1986 to facilitate food

Figure 5.4

Location of New Arrivals to Sudan
Since mid-1984



Location of new arrivals since mid-1984[1]

Wad Sherife	128,000
Wad Kowli	35,200
Shagarab I, II and III	31,600
Hilat Hakuma I and II	28,200
South Tokar District	23,000
Fau I, II and III	20,700
Um Rakoba	15,700
Wad Hileau	12,800
Kilo 26	9,400
Karkora	7,400
Karshm-el-Girba	3,900
Total	315,900

[1] As of 25 January 1986.

SOURCE: United States Congress, Senate Committee on the Judiciary (1986).

distribution during the rainy season.

There was an influx of Ugandan refugees into southern Sudan during 1979-83, after the coup of Amin. By 1983, there were 170,000 Ugandans in the south (UNOEOA). Approximately 124,000 Ugandans are located in settlements on the west and east banks of the Nile River in Equatoria Sudan; many of whom are becoming self-reliant in food production. According to USAID/Sudan, another large number of Ugandans were repatriated. However, as conditions and political factions changed during 1986, there were movements back and forth across the border.

Although serious relief problems persist in Sudan, there is a sense that the refugee program is now under control. Given continued support by the international community, the UNHCR and the voluntary and international agencies are now well positioned to help the Sudanese government cope with the three separate refugee problems along its borders (Table 5.6).

Table 5.6

Refugees in the Sudan

Source	Government Estimate of Refugee Population	Number Assisted by UNHCR
Ethiopia	852,000	405,500
Chad	126,000	75,000
Uganda	250,000	129,500
Zaire	5,000	
TOTAL	1,233,000	610,000

SOURCE: United States Congress, Senate Committee on the Judiciary (1986).

The total contributions to the UNHCR emergency program in Sudan, in cash and kind, as of 30 January 1986 was $79.5 million for eastern Sudan and $10.3 million for western Sudan, for a total of $89.8 million. This does not include direct contributions by the voluntary agencies or governments to bilateral assistance programs. While logistical and distribution problems will remain given Sudan's poor road and transport system, ways have been found to get food out, when and where it is needed to refugees in camps.

2. Internal Displacements

In addition to the influx of refugees from neighboring countries, Sudan has also experienced internal displacements of its own population. Because of the near total crop failures in Northern Kordofan and Darfur provinces, thousands of farm families migrated southward and eastward between 1983 and 1985. By the end of 1983, 300,000 people had left northern Darfur for the better watered areas of the south. During 1984, a similar number of people moved. In Kordofan, attempts by those in the north to move southward was blocked by feuds over land rights. This forced some 42,000 people to set up tents in Omdurman, across the Nile from Khartoum, during 1984.

The number of displaced people in Sudan increased to approximately over 1 million by mid-1985. The nomads of Beja migrated to relief camps in the east after losing their livestock to the drought. Others who were displaced concentrated in various areas across the country, "mainly between the 12th and 20th parallels. Some settled in camps, where they received intensive feeding. Many moved close to refugee camps, especially in the west and others spread out in the White Nile areas south of Khartoum." (OFDA, 1986).

The civil war in the south is largely responsible for the displaced

persons in 1986. Table 5.7 shows the location and number of displacements in the southern region. USAID/Sudan, however, warns that displaced southerners are difficult to estimate because travel is next to impossible for PVO and donor monitors due to the civil disturbances. Thus, the numbers in Table 5.7 are rough estimates. Nevertheless, USAID's estimates are considerably lower than those reported by UNOEOA in 1986. UNOEOA estimated two million people to be "at risk" in the Southern Region; USAID asserts that these figures are exaggerated.

Table 5.7

Populations Specifically Identified as At Risk
In The Southern Region of Sudan

REGION /Province	1986 Estimated Population	Internally Displaced People	Other People At Risk
BAHR el GHAZEL			
/Bahr el Ghazel	1,670,424	95,000	
/Boheriat	864,997		
UPPER NILE			
/Upper Nile	962,823		
/Jongoli	892,235		
EQUATORIA			
/W. Equatoria	401,834	6,000	40,000
/E. Equatoria	1,171,878	35,000	
DISPLACED OUT OF THE REGION[a]			385,000
TOTAL	5,964,191	136,000	425,000

SOURCE: A.I.D. (n.d.,c).

[a]Southern Sudanese in Ethiopia (105,000), S. Kordofan (255,000), S. Darfur (25,000)

III. A SUMMARY CHRONOLOGY OF MAJOR EVENTS RELATED TO THE DROUGHT AND FAMINE IN SUDAN, 1981-1986.

Time	Event
1982	Crop failures, 63 percent of 80/81 yield [1].
1983	Crop failures, 57 percent of 80/81 yield [1].
1983/84	Estimated 300,000 people migrate south from Northern Darfur Province after 3 years of drought [2].
April 1984	USAID and PVOs put "at risk" population at one million [1].
June 1984	President Nimeiri declares state of emergency after visit of Kordofan Province [1].
September 1984	A.I.D./W approves first Title II emergency food request for 82,000 MT [1].
October/ November 1984	Thousands move from Darfur and Kordofan to near Nile Basin, and 500,000 refugees from Ethiopia, 165,000 from Uganda, and thousands from Chad enter Sudan [4].
November 1984	First Title II shipment of 20,000 MT arrives in Port Sudan [1].
December 1984	USAID submits second Title II request for 250,000 MT of sorghum [1].
March 1985	USAID makes third Title II emergency food request [1].
April 1985	Following successful coup, transitional government refuses to approve any contracts for six to eight weeks.
June 1985	Distribution problems arise as adequate food is in-country yet transport is difficult due to commencement of rains [1].
July 1985	Level of rainfall is normal to above normal in central and southern areas [8].
January 1986	Civil strife impedes cultivation in south; UN predicts continued starvation.
June 1986	US Ambassador declares emergency due to locust plague, A.I.D./OFDA responds.

IV. FOOD AID: PLEDGES AND DELIVERIES, US AND OTHER DONORS

This section reviews the emergency food assistance effort in Sudan including pledges and actual deliveries of food with particular emphasis on the role of the United States Agency for International Development.

A. Events Leading Up to the US Emergency Response

Throughout 1984, it became obvious that the end of year harvest would be worse than the previous year. In July 1984, President Nimeiri declared a state of emergency in Kordofan and Darfur regions. Two-thirds of the people in those provinces were estimated to be "at risk" by December 1984. In addition to the local population, approximately 150,000 Chadian refugees were living in camps in Kordofan and Darfur. The Sudanese government was unable to deal with a disaster of this magnitude and external aid was requested several months after the formal disaster declaration. However, USAID had made its own assessment earlier and requested food assistance in June 1984.

During the fall of 1984, it was agreed that the World Food Program (WFP), the European Economic Community (EEC), and other donors would concentrate on the central and eastern areas of Sudan, leaving the western regions to the US. A Title I program had already been implemented to meet the needs of the urban population; thus, an expanded Title II program was initiated to meet the needs of the rural population in the west. The US provided significantly greater amounts of PL 480 Title II emergency food aid in 1985 than in any other year between 1981-86 (Table 5.8).

Table 5.8

Summary of US Food Aid for Sudan
PL 480 Title II/Section 416/Food Security Reserve
FY 1981-1986

	FY81 [a]		FY82 [a]		FY83 [a]		FY84 [a]		FY85 [b]		FY86 [c]	
	$/000	MT	$/000	MT	$/000	MT	$/000	MT	$/000	MT	$/000	MT
Title II												
Regular	4,606	15,073	331	1,146	1,000	5,510	1,078	4,980	795.7	2,690	258.8	573
Emergency												
GTG	-0-	-0-	229	,600	-0-	-0-	-0-	-0-	167,393.3	605,866	18,662.7	9,496
CRS	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	457.9	512	-0-	-0-
Section 416												
GTG	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	7,481.7	8,960	-0-	-0-
WFP	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	1,708.4	2,046	-0-	-0-
FSR/GTG	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	9,325.0	25,000	-0-	-0-
TOTAL	4,606	15,073	560	2,746	1,000	5,510	1,078	4,980	187,162.0	645,074	18,921.5	10,069

SOURCE: [a] A.I.D. (1984c).
[b] A.I.D. (1986d).
[c] A.I.D. (1986e).

B. An Overview of the US Food Aid Response

The A.I.D. approach to programming is incremental. Therefore, USAID alerted A.I.D./W to the emergency food problem in March 1984 to accelerate responses before needs assessments could be carried out. In June 1984, USAID anticipated problems in Darfur and Kordofan prior to harvesting the 1983/84 crop. They made an initial request for 67,000 MT of Title II food[1]. USAID proposed that sorghum should be supplied in preference to wheat since sorghum was the staple cereal grown and eaten by the rural population. After requesting additional information in September, the District Drought Committee (DCC) approved 82,000 MT as the first Title II emergency request. The final shipments of this initial request, although scheduled to arrive in Sudan in December, did not reach the country until March 1985. USAID/Sudan asked for a delay in the deliveries in order to evaluate the internal transportation capability of Sudan's infrastructure.

By December 1984, the estimated population "at risk" had risen to 4.2 million, as the pending 1984 crop failure had become more evident (Figure 5.5). Sorghum was 40 percent; millet was 52 percent; and wheat production was 9 percent of the 1980/81 level (Figure 5.5). Consumption needs for the November 1984 to October 1985 period were estimated to be 3,485,000 MT whereas the total local production was forecast at 1,615,000 MT (Table 5.9). USAID made a second request for an additional 250,000 MT of Title II food. This amount was intended to meet the needs of the two million population considered to be "seriously at risk." Seven thousand five hundred MT of non-fat dried milk (NFDM)

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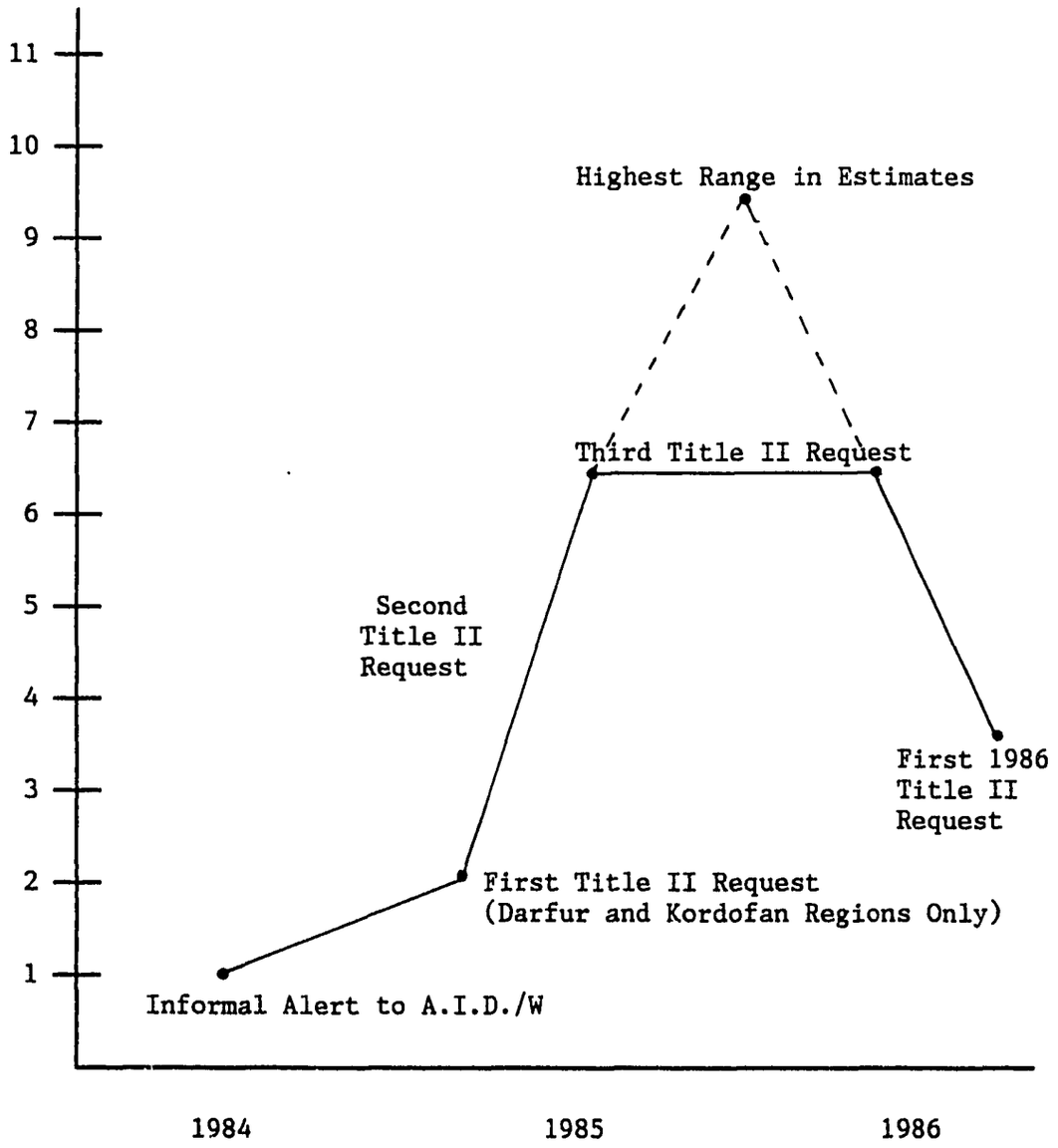
[1] Food aid request and approval figures are from USAID/Sudan records and A.I.D./W telegrams.

Figure 5.5

Estimated Number of At-Risk Population in Sudan
by PL 480 Request Dates, 1984/1985



SOURCE: A.I.D./Khartoum telegrams (1984/85).

Table 5.9

Food Grain Consumption Requirements and Supply:
Sudan Country-Wide Food Deficit Information
November 1984 to October 1985

Consumption Needs (Nov. 1984 - Oct. 1985)	3,485,000 MT
Total Food Grain Availability (Including - Donor Assistance)	2,542,000
- TOTAL LOCAL PRODUCTION	1,615,000
- WHEAT	(15,000)
- MILLET	(300,000)
- SORGHUM	(1,300,000)
Stocks-on-Hand (At beginning of Harvest Season - Nov. 1984)	-0-
Commercial Imports	-0-
Food Aid	327,000
USG:	
- TITLE I (WHEAT)	315,000
- TITLE II (SORGHUM)	82,000
- TITLE II (THIS REQUEST, SORGHUM)	250,000
Other Donors:	
- WFP (PROPOSED - SORGHUM)	166,000
- CANADA (WHEAT)	38,000
- EEC (WHEAT)	17,000
- CHINA (RICE	18,000
- GERMANY (WHEAT)	7,000
- HOLLAND (PROPOSED - WHEAT)	58,000
Deficit Requirement Minus Availability	943,000

SOURCE: A.I.D. (1984b).

NOTE: USAID has reports that WFP may receive only 25,000 MT of its request and that the EEC request may be increased to 168,000 MT, including the Dutch request.

and 2,835 MT of vegetable oil was also requested for the supplemental feeding programs being conducted by the PVOs. In order for the second Title II emergency food request to be used effectively, it had to be delivered by the end of June, the beginning of the rainy season. A.I.D./W approved 75,000 MT of USAID's second request by mid-January 1985. Approval for the remaining amount was delayed until A.I.D./W received a supplemental food appropriation for Africa in early April. Ideally, the supplemental feeding program should have commenced in conjunction with the general feeding program. However, PVOs did not begin their programs until August 1985. The final shipments of the first and second approved Title II food were not received in Sudan until late September, the end of the rainy season (Table 5.10).

Table 5.10

Sudan Food Aid Arrivals by Month
Title II/Section 416/Food Security Reserve
(in MT)

Oct-Dec	Jan	Feb	Mar	April
20,910	0	41,000	20,500	46,000
May	June	July	Aug	Sept
57,500	129,395*	250,251*	14,150*	8,191*

TOTAL ARRIVALS 587,897*

SOURCE: A.I.D. (1985d).

* Estimates.

The exact amount of assistance to be provided by the rest of the international community was uncertain throughout 1984. By early 1985, it became clear that the UN, WFP, and EEC would provide 150,000 MT, with other donors contributing 75,000 MT of food. This amount was considerably less than the earlier projections of 500,000 MT. USAID made its third request to A.I.D./W in March 1985 for an additional 500,000 MT of sorghum, plus 7,200 MT of NFDM and 2,700 MT of vegetable oil for supplemental feeding. The food provided under this request was to feed an additional one million "at risk" in the west, plus three million in the central, eastern, and northern regions. A.I.D./W only approved a total of 175,000 MT of sorghum in April, while the supplemental feeding request was finally approved in June. The successful coup on 6 April delayed further commitments to the GOS for 6 to 8 weeks; although A.I.D./W maintains the delay was due to the inability of the internal transportation system to distribute food already in place. Most of USAID's third Title II request had arrived in Sudan by September 1985.

The 1985 rains in the Sudan were not uniformly good, but did produce a surplus of sorghum. For 1986, the "at risk" population was estimated at 3.5 million (Wood et al., 1986:31). During 1985/86, the US decided that their food, financial, and technical assistance would not exceed 50 percent of the total. Nonetheless, the US provided 65 to 70 percent of all food aid for FY86 because other donors, notably the UN, failed to fulfill their pledges.

C. Pledges and Deliveries by the US and Other Donors

The US, WFP, and EEC were the major donors of food and assistance to the Sudan. However, of the 1.5 million MT of cereal aid pledged in 1984/85, barely two-thirds of that amount was delivered within the crucial period (Economist, 1986).

Food aid requirements increased dramatically during the first months of 1985. In January 1985, they were given as 950,000 MT (WFP) (Tables 5.11a and 5.11b). Donor pledges then amounted to 650,000 MT. The food aid gap was set at 256,500 MT. However, by March requirements had risen to 1.5 million MT. Donor pledges did not grow in proportion, amounting to only 862,000 MT; or 57 percent of requirements (FAO, 1985). By May, donor pledges increased to 1.1 million MT. However, as of mid-May, only .3 million MT had been delivered to Sudan. It became increasingly important that food should arrive in the affected areas before the onset of the rains in June.

Shipments of food aid were repeatedly rescheduled; the EEC and WFP were major offenders. A shipment of 7,000 MT of grain from the EEC initially reported to arrive in Sudan in June was still recorded as undelivered in December 1985 (Table 5.12). The WFP and the US delivered pledges of cereal in increments which compounded transportation problems in Sudan. By the end of FY85, the US had delivered 93 percent of their pledges, and 90 percent of the food delivered had been distributed to the provinces and camps of the Sudan (Table 5.13). US food and assistance vastly exceeded that of other major donors, and the overall rate of deliveries for pledges was higher for the US than for the other donors on average (Table 5.14).

In early 1986, conservative estimates put the number of people still affected by the drought and in need of food assistance at 4 million. Their total food needs were estimated at 400,000 MT (A.I.D. 1987d).

By April 1986, the food aid gap was 111,000 MT. Undelivered pledges were then 67 percent of the total amount committed for FY86.

Table 5.11a

Food Aid Requirements and Deliveries, December 1984/1985

1984/1985 Cereal Import Requirements and Deliveries (Sudan)
(Quantities in thousand tons)

Month/ Year	Country	Marketing Year	FAO-Estimated * Cereal Import Requirements ('000 MT)			FOOD AID (Cereals)				Country Food Aid Gap (3)-(7)
			Total (1)	Commercial Imports (2)	Food Aid (3)	Food Aid Deliveries (4)	Scheduled Deliveries (5)	Schedule to be announced (6)	Total (4+5+6) (7)	(8)
Dec/84	Sudan	July/June	850	200	650	203.1	141.5	247.6	592.2	57.8
Jan/85	Sudan	July/June	1,150	200	950	240.5	411	42	693.5	256.5

* FAO-estimated cereal import requirements as of 20 January 1985. It should be noted that country food aid gaps will change as the estimated cereal import requirements are reassessed.

Table 5.11b
Sudan Cereal Food Aid Requirements and Deliveries, 1984-1986
(For Cereals, Grain Equivalent in Metric Tons)

Month/ Year	Country	Marketing Year	Total Cereal Import Require-ments(FAO)	Total Cereal Food Aid Require-ments(FAO)	Total Cereal Pledges Known	Total Cereal Deliveries To Date In-Country	Total Non-Cereal Pledges Known	Total Non-Cereal Deliveries To Date In-Country
Nov/85	Sudan	Nov/Oct	1,500,000	1,400,000	1,369,941	1,369,941	107,451	107,451
Nov/86	Sudan	Nov/Oct	800,000	700,000	94,445	125	14,148	

SOURCE: FAO (1986).

Table 5.12

Food Aid: Cereal Pledges and Delivery Schedules for Sudan 1984/1985

Pledges ('000 tons)	Month	Delivery Plan (by month) Quantity	Est. Arrival Date	Actual Deliveries
USA				
8.0	Dec '84	--	--	
25.7	Feb '85	--	--	
0.2		0.2	March '85	
202.0		20.9	November '84	
0.6		0.6	January '85	
33.0	June '85	33.0	June/July '85	
0.2		0.2	March '85	
0.6		0.6	January '85	
542.2		290.6	--	Received
33.8	Sept '85	33.6	--	Received
0.2		0.2	March '85	
545.3		530.0	--	Received
0.6		0.6	January '85	
33.8	Dec '85	33.2	--	Received
0.2		0.2	March '85	
0.7		0.7	August/October '85	
541.3		539.2	--	Received
1,968.4		1,483.8		1,426.6 (96%)
EEC				
17.0	Dec '84	17.0	Early '85	
17.0	Feb '85	--	--	
7.0	June '85	7.0	May/June '85	
4.0		4.0	May '85	
8.0		8.0	July '85	
10.0		10.0	June '85	
8.4		8.4	April/May '85	
11.0		11.0	June '85	
16.7	Sept '85	16.7	--	Received
7.0		7.0	May/June '85	
4.0		4.0	May '85	
8.0		8.0	July '85	
10.0		10.0	June '85	
8.4		8.4	April/May '85	
11.0		11.0	June '85	
150.8	Dec '85	150.8	--	Received
7.0		7.0	May/June '85	
4.0		4.0	May '85	
8.0		8.0	July '85	
10.0		10.0	June '85	
8.4		8.4	April/May '85	
11.0		11.0	June '85	
249.9		249.9		167.5 (67%)

Table 5.12 - continued -

Food Aid: Cereal Pledges and Delivery Schedules for Sudan 1984/1985

Pledges ('000 tons)	Month	Delivery Plan (by month) Quantity	Est. Arrival Date	Actual Deliveries
WFP				
7.7	Dec '84	7.7	July '84	
5.5		5.5	July '84	
21.6	Feb '85	--	--	
25.0		25.0	January '85	
21.6	June '85	12.0	March '85	
5.4		5.4	February/April '85	
24.9		4.0	February '85	
		20.0	January '85	
		0.9	March '85	
30.0		5.0	May '85	
		5.0	August '85	
		20.0	June '85	
21.9		21.9	June '85	
21.6	Sept '85	21.6	March '85	
5.4		5.4	February/April '85	
24.9		4.0	February '85	
		20.0	January '85	
		0.9	March '85	
5.0		5.0	August '85	
5.5	Dec '85	5.5	February/April '85	
36.8		36.8	--	Received
35.1		35.1	--	Received
21.6		21.6	March '85	
21.9		21.9	June '85	
5.0		5.0	August '85	
115.0		105.4		71.9 (62%)

SOURCE: FAO (1986).

Table 5.13

Sudan Food Aid Arrivals and Distributions (MT)
Title II/Section 416/Food Security Reserve
FY 1985

Arrivals	
Title II	560,865
Section 416	8,960
FSR	25,000
TOTAL	594,825 [a]
Distributions	
Kordofan I	46,000
Darfur I	31,000
Kordofan II	125,000
Darfur I	130,000
Kordofan SP	32,619
Darfur SP	5,968
Kassala	82,061
Central	58,000
Upper Nile	2,000
Bahrel Ghazel	2,000
EEC [b]	6,000
Omdurman	6,100
Refugees	10,000
TOTAL	536,748 (90%)
BALANCE	58,077

SOURCE: A.I.D. (1985e).

[a] This figure represents 93% of FY85 US pledges (see Table 5.8).

[b] Used in EEC airlift to western Sudan.

Table 5.14

Non-US Major Emergency Food Aid Pledges and Arrivals for Sudan
FY 1985
(In MT)

Donor	Drought Committed	Drought Arrived
WFP	63,695	62,744
EEC	39,685	38,501
UK	17,000	16,876
Canada	25,450	450
Japan	2,812	2,812
Germany	3,580	2,481
Netherlands	5,373	373
LIRCROSS	12,663	12,595
BANDAID	1,834	1,789
OXFAM	642	642
SCR-UK	3,235	3,030
Kuwait Relief	9,250	7,412
Saudi Red Crescent	24,483	24,483
TOTAL	209,702	174,188 (83%)

SOURCE: UN Office for Emergency Operations in Africa (1985).

V. SYNTHESIS: LESSONS LEARNED, QUESTIONS RAISED

So far the facts and events related to the famine and the extent of the US response have been presented. In this section, a synthesis of this information is set forth in the form of questions raised by the relief effort in Sudan between 1981-86. Two major questions are asked: one concerns the magnitude of the crisis and the other is related to the appropriateness of the response.

A. Why did the situation reach such crisis proportions in Sudan?

1. Sudan has no recent history of famine and therefore has insufficient institutional mechanisms to deal with it.

Traditionally, Sudan has been perceived as the breadbasket of Africa. Until 1981, it was a grain surplus country and a grain exporter. While rain failure is a frequent event in the Sudano-Sahelian region, the farmers and herders of these drought-prone areas have developed their own, traditional means of dealing with it. A State Department official, who worked for a number of years in Sudan, asserted that "these people have been dealing with drought for 150 years. They have always adapted by eating famine foods, by migrating southward in search of more arable and well-watered land, and by quietly dying."

Some argue that Nimeiri knew of the seriousness of the crop failures in Darfur some time before January 1984 when it was first flagged by USAID; but he attempted to cover up the situation because of the unstable conditions of his administration. AID/W generally dismisses this allegation with the assertion that rather than actively trying to conceal the famine, Nimeiri was merely preoccupied with other, more proximate problems. The IDI of London suggests

that the position of the Central Government was "that drought (is) a common event and would eventually break and that the traditional hospitality of settled people in the south would be adequate to sustain these internal refugees without massive government assistance."

A Foreign Service officer portrayed what he felt to be the view of the western Sudanese to the US relief effort as one of surprise. He stated that western Sudanese people are accustomed to drought, rarely receive attention from the Central Government in the east, and therefore were surprised when US helicopters arrived with food. "The western Sudanese are constantly thirsty and constantly having to move south. They don't see it as so special. Our zeal did not register with them." This description may not accurately reflect the severity of the drought of 1984, nevertheless the reaction to drought in Sudan is not institutional but traditional. The customary reaction is to leave victims to adjust to drought as they have in the past. Because of this, the institutional mechanisms for dealing with disaster in Sudan are very weak, particularly when compared to Ethiopia. In Sudan, the RRC was staffed by 10 people as compared to 10,000 in Ethiopia. Clearly, this affected the GOS's ability to respond to the crisis.

The institutional response was further hindered by the decentralization laws, which in 1974 created 12 semi-autonomous regional governments. With the implementation of the 1982 decentralization policies, each region had its own governor and ministries paralleling those in Khartoum. According to Brown et al. (1985:3), because "decentralization is a new experiment in Sudan's political life, the lines of responsibilities between central authorities and regional governments are not yet clearly delineated. This often caused complications in dealing with drought relief efforts." The IDI further explains that these regional governments are still undeveloped; they are lacking in

trained and experienced staff as well as in such resources as food stocks and the vehicles with which to distribute it. Already understaffed and underfinanced, western regional governments in 1984 drought areas were stretched well beyond their capacity to deal effectively with the crisis.

And yet in the early months of 1984, the regional governments of Darfur and Kordofan were left to deal with the situation without the help or recognition of the Central Government. The perception of the problem in Khartoum was that the situation would cure itself in time.

2. Poor communications within Sudan contributed to a delay in the perception of the problem and the response by the GOS, and also hindered A.I.D.'s ability to respond quickly.

Crucial to an effective response to a disaster like famine is an early perception of the problem, as well as information on the magnitude of the crop failures and of food shortages. The drought in western Sudan had been continuous since 1981. Crop failures became progressively worse after the 1981/82 good crop year. The 1983 large-scale migrations in response to these crop failures were clear indications of a potentially growing and disastrous problem. And yet the first official request for food by USAID was not made until June 1984; and the official declaration of a disaster by the GOS in Khartoum did not come until July 1984.

The delay in response by the Sudanese government was partly the result of intransigence on the part of the MOA. The ministry refused to acknowledge a failed harvest and any impending food shortages, even while people at lower governmental levels were conveying estimates to A.I.D. that showed a severe problem. USAID's lag in responding was partly related to their concern with Washington's reaction and a failure to accurately assess the problem. Poor communication also played a significant role.

The cause of poor communications in Sudan are both logistical and cultural. The size of the country coupled with the poor infrastructure create difficulties for the flows of information and goods. According to the IDI, the communications between some of the remote western regions and the Central Government in the east are virtually nonexistent.

The cultural divisions in Sudan increase the relative distances between east and west, and north and south. While the most extreme division is between the Muslim Arabs of the north and the African animists and Christians in the south, differences also exist between the Arabs of the east and west. A State Department official explains the differences among the three regions.

> There has been an attempt in Sudan to Arabicize African tribes in the south, a gradual Arabization of African tribes. The Sudanese in Khartoum are 100 percent Arabs. In the west, they are 75 percent; and in the south they are 50 percent. The east controls the politics. The west is outside, they have a different dialect than those in the east. In Khartoum, the western Sudanese are seen as second rate Sudanese, as country bumpkins, as not the same class of Arabs of those in the urban areas. Because the higher class Arabs in Khartoum control the politics, it is more of a crisis when the gas pipeline breaks down than when those in the west are experiencing a drought.

Partly because of the poor communications between the east and west, the problems of those in the west, including the increasingly severe drought in the 1980s did not receive adequate attention until it reached crisis proportions.

In order to get the attention of the GOS, thousands migrated into Khartoum from Northern Darfur to make their needs known. A UN official describes the scene:

> When I was in Sudan I saw people coming down from the north setting up their tents around Khartoum. They came to make their problems visible. The diplomats would set up captain's chairs and sit and watch. Finally the government came to take them back to the north.

3. Sudan has become increasingly vulnerable to famine due to environmental degradation.

The famine of 1984/85 was the result of a multitude of factors both physical and human. While there are significant institutional and socio-political reasons why the drought of the 1980s took on crisis proportions, the reduction of land available for agricultural production due to desertification and population increases must not be overlooked. The IDI contends that these are "the chief factors which contribute to disaster vulnerability in the Sudan."

M.O. el Sammani and H.O. Abd el Nour state in their article, "An Integrated Approach to the Problem of Drought and Desertification in Kordofan Region" (1985), that the extent of land misuse in Kordofan is correlated to the growth of human and animal population. The population of Kordofan has grown sixfold in the last 80 years, while the animal population increased more than fourfold between 1957-81 (Table 5.15). Population growth has resulted in the expansion of land brought under cultivation as well as a reduction of land rotation. "The former has meant the clearance of natural forests, while the latter has left the tree (particularly Acacias Senegal) out of the traditional fallow system" (ibid:5). The Acacia Senegal provides nitrogen to the soil when used in the fallow systems.

The result of overcultivation and overgrazing of livestock is the accelerated loss of soil and therefore agricultural productivity. The productivity of the major cash crops of Kordofan have declined drastically over the last 25 years (Table 5.16). El Sammani and el Nour write of the alarming rate of decline of gum arabic production due to the removal of the Acacia Senegal trees. However, the loss of vegetation from deforestation and overgrazing, has meant that vast semi-arid regions are being converted to true desert.

This environmental degradation triggers movements of people. While nomadics and transhumants have traditionally moved from north to south during

Table 5.15

Kordofan Region (Sudan) Population, 1903-1983

Year	Population	Source
1903	550,000	Lebon (1965)
1910	590,000	(ibid)
1913	635,000	(ibid)
1956	1,761,968	Dept. of Statistics (1958)
1973	2,098,073	Dept. of Statistics (1977)
1983	3,240,000	Anon (1984)

Animal Population in Kordofan Region (Sudan) in 24 Years, 1957-1981

	Number of Head	
TYPE	1957 [a]	1981 [b]
Cattle	590,416	1,066,000
Sheep	386,967	1,963,000
Goats	266,077	2,181,000
Camels	155,547	883,000
Horses	1,330	
Donkeys	71,875	
TOTAL	1,472,212	6,093,000

SOURCE: el Sammani and el Nour (1985).

[a] Barbour (1961)
[b] Ministry of Agriculture and Natural Resources, Kordofan Region.

Table 5.16

Productivity of the Major Agricultural Crops in Kordofan Region (Sudan) Between 1960 and 1985

Crop	Productivity in Tons per Feddan								
	60/61	67/68	72/73	75-79	80/81	81/82	82/83	83/84	84/85
Sorghum (dura)	0.377	0.120	0.136	0.254	0.207	0.237	0.204	0.117	0.104
Pennisetum (dukhun)	0.545	01180	0.068	0.158	0.180	0.116	0.057	0.061	0.037
Groundnut	0.400	0.248	0.090	0.400	0.300	0.378	0.113	0.087	0.071
Sesame	0.348	0.093	0.090	0.098	0.087	0.044	0.028	0.063	0.047

SOURCES: 1960 73: Awouda (1974); 75-80: Berry and Geistfeld (1983); 80-85: Abudeik (1985). Groundnut 79:80 Abd el Ghaffar.

the dry season, desertification is increasing the numbers moving and causes even sedentary farmers to migrate, and also expands the distances moved. This increased migration puts added pressures on the regions of in-migration, thus engendering the desertification which was originally the motivation for moving. The IDI claims that increased migrations during periods of widespread rain and crop failure contribute to conditions under which famine can suddenly erupt.

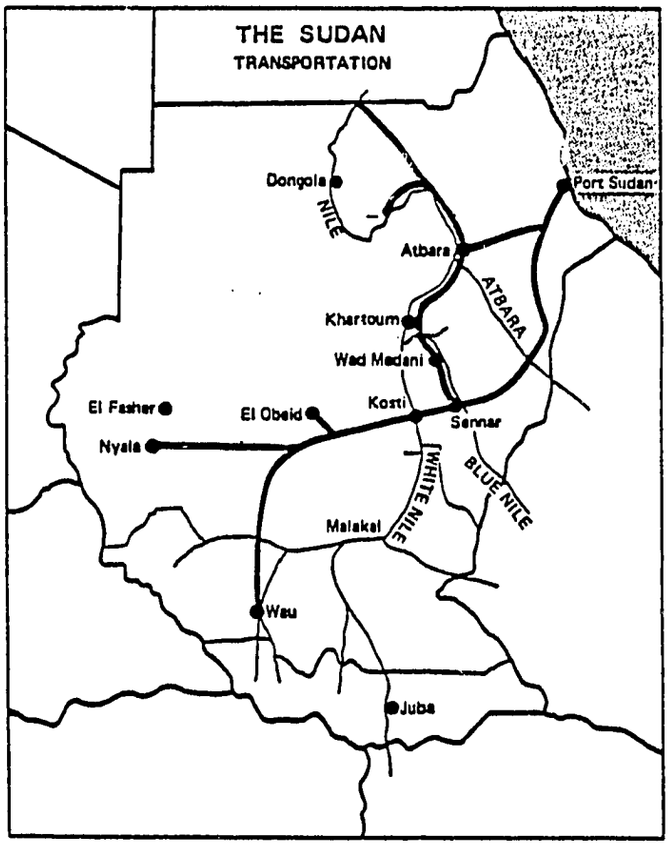
4. The logistics of distributing the food aid to those in remote rural areas was probably the most difficult hindrance to the emergency operations in almost every country which experienced drought and famine in Africa. Sudan was not an exception.

Sudan is the largest country in Africa with almost one million square miles of desert, semi-arid desert, and savannah. This huge land area only has 1,376 miles of paved roads, and many of the roads through the arid region are dirt tracks. The road system is not well developed, and during the rainy season 75 percent is impassable (IDI, 1985). Historically, the rail system was the most important means of transportation. The Sudan railway is the longest line in Africa, with tracks running from Port Sudan in the east, to Nyala in the west, and to Wau in the south (Figure 5.6).

Given the size of the relief effort in Sudan and the amount of food which had to be transported from Port Sudan to the west, it was vitally important to assess realistically the national logistic capacities. The initial strategy for distributing food was to use the railroad and trucks. According to one official in A.I.D./W, the GOS promoted the rail system; however, others in A.I.D. said that an assessment was conducted by USAID, which approved the use of the rail system, arguing that it was the cheapest means and could carry the greatest tonnage. But the railroad began failing. A State Department official purported that he was surprised USAID even tried to use the rail system.

Figure 5.6

Sudan Railway Transportation System



SOURCE: Lees and Brooks (1977).

> If one looked at the efficiency of the rail over the last five to ten years, you would see that the tonnage has dropped by half. In 1981, I went to Kassala to speak with the railroad people. They had a "mishmash" of equipment, spare parts from Japan, some from Belgium, and some 19th century equipment for which they were trying to make spare parts. I took a train to the west and saw railcar after railcar pushed to the side of the track, left because it no longer functioned properly. It took 13 hours to go 100 miles. The rail was a disaster then (1981).

The failure of the railroad meant a heavier reliance on trucks. While there was friction over USAID's choice of Arkel-Talab, the use of the rail system was nevertheless fairly successful and efficient until the rains came. The rainy season of June to July 1985 was heavier than usual. Roads and rail tracks washed out, bridges collapsed, and trucks got stuck in mud several feet deep. This resulted in a sharp increase in trucking rates. During the difficult period, the EEC airbridge continued to take commodities and medical supplies to Darfur. Concurrently, the EEC and USAID invested thirteen million dollars in the Sudan railways; USAID also made efforts to repair the western roads. But despite these efforts, the obstacles posed by the flooding and washouts resulted in increased cases of malnutrition and starvation. The situation was particularly bleak in July of 1985, as the rains rapidly deteriorated the airstrips and the roads, and the rail line was submerged in water.

As the summer wore on, concern mounted for those individuals hardest to reach in remote villages in the west, along the border of Chad. These people were starving because of the inability of truck or rail transport to reach them during the period of heavy rains. It was at this point that A.I.D. contracted for three helicpoters at the cost of thirteen million dollars.

Rehabilitation projects were implemented in 1985/86 which repaired the road from Kosti to Tendelti and Zalingei to el Geneina, and updated the railway. While these improvements contributed to some extent to the success of the relief effort in 1986, the most important reason for the ease of the emergency

operations was that in 1986, food stocks in-country (100,000 MT of Title II sorghum) as carryover from 1985 and the record 1985 harvest allowed for the prior placing of food before the rainy season. Also in 1986, the railroad was employed only to take food to Kordofan. The use of block trains ensured full use of the cars for the transport of relief food. The rail line to Kordofan is excellent and few technical difficulties were encountered. However, after an impressive start, the rail peformance declined, and the work was finally completed five months behind schedule.

5. The political and economic chaos in Sudan in 1985 added to the difficulty of responding to the disaster.

Political unrest in Sudan, historically, has been more common than not. Nimeiri's presidency had seen 12 attempted coups before the successful one of 6 April 1985. Nimeiri was seen to be living with a time bomb. A succession of riots in Khartoum since the 1970s, and the civil war in the south had become an increasing problem for the President. His country was also economically bankrupt. The Sudanese debt had reached $10 billion for which the servicing annually cost Sudan 80 to 90 percent of its foreign exchange as of April 1985. The IMF cancelled a 1984 standby loan and pressed Nimeiri to pursue some difficult economic reforms. One such reform was the removal of government food subsidies which consequently sparked food riots in Khartoum.

Sudan's financial insolvency, amid a famine and worsened by the influx of refugees, manifested itself in the urban areas where there were acute shortages of food, fuel, and even water. These shortages were accompanied by a widening gap between wages and prices, and a breakdown of industry and essential services due to a lack of fuel and spare parts. Homes were not merely short of food, but also without fuel to cook.

Added to these financial problems were those resulting from the imposition of Islamic sacred law, Sharia, on the Muslim and non-Muslim population of Sudan. These laws were particularly unpopular with the African animists and Christians from the south, but even many Muslims were opposed to the strict enforcement of the Sharia.

With these pressing problems on all sides, the continued crop failures in Northern Darfur in 1983 were not a priority to Nimeiri. Even when people came down in large numbers from the north to make their plight known, Nimeiri's reaction was to have the army expel them from the capital. Eventually he declared an emergency; but not until July 1984, when the situation had already reached crisis proportions.

The coup itself caused problems for USAID's emergency response in April 1985. The vacuum in the government from the coup created a decision-making hiatus for six to eight weeks. According to an A.I.D./W official:

> The coup created problems because there was no one to sign contracts. We needed to get the local currencies from the Government of Sudan in order to pay the truck contractor (Arkel-Talab). In order to get these currencies, we needed the contract to be signed by the government. But after the coup there was no government to sign any contracts. This created delays.

These delays came at a very critical time when A.I.D. was racing most desperately against the impending June rains. These delays contributed to perhaps the greatest disappointment in the US emergency effort, the inability to get the food in place before the 1985 rainy season.

6. The influx of refugees into Sudan as the drought continued to build in the 1980s put added pressures on resources, exacerbating the severity of the famine and enlarging the relief effort.

Refugees have been entering Sudan since the mid-1960s from Ethiopia, Uganda, Chad, and Zaire. Insurgency and famine in Ethiopia in the late 1970s and early 1980s resulted in increasingly larger in-migrations. Even before Sudan's disaster declaration, there were over 130,000 registered refugees from Ethiopia in 22 settlements in eastern Sudan. Between the fall of 1984 and the end of 1985, an additional 300,000 Ethiopians migrated into the eastern part of the country. Drought and civil war in Chad caused out-migrations of 60,000 Chadians into Sudan after mid-1984; approximately 250,000 Ugandans have settled in southern Sudan. With in-migrations from Chad and Uganda, Sudan in 1985 had more refugees than any other country in Africa (OFDA, 1985).

Sudan's physical size in relation to its population suggests that there is no critical shortage of land to accommodate the influxes. The heavy concentration of populations in the east and near the western border, however, have resulted in increasing pressures on a finite land resource. But probably more crucial are the demands these large numbers of refugees put on Sudan's very limited economic resources. While international agencies have done much to assist these people, the country clearly will end up bearing some of the burden.

The Sudanese have traditionally been hospitable to strangers in need; but the massive influx into Sudan during the 1984/85 emergency stretched already diluted resources, causing cultural tensions and adding to the demands of the emergency operations.

B. Was the response to the famine appropriate?

1. Did A.I.D. and USAID/Sudan correctly estimate the magnitude of the problem in 1984, and did they respond in appropriate and timely manner?

In 1984, USAID/Sudan was not aware of the magnitude of the problem which was building in the western provinces and did not correctly estimate the need when it made its first request for emergency food in June 1984. There are a number of reasons for the initial incorrect assessment. USAID only assigned 3 staff persons to work on the drought in 1984; this small staff was unable to manage the problem from the mission in Khartoum, and at the same time monitor the development of the problem in the field. Reports began coming in as early as January 1984 concerning food shortages in northern Darfur and Kordofan, and USAID sent a number of people out to investigate the situation. The assessment at this time was that if the rains failed again in 1984, "there could be a disaster in 1984/85."

The Mission, however, was fearful of responding too quickly, before they could piece together a clear and reliable picture with which to convince A.I.D./W. Also USAID did not want to be wrong, knowing that food aid "can have a negative impact and destroy the incentive of farmers to grow food. It is difficult to know if you are wrong because you do not have a great deal of information. It is also difficult to know how much food is needed."

USAID's initial estimates were based on crop estimates of the MOA, which refused to acknowledge the problem at first. Requests for assistance came from the Darfur and Kordofan regional governments. Even after it was clear that a problem existed, the Mission had to assess how many people were in need of food aid and where it was needed. As more people were sent out into the field and the local governments got involved, the estimates were continually revised. however, the initial request was not large enough for the enormous needs in western sudan. Due to a lack of adequate information, a failure on the part of the GOS to acknowledge the problem early, and the fact that USAID did not "realize that the situation would mushroom so quickly."

Between the fall of 1984 and early 1985, the need estimates jumped dramatically. As thousands of Kordofanis in-migrated and set up camp outside of Omdurman, the city opposite Khartoum on the Nile, the magnitude of the problem became more visible. It was December 1984 that USAID submitted its second request for emergency food; while the first request in June was for 82,000 MT, this second request jumped to 250,000 MT.

USAID/Sudan asserts that the GOS both helped and hindered the relief effort. However, the obstacles resulting from the Central Government's lack of support in responding to the crisis absorbed an enormous amount of time of USAID's small staff and resulted in unfortunate delays at critical times.

2. Did the US play too large a role in the relief effort in Sudan?

The facts show that the US was clearly the major donor, giving 85 percent of the food aid. The US already had Title I and Title III programs in Sudan, and a USAID mission staffed with approximately 130 people. This established presence greatly facilitated the relief effort and gave the US advantages over other donors. Is this why A.I.D. responded in such a massive way? Some would argue that perhaps these commitments to Sudan did give the US a greater sense of responsibility. USAID argues that the magnitude of the US response was also the result of "a massive, heartfelt, worldwide humanitarian reaction to the images of misery in Sudan; and, as a consequence, USAID received tremendous pressure from A.I.D./W and the world press to try every possible means to get food to the starving." Another important factor was US politics. According to USAID/Sudan, "Sudan is seen to have important strategic value to the West."

According to a State Department official, the massive response in Sudan was also a product of some of the personalities at USAID who were eager to show the success of their efforts. Evidently, more money was spent than others

outside of USAID/Sudan would have wanted. This latter faction felt thatbecause so much was spent in Sudan, there was less money available for other countries in need.

3. Did the Government of Sudan contribute its part to the emergency operations?

The IDI states that after Nimeiri made his formal disaster declaration in July 1984, he attempted to delegate the problem to USAID. And after the situation was accurately assessed, A.I.D. did respond in a massive way. In December 1984, the Central Government made an official request for emergency food aid of 166,000 MT. This amount was cut back by donors to 25,000 MT. At this stage, USAID stepped in and pledged an additional 250,000 MT to the 82,000 MT already in the country. By fall 1986, the US had provided approximately 85 to 90 percent of the emergency food for Sudan.

In terms of the responsibility of the GOS, many at USAID criticized the Central Government for not making the transport of food aid a greater priority. Probably what drew the most negative reaction was the situation during Ramadan (a month of fasting from sunrise to sunset for Muslims) when sugar was given priority over food aid on the rail system. The outcries over this situation attracted the attention of the transitional government, which sent an official to the rail station to show that food was indeed being transported. The story given by a Foreign Service officer is that when the GOS official drew open the doors of a rail car, he was embarrassed to find sugar and other commercial goods inside.

The Sudanese government was unwilling to take a stand against the railroad union when there were problems with food aid shipments, inefficiencies, and unfair charges. In 1985, the GOS had control of the contract with the SRC;

USAID/Sudan states that the GOS managed this contract poorly, in part because it was afraid of the political strength of the railroad union. In 1986, the contract with the railway was a direct contract with USAID; this arrangement included financial incentives for the SRC. The deliveries of food aid went more smoothly in 1986.

USAID/Sudan asserts that, particularly during Nimeiri's regime, the lack of control and coordination between the GOS, its own ministries, parastatals, and regional governments created numerous obstacles for the relief effort.

The evidence presented so far depicts the GOS as a hindrance to the emergency operation; but what about its financial contributions to the relief effort? After the government declared a state of emergency in July 1984, 150,000 sacks of sorghum arrived for the destitute. At this point, the GOS attempted to turn the problem over to USAID and the PVOs. Questions were also raised concerning the government's contribution to the relief effort when it requested food aid from the international donor community, while using its own funds to wage a civil war in the southern region. Nevertheless, according to USAID/Sudan, the regional and local governments were very responsive to the emergency. The regional governments of Darfur and Kordofan were instrumental in communicating the severity of the crisis to the Central Government and USAID in 1984. At the village level, a number of sheiks contributed to the relief effort by transporting food aid at their own expense.

VI. ACHIEVEMENTS OF THE US RELIEF EFFORT IN SUDAN

In the fall of 1984, the world's attention focused on Ethiopia while very close by, the situation in Sudan was also building into an immense crisis. A UN official tells the following story:

> In 1984, I was in the Ethiopian airport. It was crowded with all sorts of do-gooders: people from UNICEF, people from save this and save that, all wearing badges. There were tons of journalists and TV cameramen. There were people from Russia, people from Libya, people from the East and the West, movie stars, and rock stars. All the hotels were packed. Watching all of this, I realized that the Khartoum airport could never accommodate all this, and yet I knew Sudan would be next.

Although the number of people "at risk" in Sudan was not as great as in Ethiopia, the percentage of the population affected by drought and famine was greater. And yet despite the extent of the problem in Sudan, it was referred to as the "quiet famine." One A.I.D. official explained that Sudan did not get the publicity which Ethiopia did because help came before starvation was as widespread; and the prevention of starvation is not as interesting or dramatic a news story as a full-scale disaster.

Nevertheless, the greatest achievement in Sudan was the number of lives saved and the prevention of an even greater disaster. A report conducted by Devres, Inc., evaluating the US response in Sudan states that:

> A.I.D.'s emergency food assistance made a critical difference in the lives of millions of Sudanese who, in 1984/85, did not have enough to eat. A massive program undertaken in a country where food emergencies are infrequent, USAID's and A.I.D./W efforts deserve much praise for having overcome many major constraints as the emergency situation unfolded. As a result, over one million MT of emergency food was brought into Sudan and sold in urban areas or distributed to rural people, some in very inaccessible areas. Many, many lives were saved and much suffering was alleviated by this food assistance. Overall, A.I.D. undertook a large job and did it very well under the circumstances.

The biggest failure of A.I.D.'s relief effort in Sudan was its inability to pre-positic food before the rainy season. According to a FFP staff person:

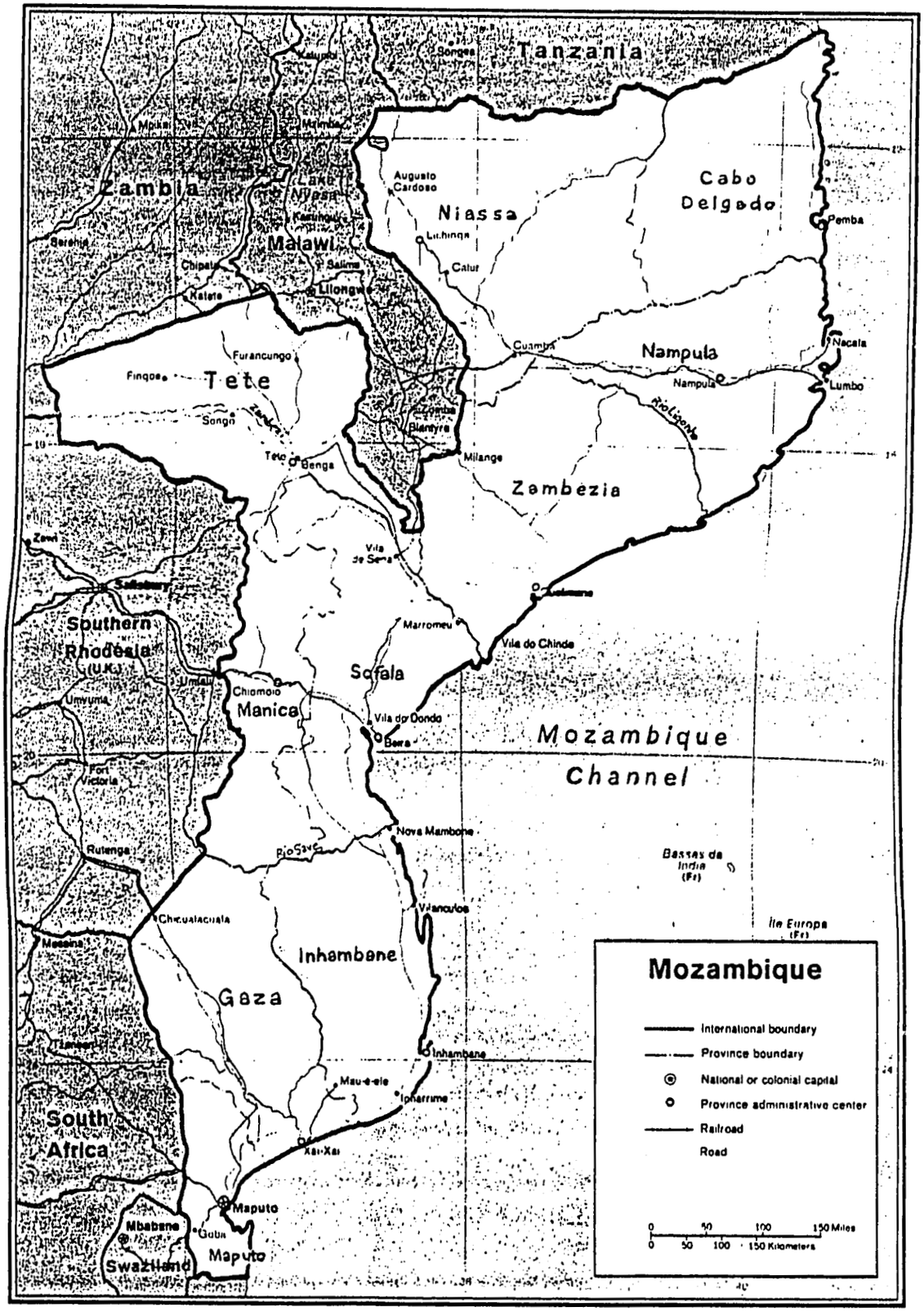
> In 1985, we were faced with transport problems in Sudan. There was a race to get the food to the west before the rains came. We brought in trucks, we brought in trains, we paid for fuel. We had to stretch a lot of rules; but we were late; and we were not able to get food to the west before the rains started in April.

And yet in 1985, the Nimeiri regime was overthrown, the external debt reached $9 billion, the rains were unusually heavy washing out many roads and bridges, and on top of all this, "we ran out of money," attests FFP. Although a supplemental fund of $450 million was eventually approved, it was not signed until April 1985, after the start of the rains. An A.I.D. official contended that the press concentrated on everything that went wrong, on the trucks mired in flooded roads, on collapsed bridges, on starving villagers; but dealing with the inevitable problems of such an immense program in such a difficult environment was a dedicated USAID staff of seven people who worked long hours to mobilize all resources available to push trucks to the west.

USAID was able to keep people in their villages such that when the rains did come in 1985, peasants were in the position to plant their fields. This also helped to avoid the horrific problems associated with the feeding camps in Ethiopia and the refugee camps in eastern and western Sudan, where there were often inadequate facilities and high death rates due to epidemics.

Another point which should not be overlooked is that while there were problems associated with the relief effort in Sudan, the US did respond faster and in a more massive way than any other donor.

Mozambique


Tanzania
Zambia
Lake Nyasa
Malawi
Niassa
Cabo Delgado
Augusto Cardoso
Lichinga
Cuamba
Nampula
Tete
Zambezia
Sofala
Manica
Southern Rhodesia (U.K.)
Mozambique Channel
Inhambane
Gaza
South Africa
Swaziland
Maputo
Mozambique
International boundary
Province boundary
National or colonial capital
Province administrative center
Railroad
Road
0 50 100 150 Miles
0 50 100 150 Kilometers

CHAPTER 6. MOZAMBIQUE: THE DROUGHT AND FAMINE, 1981-1986

I. INTRODUCTION

Mozambique has been buffeted with one disaster after the other since the late 1970s. Floods, cyclones, and drought have hit both northern and southern regions successionally, allowing little time for recovery. These disasters have had serious impacts on crops. In spite of the return of the rains and the subsiding of floods, food production remains low because of the insurgency actions of the South African-backed guerrilla group, Mozambique's National Resistance (MNR). These rebels have caused more destruction to Mozambique's agricultural economy than the natural disasters. They have attacked peasants attempting to till their fields, sabotaged truck and rail transportation, and greatly impeded the US relief effort. The result of these devastating events is that Mozambique's need for assistance has intensified in spite of more favorable weather. The following aspects characterize the crisis and the US response in Mozambique between 1981-86.

1. Mozambique has a history of natural disasters and thus a relief agency, the Department for the Prevention and Control of Natural Calamities (DPCCN), for dealing with crises.

2. The terrain, coupled with an infrastructure oriented toward the export of goods rather than internal distribution, was a hindrance to the relief effort.

3. Emergency food was primarily channelled through the market because the Government of the People's Republic of Mozambique (GPRM) believed that free food distribution would be deleterious to the society; also the GPRM did not have the time nor resources for such an immediate operation.

4. The politics of providing emergency relief aid to a Marxist country had to be resolved before the US could respond. This resolution came in 1982 and was not as difficult as in the case of Ethiopia, partly because of Mozambique's leanings toward the West.

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5. The economy of Mozambique has been extremely weakened by the premeditated efforts of the MNR, years of natural disasters, and government policies which provide no incentives for increased production.

In the section to follow, the environmental and cultural contexts in which the crisis and response took place are presented. The purpose of this background material is to reveal some of the constraints to the US relief effort in Mozambique.

A. The Environmental Context

Mozambique is approximately twice the size of California, with a similarly long coastline (2,470 kilometers) and an elongated shape extending from northeast to southwest. The terrain rises from the Indian Ocean littoral and generally meets a hinterland of plateaus and highlands in the west. The higher elevations in the west descend through a subplateau zone to the coastal lowland which is narrower in the north but widens almost to the western border south of the Save River. About 44 percent of Mozambique's terrain is made up of this littoral lowland with sandy soil.

The country is divided by at least 25 rivers which generally flow from east to west into the Indian Ocean. The largest and most significant is the Zambezi River which bisects the country both geographically and culturally. This enormous river, which rises in eastern Angola, provides an access to the interior of Mozambique from the eastern coast, significant hydroelectric power, and water for irrigated agriculture.

Variations in topography contribute to marked differences in rainfall and temperature, at times within areas only a short distance apart. Such variations can result in pockets of drought surrounded by areas of normal rainfall.

More generally, Mozambique has two main seasons which divide the climate year: a wet season which lasts, in most of the country, from October to April; and a dry season which lasts from April through September. Concomitantly, there are three climatic zones: a tropical humid zone in the northern provinces; a tropical semi-arid zone in the southern provinces; and a tropical zone in the more interior western areas.

The region most vulnerable to disaster is the semi-arid south, where the dry season can be more severe. In fact, the rains stopped here in December 1981, and did not return until 1984; thus triggering the worst famine of the century. It is not only the lack of rain that causes problems in Mozambique, too much rain is also a problem. For example, when the rains finally came in southern Mozambique, they came in such torrents that flooding resulted. The drought was actually brought to an end by a cyclone. "Instead of bringing relief to the parched land, it swept away the topsoil in which the crop was germinating" (African Research Bulletin, 1984: 7148).

The disasters of the 1980s, however, were not only concentrated in the south. The north and central regions also suffered from the syndrome of drought, cyclone, and flooding. Even in the tropically humid north, topographical variations resulted in pockets of drought. For more than a decade, Mozambique has suffered from one natural disaster after another. While the type of disaster and the area affected has shifted, the cost to the country has accumulated in terms of crops destroyed, lives lost, and vulnerability to future crisis.

B. The Cultural Context

Mozambique is a former Portuguese colony and is strategically located within the Southern African region. Because Portugal's economy was too weak to

develop Mozambique, Portuguese officials "remained content to take whatever economic fallout they could from the territory, while permitting it to become increasingly dependent on its wealthier white-ruled neighbors, South Africa and Southern Rhodesia." (Area Handbook on Mozambique, 1985: xxvi). This dependency accrued from Mozambique's rail system which served landlocked Southern Rhodesia and South Africa's mining region, as well as from Mozambique's reliance on wealthy South Africa for foreign exchange earnings and imports.

The geopolitics established before Mozambique became an independent country in 1975 is likely more significant to the nation politically, economically, and culturally than internal events. Since independence, the Marxist-Leninist regime which overthrew the colonialist Portuguese government, GPRM, has been consumed with trying to extricate itself from the power relations set up during the colonial era. However, the power wielded by South Africa in its undeclared political and economic war against anti-apartheid Mozambique has created a situation in which the black-ruled country can never win. Yet Mozambique is forced continuously to struggle for survival. It is this struggle against South Africa and a South African-backed guerrilla group which has dominated Mozambique's history since 1975.

Before South Africa's systematic attempts to undermine the newly independent nation, Mozambique was a resort haven for whites in the region. An A.I.D. official describes Mozambique before and after independence:

> Mozambique used to be a resort for the Southern Rhodesians. It had beautiful beaches and a good economy. This was before independence, when Mozambique was still Portuguese. With independence, the Portuguese left. They left nothing behind. They had not trained any Mozambicans, they destroyed the agricultural complexes, they destroyed their mills and their heavy equipment. They left the country in shambles.

Before the Portuguese left, the coastline of Mozambique was dotted with

luxurious hotels, cafes, and restaurants catering to a wealthy, white elite. The country was rich in resources with potential for development. Mozambique was in "shambles" after the Portuguese left, after the destruction they perpetrated before leaving, and after the South Africans began their attacks on any efforts made toward development. Now the country is dependent on the US and other donors for food aid, on the Soviet Union for military aid, and on anyone who will give economic assistance.

C. Constraints to the Relief Effort

The three major constraints to the relief effort are: civil strife, an inadequate infrastructure, and a greatly weakened economy. While these constraints persist unabated, their origins are rooted in the Portuguese colonial era. For example, the transport system was originally designed by the Portuguese to further their exploitation of Mozambique rather than to develop a functioning transport infrastructure. The Portuguese capitalized on the country's strategic location by orienting the main roads and rail lines to export the products of landlocked countries and only secondarily to transport domestic goods internally. The consequences of these historical events for the relief effort was an inadequate transport system for distributing supplies for internal use. There was no rail line or road from north to south. Even the main roads are penetration lines toward the country's border and insufficient for internal distribution.

The Portuguese were also responsible for Mozambique's economic dependence on and therefore its vulnerability to South Africa. Portugal's inability to invest in Mozambique provided South Africa an entry point to dominate the Mozambican economy. But despite its lack of investment capital, the colonial

power hoped to exploit the native labor to better the Portuguese economy. To force Mozambicans into labor, the Portuguese imposed a tax to be paid in European currency and concurrently set artificially low prices for peasants' crops. The consequence of this forced labor policy was again in the favor of South Africa. It drove thousands of Mozambican migrant laborers to South African gold mines, and remittances from these migrant workers are still an important source of foreign exchange today. It is also one which South Africa has been able to manipulate in its economic war on Mozambique by restricting the number of foreign workers: South Africa has significantly reduced Mozambique's foreign earnings.

Mozambique's economy has been devastated by South Africa through its support of the Mozambique National Resistance (MNR), a guerrilla movement whose main goal is to disrupt the political and economic stability of the country. The MNR has repeatedly attacked strategic economic targets cutting railroad lines, mining roads, and bridges, as well as interdicting traffic, plundering communal villages, and state farms, and sabotaging key development projects.

> MNR's principal economic target has been the transportation network, especially the railway lines from Mozambique to Zimbabwe, which came under repeated attack. As a result, many Zimbabwean companies have decided to continue relying on the South African port of Durban, despite the appreciably lower cost of shipping through Maputo. Beira, historically Zimbabwe's major international outlet, has suffered the most. In 1982 Zimbabwe exported only 55,000 tons through Beira, a mere fraction of pre-sanction trade. The MNR also stepped up its attacks on rail traffic between Beira and Malawi, resulting in serious fuel and fertilizer shortages just before the 1982 agricultural season. There were also indications that Pretoria's surrogate was increasing pressure on the Nacala railroad line, Malawi's only other link to the outside world besides the South African ports. (Bender et al., 1985: 143-4).

The cumulative effect of these events on the relief effort has been deleterious. The routing of the transport system from coast to border has made

food distribution to many rural areas difficult. Attacks on the rail lines and ports have either halted food aid distribution, or necessitated airlifts, the use of boats, or the resort to a South African port requiring costly overland transport. An A.I.D. offficial describes the impact of the insurgency on the food distribution program:

> The food distribution did not go smoothly because of security problems, because of the insurgency. Now you can't travel anywhere by road, therefore a great deal of coordination with the military is necessary. It is enormously difficult to travel. You can't even get out of Maputo now, and the security situation has worsened in the last six months.

II. THE IMPACTS OF THE DROUGHT AND FAMINE IN MOZAMBIQUE, 1981-1986

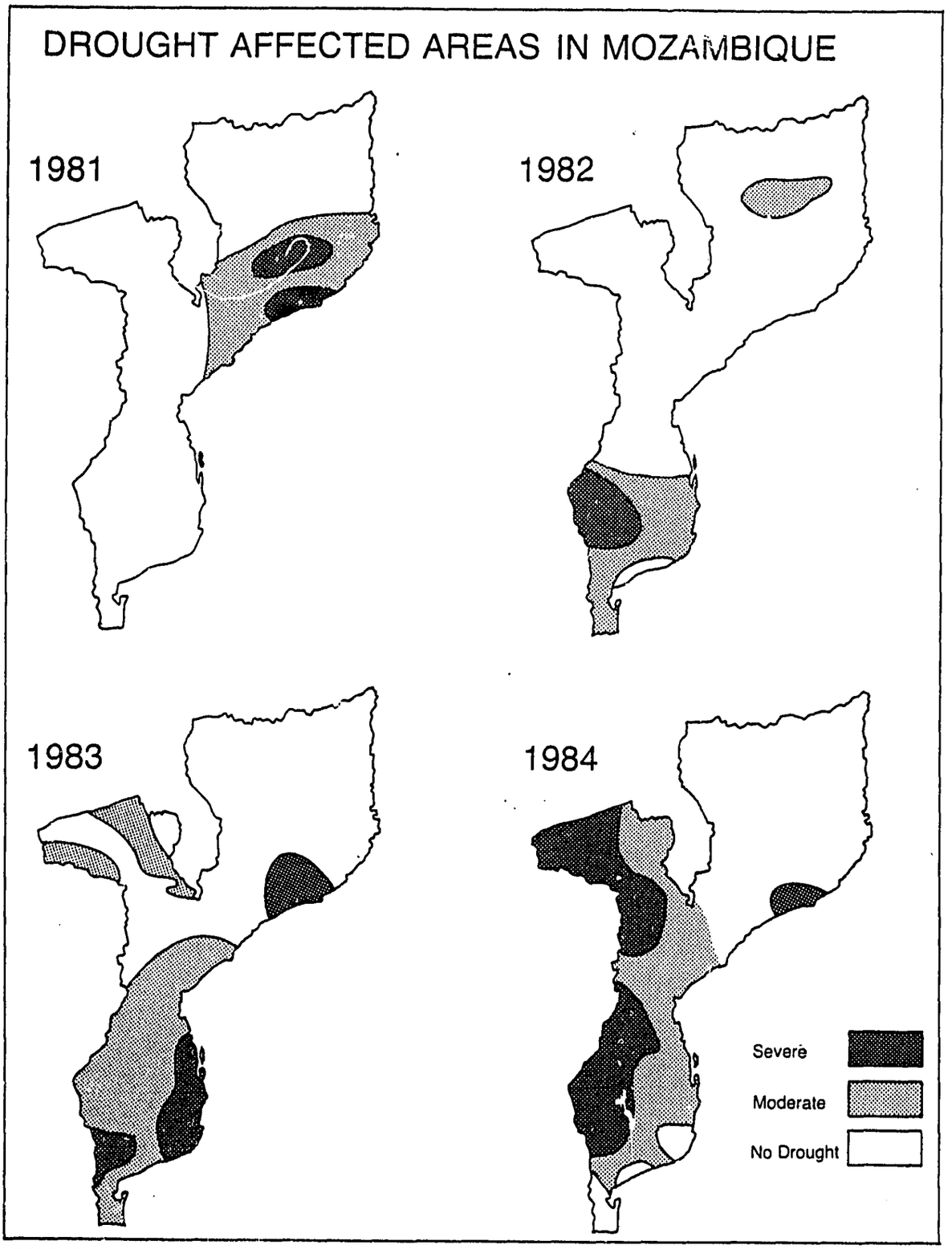
This section presents a summary of the drought conditions in Mozambique between 1981-86 and describes the impacts on the overall economy, agricultural production, and movements of people.

A. Drought in Mozambique

The rainy period in Mozambique begins in November to December and ends in April, with harvesting of maize occurring from April to May. The climate is characteristic of the regional patterns in Southern Africa. The causes and progression of drought in the 1980s in Mozambique were similar to those in Zimbabwe, Botswana, and South Africa. Rainfall in 1980 was below normal in most of East and Southern Africa along the coast. In 1981, drought affected the central and northern areas (Zambezia and Nampula provinces) as depicted in Figure 6.1. Part of the north experienced moderate drought again in 1982, while the southern provinces of Gaza, Inhambane, and Maputo were moderately to severely affected. The central region received near average amounts of rain. Compared to the 30-year average, rainfall in the November 1981 to April 1982 season was 60 to 95 percent of normal in the north, and 40 to 75 percent in the south. The worst drought years were in 1983 and 1984, when most of the southern and central areas were affected. The rainy season in 1982/83 was 35 to 50 percent of normal in the central region and 25 to 50 percent in the southern region. By 1985 the drought had ended, although its impacts continued due to disruption by insurgents. In addition to the drought, two cyclones in January and April 1984 caused extensive flooding which affected crop production and trade.

Figure 6.1

Drought Affected Areas in Mozambique, 1981-1984



SOURCE: Mozambique, Government of (1985).

B. The Economy

Of the total working population in Mozambique, 80 to 90 percent are engaged in agriculture. Yet only 5 percent of arable lands are cultivated, generating 44 percent of the GDP. Before independence, large-scale modern agriculture was mainly Portuguese. Since independence, production has generally declined due to three main factors:

1. Most Portuguese farmers left the country.

2. Rural transport and marketing systems have collapsed, due to the insecurity and disorganization engendered by the insurgents.

3. Drought, flooding, and unfavorable weather conditions have destroyed food crops in much of the country.

When the Portuguese left, the new Marxist-oriented Mozambican government took control of former Portuguese national and provincial holdings and established large state farms and cooperatives. Agricultural collectives eventually formed the backbone of the economy. In 1981, there were 1,266 communal villages with 1.8 million people. After the Fourth Frelimo Congress in 1983, however, government policy in the countryside switched from an emphasis on large state farms, which had not performed well, to supporting the peasant and private commercial farmer. This policy was intensified in 1984. Land belonging to state farms has been redistributed to private farmers. Following the announcement of these government liberalization measures, price increases for agricultural products were also instituted, aimed at encouraging a "commercial ethic."

According to a number of reports, these higher prices for producers have not been beneficial because of the disruption of planting caused by the insurgents. With no goods to sell or buy, higher prices have had little impact. Nevertheless, there have been changes in the distribution of goods, in an

attempt to eliminate unnecessary intermediate structures as well as delays. Some success has accrued from these policy changes. In 1984/85, there was an estimated 34 percent increase in goods marketed (Economic Quarterly Review, 1985).

Mozambique derives much of its income from charges on goods carried between Zimbabwe, Zambia, Malawi, and South Africa and its ports. The railways have played a dominant role in this "middle-man" economy. There are seven main lines running from Mozambican ports to neighboring countries; all are intended primarily to export the products of landlocked countries. The Beira Corridor has received heavy investments from Zimbabwe as well as from the international donor community, because it represents such an important transport line for the landlocked countries of the region. The MNR, however, has repeatedly attacked the railway and sabotaged efforts at rehabilitating the lines.

Mozambique's current account has been negative throughout the 1980s, worsening in 1982 (Table 6.1). Imports have consistently exceeded exports by a

Table 6.1

Macroeconomic Indicators for Mozambique, 1981-1985

	1981	1982	1983	1984	1985
Current account $ mn	-371	-436	-327	-235[a]	...
Outstanding Debt & Liabilities $ mn	...	...	1,172	1,217	...
Exports FOB $ mn	281	229	132	96	75
Imports CIF $ mn	801	836	636	540	650

SOURCE: The Economic Intelligence Unit (1986).

[a] Provisional.

substantial amount. Mozambique's debt situation also reveals the country's weakened economy. While debt rescheduling negotations were held with the Paris Club in 1985, resulting in special treatment for Mozambique, the external debt of approximately US $2.9 billion, including arrearages, is clearly problematic for a country with negligible foreign exchange earnings.

C. The Impacts of the 1981-1986 Drought on Agricultural Production

The impacts on agricultural production presented here concentrates first on exports and imports and then on food production.

1. Agricultural Exports and Imports

Mozambique's largest export earners are the oil and nuts of its cashew trees. High world prices for cashews in the 1960s led to local processing, and by the early 1970s, over two-thirds of Mozambique's exports were in the form of shelled nuts. In 1972/73, Mozambique was the top producer of cashews in the world, but production dropped sharply after independence because of the virtual collapse of local marketing outlets and damage accruing from natural causes. Production declines continued into the early 1980s due to the lack of goods available to farmers for purchase with their surplus earnings. While production was 196,000 MT in 1973, by 1981 it had dropped to only 90,100 MT. Cashew production was particularly hard hit by the drought of 1982/83, reducing production 80 percent from the 1981 level (Table 6.2).

Table 6.2

Export Crop Production in Mozambique, 1981-1984,
('000 Tons)

	1981	1982	1983	1984	1985
Cashewnut Production[a]	90.1	57.0	18.1	25.3	
Seed Cotton Production[a]	73.7	60.7	24.7	19.7	
Tea Production[a]	99.2	109.7	51.1	59.8	
Prawn Production	8.7	6.2	5.7	5.8	

SOURCE: Economic Intelligence Unit (1986).

[a] Marketed Production.

Cotton and tea production have also declined significantly since the early 1980s. Cotton is the most problematic of the main export crops, partly due to insurgency in the cotton growing districts. Prawn production has been a more consistent export commodity; in 1984, it was the principal export, earning almost twice as much as cashewnuts (Table 6.3).

Table 6.3

Principal Exports and Imports in Mozambique, 1984

Principal Exports 1984	$ mn	Principal Imports 1984	$ mn
Prawn	28	Food	135
Cashewnuts	15	Oil & Products	101
Tea	11	Equipment	94
Cotton	8	Spare Parts	71
Sugar	6	Non-Food Consumer Goods	47
Petroleum Products	5	Chemical Products	25
		Metal Products	19
		Electricity	9

SOURCE: Economic Intelligence Unit (1986).

Food was the major import in 1984. Food imports have increased consistently since 1979, more than doubling between 1979-83 (Table 6.4).

Table 6.4

Main Imports for Mozambique, 1978-1983
(MT mn)

	1978	1979	1980	1981	1982	1983
Consumer Goods	4,907	4,798	6,591	6,304	6,326	7,300
Food	2,717	2,590	3,500	4,044	4,360	5,700
Raw Materials	7,055	8,009	12,553	12,976	14,292	8,589
Crude Oil & By Products	2,840	1,470	7,105	5,906	8,044	3,943
Spare Parts	1,977	1,634	1,838	3,690	4,061	3,943
Equipment	3,259	4,134	4,941	5,349	6,859	5,740
TOTAL	17,198	18,575	25,923	28,319	31,574[a]	25,572

SOURCE: National Planning Commission (1984).

[a] Does not add in original.

2. Food Crop Production

Severe drought between 1981-84 seriously affected food production in 8 out of 10 provinces. Further problems were caused by floods and cyclones in 1981. Table 6.5 published by the USDA's ERS shows food production data which actually represents "total production" provided to the official marketing channels, and excludes food production for family consumption and private farm output marketed through parallel markets. Nevertheless, this data does provide some indication of the impact of the worst year of drought, 1982/83, on food crops. There was a 20 percent decline between the 1982 harvest and that of 1983; this decline slowly diminished in 1984/85. According to FAO estimates, production fell by 70 to 80 percent in the southern provinces, necessitating some 500,000 MT of cereals to offset the losses in 1983/84.

Table 6.5

Total Food Production for Mozambique, 1981-1985

	1981	1982	1983	1984	1985
Mozambique	111	110	86	93	104

SOURCE: United States Department of Agriculture (1986a).

Table 6.6 shows production for Mozambique's principal food crops. Rice production fell from 120,000 MT in 1974, to 55,000 MT in 1983. Rice is produced primarily in the irrigated lowlands. The precipitous declines since 1974 are part of the overall decline in production since independence, while decreases since 1980 reveal the impacts of natural disasters and insurgency. Maize and sorghum production did not fall as sharply as rice over the period, nevertheless, the impacts of drought and flooding were felt. In 1983, an estimated one million MT of cassava, or approximately one third of the total annual crop, was lost because of drought.

Table 6.6

Production of Principal Crops in Mozambique, 1981-1984

('000 metric tons)

	1981	1982	1983	1984
Maize Production	78.3	89.2	55.8	82.6
Rice Production[a]	28.9	41.5	17.3	19.1
Sorghum[b]	--	190	180	180
Cassava (Manioc)[b]	--	3,250	3,150	3,150
Bananas[b]	--	70	70	70

SOURCES: [a]Food and Agriculture Organization (1984d).

[b]Economic Intelligence Unit (1986).

Fishing is a relatively new industry in Mozambique and a needed contribution to the food supply. Although Mozambique is not yet self-sufficient in fish, domestic catches presently cover 34 percent of consumption (FAO).

D. Movements of People

Insurgents of the MNR have compounded the problems faced by the victims of the 1981-84 drought. Of the 4.7 million people estimated to be "at risk" by the UNDRO in the period January to April 1984, 100,000 Mozambican refugees were reported to have fled to Zimbabwe in March 1984.

Rebel activities were also responsible for substantial movements of people into district and provincial capitals a year later. The number of people affected by extreme climatic conditions and guerrilla attacks had decreased to 2.3 million people by July 1985, but displaced persons, scattered across 6 provinces, were estimated at 300,000 (UNOEOA).

In August 1985, it was estimated that 10,000 displaced people had settled in Moatize and 20,000 in Tete City, while a number of displaced persons from Tete Province were reported migrating to Zimbabwe. In Inhambane Province, some 2,000 people from Vilanculos, Pambara, and Inhambane cities were squatting outside the provincial capital. During December, there was a sudden influx of displaced persons into Maputo City and Sofala City, which have a normal population of only 15,000, but have a destitute population of 10,000. These large influxes of people put added pressure on agricultural land in these areas and gave rise to significant increases in incidences of waterborne diseases. At the end of the year, the provinces of Maputo, Gaza, Inhambane, Sofala, Manica, Tete, Zambezia, Nampula, Cabo Delgado, and Niassa had requested donor assistance to treat their water supplies.

In January 1986, Mozambique had an affected population of 3.14 million and a displaced population of 381,000. Table 6.7 shows the number of displacements in the six most affected provinces.

Table 6.7

Number of Displaced Persons
in the Six Most Affected Provinces of Mozambique
January 1986

Province	Number of Displaced Persons, January 1986
Inhambane	112,000
Gaza	23,000
Sofala	28,000
Manica	123,000
Tete	84,000
Maputo	10,150

SOURCE: UNOEOA (1986).

III. A SUMMARY CHRONOLOGY OF MAJOR EVENTS RELATED TO THE DROUGHT AND FAMINE IN MOZAMBIQUE, 1981-1986

Time	Event
1982	US provides 20,000 MT of food aid to northern provinces in response to late year drought [5].
November 1982	Drought strikes southern provinces leading to significant drop in cereal production [28].
January 1983	US Embassy makes request to A.I.D./W to provide food assistance for central and southern regions [5].
February 1983	GPRM appeals to international community for drought assistance [4].
July/August 1983	Indian Ocean salt waters begin to flow up the low-lying Limpopo and other rivers in the south making irrigation impossible.
Late 1983	Thousands flee to neighboring Zimbabwe due to insufficient food and MNR insurgencies [17]. MNR offensives continue in Maputo Province and begin in Cabo Delgado in the north [16].
January 1984	Cyclone "Domoina" strikes; GPRM requests aid for victims [13].
October 1984	UNICEF estimates 4.7 million people affected by drought [4].
January 1985	US Ambassador extends drought and food emergency declaration [25].
March 1985	Twelve Zimbabwean refugee centers register 72,000 Mozambican refugees. Thousands of refugees begin to return to Mozambique.
August 1985	Despite increases in rainfall, 2.3 million people estimated at risk [8].
January 1986	Heavy rains cause considerable damage to crops in low-lying areas. Affected population rises to 3.14 million, with displaced individuals numbering 381,000 [8].
June 1986	Number of people at risk remains high due to flooding, lack of seeds, and insurgent activities [8].

IV. FOOD AID: PLEDGES AND DELIVERIES, US AND OTHER DONORS

This section reviews the series of natural disasters which compelled the Government of the People's Republic of Mozambique (GPRM) to seek international assistance from 1981-86. The US response is documented and the expediency of the deliveries of food and by major donors is described.

A. Events Leading Up to the US Emergency Response

From 1981 to 1984, Mozambique had its worst drought in many decades. The central region had been in the grip of drought since 1978. In 1983, drought affected the central and southern provinces. The US response to the crisis was hampered by a shortage of transportation in the inland region, which contributed to migration to coastal areas where emergency food aid relief supplies were available.

In January 1984, Cyclone Domoina devastated Maputo City and severely affected six of the seven districts and part of the seventh. Flooding destroyed the staple food crop of maize, leaving supplies at a critically low level. UNDRO estimated that 4.7 million people were at risk during the period January to April 1984.

To aggravate the situation, rural insurgency dislocated thousands of Mozambicans, destroyed road and railway links, and attacked relief convoys delivering emergency food aid. By the end of 1984, it was reported that as many as 100,000 people had died. In November of that year, Mozambique made the continent's largest appeal for emergency food aid in proportion to its population for 575,000 MT.

The famine situation improved noticeably in 1985, with the estimated

number of affected people dropping to 2.5 million (OFDA, 1986). But while Mozambique experienced a normal rainy season, rural insurgency and a shortage of seeds and other agricultural inputs severely inhibited food production. In October 1986, the food supply position remained serious. The population 'at risk' increased to three million. The 1986/87 food aid requirement, currently estimated by FAO at 540,000 MT, may increase.

B. An Overview of the US Food Aid Response

The US government supported a number of PVOs who cooperated with the GPRM in the relief effort. However, intense rural insurgency after 1983 prevented CARE and World Vision from expanding into rehabilitation projects or proposing regular Title II programs. In 1985, World Vision received 13,000 MT of corn under a Title II emergency program for delivery to central provincial warehouses in the Tete and Mancia provinces. Since 1984, Church World Service has received US assistance to feed 34,000 drought victims in the areas of Inhambane Province. In 1986, Church World Service delivered 23,854 MT of corn, rice and vegetable oil, valued at $1.7 million, to various provinces. This program is expected to continue. According to USAID/Mozambique, the actual distribution of this food was carried out by the Christian Council of Mozambique. When faced with rural insurgency, the PVOs were unwilling to implement any direct distribution program.

In 1985, the US government increased its Title II emergency food aid contribution to Mozambique to over 56,000 MT (Table 6.8). A.I.D.'s FFP contributed 42,250 MT of PL 480 corn, and in 1986 it contributed 40,000 MT. In both years, only 10,000 MT of this corn was allocated for free distribution by the DPCCN. Most Title II emergency food was sold through normal market channels.

Table 6.8

Summary of US Food Aid for Mozambique
PL 480 Title II/Section 416/Food Security Reserve
FY 1981 - 1986
(metric tons)

	FY81[a]		FY82[a]		FY83[a]		FY84[a]		FY85[b]		FY86[c]	
	MT	$/000	MT	$/000	MT	$/000	MT	$/000	MT	$/000	MT	$/000
Title II												
Regular	1,174	535	1,576	528	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Emergency												
GTG	-0-	-0-	19,946	3,691	43,500	9,743	51,610	13,277.4	42,250	8,131.9	40,000	7,450.4
WFP	-0-	-0-	-0-	-0-	-0-	-0-	7,468	1,770.6	225	132.7	-0-	-0-
PVO	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	14,145	5,418.3	26,420.8	7,011.5
Section 416												
GTG									5,640	6,696.5	-0-	-0-
WFP									104	86.8	-0-	-0-
FSR									-0-	-0-	-0-	-0-
TOTAL	1,174	535	21,522	4,219	43,500	9,743	59,078	15,048.0	62,364	20,466.2	66,420.8	14,461.9

SOURCES: [a] A.I.D. (1984c).
[b] A.I.D. (1986d).
[c] A.I.D. (1986e).

The GPRM used the resultant funds to conduct feeding programs at cooperatives, schools, and factories. Some food had to be distributed under military escort. Under the Section 416 Dairy Donation Program, an additional 5,744 MT was approved for 1985. In 1986, a total of 66,000 MT of Title II emergency food aid was contributed to the GPRM. In addition, it was proposed that Title I food be changed to Title II emergency, due to foreign exchange difficulties and the country's potential inability to make repayment in the foreseeable future.

The Title I (concessional sales) program, which was recommenced in 1985, supplied a total of 83,000 MT of corn, wheat, and rice, valued at $2.1 million. The Title I loan also covered ocean transportation. For FY 1986, another 83,000 MT of commodities were received by Mozambique under Title I to assist in meeting the normal food deficit requirements in urban and rural areas.

C. Pledges and Deliveries by the US and Other Donors

Mozambique is normally a food-deficit country; but after the recurrence of drought in the central and southern provinces, cereal import needs for 1983/84 (May/April) increased to 600,000 MT, more than double the imports in the previous season. Donations of cereal increased in proportion in 1983 to meet the crisis situation (Table 6.9). However, of the 421,000 MT of aid pledges committed for the period May 1983 to April 1984, only 270,000 MT had been received by January 1984 (FAO). It was crucial that the remaining pledges be delivered in the following four months which is typically the 'lean' period. By the end of 1984, the food supply situation was acute in Manica, Sofala, and Tete provinces. Stocks of cereal were virtually exhausted and food aid requirements for the 1984/85 crop year were estimated at 520,000 MT (FAO).

Table 6.9

Summary of Cereal Production, Import Needs and Actual Imports for Mozambique, 1981 - 1986 (thousands of metric tons)

Market Year May/April	Cereal Production	Total Import Needs	Total Donor Cereal Pledges	Actual Cereal Imports		Ard Pledge/Delivery Gap	Total Import Gap
				Total	Delivered Food Aid[1]		
1981/82	490	NA	NA	306.5	198.6	NA	NA
1982/83	468	400	NA	253.9	191.5	NA	146.1
1983/84	330	600	421	467.5	358.5	62.5	132.5
1984/85	400[2]	620	538.6	401	350	188.6	219
1985/86	450[2]	500	428	423.7	383.8	44.2	39

SOURCE: Food and Agriculture Organization (1986).

[1] Delivered as of end of marketing year.
[2] Estimated figures.

Although all FY85 US pledges were met, the actual distribution of food was delayed by transportation bottlenecks created by the uneven arrival of food. Table 6.10 provides a detailed account of US food aid arrivals for this period. Donor governments, in general, for the marketing year 1984/85, augmented their contributions to meet the growing need for cereals (Table 6.11). However, shipments from two major donors, the EEC and the WFP, often were received in Mozambique six months after the estimated delivery date.

Table 6.10

Mozambique Food Aid Arrivals by Month
Title II/Section 416/Food Security Reserve, FY 1985
(MT)

Oct.-Dec.	Jan.	Feb.	March	April
- 0 -	4,750	- 0 -	41,200	140
May	**June**	**July**	**Aug.**	**Sept.**
6,757	313[a]	5,391[a]	3,813[a]	- 0 -[a]
	TOTAL	62,364[a,b]		

SOURCE: USAID/Sudan (1985).

[a] Estimated figures.

[b] This represents 100 percent of US pledged food aid for FY85.

Table 6.11

Summary of Cereal Pledges by Donor for Mozambique
Non-US Government-to-Government
Cereal Pledges for Mozambique, 1983-1986

	Market-Year May/April		
Donor	1983/84	1984/85	1985/86
Algeria		0.8	
Australia	8.1	6.8	13.7
Austria	7.0	1.7	5.1
Belgium	2.0	5.0	
Burma			0.5
Canada	14.0	20.8	
China		15.0	10.0
Denmark	33.2	5.7	
EEC	42.3	117.8	136.2
France	5.8	10.0	
F.R. Germany	9.7	11.1	
Iran			6.9
Italy	11.5	20.0	
Japan	19.8	9.1	11.6
Netherlands	28.2	36.5	
Norway			1.1
Pakistan			0.5
Spain		3.5	
Sweden	8.1	6.6	6.6
Switzerland		2.0	
UK	3.0	17.2	
USSR	10.2	2.0	7.0
Vietnam		4.0	
Yugoslavia		10.1	10.3
Zimbabwe	25.0		
TOTAL	227.9	305.7	214.5

SOURCE: Food and Agriculture Organization (1986).

Food aid requirements for the period April 1985 to April 1986 were 440,000 MT. This amount was fully covered by pledges carried forward from 1984/85 and new pledges. Of the 428,000 MT of donor pledges, only 383,800 MT

had been delivered by the end of the marketing year (Table 6.9). Due to internal strife and a serious lack of seeds and other agricultural inputs, the food supply situation together with the need for food assistance remained critical.

Mozambique's foreign exchange position made it unlikely that commercial imports would exceed 50,000 MT in 1986/87 leaving food aid requirements at approximately 545,000 MT (Table 6.12). At the start of the 1986/87 agricultural season, beneficial rains over the southern provinces favored land preparation and early planting, but lack of inputs and civil disturbances continued to impede agricultural activities.

Table 6.12

Estimated Cereal Needs for Mozambique
May 1, 1986 to April 30, 1987

	Thousands of MT	
CEREAL NEEDS		
Urban	387.1	
Rural	310.4	
Total	697.5	
AVAILABLE (Net)		
Internal Market	84.4	
Stocks	37.2	
Commercial Imports	30.7	
Total Available	152.3	
ESTIMATED DEFICIT		545.2
FOOD AID (As of Nov. 25)		
Delivered	63.4	
Unscheduled Pledges	111.8	
Total	175.2	
UNMET NEEDS		370.0

SOURCE: A.I.D. (1986b).

NOTE: (Per capita ration: 350g/day (127.75 kg/year).

V. SYNTHESIS: LESSONS LEARNED, QUESTIONS RAISED

In this section, an analysis of the events leading up to the famine in Mozambique, as well as the emergency response by the US is presented. This analysis is essentially a synthesis of the historical facts and interviews conducted with A.I.D. and UN officials.

A. Why did the situation reach such crisis proportions in Mozambique?

1. Mozambique has had a succession of natural disasters for almost a decade with little time for recovery.

A report issued by Mozambique's relief organization, DPCCN presents a recent history of natural disasters in the country. While drought has been cyclical in Southern Africa as in other semi-arid regions of the continent, the variations in rainfall since 1977 have been the worst in 50 years. The southern and central regions experienced low rainfall for the years between 1981-85.

Flooding added to the destruction of the agricultural economy. The Limpopo and Incomati rivers in the southern region flooded in 1977, resulting in losses amounting to $34 million. The next year, 1978, the most severe flooding ever recorded of the Zambezi River occurred. The flood waters covered vast, densely populated areas in Tete, Manica, Sofala, and Zambezia provinces. It left 220,000 people homeless and resulted in $63.7 million worth of damage.

In 1979, Cyclone Justine affected the whole northern coast of Mozambique; the losses were "impossible to assess." In 1984, another tropical depression

hit Maputo; in two days precipitation rose to almost 40 percent of the annual rain level, causing catastrophic floods which destroyed "90,000 tonnes of food crops." (African Research Bulletin, 1984: 7148)

This combination of natural disasters over time has made agricultural production and recovery difficult and triggered the severe famine of 1982/83.

2. Insurgents in Mozambique have systematically attempted to destroy the country's political and economic stability as well as to hamper relief efforts.

In order to understand the motivations of the insurgents in Mozambique, it is necessary to examine the politics of the region of Southern Africa. The insurgent group, referred to as both RENAMO and as the MNR, has been sabotaging the GPRM since independence in 1975. The GPRM, with its Marxist-Leninist orientation, has been opposed by South Africa and historically by Southern Rhodesia. The confrontation between Southern Rhodesia and the GPRM began when Mozambique began providing a haven and launching point for guerrilla operations against Ian Smith's regime. The Smith regime responded by organizing and supporting a group made up of Mozambicans dissatisfied with the GPRM and disgruntled Portuguese whose property had been confiscated with independence.

When white-ruled Rhodesia was transformed into black-ruled Zimbabwe in 1980, RENAMO's support base shifted to South Africa. The government in Pretoria, which had provided some clandestine assistance earlier, now assumed full responsibility for the continuation of the insurgency. Its motive for supporting MNR mirrored that of the Southern Rhodesians. Mozambique was giving refuge to a group of black nationalists, the African National Congress (ANC). In an attempt to protect apartheid policies, South Africa readily backed the

MNR, supplying them with money, military arms, and training.

By 1984, the insurgents had grown to approximately 12,000 and were active in all of the country's ten provinces. This activity, according to the GPRM, has not only consisted of attacks on the railway lines and the disruption of agricultural production, but also of senseless atrocities against civilians. Attacks on provincial villages have resulted in migrations of peasant farmers to larger towns, bordering countries, and refugee camps. Many were afraid to till their fields and thus left for more secure areas.

While natural disasters have triggered famine in Mozambique, RENAMO's disruption of food production and the transportation system, both before and after the drought of the 1980s, added to the country's vulnerability to such a crisis and then exacerbated it once it began. The African Research Bulletin writes about Mozambique's "already heavy burden of problems:"

> The Mozambique National Resistance (MNR) insurgency in the countryside is beyond much dispute the biggest obstacle to recovery. So long as this continues, there is scant hope of rebuilding Mozambique's shattered economy (1986: 8432).

Reports by the GPRM, the USG, and other international aid agencies also allege that RENAMO has deliberately sabotaged relief efforts.

> Since December, more than twenty foreigners - most of them relief and development workers - are known to have been killed by the MNR, a source from one United Nations agency here in Harare said. No statistics are available on killings of Mozambican relief workers, but the number is believed to be even larger.
>
> The violence has virtually halted travel outside Maputo by journalists and international aid workers. But recent reports from Tete, one of five Mozambican provinces afflicted by food shortage, paints a dramatic picture of the effects of warfare in a food-poor nation. In 1983/84, an estimated 5,000 people starved to death in the province, and tens of thousands more fled to neighboring Zimbabwe in search of food (African News, 1985: 2).

MNR lacks any political program and has made no effort to organize peasants. Its main "raison d'etre" is to destabilize the GPRM government and

economy. MNR is essentially an arm of the South African security (Guardian, April 18, 1983), and an important component of South Africa's covert war against Mozambique.

3. Mozambique's economy has been virtually destroyed by war, drought, and economic sabotage.

Mozambique has been suffering from a severe economic crisis for the past several years. GDP is now only two-thirds of its 1973 level; commercial agricultural production for export has fallen 52 percent since 1981, and the country's debt service ratio at the end of 1984 equalled 174 percent of exports.

Drought between 1981-84 resulted in a dramatic drop in food production. Corn and rice harvests in southern Mozambique were more than halved and almost the entire vegetable crop was lost. Two and a half million people suffered from food shortages in central and southern provinces. In 1985, the rains had returned to nearly normal levels in most areas, and food surpluses were produced. However, these surpluses were often never marketed because of the lack of consumer goods in the countryside.

> With no goods available to purchase, successful farmers in northern Tete are reluctant to sell produce to their southern neighbors, who remain short of food. Instead, many carry their surplus grain across the northern border to Malawi, where they can exchange it for basic consumer goods (Africa News, 1985: 2).

With the worst export performance since independence, Mozambique has had little foreign exchange to deal with its economic and food shortage crisis. A major source of foreign exchange is dues received from rail and port services provided to neighboring countries. MNR attacks on the railway lines, however, have sharply decreased trade, much of which has been diverted to South African

ports. In 1985, the major port of Maputo handled only 13 percent of its 1975 tonnage.

A final reason given for Mozambique's critical economic situation is "misguided social economic policies." These policies initially entailed the imposition of a socialized economic system founded on Marxist-Leninist doctrine, and an agricultural economy which encouraged cooperatives and state farms. These state farms, in particular, were inefficient with productivity levels significantly below the traditional individual holding. In 1983, the GPRM publically admitted that past policies were not working and that a new path would be taken. The African Research Bulletin reported in November 1986:

> The government has broken up and reorganized some of the large and inefficient state farms, and is trying to encourage private agricultural production. In May last year it deregulated the prices of a wide range of agricultural goods and raised the official prices on others to successfully increase output.

The US has encouraged this new emphasis on family and commercial farms and provided economic support funds (ESF) to help make the country's transition away from the Marxist model. While some progress toward economic recovery has been made, until the civil war is resolved, any semblances of a healthy economy will be difficult if not impossible to obtain. An article in New Africa (May 1986) stated that almost every development project implemented has failed, despite the "huge areas of fertile land that should be self sufficient in food production." Part of the blame is due to bad planning and inefficient management on a state-run economy, but even if it was the most efficient system in the world it would be scuppered in a country where safe transport by land is impossible." Without improved conditions, without more development, Mozambique's vulnerability to famine will not change despite climatic improvements.

B. Was the response to the famine in Mozambique appropriate?

1. In 1982 and 1983, the US response to Mozambique's crisis was delayed.

In southern Mozambique, the rains stopped between 1981-84. An article in the African Research Bulletin describes the severity of the crisis in the summer of 1983 and the response by the donor community:

> Last year's harvest was bad enough, but this year there have been virtually no crops at all. Perhaps half the country's cattle have died, or had to be slaughtered, because there is no water or pasture left.
>
> The people are heavily dependent on food aid from abroad to survive. But the aid promised so far will run out in October, and there will be nothing to feed people until the next crop is due in April. Despite the crisis the country has so far been offered less than half as much aid as it had last year.

The US response was being delayed back in Washington, DC for approximately six months because the issues involved with giving aid to the Marxist government of Mozambique were not quickly resolved. Finally, in 1984, the policy of "The Hungry Child Knows No Politics" was reiterated, thus helping to resolve the issues and clearing the way for an emergency response by the US. In 1983, the US donated more food aid to Mozambique than any other donor.

In 1984, A.I.D. signed its first project agreement with the GPRM, called the Private Sector Rehabilitation Program. The purpose of the project was to promote the private sector, particularly the private agricultural sector. It was in response to the GPRM backing down from the "mistakes" accruing from its socialist experiment and encouraging aid to the family farmers. However, in 1986:

> Congress blocked plans to expand the modest aid program, making $5 million of aid conditional on the government's holding free elections - regarded by this one-party state as an unaccep-

table demand.

The Gramm-Rudman-Hollings balanced budget legislation also took a bite, leaving the program at $9.5 million, $3.5 million less than last year.

Administration efforts to supply a small amount of nonlethal military aid - $4.6 million over two years - also have been blocked in Congress (Frankel, 1986).

Despite Mozambique's so-called turn to the West after 1983, the US government questioned the extent to which it should "play a major dialogue role" in the Marxist state which received military aid from the Soviet Union. A 1985 A.I.D. report states:

> The first question which must be answered is do we play a role in trying to promote the policy reform process in Mozambique? If we do not try to promote the policy reform process, the effects of our and other donors' assistance will be minimized. On the other hand, if we do enter the policy arena in Mozambique, we must be aware that the risks are high, the chances of success in the short-to-medium-term are low, and the Mozambicans will understandably be wary of foreign advice that may carry with it a risk of more popular unrest which a weak GPRM can ill afford.
>
> In this context, our strategy is to look on our assistance as an effort to educate policymakers in the GPRM and demonstrate the benefits of market liberalization and rehabilitation of the private sector. We are encouraging the World Bank and IMF to take the lead in policy dialogue and donor coordination, and we are participating in that process in a supportive role.

Part of Mozambique's "turn to the West" entailed the signing of the Nkomati Accords with South Africa. This accord between Mozambique and South Africa consisted of an agreement by South Africa to halt its support of RENAMO, and by Mozambique to expel members of the ANC. By 1986, the nonagression pact was broken beyond repair due to alleged violations by the South Africans. And yet the US has done little to support the Mozambicans, to which the Mozambicans have asserted: "It's quite clear that after two years of Nkomati, the US has not made up its mind (Frankel, 1986)." Because of the unwillingness of the West to give military support when the Soviets are doing this, the Mozambicans

feel some lack of support from the US. An Ethiopian official suggests that Mozambique has made a serious error in not clearly aligning with either the East or the West, but rather attempting to get support from both powers. The end result, according to this official, is a lack of trust on all sides. The USG is fully willing to give emergency aid to Mozambique, and has been generous in this area. However, military aid is a more sensitive form of aid; and one that Mozambique desperately desires.

2. The Mozambican DPCCN became an effective relief organization, with the assistance of CARE, which was in turn funded by the US OFDA. By 1985, the DPCCN was able to contribute its part to the emergency operations, and to coordinate with USAID.

Because the logistics in Mozambique were so difficult, coordination between USAID and Mozambique's relief agency, the DPCCN was crucial to the effectiveness of the emergency response. These difficult logistics accrued from the inadequate infrastructure which the international and US relief effort had to overcome in all drought affected countries. In Mozambique, however, these logistics were exacerbated by the insecurity created by the MNR. Widespread civil strife meant that relief workers and A.I.D. assessment teams were restricted in terms of where and when they could travel, and for the most part, they had to be accompanied by government security forces.

By 1983, the working relationship between the USG and the GPRM was relatively good and it continued to improve thereafter. However, in previous years, relations had been strained. In February 1982, the GPRM accused a number of Americans at the US Embassy of being spies and expelled them from the country. This greatly reduced the American presence, and therefore the US reporting capabilities. The US assistance program of 1982 reflects this

cooling of relations. The US only gave $600,000 in 1982, after having given $8.7 million in 1981, and $18.9 million in 1980. The 1983 figures of $9.7 million suggest an improvement, though they also reflect the worsening of the drought and food shortages.

After the 1983 Fourth FRELIMO Party Congress and Mozambique's "turn to the West," relations between the USG and GPRM improved considerably. An A.I.D. official explains:

> In mid-July 1984, we began a bilateral assistance program. Mr. McPherson went to Mozambique two months later and we instituted this program. At the time we had no mission on ground. With this new program, McPherson established a greater American presence in Mozambique.

A member of an A.I.D. assessment team gave the following evaluation of the US/Mozambique working relationship in 1985 and the contribution made by the GPRM to the relief effort.

> In my opinion, Mozambicans are fairly easy to work with, very professional at the highest level, honest and sincere. I was there at this time last year, there was a sense of commitment with the Government of Mozambique. They were serious about getting food to the right locations. The government did a good job identifying where the food should go, and there was good collaboration between the PVOs, USAID, and the Mozambique government.

USAID confirms this view by praising the "GPRM's sincere concern for its people, the honesty and the dedication of its officials, and the pragmatism of its efforts, both in addressing the emergency and the atrophied economy."

The GPRM and its DPCCN took a leading role in the relief effort after 1985. The DPCCN was the central coordinating agency which worked closely with international donors to assess the food needs of the populations "at risk" and issue monthly situation profiles of the affected provinces. According to USAID: "the GPRM made sincere efforts to have Mozambicans taking care of

Mozambicans. Donor food support and PVO logistic and technical support were encouraged and used to complement and improve GPRM capacities, not to supplant them." The A.I.D. OFDA writes:

> The DPCCN managed the distribution of emergency food donations and monitored most of the other on-going relief projects in Mozambique. One project that undoubtably improved the GPRM's ability to deliver emergency commodities was the creation of a Logistical Support Unit (LSU) with the DPCCN. Funded by OFDA and staffed with CARE employees, the LSU was put in charge of port clearance, handling, and warehousing of incoming relief commodities, maintenance and operation of delivery vehicles, and distribution monitoring.

The GPRM used all its available resources to deliver food aid to affected areas, despite the growing insecurity created by the MNR. Rail, roads, boats, and airlift were employed, depending on the infrastructure and the vulnerability of the area in need. The GPRM used its available truck fleet and organized truck convoys with military escorts in rebel-controlled areas. DPCCN, in cooperation with UNDP, airlifted food, while a 350 MT capacity barge, the "Cinq Juin," was chartered to bring desperately needed food supplies to famine victims along the coast of Inhambane Province.

Virtually every government agency and local voluntary organization was involved in the disaster relief effort. AGRICOM, the Mozambican agricultural marketing parastatal, purchased surplus food from local farmers to encourage increased agricultural production. The National Seed Company (NSC) purchased several varieties of high quality cereal seed to give to farmers in affected areas. The Ministry of Marine Transport and Navique, the GPRM shipping agency, assisted in the operation of the "Cinq Juin," providing navigational guidance and off-loading the emergency supplies. The Mozambican Red Cross carried out its own emergency airlift and supplementary feeding programs in the southern and central provinces, while the Christian Council of Mozambique provided

emergency supplies to relief camps in Inhambane, Gaza, Sofala, and Maputo.

Despite the insurgency, the GPRM was committed to the relief effort and made the saving of lives a priority. And despite ideological differences, the relations between the two countries and their respective agencies were very positive. Clearly the situation was different than in Ethiopia.

VI. ACHIEVEMENTS OF THE US RELIEF EFFORT IN MOZAMBIQUE

An important achievement of the US emergency operations in Mozambique was the willingness of A.I.D. and the GPRM to make humanitarian concerns paramount over ideological differences. For the US, Mozambique was the first African drought affected country requiring a resolution between humanitarian and political concerns. The African Bureau and M. Peter McPherson should be given credit for their efforts in resolving such issues. Once the emergency program was initiated, both the USG and the GPRM were able to establish good working relations which benefited the relief effort.

An example of these good working relations is offered by OFDA's successful program with CARE to assist Mozambique's relief agency, DPCCN. According to USAID, the GPRM welcomed CARE's technical advisory services with the DPCCN, which undertook such a close collaborative stance that CARE was totally integrated into the relief agency. While there was suspicion initially, no other US PVO had worked in Mozambique; after a few months, CARE had entry to and influence on high central and provincial authorities.

The success of the relief effort is dramatically highlighted by the changing conditions between winter 1983 to spring 1984 and 1984/85. During the earlier period, approximately 100,000 people alledgedly starved to death, while during the following 2 years, a massive donor response averted starvation. Despite the problems and contretemps, the US response, after the government made the decision to initiate the aid program, has been a success story, resulting in thousands of lives saved.

Mali

VI
VII
Toumbouctou
Gao
V
Kayes
II
Mopti
IV
I
Segou
Koulikoro
Bamako
III
Sikasso

CHAPTER 7. MALI: THE DROUGHT AND FAMINE, 1981-1986

I. INTRODUCTION

The Sahelian region as a whole, and Mali in particular, were devastated by drought between 1968 and 1974. The severity of the crisis drew the attention of the United States which had previously viewed this region of the world as a concern of the former colonial power, the French. In 1973, the US committed 156,000 MT of food for the Sahel, and additional aid in 1974. After the crisis waned, the US along with other donors launched major recovery and medium-term development relief efforts. These investments, coupled with the experience gained from the 1973/74 drought, benefited the US relief effort which recommenced in 1984/85 when the worst drought on record struck the region. The situation in Mali was not perceived to be as critical as in other drought affected African countries, despite the severity of the drought and famine in the 1980s. Six aspects characterize the situation and the US response:

1. Previous experience with drought in Mali in 1973/74 improved the US as well as Malian response in the 1984/85 period. In addition, the growth of PVOs in Mali since the initial drought facilitated later drought-related actions.

2. Development projects implemented during the eight year period between the previous and recent crisis contributed to an improved infrastructure and early warning system.

3. Despite the lessons learned in the 1970s, the US response in the 1980s was untimely in that sufficient food was not put in place before the rainy season; in addition, US planning for the food needs of the rural population was insufficient.

4. Because Mali is a landlocked country, the ports of Abidjan, Lome, and Dakar had to be used for the delivery of food and overland transport had to be arranged. Unanticipated backlogs occurred in the congested ports and overland transport was often unreliable.

5. The lack of a strong Malian government operational office for emergency relief purposes resulted in inadequate information and an unegalitarian distribution of food.

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6. Mali was not considered as critical a problem in comparison to other countries because of its smaller population, its relatively unimportant strategic location, the lack of internal political problems, and the drought planning advantages the US had gained in Mali during the early 1970s.

A. The Environmental Context

Mali is a landlocked country 5 times the size of the United Kingdom (UK) with a population of approximately 7.5 million. Much of the country is covered with loose sands which are a relic of drier climatic conditions. Across the heart of the country flows the Niger River which is vital for transportation, fishing, and agriculture. Seasonal flooding provides pasture for thousands of livestock desperate for food and water after the dry season. The floodplains also leave cultivable land in an otherwise arid environment. Flood water is used for rice paddy cultivation and for irrigation, particularly in the inland Niger delta.

Aside from the Niger and Bani rivers, Mali is primarily dry; although there is a rainy season which becomes progressively shorter as one moves from south to north. The rains last from 4 to 5 months in Bamako, in the south, and on the average total 1,120 millimeters. In Gao, to the north and east, the rainy season is only 7 weeks long with an average fall of 236 millimeters. North of Gao, there is no rainfed agriculture, but rather only semi-desert and desert for nearly half of the country.

B. The Cultural Context

The economically viable region of Mali is confined to the Sahelian-Sudanese regions irrigated by the Niger River. This comprises one-fifth of the land area. Mali is one of the poorest countries in the world, with pervasive

subsistence agriculture and little industrial agriculture. There are three major groups of people: nomads, transhumants, and agriculturalists reflecting the ecologies of the desert, the Sahel, and the Sudanese zone in the south. The nomads rely solely on animal husbandry for subsistence and occupy territory where cropping is impossible. The transhumants migrate with their herds during the dry season but are otherwise agriculturalists.

Migration for pastoralists is the principal strategy for adjusting to seasonal and environmental changes. The nomadic groups migrate across regional and national borders to territories which unite them with culturally-related fellow nomads and where there is pasturage for their herds during the dry season. However, cumulative drought has lengthened migrations which have resulted in movements further south than usual; the devastation of such severe drought for so many years is having repercussions on the traditional lifestyles of these nomadic people. For the many who have lost their herds, food aid has been their only means of survival. The trends of cyclical drought that have been occurring in Mali over the last 30 years have put serious strains on the nomadic lifestyle.

C. Constraints to the Relief Effort

Unlike Ethiopia, Sudan, and Mozambique, drought and famine in Mali was not complicated by internal strife. This factor made the relief effort in this country much easier than in the other cases. The small population of Mali, approximately equal to the people "at risk" in Ethiopia in 1984/85, also meant that the emergency operations did not compare to those in the other countries under study. Thus while constraints to the relief effort existed in Mali, and the severity of the drought was no less than in East Africa, the constraints

were more logistical than political.

The logistics of the food distribution program were difficult in Mali. The infrastructure, despite improvements, was very poor; and with the onset of the rains and the delivery of thousands of MT of food, the transport system was put under severe pressure, especially in the difficult-to-access northern regions. The landlocked location of Mali meant that food had to be shipped to ports of the Ivory Coast, Senegal, and Togo and then transported on roads frequently in poor condition across international boundaries. The Government of the Republic of Mali (GRM) was more willing to confront the drought situation in the 1980s than during the 1970s, and the government had improved institutional mechanisms for dealing with drought conditions. Nevertheless, governmental agencies were not always accurate in their reporting nor were they apolitical in their priorities. Finally, the timing of the US initiative, though improved from the previous drought, was problematic. The US and other donors delayed their requests and, in turn, their shipments of food aid in 1983/84 in order to compare the predicted food aid requirements after the harvest with the GRM request for grain. The request delays were in part due to unreliable GRM food production and aid estimates.

II. THE IMPACTS OF THE DROUGHT AND FAMINE IN MALI, 1981-1986

In this section, the impacts of the 1984/85 drought in Mali on the economy, agricultural production, and movements of people are examined. Food self-sufficiency has been deteriorating in the Sahel since the 1960s (Somerville, 1986) due to environmental degradation, GRM food production policies, lack of investment in agricultural inputs, and recurring drought. Thus, against the background of chronic decreases in food production, and the cumulative effects of drought since the 1970s are the sharp declines resulting from the 1984/85 drought.

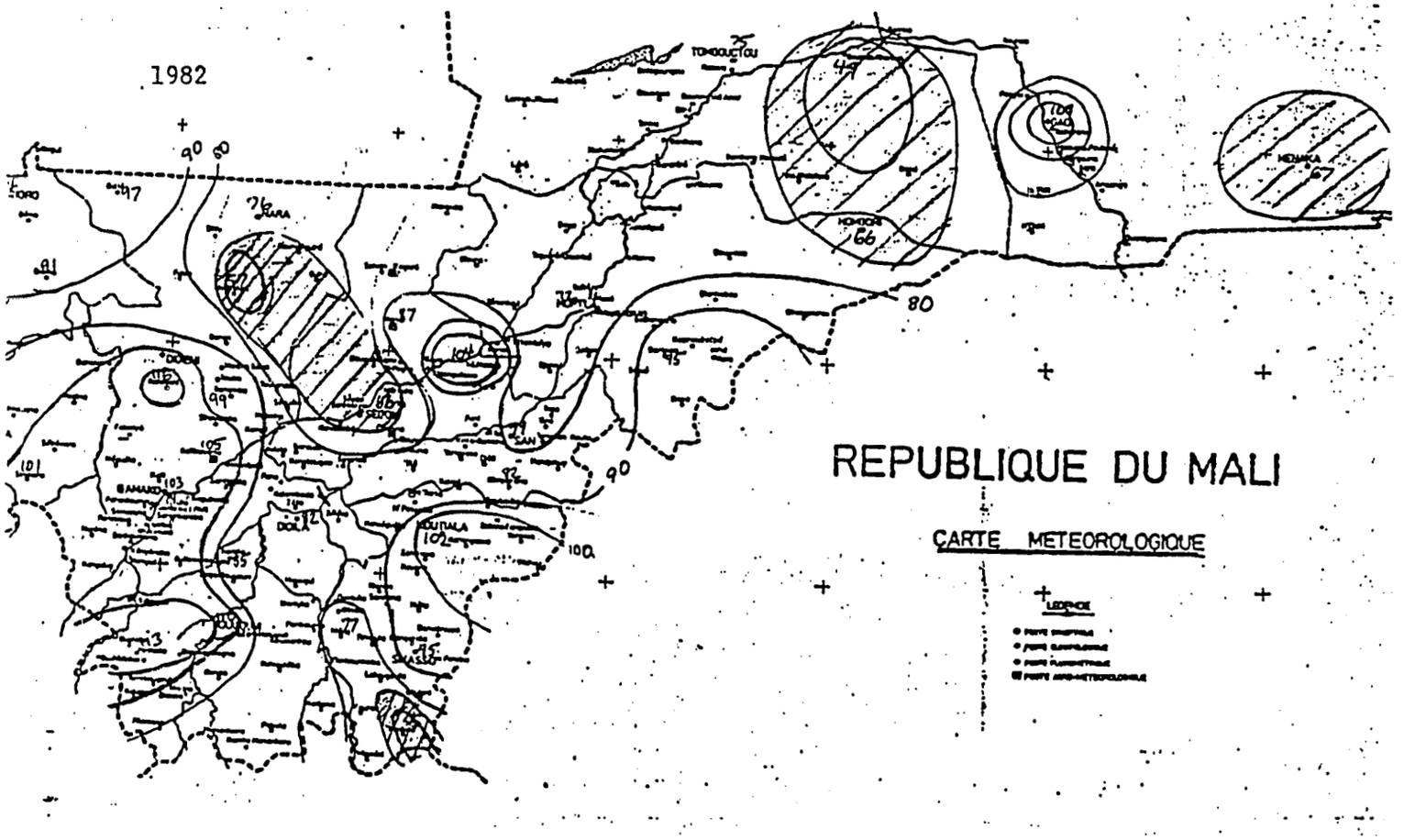
Before discussing these impacts a brief description of the timing and severity of the drought in Mali is outlined. This represents the physical events which had an impact on human activities.

A. Drought in Mali

The rainy season in Mali peaks in July and August. Average rainfall decreases and the growing season becomes shorter from south to north. Rainfall throughout the country in 1980 was near average. Rainfall departures from the 1969-85 average values are depicted in Figure 7.1 for 1982-85. A mixed rainfall pattern was experienced in 1981/82, with several regions experiencing moderate drought and several regions having above average rainfall. In 1983, only 1 station, (Menaka in Region 7) out of approximately 50, reported annual rainfall above average. Rainfall was 70 percent below the average in the north and south. These conditions continued into 1984, with below average rainfall throughout the country, and moderate to severe drought in the north and southeast. Rainfall approached average rates in 1985 throughout most of the country, except around Hombori in the central east.

Figure 7.1a

Republic of Mali Meteorology Map, 1982 and 1983



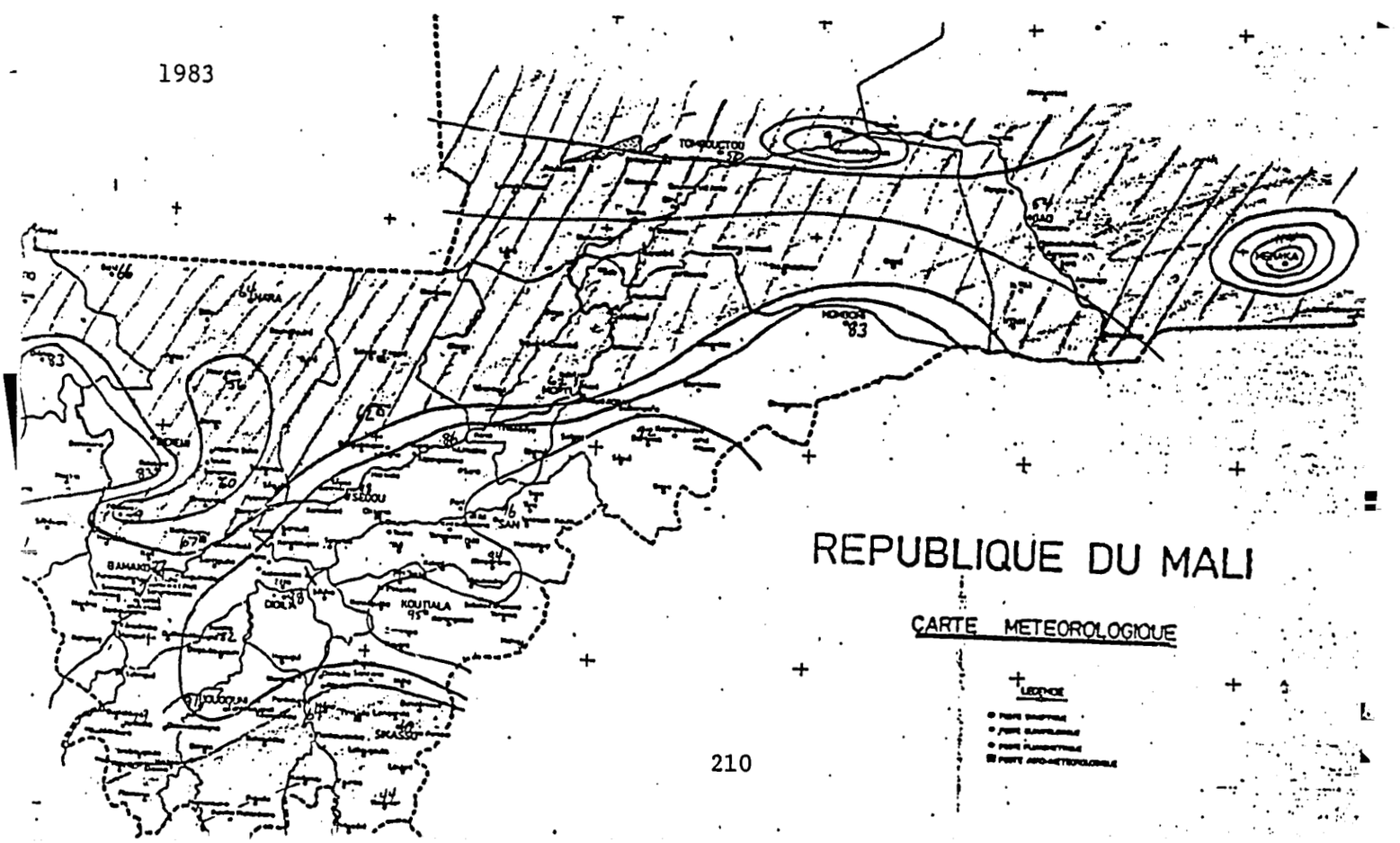
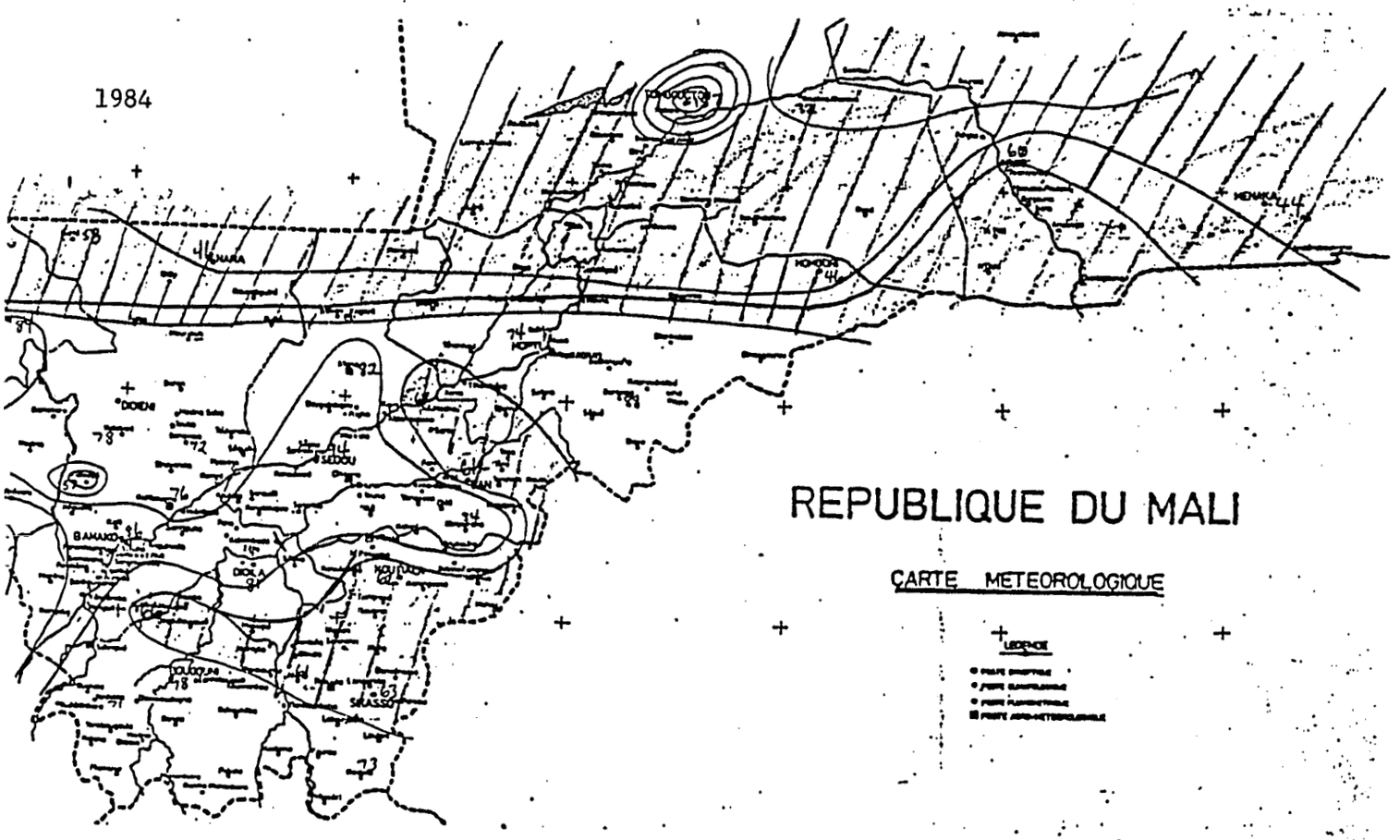
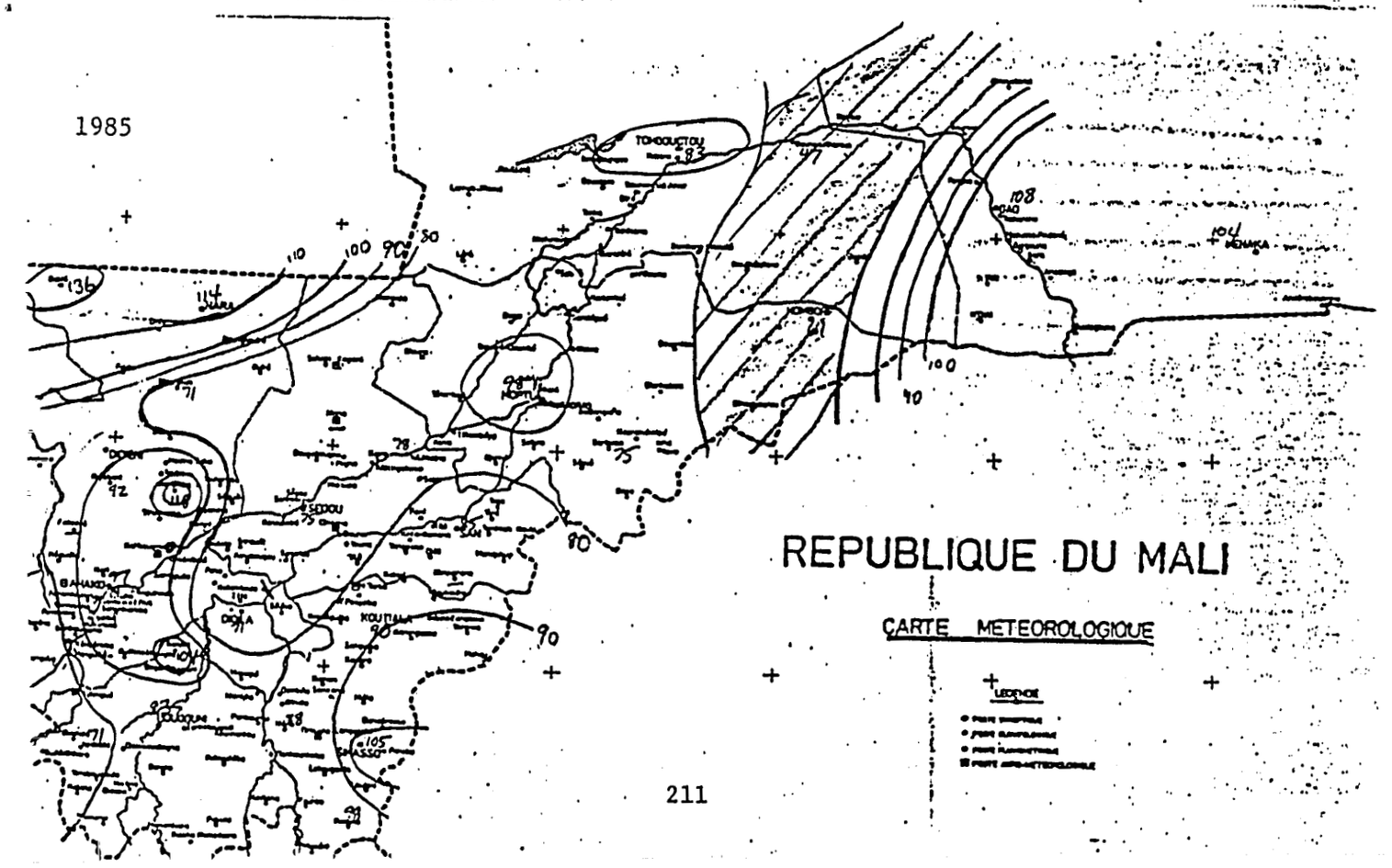


Figure 7.1b

Republic of Mali Meteorology Map, 1984 and 1985





B. The Economy

The economy of Mali is heavily dependent upon the production resources of the Niger River and the Sudanese zone in the south. In 1983, the World Bank estimated Mali's GNP per capita to be $160 which is among the ten lowest in the world. The rate of economic growth in recent years has been affected by persistent drought, low prices for producers, and increased rural-urban migrations. The drought of 1973/74 was devastating to the agricultural economy; since then recovery and rehabilitation have been slow and intermittent. The average annual growth in GDP reached 4.1 percent in 1973-83, a slight improvement over the 3.1 percent recorded in 1965-1973. However, GDP per capita between 1980-85 averaged 2.1 percent, indicating declines due to drought as well as to an economy which could not keep pace with the population growth (officially 2.5 percent annually).

Since 1980 exports have stagnated while imports have spiraled, producing a consistently negative balance of payments (Table 7.1). But while exports have not been vigorous, they do not appear to have been greatly affected by the 1984/85 drought. One reason for this is greater inputs available for export crop production. Data shows that cotton production actually increased during the 1973/74 drought.

Imports changed significantly from 1984/85. The rise during 1985 mirrored the magnitude of the decline in imports from 1985/86. Lower imports accrued from the plentiful rains and consequent good harvest of 1985, thereby obviating grain imports. This pattern is also reflected by a drop in foreign exchange of 46 percent between 1984/85, and then a recovery during the following year of almost 40 percent.

Table 7.1

Financial Indicators for Mali, Actual and Projected
(million dollars)

Year	Exports and Other Credits	Imports and Other Debits	Debt Service	International Reserves	Foreign Exchange Available	
					Total	Share to Major Food Imports
1980	205	308	9	15	196	12%
1981	154	269	9	17	145	22%
1982	145	234	8	17	137	30%
1983	165	246	13	16	153	32%
1984	194	256	17	27	177	24%
1985	176	300	80	23	96	
1986	150	250	11	14	134	29%
1987	160	250	11	14	143	29%

SOURCE: United States Department of Agriculture (1984).

C. The Impacts of the 1984/1985 Drought on Agricultural Production

Mali's economy is primarily agricultural, with commercial crops contributing only a small share to total agricultural production. The majority of the agricultural population is engaged in food production and animal husbandry. The cropped area in Mali covers a little less than 2 million hectares, while rangeland and pastures total some 30 million hectares. Both food production and livestock raising are severely dependent upon available water and rainfall; and yet, the total amount of irrigated land does not exceed 125,000 hectares. The impacts of the 1984/85 drought on agricultural production are presented below and entail an examination of exports, imports, and food production between 1981-86.

1. Agricultural Exports and Imports

Cotton and groundnuts are the primary contributors to Mali's export earnings. Although limited to 100,000 hectares, cotton accounted for 39 percent of Mali's export revenue in 1982. Before the 1980s, the production of cotton and groundnuts had risen appreciably. Output of cotton rose from 16,000 MT to 150,500 MT between 1965/66 and 1979/80, making Mali the second largest producer in Francophone Africa. However, poor weather conditions in 1980/81 resulted in a decline in production during 1981/82. According to the USDA/ERS, cotton production has increased 23 percent in the Sahel region during the last 3 years because of economic reforms and improved inputs. USAID/Bamako asserts, however, that these increases were rather the result of improved organization and good cotton prices. Others argue that these changes were a consequence of the GRM perception that the demand for cotton would remain constant over a period of years. Table 7.2 displays quantities of cotton

produced and exported between 1980/81 and 1985/86. This data confirms the trends described above and reveals the minimum impact of the 1984/85 drought on production. Despite a decline in production of less than 4 percent between 1983/84 to 1984/85, there were more significant decreases in the amount of cotton exported after 1983/84 as well as foreign exchange earned between 1984/85 ($96 million and $84 million, respectively). These declines not only accrue from a decrease in African buying power due to prevalent drought conditions in 1986, but also stem from "world oversupply and low prices" (USDA, 1986d).

Table 7.2

Mali's Cotton Production and Exports

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
			(1,000 tons)			
Production	42	37	49	53	51	65
Exports	38	35	47	53	44	44

SOURCE: United States Department of Agriculture (1986d).

Groundnut production has also increased over time, though not with the same consistency as cotton. Output rose from 95,000 MT in 1968 to 205,000 MT in 1975/76, reflecting government development programs and external capital support. But since 1980/81, groundnut production has declined. Output totalled only 19,600 MT in 1983/84 and about one half of that level in 1984/85. USAID/Bamako attributes this decline to a drop in the world market price and

the subsequent collapse of GRM groundnut support programs and donor support. Most groundnuts are grown in areas with relatively consistent rainfall and were not greatly affected by the drought.

Before the droughts of 1973/74 and 1984/85, Mali was food self-sufficient and, therefore, did not require food imports. Drought, GRM agricultural policies, and population growth have caused food deficits to rise. Since the 1970s, Mali has imported increasing amounts of food in addition to large-scale food aid. Table 7.3 reveals how imports have fluctuated with each drought leading overall to an increasing rate of importation. This table also provides some indication of the impact of cumulative drought beginning in 1981 and the severity of food aid need in 1983/84 and 1984/85.

2. Food Crop Production

Mali's major staple crops are millet and sorghum followed by rice and maize. Rice production is limited primarily to the irrigated zones of the Niger and Bani rivers. Table 7.3 reveals the deleterious impact of persistent drought on cereal production. Millet and sorghum fell dramatically in the early 1970s and then recovered by 1976/77. However, production dropped again in 1977/78 and 1980/81 due to rain failure. In 1983/84 and 1984/85, output of millet, sorghum, and maize continued to be well below earlier levels. Rice production has suffered severely due to the insufficient flood level of the Bani and Niger rivers. Paddy production in the 4th and 5th regions was very low in 1982/83 and 1983/84, while it was practically nonexistent in the more northern 6th and 7th regions (FAO, 1983b).

In 1969/70, Mali had the largest livestock herds in French West Africa, with 5.35 million cattle and 5.75 million sheep. These numbers declined in

Table 7.3

Total Available Grain Supply in Mali
(thousands of metric tons)

Year	Domestic Production					Imports				Total Grain	Population	Per Capita Avail.
	Millet/ Sorghum	Maize	Rice		Total	Commercial		Food Aid	Total			
			Paddy	Rice Equiv.		Private	DPAM					
969/70	913	73	119	74	1,060	—	5	0	5	1,065	5,162	206
970/71	756	84	168	104	944	—	27	0	27	971	5,297	183
971/72	691	87	171	106	884	—	31	32	63	947	5,435	174
972/73	624	44	116	72	740	—	68	103	171	911	5,577	163
973/74	660	63	130	81	804	29	81	153	263	1,067	5,723	186
974/75	800	100	250	155	1,055	29	15	77	121	1,176	5,873	200
975/76	800	70	216	135	1,005	29	0	12	41	1,046	6,026	174
976/77	900	80	237	147	1,127	29	0	0	29	1,156	6,184	187
977/78	800	50	199	123	973	29	10	46	85	1,058	6,350	167
978/79	1,000	55	251	156	1,211	29	15	47	91	1,302	6,522	200
979/80	943	64	165	102	1,109	29	20	19	68	1,177	6,699	176
80/81	654	73	165	102	829	29	16	41	86	915	6,881	133
81/82	856	75	176	109	1,040	71	11	53	135	1,175	7,076	166
82/83	795	95	129	80	970	55	0	80	135	1,105	7,277	152
83/84	663	95	122	76	834	143	7	170	320	1,154	7,484	154
84/85	609	—	142	88	697	155	22	155	332	1,029	—	—

SOURCE: Humphreys (1985).

NOTE: Production refers to first year but is consumed in second year; imports refer to second year.
Commercial imports in 1973/74 to 1980/81 assumed to be 20 flour, converted to wheat equivalent at 0.7.
Other wheat imports are 15 in 1981/82, 20 in 1982/83, and 17 in 1983/84.
Population is for year of consumption (1970=1969/70).
FAO production figures for 1984/85 are 564 for millet/sorghum, 81 maize, and 102 paddy.

1975 to 3.9 million and 4 million, respectively. Livestock numbers recovered to 5.8 million cattle and 11.5 million sheep and goats, following a program implemented to rebuild the herds after the 1973/74 drought. USDA/ERS estimated that 40 to 80 percent of livestock have died in the 1984/85 drought. However, GRM livestock production reports state that overall Mali lost approximately 15 percent of their herds during the 1984/85 drought period. Regions VI and VII claim a loss of 70 to 90 percent, though that figure is inflated due to migrations toward better pastures in the south. The overall livestock losses are also inflated due to higher than average rates of sale and greater animal migration out of the country. Increased sales, however, are generally a sign of distress as are migrations.

Extensive fishing on the Niger River produced an annual catch of approximately 110,000 MT before the droughts. Since 1984/85, however, the fish catch has fallen by one-tenth.

The impacts of drought in the 1980s were severe, exceeding those accrued from the drought of 1973/74. By 1985, the rains had improved and produced a record harvest. The 1986 harvest was also good and contributed to the unusually large stocks in Mali during 1986/87. However, drought and famine conditions persisted in the northern region throughout 1986, and the crop situation was again damaged by grasshopper and locust infestations.

D. Movements of People

To escape drought and famine, much of the population in the northern regions moved south into areas where food, water, and assistance were available. There were several hundred thousand displaced persons in Mali in the fall of 1985, representing 3 percent of the population (Somerville, 1986).

USAID/Bamako states, however, that these figures are high and that many of the displaced persons were quickly absorbed by their extended families living in cities and villages in the south. Thus, the bulk of the population was cared for by the urban population, who were burdened by this hospitality.

UNOEOA reported that as of June 1985, 1.2 million people were affected by the drought; 95,000 people were displaced or had migrated from rural to urban areas, particularly in the regions of Tumbuktu, Gao, and Mopti. During the next 2 months, the reported number of displaced persons jumped to 200,000; an influx of Malian nomads into northwestern Burkina Faso were reported, and some 40,000 people crossed the border into Algeria.

With the onset of the rains, return movements began in June and July of 1985. Most GRM, donor, and PVO authorities believed that approximately two-thirds or more of the displaced population returned to their native villages or areas during this time period. Those herders who still owned cattle returned to their areas of origin, although others relocated to regions which could be farmed after the recession of the flood waters of the Niger River. By December 1985, the affected population had dropped to 420,000 and the number of displaced persons to 100,000; although, there were still a large number of displaced people around the urban centers.

In 1985, US OFDA conducted a survey of the displaced population. Two major points came out of this study:

1. Many villages have completely emptied, leaving at most only a few religious officials and elderly individuals remaining at home.

2. A large proportion of people from these villages and others have decided that there is no future for them in their home areas, and thus have decided to leave permanently.

In March 1987, USAID/Bamako wrote that many villages which had been abandoned

were repopulated in 1985. The last census shows that even areas of Regions VI and VII lost only 10 to 20 percent of their population. USAID argues that claims of mass exodus were alarmist and did not take into account the return of the displaced population in 1985.

III. A SUMMARY CHRONOLOGY OF MAJOR EVENTS RELATED TO THE DROUGHT AND FAMINE IN MALI, 1981-1986

Time	Event
November 1982	GRM appeals to international community for emergency drought assistance [11].
October 1983	GRM declares an agricultural crisis and requests international assistance [26].
December 1983	USAID/Mali submits initial request for emergency assistance to A.I.D./W [22].
May/June 1984	Reports indicate serious famine conditions are developing [1a].
July/August 1984	GRM makes urgent appeal for further assistance to northern and eastern regions. Food aid backlogs occur in ports due to lack of trucks; inland transportation is hindered due to deteriorating road conditions [22].
September 1984	US Ambassador Ryan issues disaster declaration for Mali [15].
May/June 1985	OFDA approves Gao Ferry Project; ferry put into operation by US military team [1a].
June 1985	Drought conditions broken with onset of significant rains. Affected population estimated at 1.2 million [8]. Only 125,000 MT of the 375,000 total MT needed has arrived in-country. Famine conditions in Mopti, Gao, and Tombocton persist [4]. Transport capacity is improved with provision of trucks by Italy, OPEC, USAID, Baptist Mission, World Vision, and France [8].
July/August 1985	Lack of millet and sorghum seed bodes ill for crop prospects despite improved weather conditions. Population affected by emergency remains at 1.2 million [8].
September 1985	Rainfall is close to normal in most areas and crop prospects are good; but locust and grasshopper infestations threaten crops [8].

IV. FOOD AID: PLEDGES AND DELIVERIES, US AND OTHER DONORS

This section reviews the emergency food assistance effort in Mali with particular emphasis on the response to the crisis by the US and other major donors.

A. Events Leading Up to the US Emergency Response

During its first decade of independence in the 1960s, Mali was self-reliant in cereal production. However, after the drought of 1968-74 grain production in Mali failed to meet the growing domestic demand, particularly in the urban areas. Mali has increasingly had to rely on foreign aid, resulting in an improvement in the level of cooperation between principal aid donors and the Malian government.

As part of the formulation of a national food strategy, donors reached agreement in 1981 with the GRM policy and procedural measures for structural food aid. Under the Cereal Marketing Restructuring Project (PRMC) donors agreed to provide 250,000 MT of "regular" food grain aid over a 5-year period (1982-86). The Mali Office of Agricultural Products (OPAM) has been responsible for the management of donor PRMC agreements since 1982. C. Humphreys notes in "The Nature and Implementation Issues of Grain Markets in Mali":

> "The promise of a steady flow of food aid that would both support public sector consumption and generate public financial revenues gave the donors the leverage needed to get the government to improve the management of OPAM, which would assure that future food aid would also be handled relatively efficiently. It also provided a forum for discussing policy reforms in the grain sector" (1985).

OPAM is involved in the distribution of all government food assistance (both sales and free distributions). Monetized emergency food aid is allocated

through OPAM's Cereal Marketing Plan, a government project which sells regular donated food aid at official prices in food deficit areas. Proceeds from the sales of monetized emergency food aid are used to finance the in-country transportation of both monetized and free food distributions. A major accomplishment of PRMC is that OPAM has considerably improved its accounting and management of food aid. Total food aid to Mali increased from 41,000 MT in 1980/81, the year before the PRMC went into effect, to 53,000 MT in 1981/82, which was a relatively good harvest year. Total food aid in 1982/83, a drought year, amounted to 80,000 MT and more than doubled the following year (Table 7.3).

Emergency food aid is administered by the National Committee for Aid to Drought Victims (CNAVS). It serves as a link between donors and regional authorities. CNAVS depends on OPAM for the delivery of food aid to local warehouses but CNAVS handles free distribution at the local level. Since late 1985, a subcommittee has been established within CNAVS for early warning and harvest evaluation. Emergency food aid is imported through various West African ports which are used by all donors to supply Mali as well as other Sahelian countries. In 1984/85, major emergency food aid programs in Senegal, Niger, Burkina Faso, and Chad competed logistically for port access and for donor resources with Mali.

These mechanisms were in operation as the drought of 1981-86 continued and increased in severity. The cereal harvest of 1980/81 was 56 percent of normal production levels. In mid-October 1983, the GRM declared a crisis situation in the agricultural sector and appealed for international assistance, requesting 233,000 MT of food aid. GRM's analysis on September 1984 reported the largest national food deficit to be recorded at 481,000 MT and estimated that 1.2 million people in Regions I, II, IV, V, VI and VII were severely affected.

B. An Overview of the US Food Aid Response

Prior to the current crisis, US food aid to Mali had been suspended since 1978 pending the resolution of counterpart account problems. A.I.D. did not participate in the PRMC agreement until June 1983, when it undertook to provide Mali with 25,000 MT of rice over a period of 3 years under Section 206, PL 480 Title II Agreement. The rice was intended for sale through OPAM. A small emergency food aid program was planned for 1983/84. Of the 10,000 MT of emergency aid committed to Mali, 2,000 MT was for free distribution by the government and 8,000 MT was for sale.

In November 1983, an A.I.D. representative collaborated with an FAO/donor assessment team which had been invited to verify the GRM's food deficit estimates. A recommendation was passed, based on the findings from Table 7.4.

Once USAID/Mali had received FAO cereal production estimates, a request for 20,000 MT of emergency food assistance was forwarded to A.I.D./W. USAID was compelled to cable a "call forward" in January 1984, before an initial 10,000 MT of Title II commodities were approved for immediate delivery the following month. The second 10,000 MT was later approved under a regular feeding program. Thereafter, the commodities arrived at regular speed, roughly three months after program approval. Nine weeks were required to clear each shipment through the port of Abidjan and to obtain transportation to Mali.

In September 1984, after a GRM announcement of the food crisis situation in Regions VI and VII, US Ambassador Ryan declared that the drought had reached disaster proportions in the country. Once it was realized that larger quantities of food aid would be needed, requests for emergency food assistance were forwarded to A.I.D. in September, October, December, and January (Table 7.5).

Table 7.4

Mali Emergency Food Aid Requirements, 1983/1984

	(in tons)
Food Needs	1,400,000
Estimated Production	840,000
Production Deficit	560,000
Less: stocks on hand, preprogrammed food aid, and commercial imports	230,000
Gross Deficit	330,000
Less: structural deficit*	154,000
Net Deficit	176,000
Less: non-emergency food programs	90,000
Emergency Food Aid Needed	86,000

SOURCE: Food and Agriculture Organization (1984d).

*The structural deficit is GRM's estimate of the deficit that would exist during a normal production year. GRM believes that in order for Mali to obtain food self-reliance this deficit should not be filled by emergency food aid.

Table 7.5

Emergency Food Aid for Mali: Government-to-Government, 1984/1985
September to January FY 1985

MONTHS SUBMITTED BY USAID/MALI	AMOUNT (MT)	MONTH APPROVED BY A.I.D.	DETAILS
September 1984	10,000	--	--
October 1984	10,000	November 1984	Approval of 15,000 MT 10,000 free distribution 5,000 monetization
December 1984	15,000	December 1984	Approval of 15,000 MT
January 1985	35,000	February 1985	First approval of 20,000 MT for free distribution; later approval of 10,000 for monetization

SOURCE: A.I.D. (1986d).

In order to improve distribution, USAID/Mali formulated "Lessons Learned" from the FY84 program for A.I.D./FFP. The management of food aid was reassessed given the difficulties of reaching the "most needy" populations who tend to be highly mobile and rarely migrate according to administrative boundaries. Six PVOs were identified to conduct distributions while allocation of stocks were made on a joint basis between USAID and CNAVS. Monetization of Title II food aid was supported by both parties and the decision was made to continue it.

In January 1985, the African Hunger Relief Initiative gave top priority to the emergency. This resulted in a reduction in the time delay between the request for aid program approval. The shipment of the 60,300 MT of US emergency food aid (government-to-government) began in February 1985 and was completed by July (Table 7.6). The total US food program amounted to 85,000 MT (Table 7.7). The bulk of US free distribution, which extended into November 1985 for Regions VI and VII, provided over 1.5 million people with rations.

Although the 1985/86 harvest was better than the previous year, there was still a considerable deficit, estimated at 105,000 MT (FAO,1985). The US provided 34,419 MT of emergency aid in addition to the regular program. This was targeted for the still-deficit northern regions.

C. Total Food Aid: Pledges and Deliveries

Timing was a critical factor in the 1983/84 and 1984/85 emergency food assistance program in Mali, affecting the impact and cost effectiveness of the US effort, as well as that of other donors.

During 1983/84, Mali had a cereal deficit of 330,000 MT which was about 150,000 MT greater than the structural deficit. The US and other food donor countries reacted by providing 170,000 MT of food aid, the US contributed

Table 7.6

Monthly Arrivals of US Food Aid by Port for Mali
PL 480 Title II/Section 416/Food Security Reserve
FY 1985
(metric tons)

Port	Oct-Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Total
Lome	428	481	5,000	-0-	50	-0-	422	242	3,900	-0-	10,523
Abidjan	-0-	-0-	10,125	-0-	5,300	13,750	13,500	120	-0-	-0-	42,795
Dakar	-0-	-0-	-0-	-0-	5,057	7,750	-0-	165	-0-	-0-	12,972
TOTAL	428	481	15,125	-0-	10,407	21,500	13,922	527	3,900	-0-	66,290

SOURCE: A.I.D. (1986d).

Table 7.7

Summary of US Food Aid for Mali
PL 480 Title II/Section 416/Food Security Reserve
FY 1981-1986
(metric tons)

	FY81[a]		FY82[a]		FY83[a]		FY84[a]		FY85[b]		FY86[c]	
	$/000	MT	$/000	MT	$/000	MT	$/000	MT	$/000	MT	$/000	MT
Title II												
Regular												
GTG			810	3,348	1,751	8,043	5,939.0*	10,000	2,549.7	5,000	-0-	-0-
WFP			-0-	-0-	-0-	-0-		12,338	4,227.8	13,405	2,643.2	5,425
Emergency												
GTG					2,556	10,000	4,671.9	10,000	28,272.1	60,300	9,569.9	30,339
WFP					-0-	-0-	2,627.8	10,000	-0-	-0-	-0-	-0-
Baptists					-0-	-0-	1,811.7	4,860	-0-	-0-	-0-	-0-
LICROSS					-0-	-0-	-0-	-0-	3,021.6	5,439	-0-	-0-
WYRO					-0-	-0-	-0-	-0-	-0-	-0-	1,818.6	4,080
Section 416												
WFP									336.6	360	394.1	453
LICROSS									785.4	840	-0-	-0-
FSR									-0-	-0-	-0-	-0-
TOTAL	-0-	-0-	810	3,348	4,307	18,043	15,050.4	47,198	39,193.2	85,344	14,425.8	40,297

SOURCE: [a] A.I.D. (1984c).
[b] A.I.D. (1986d).
[c] A.I.D. (1986e).

* Total cost for both categories.

47,198 MT, or 28 percent of this amount through the Title II Food Assistance Program. Of the total US emergency food aid, 10,000 MT was government-to-government, and 14,860 MT was contributed through PVOs and the WFP. However, the first shipments of emergency food assistance were not delivered to Mali until May 1984.

In October 1984, it was estimated that cereal production was only 73 percent of the average for the previous 5 years. The food aid requirement for 1984/85 was established at 230,000 MT (A.I.D.). Concomitantly, an inter-agency task force on African famine recommended that all grains be brought through the ports by June or July 1985, prior to the rains in Mali. This was to avoid delays similar to those of 1983 when the request for food aid, made after the November harvest, postponed deliveries until after the start of the rains. (USAID/Bamako asserts that delays resulted from the processing of the request in Washington.) By January 1985, total in-country food aid was 48,402 MT. This amount combined with a US commitment of approximately 85,000 MT raised the total of in-country or pledged food aid to 182,000 MT. Major donors were attempting to observe the plea to meet the July deadline for delivery of cereals (Table 7.8). Nevertheless, the shortfall in food and assistance was about 48,000 MT.

All donors experienced delays in transhipping food aid due to backlogs in Abidjan and poor road conditions between the ports and distribution points in Mali. In June 1985, FAO reported a backlog totalling 97,000 MT in the ports of Abidjan, Dakar, and Lome, primarily due to distribution constraints. Most of the emergency food programmed for 1984/85 by the US and other donors arrived in Mali by June or later, the bulk of distributions taking place from July to October. Supplies available for earlier distribution were several times less than actual the requirements (Wood et al., 1986: 41). By October, food

Table 7.8

Mali Food Aid Firmly Committed as of January 1985 (excluding US)

Source	Commodity	Quantity (MT)	Date Expected
EEC (FED)	corn	8,000	March 1985
Netherlands	rice	1,500	January/February 1985
West Germany	corn/sorghum	8,500	April 1985
West Germany	corn/sorghum	3,500	April 1985
Canada	corn	3,694	January 1985
Canada	corn	10,500	January 1985
North Korea	corn	1,000	January 1985
France	corn	7,000	March 1985
Japan	rice	2,800	May 1985
PRC	corn	1,000	January 1985
WFP	wheat	3,200	February/March 1985
TOTAL FIRMLY COMMITTED: 50,694 MT			

SOURCE: Adams and Hoskins (1985).

assistance had reached all sectors of the population at greatest risk. However, the need for emergency food supplies in the rural areas was greatly underestimated and many areas remained food deficient.

High yields were forecasted in October 1985, although some areas experienced insect attacks. Prior to the FAO/multi-donor mission, cereal imports were estimated at 240,000 MT and the food aid requirements at 140,000 MT. Donor allocations in December 1985 amounted to 63,000 MT, including 41,000 MT carried over from 1984/85.

V. SYNTHESIS: LESSONS LEARNED, QUESTIONS RAISED

According to A.I.D. officials interviewed for this study, the relief effort in Mali was not as critical as in other countries with larger populations "at risk." Thus the questions posed in this section, which synthesizes the facts and events related to drought and famine in Mali between 1981-86, focus on the proportion of the crisis and the appropriateness of the response. Was the response such that the crisis was more easily handled than in other more problematic countries like Sudan and Ethiopia; or was Mali merely less significant in terms of affected population and the strategic importance of its geographic location?

A. Why did the situation reach such crisis proportions in Mali?

1. Mali, a drought-prone country, had a severe drought in 1973/74 from which it never fully recovered.

In her book, Drought and Aid in the Sahel: A Decade of Development Cooperation, Carolyn M. Somerville refers to the earlier drought as spanning a period between 1968-74. The impact on Mali and the surrounding region was catastrophic. While the Sahel region has a history of drought and social systems with traditional strategies for dealing with it; the recent droughts, according to Somerville, are exceptional. They are exceptional in that previous droughts have been more circumscribed, more confined to small geographic locations; and none were as pervasive or of a magnitude comparable to the 1968-74 and 1982-84 droughts.

Because of the severity of the 1968-74 drought and the erratic rainfall following this period, recovery was slow. But just as Mali was beginning this

process, an even worse drought hit. A.I.D. states that by 1984/85, "the rural population was particularly vulnerable because food stocks and other resources of herders and farmers were close to exhaustion." Clearly this recent history of drought in Mali and the population's resulting depletion of resources were important contributing factors to the situation in Mali during the study period, 1981-86.

2. Mali's rainfed and floodplain agriculture, as well as pastoral economy, are very vulnerable to rain failure.

Agriculture and animal husbandry form the backbone of Mali's economy. Agricultural production, however, is severely constrained by the semi-arid climate and dependency on rainfall and river flooding. The inner delta region of the Niger River is the traditional breadbasket of Mali; and yet severe drought in the fall of 1984 not only meant a lack of rainfall for crops, but also extremely low levels of river flooding. With only 125,000 hectares in irrigation, drought had a devastating effect on food crops.

Agriculture and animal husbandry are in close contact in Mali. The transhumants of Mali engage in rainfed or floodplain agriculture during the rainy season, and then migrate with their livestock during the dry season. This group, along with the Saharan nomads, are greatly affected by drought. For the transhumants, anything that affects agricultural production has immediate repercussions on animal husbandry and for the nomads severe drought means longer migrations.

Sahelians have traditionally migrated in response to rain failure, moving their livestock to more southern areas outside of the usual transhumance region. However, in 1984 more "unusual" migration occurred. Both agriculturalists and pastoralists moved further than normal. The UN reported that entire

villages were abandoned as people fled to southern Mali and even into neighboring countries in search of more hospitable environments.

Nomads attempted to cope with the drought in their traditional manner; but with the severe drought, entire families migrated to areas not usually part of their territory. The result of these so-called "unusual" movements was social disorganization. Social customs and cultural values disintegrated under the strain of the crisis; survival replaced tradition as some groups migrated primarily for the purpose of reaching feeding camps rather than following social customs.

3. Mali was a food-deficit country even before the worst drought and crop year of 1984/85.

Mali has had food deficits since the earlier drought of the 1970s. However, food self-sufficiency has been declining since the 1960s. Between 1970-82, food production grew at an annul average rate of 2.5 percent, although production fell significantly during the 1973/74 drought. A lack of agricultural inputs and government policies which stifled cereal production helped keep productivity low. Rain failure has merely exacerbated an existing problem. The drought of 1984/85 increased cereal deficits 54 percent over the previous year.

Somerville writes that government policies have systematically underdeveloped agriculture, taxing it disproportionately without reinvesting in inputs which could result in higher yields. What little revenue has been allocated to agriculture has generally gone to cash crops rather than to food crops. Farmers involved in food production tend to be the most "marginalized," the poorest, and outsiders in the development process. Government policies have

further damaged food production by holding down producer prices in order to feed the urban population at a low cost. One consequence of these policies is crop smuggling across international borders to the more lucrative markets of Burkina Faso, the Ivory Coast, and Senegal. An A.I.D. official describes this situation and its implications for the donor community.

> In Mali, Mopti farmers grow millet; the government sets the price below production cost and yet, by law, the farmers must sell to the government. The consequence of this is that Mopti farmers often sell their grain in Burkina Faso. They carry it on bicycles across the border. They do this in order to be able to make money on their grain rather than selling it to the government. So farmers sell their grain to other countries on the black market and then there is no grain in the country. Then A.I.D. gives food aid to feed the people; we are subsidizing poor government food and agricultural policies.

Rural-urban migration has been increasing at a rapid rate. Before 1960, Mali's urban population was only slightly over 10 percent of the total; by 1982, at least 20 percent of the population lived in urban areas. Rural dwellers have been abandoning their rural and agricultural traditions to seek a better life in the cities and towns. The pull of the urban areas is related to governmental policies which favor the urban dweller and the perception that better services and economic opportunities can be found in the cities. But rural-urban migration is also the result of drought. For example, during the 1973/74 drought, Mopti suddenly grew by 50 percent, and border towns of neighboring countries experienced influxes of refugees. In 1984, peasants again poured into towns and cities in search of work and relief.

> As people abandon the villages for the towns, agriculture becomes a less attractive occupation. When fewer individuals value agriculture as a worthwhile enterprise, the desire to remain diminishes among those left behind. In the Sahel, as in many parts of Africa, agriculture is no longer viewed as a viable enterprise. Peasants have begun to vote with their feet. The drought has accentuated this migration process. The combination of drought and

rural-urban migration has negatively affected food production. (Somerville, 1986: 10-11).

4. The impact of progressive environmental degradation on food production, livestock pasturage, and export crops has made Mali vulnerable to crisis.

Environmental degradation in Mali has been the result of long-term land mismanagement, exacerbated by an unfavorable climate. During the French colonial era, cotton and groundnuts were introduced for export. Between 1960-72, the amount of land devoted to cotton rose from 26,000 to 90,000 hectares, while yields per hectare increased by two-thirds. This increase in cash crop production was achieved by expropriating the most fertile and well-watered land. When new lands could not be exploited, the traditional fallow period of fifteen to twenty years was shortened to one to five years (Somerville, 1986: 21). The consequence was, of course, soil depletion and eventually declining yields.

This push to expand the production of cash crops forced subsistence farmers onto more marginal lands. The ecological balance was further upset by a shortening of the fallow period for food crops. As the soil grew progressively less fertile, per capita food availability declined. This overproduction of food and cash crops, and consequent degradation of the soil, increased Mali's vulnerability in times of drought.

Colonial policies also affected the pastoral economy. According to Somerville, the erection of political boundaries diminished the land available for grazing. This, coupled with the expansion of food and cash crops, meant encroachment on regions formerly used by pastoralists. This diminution of grazing land forced nomads to overgraze the land available to them, and to degrade the very environment which supported them.

The decline in Mali's agricultural productivity has been precipitated by overgrazing and overcultivation, as well as increases in human and animal populations. Desertification and the diminution of vegetation began to occur in 1968. When the rains failed in the 1970s and again in the 1980s, the resulting imbalance between population and resources greatly contributed to the forthcoming crisis.

B. Was the US response to the crisis in Mali appropriate?

The US response to the 1984/85 drought in Mali benefited from development projects initiated in the wake of the catastrophic drought of the 1970s. Over one billion dollars were channeled to the Sahel region in the eight years between the two major droughts. According to A.I.D. officials, the result of these investments was improved early warning systems, a willingness by recipient nations to make their plight known earlier, greater experience of both donors and recipients in dealing with food provision and distributions, and improvement in infrastructure (ports, roads, warehouses).

But despite these changes and the lessons learned from the previous drought, adequate amounts of food aid failed to reach much of the rural population. The GRM declared a crisis and appealed for international assistance in October 1983, but the A.I.D. mission did not submit its request until December 1983. According to a GAO report, the food arrived late partly because of the Mission's unwillingness to submit an early request before the November harvest. However, USAID/Mali objects to the GAO report stating: "Due to GRM misappropriation of US cereals funds in the 70s, the USG had serious doubts about participating in GRM production assessments and cereals

starvation during the period March-July 1985."

Some reasons given for these deficiences were related to a lack of information. Because A.I.D. was conscious of the negative effects food aid can have on the economy of the host country, they were cautious about acting too soon or giving too much. And yet Somerville argues that the deliveries of food were nevertheless "ill-timed."

> Deliveries made just prior to harvest had detrimental effects for peasants. Food surpluses made it difficult for peasants to sell their crops. The price paid for locally-grown crops dropped as a result, and incentives to increase food production were reduced. In the end, donor shipments of foodstuffs undermined food self-sufficiency in the Sahel and made future needs for food aid a certainty (Somerville, 1986: 43).

According to Devres Inc., despite the increase in information available to donor countries for this drought, as compared to that of 1973/74, key information was still lacking. Reliable data on the "extent and character" of food shortages in rural areas was deficient. The information which was available provided a general picture, but it was not sufficient for relief planning purposes. The IDI explains:

> It is high time that a system to obtain information on major stress indicators be established, designed specifically to answer the needs of preparedness and relief planning. The key to the design would be a sample of rural information points selected according to a carefully considered 'vulnerability profile' of the population, on an ecological zone rather than an administrative division basis.

In Mali, the information or "stress indicators" available was based on administrative regions and was not representative of the more localized areas most critically affected. This is one explanation of why the needs of the rural population were so seriously underestimated.

distributions..." USAID maintains that after an assessment of the food situation by a multi-donor mission in December 1983, the independent food aid figures were forwarded to Washington (USAID/Mali, 03/17/87). USAID furthers its defense with the argument that delays accrued from the approval process in A.I.D./Washington. Nonetheless, the untimeliness of the deliveries exacerbated the costs and the logistics of distributing food because of the difficulties caused by impassable roads and washed out bridges. It also made the most vulnerable population in remote rural areas more difficult to reach. It should be noted, however, that PVOs and OPAM were able to deliver grains to central warehouses in several regions of the country during the rains of 1984. CARE, responsible for much of the aid deliveries during this period, notes in its end-of-year report: "It is significant to note for future drought relief planning that substantial quantities of grain can be distributed in the rainy season" (CARE/Mali, Nov. 1983: 11).

An A.I.D. official, in comparing the previous drought to the more recent one, further explained the delays which occurred in 1984/85.

> After the drought of the 1970's, we got involved in doing development in the Sahel. We established a mission there with a lot of people. The first time we didn't even have a mission. This time we had food monitors and experienced people. However, the management from Washington was easier last time... This time a task force was established and so many officials got involved that their rules were not clear. The task force was just another layer to contend with, it got in the way. We, in the Sahel office, set up our own working group before the task force. This resulted in a multiplicity of efforts and required extra time in Washington. Some things got held up because of the multiplicity.

The consulting firm, Devres, Inc. asserted that the A.I.D.'s food assessment "seriously underestimated" the needs of the rural population. In particular, the "... deliveries were inadequate, resulting in unfortunate

C. Was the response of the Government of the Republic of Mali appropriate?

The GRM was more willing to declare a disaster during this drought as compared to the one in 1973/74. The more timely appeal for international assistance clearly allowed for an improved response. Carolyn Somerville explains that in the case of the earlier drought, the GRM initially ignored the problem when it touched only the nomadic population. There was and still is a cultural and political tension between nomadic and sedentary groups. Political power rests in the hands of the latter group which is not always sensitive to the former's needs. During the relief effort of the 1980s, the IDI asserted that OPAM, which is responsible for transporting relief foods, gave preferential treatment to regional centers over more remote rural areas. OPAM was also part of the effort which sold food at subsidized prices to the urban population. IDI contended that free food distribution was not a high priority of OPAM.

> The almost inevitable result is that the non-urban, non-mobile destitutes are not in the best position to make use of OPAM's services. Established village members do, at least, theoretically have the right to a registration card giving entitlement to purchase of grain from OPAM stores. In a situation of chronic shortage of 'fair price' grain, however, it is not surprising to hear repeatedly that political or other influence, whether of certain urban denizens or certain village chiefs, leads to inequality in actual access to OPAM grain. But the most dangerous inequity seems to be the lack of access for people who have migrated away from their villages due to drought - i.e. the most distressed people (IDI, 1985).

Most evaluations agree that the relief effort was greatly improved from 1973/74. Coordination among donors and the GRM benefited from a reconstruction program, PRMC, funded by a consortium of donors from nine multilateral and bilateral agencies. IDI, however, states that the GRM has a number of

different agencies which contribute to relief, and that because no clear role for each organization exists, confusion occurs.

> It is the opinion of (IDI) that the lack of a strong government operational office, specifically for emergency relief purposes has dissipated the focus of emergency food aid.
>
> As of mid-1984 the (IDI) consultant formed the view that there were serious gaps in disaster preparedness in Mali, and indeed a rather non-systematic approach. This was observable both at the level of information and relief programme execution. There was no central focus of disaster information, let alone a regular official documentation of disaster conditions. Furthermore, the non-operational nature of the government emergency committee appeared to leave a planning vacuum in which various relief bodies were encouraged to pursue their own programmes in chosen areas without a systematic attempt let alone a guarantee of overall coverage of relief for destitutes in the most affected areas (IDI, 1985).

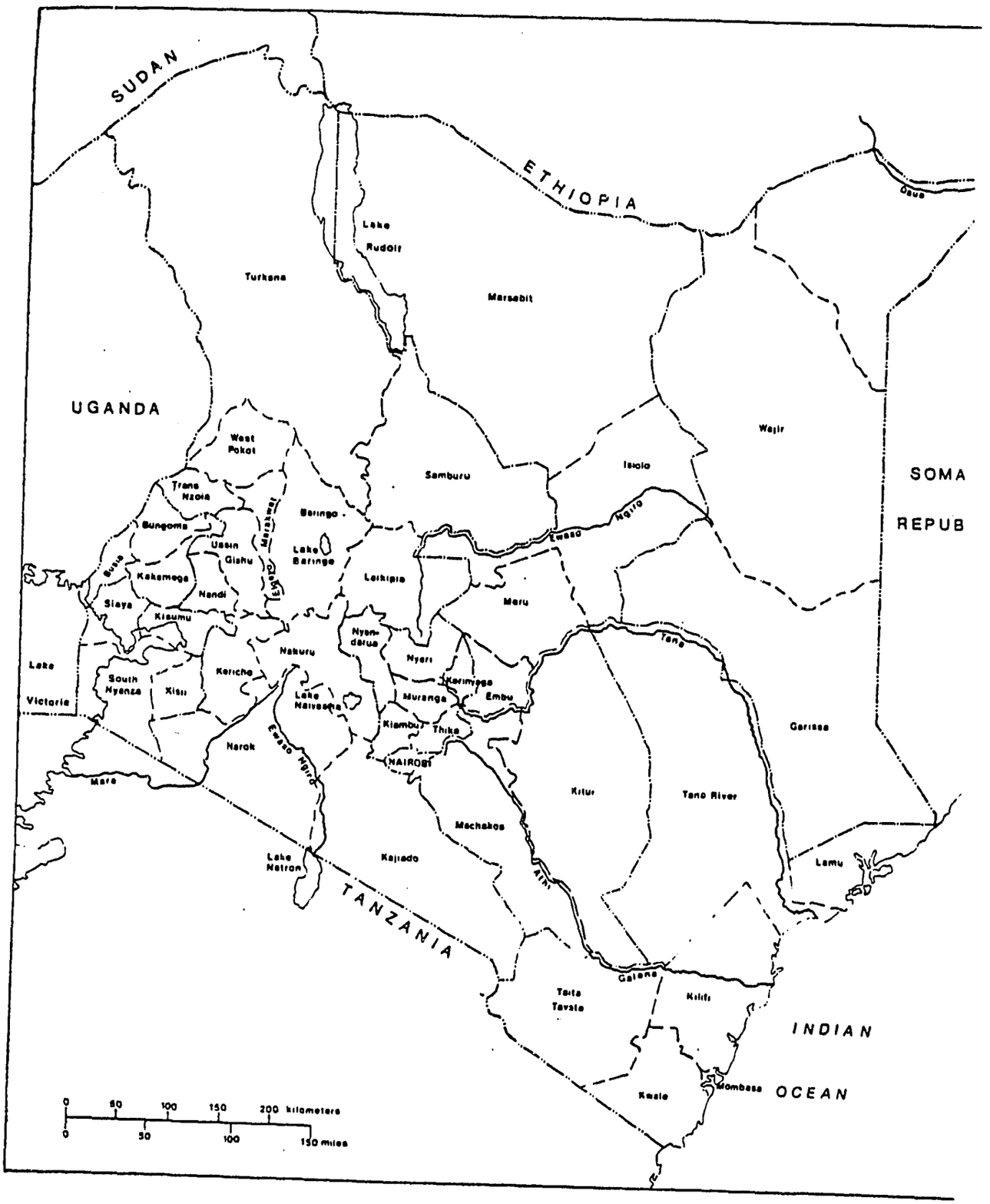
According to IDI, the controlling government office for emergency relief is CNAVS. But while CNAVS receives reports from provincial officials and decides on allocations of relief items, it does not run relief operations in the sense of directly receiving or distributing food. OPAM is the operational relief agency and yet it does not usually undertake free food distribution. This is organized by local officials at the request of CNAVS. Thus, Mali does not have an operational relief ministry or commission.

Because of the confusion engendered by the different relief agencies without a strong operational office, those with the least political clout and in most need of free food may get the least attention. IDI suggests that to ameliorate this situation, "the CNAVS could be encouraged through major donor pressure to assume a clearer planning role to develop a strategy for early response to the threat of localized shortages."

VI. ACHIEVEMENTS OF THE US RELIEF EFFORT IN MALI

The 1984/85 drought in Mali was even more severe than that of the early 1970s. However the US relief effort, despite some unfortunate occurrences, was better able to deal with it. Delays were mitigated although they were still existent. With at least one half dozen countries experiencing food shortages in the region, the ports which serve the Sahel region were under tremendous pressure, as was overland transport. Numerous unforeseen obstacles arose, from the port situation, to long delays at the border crossings, and the breakdown of the Niger River Ferry. While it took time to solve these bottlenecks, they were solved and food was delivered in sufficient time to avert a major famine. Health problems were also minimized largely by the US Public Health Service's (CDC Atlanta) identification and monitoring of nutritional "at risk" groups.

Kenya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Lake Natron
Turkana
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Trans Nzoia
Bungoma
Busia
Uasin Gishu
Marakwet
Baringo
Samburu
Marsabit
Isiolo
Wajir
Garissa
Lamu
Kakamega
Siaya
Kisumu
Nandi
Elgeyo
Laikipia
Meru
Nyandarua
Nyeri
Kirinyaga
Embu
Nakuru
Kericho
South Nyanza
Kisii
Narok
Murang'a
Kiambu
Thika
NAIROBI
Kajiado
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CHAPTER 8. KENYA: THE DROUGHT, 1984-1985

I. INTRODUCTION

This chapter summarizes the major events and lessons learned in the 1984 drought in Kenya, focusing principally on the national government and non-governmental levels[1]. Five aspects characterize the Government of Kenya (GOK) response to the drought:

1. Capacity to respond to the drought in a relatively timely fashion to prevent famine.

2. Advance action to import food on commercial terms before donors could respond.

3. Decision to distribute most of the food through market mechanisms.

4. Implementation of an adequate monitoring effort to report on the food distribution by both the GOK and USAID.

5. Lack of a systematic preparedness plan and a comprehensive food monitoring system before the drought emergency resulted in some delays and shortcomings in the response that could have been avoided.

A. The Environmental and Cultural Context

Kenya is a diverse country, both in its environmental resources and social and cultural composition. Figure 8.1 depicts the average rainfall for the two growing seasons: the short rains (October to December) and the long rains (March to May). Only 12 percent of the total land surface is high potential agricultural land, while an additional 5.5 percent is medium potential land. Inadequate rainfall and surface water restrict about three-fourths of Kenya to

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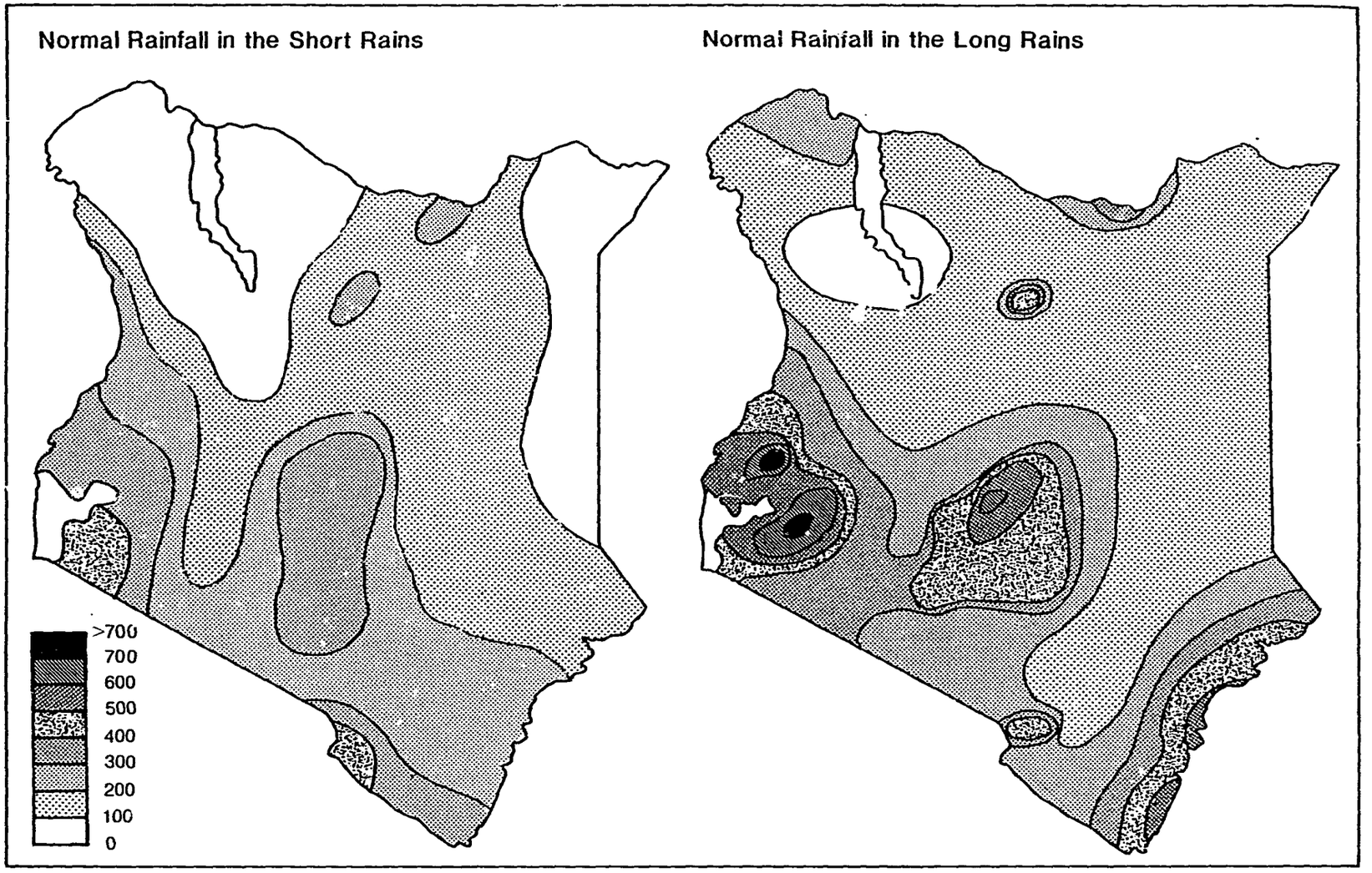
[1] A detailed evaluation of the local responses and impacts of the drought is being prepared by the National Environment Secretariat for an edited volume titled Drought in Kenya: Lessons from 1984. This paper draws heavily upon work prepared for that volume, as well as discussions with USAID staff in Kenya: Tom Ray, Food for Peace Officer, and Al Smith, Agricultural Economist.

Figure 8.1

Normal Rainfall in the Short and Long Rains in Kenya



SOURCE: Kenya Meteorological Department (1987).

ranching and nomadic pastoral land uses; about 75 percent of the Kenya population are smallholder farmers. Land resources are further restricted in many areas by deforestation, soil erosion, stagnant agricultural productivity, expansion of the cultivated area into marginal lands, and land subdivision.

The population of Kenya was estimated to be over 19 million in 1984 with 4 percent annual growth rate (A.I.D.,1985b). Population densities are high in the highest potential lands, approaching 400 people per square kilometer. By contrast, the driest districts support fewer than ten people per square kilometer. Population growth, even if effective measures were widely adopted now, will contribute to serious problems in ensuring an adequate food supply in the country and promoting economic development.

The Kenya economy has performed well since the 1982 recession (Table 8.1). Tourism, agricultural exports, an increasing regional export market, and reduced oil prices have contributed to a healthy economy. Unemployment, poverty, malnutrition among certain groups, urban migration, and housing, however, are still issues requiring attention in the future.

B. Constraints to the Relief Effort

While Kenya has a relatively well-developed transport network, it was not geared to rapid dispersal of large quantities of food imports. The Kenya railways lacked the optimal capacity to ship over 3,000 MT per day; this was the required delivery schedule estimated to meet the needs of the drought affected population. Thus, contracts with private truckers were negotiated. From the major depots of the National Cereals and Produce Board (NCPB), transport to district depots was not difficult. However distribution to markets and chiefs' camps was often obstructed by the lack of local transport facilities or the finances and the poor rural roads in many of the semi-arid areas.

Table 8.1

Quarterly Indicators of Economic Activity in Kenya

		Exports			Imports	Foreign Exchange		Foreign Debt
		Tea	Coffee	Value	Value	Holdings	Market Rate	Serv Ratio
1981	1Q	7.20	5.50	790	1318	421.5	8.291	
	2Q	7.47	7.63	901	1505	303.2	8.802	
	3Q	8.67	3.33	818	1542	199.9	10.416	
	4Q	-	--	906	1439	220.0	10.286	16.5
1982	1Q	6.87	6.67	3147	6105	189.4	10.73	
	2Q	6.07	6.67	2832	4784	242.5	10.98	
	3Q	7.07	6.67	2539	3235	152.8	11.14	
	4Q	6.8	10.00	2561	3685	194.6	12.73	20.8
1983	1Q	8.33	6.83	2824	3642	255.3	13.06	
	2Q	7.03	6.27	2707	3995	333.6	13.25	
	3Q	10.04	6.47	3455	4159	56.2	13.70	
	4Q	4.54	2.04	2508	5037	348.5	13.80	20.3
1984	1Q	10.73	7.09	4885	5478	385.5	13.62	
	2Q	7.80	7.86	3643	4376	422.3	14.28	
	3Q	5.64	7.56	3328	5468	389.6	14.96	
	4Q	8.33	9.75	4151	5859	377.0	15.78	21.5
1985	1Q	9.30	7.49	3917	5887	415.1	16.10	
	2Q	10.39	8.44	3786	5822	387.5	16.18	
	3Q			3928	5895	308.7	16.75	
	4Q			4094	5985	376.4	16.28	
1986	1Q					420.7	16.49	

SOURCE: Economist Intelligence Unit (1984b-1986b).

NOTES: Tea and Coffee = monthly averages ('000 tons). Values = quarterly totals (mn Kshs.). Holdings = end of quarter (mn $). Market Rate = KShs/$. Debt Service Ratio = percentage for entire year.

Some aspects of the Kenyan response to the drought were hindered by the lack of any planning prior to the emergency. Although there are a number of agencies with responsibilities related to drought, a considerable data base upon which to make decisions, and a skilled professional cadre in the government; there was, and still is, no coherent set of procedures or even a detailed guide to policy concerning drought responses. As a result there were delays at almost every step in the response to the drought. The identification of the severity of the drought, the estimations of the population-at-risk and needed food imports; discussions over food or cash for work, free versus marketed distribution, and coordination with NGOs all led to uncertainties in the response and delays in implementation.

The lack of consideration of rehabilitation and recovery was also apparent. As detailed below, the lack of authoritative statistics on the food system (particularly grain production, marketing, and on-farm storage by smallholders) led to serious miscalculations of the drought's severity. Other issues which could have been clarified in a preparedness plan include guidelines for identifying eligible food aid recipients, determination of standard rations, problems of transporting food aid in local areas, logistics planning including determination of transport capabilities of the railways and truckers, potential for relaxing marketing restrictions, and procedures for releasing food from the NCPB stores.

If the drought had persisted through the short rains of 1984, then the emergency response program would likely have been adequate. However, if the 1985 long rains had also failed, a more radical approach would have been required.

II. THE IMPACTS OF THE DROUGHT IN KENYA, 1984

A. Drought in Kenya

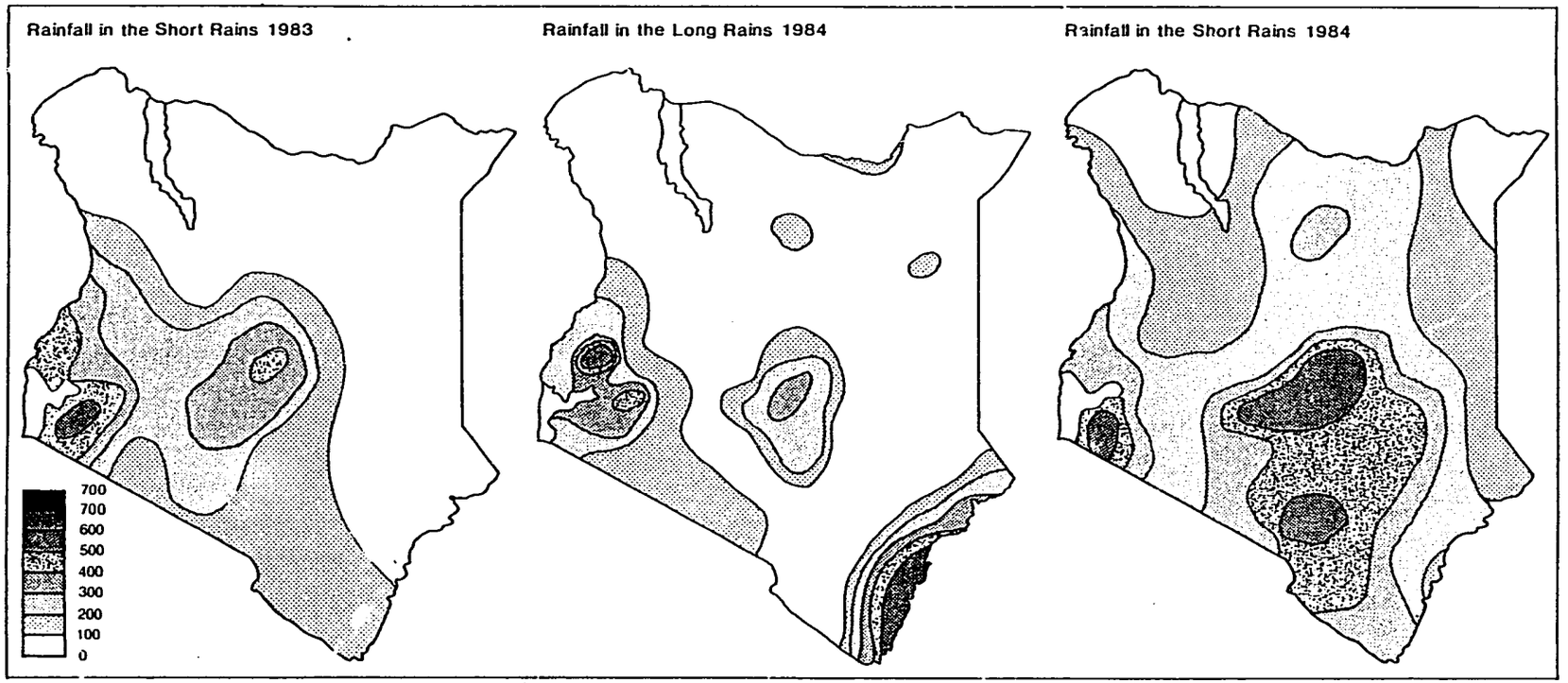
The drought, as indicated by rainfall departures, actually began in some parts of the country, particularly in the Eastern Province, with the long (March to May) rains of 1983. The short (October to December) rains in 1983 were widely deficient (33 percent below normal), but are not usually heavy in the central highlands (Figure 8.2). The 1984 long rains were the worst in over 50 years in many places. The most affected areas were the Central, Rift Valley and Eastern provinces. The coastal and western areas were normal or only moderately affected by drought. The short rains of 1984 were above average and the long rains of 1985 were well above average, causing a dramatic increase in food supplies in the country.

B. Socio-Economic Impacts

The drought caused widespread suffering in the affected areas. Most people reported that they were hungry and had to spend more time than usual getting food and water. Nutrition indicators in one district where reliable information was available showed the effect of the drought (Newmann et al., 1987). The household average consumption and the consumption by adults and school age children decreased. Women pregnant during the drought had below average weight gains, and their offspring were under weight. About 10 percent of the infants sampled, 24 percent of the toddlers, and 14 percent of the school age children lost weight between August and December 1984. Migration in search of employment and, to some extent, food was common in the drier zones of the country; although the relief effort enabled most households to avoid the further disruption of moving to urban centers.

Figure 8.2

Rainfall in the Short and Long Rains in Kenya, 1983-1984



SOURCE: Macodras et al. (1987).

The economic impact of the drought at the national level was alleviated by above average prices for coffee and tea, the major export crops (Table 8.1). Thus the foreign exchange reserves were not depleted. The drought essentially lasted on a widespread scale for only a season, thus limiting its impact on the national economy. Coffee and tea production recovered rapidly with the above average short rains in 1984. A longer drought would have had greater impacts on exports and the economy. Only a few industries were forced to reduce their production due to the lack of inputs. The contribution of agriculture to GDP, at constant 1982 prices, declined 3.7 percent in 1984 compared to 1983; while GDP rose 1 percent over 1983. The value of exports increased 19 percent over 1983, although food imports contributed to a 21 percent increase in the value of imports.

C. The Impacts of the 1984/1985 Drought on Agricultural Production

The primary impact of the drought was reduced production of maize, the staple food crop, wheat, important in the urban diet, and beans. Maize is grown throughout the agricultural areas of the country, almost wholly under rainfed conditions. The main surplus areas are in the Western and Rift Valley provinces. About three-fourths of the maize is grown by smallholders with under eight hectares of land; and it accounts for over three-fourths of the total cereals grown, over half of the total calorie intake, and two-fifths of the total protein requirements. About two-thirds of the maize is grown in the long rains (Ray, 1984).

The years preceding the drought had been relatively normal, and maize production in the 1982/83 long rains was average. Favorable producer prices and available liquidity enabled the NCPB to buy a greater market share of these crops than in the past. Due to high stock levels in 1983, and recurrent cash

flow problems, the NCPB contracted to export the surplus maize. Shipments of 76,700 MT in January to June 1983, 41,800 MT in July to December 1983, and 64,000 MT in January to June 1984 resulted in more normal stocks in the NCPB and enabled the NCPB to purchase the 1984 long rains crop.

The 1983/84 short rain crop (350,000 MT) was 33 percent below normal, due to drought in the Central and Eastern provinces. The yield in 1984 (1984 long rains and 1984/85 short rains) would have been 63 percent of the average in the previous 8 years had the short rains also failed. However, the short rains were normal, and total production for the 1984/85 agricultural year, which encompasses the 1984 long rains harvest and the 1984/85 short rains harvest, was 1,725,000 MT (Table 8.2). This represented a yield about 79 percent of the average (Table 8.3). The timing of the harvest was more critical than the overall deficit in production.

Figure 8.3 charts the purchases, imports, sales, and exports of maize by the National Cereals and Produce Board, the parastatal grain marketing agency. The rapid drop in purchases and rapid increase in sales beginning in March 1984 indicated the seriousness of the 1984 drought. Whereas the NCPB had cash to purchase the 1984 crop, there was little marketed. The six month strategic reserve kept by the NCPB was rapidly drawn down, as millers and traders attempted to purchase sufficient stocks for the medium term, in anticipation of the effects of the drought on supplies and prices.

Concurrently rural markets in central and eastern Kenya experienced a sharp demand due to the lack of on-farm storage and the poor harvest of the 1983/84 short rains. At the peak before the Government of Kenya (GOK) started rationing sales of maize, sales reached 1 million bags (1 bag = 90 kg) per month. It was this alarming drawdown in reserves that prompted the GOK to respond to the drought, rather than an accurate assessment of the food stocks

Table 8.2

Maize: Estimated Output, Stocks, Trade and Use By Quarter for Kenya
Market Years 1984-1986
(000 MT)

	July-Dec 1984	Jan-Mar 1985	April-June 1985	1984/85 Total	July-Sept 1985	Oct-Dec 1985	Jan-Mar 1986	April-June 1986	1985/86 Total
Supply									
Beginning Stocks	545.5	687.4	1032.3	545.5	641.9	862.1	1445.7	1549.7	641.9
Domestic Production[1]	900.0	795.0	30.0	1725.0	770.0	1240.0	720.0	20.0	2750.0
Commercial Imports[2]	289.0	102.4	107.2	498.6	0.0	0.0	0.0	0.0	0.0
Food Aid[2]	33.1	54.2	25.2	112.5	0.0	0.0	0.0	0.0	0.0
Total Supply	1767.6	1639.0	1194.7	2881.6	1411.9	2102.1	2165.7	1569.7	3391.9
Utilization									
Exports	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.6	39.6
Seed Use[1]	13.0	28.0	8.3	49.3	0.0	17.0	28.0	8.3	53.3
Feed and Waste[3]	93.7	55.1	15.6	164.4	46.0	69.5	43.5	8.5	167.5
Food Total	973.5	523.6	528.9	2026.0	503.8	569.8	544.6	550.0	2168.3
Per Capita (kg)	50.0	26.5	26.5	103.0	25.0	28.0	26.5	26.5	106.0
Total Utilization	1080.2	606.7	552.8	2239.7	549.8	656.3	616.1	606.4	2428.7
Ending Stock[4]									
NCPB	295.4	466.7	474.3	474.3	388.0	586.4	859.6	769.7	769.7
Private	392.0	565.6	167.6	167.6	474.1	859.4	690.1	193.6	193.6
Total Ending Stock	687.4	1032.3	641.9	641.9	862.1	1445.7	1549.7	963.2	963.2
Consumption Deficit[5]									
MT	63.6	0.0	0.0	63.6	0.0	0.0	0.0	0.0	0.0
Percentage of Normal	93.9	100.0	100.0	97.0	100.0	100.0	100.0	100.0	100.0
Population (000)	19463.0	19760.0	19958.0	19661.0	20154.0	20350.0	20550.0	20756.0	20450.0

SOURCE: A.I.D. (1987c).

1 USAID/Agr Econ Estimates based on MOALD, CBS, FAO, and USDA Data Bases, Agroclimatic and Market Price Analyses as well as regular and periodic field trips.
2 Source: NCPB, USDA, and USAID/FFP.
3 Feed is estimated to be 2,500 MT/month and waste 5% of supply attriburted as the maize enters the system.
4 Source: NCPB Stock Reports through August 23, 1985. Private stock is calculated as a residual. The model employed assume a minimum pipeline of 90,000 MT for NCPB and 75,000 MT for the Private Sector.
5 Deficit is calculated as population estimate multiplied by the moving average monthly consumption rates minus the available food supply. Expected Consumption Rates are July-Sept 25 kg, Oct-Dec 28 kg, Jan-June 26.5 kg.

in the country, including retentions and production by smallholders. The long rains crop forecast survey was not completed until the harvest began in August 1984. The first commercial food shipments were ordered and concessional food requested in June.

In essence the government response was micro-oriented, in response to the crisis in the NCPB, rather than macro-oriented, based on complete information about the food system. This contributed to the GOK being extremely conservative in its response, by assuming no production from the 1984/85 short rains crop. In retrospect, the 1984 long rains crop was not as affected as originally predicted; and the following short rains were normal, and would have been higher had seed and other inputs not been a constraint.

Table 8.3

Agricultural Production in Kenya, 1984

Crop	Average Yield MT/Ha	1984 Yield MT/Ha	Production MT
Maize	1.26 *	0.99	1725
Wheat	1.75 *	0.77	85

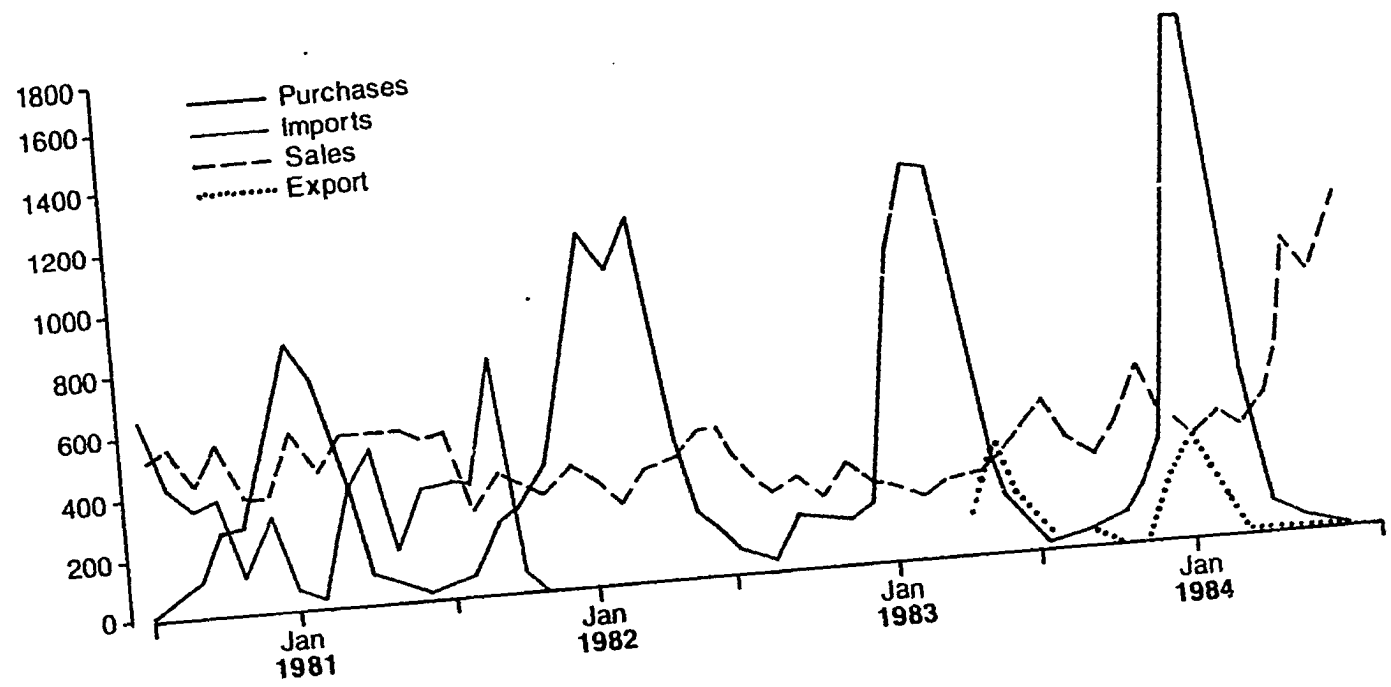
SOURCES: Ray (1984).
A.I.D. (1987c).

NOTE: * 1976/77 to 1983/84.

The Rift Valley Province accounts for 90 to 95 percent of the wheat grown in Kenya. Since the early 1970s, wheat has been imported every year to supply the expanding demand. The 1984/85 crop was less than half of normal (Table 8.3), followed by a very good crop in 1985/86 (Table 8.4).

Figure 8.3

National Cereals and Produce Board's Monthly Purchases, Sales, Exports, and Imports for Kenya, 1981-1984 (In '000 Bags)



SOURCE: FAO (1984c).

Table 8.4

Wheat: Estimated Output, Stocks, Trade, and Use By Quarter for Kenya
Market Years 1984-1986
(000 MT)

	July-Dec 1984	Jan-Mar 1985	April-June 1985	1984/85 Total	July-Sept 1985	Oct-Dec 1985	Jan-Mar 1986	April-June 1986	1985/86 Total
Supply									
Beginning Stocks	100.0	80.8	78.5	100.0	32.5	99.6	208.1	156.8	32.5
Domestic Production[1]	75.7	7.0	2.3	85.0	105.0	119.8	7.5	2.7	235.0
Commercial Imports[2]	21.7	16.6	35.3	73.6	74.1	0.0	0.0	0.0	74.1
Food Aid[2]	72.0	62.2	43.2	177.4	4.2	88.0	11.0	22.0	125.2
Total Supply	269.4	166.6	159.3	436.0	215.8	307.4	226.6	181.5	466.8
Utilization									
Exports	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Seed Use[1]	2.0	0.0	7.0	9.0	0.0	1.0	0.0	7.2	8.2
Feed and Waste[3]	10.0	5.1	4.8	20.0	11.0	12.5	1.1	1.5	26.1
Food Total	176.6	83.0	114.9	374.5	105.2	85.8	68.8	89.3	349.0
Per Capital (kg)	9.07	4.20	5.76	19.03	5.23	4.22	3.34	4.30	17.09
Total Utilization	188.6	88.1	126.7	403.5	116.2	99.3	69.9	98.0	383.3
Ending Stock[4]									
NCPB	35.9	43.6	12.5	12.5	79.7	152.1	111.6	51.8	51.8
Private	44.9	34.9	20.0	20.0	19.9	56.0	45.2	31.8	31.8
Total Ending Stock	80.8	78.5	32.5	32.5	99.6	208.1	156.8	83.6	83.6
Consumption Deficit[5]									
MT	-1.5	-7.9	23.1	13.7	12.5	-7.8	-28.1	-8.6	-32.0
Percentage of Normal	98.9	91.4	125.2	103.5	110.8	89.5	71.0	91.3	90.6
Minimum Stock Surplus/ Deficit	-4.2	-6.5	-52.5	-52.5	14.6	123.1	71.8	-1.4	-1.4
Population (000)	19463.0	19760.0	19958.0	19612.0	20154.0	20340.0	20550.0	20756.0	20450.0

SOURCE: A.I.D. (1987c).

1 USAID/Agr Econ Estimates based on MOALD, CBS, FAO, and USDA Data Bases, Agroclimatic and Market Price Analyses as well as regular and periodic field trips.
2 Source: NCPB, USDA, USAID/FFP.
3 Feed by-product is estimated to be 1%, waste is estimated to be 5% of supply attributed as wheat enters the system.
4 Source: NCPB Stock Reports through November 1986. Private Stock is calculated as a residual. The model employed assumes a minimum pipeline of 20,000 MT for the Private Sector.
5 Consumption deficit is calculated as population estimate multiplied by the monthly average consumption rate of 1.533 kg/capita in 1985 and 1.5713 kg/capita in 1986.

Rice is grown in irrigation schemes; production during the drought was not affected.

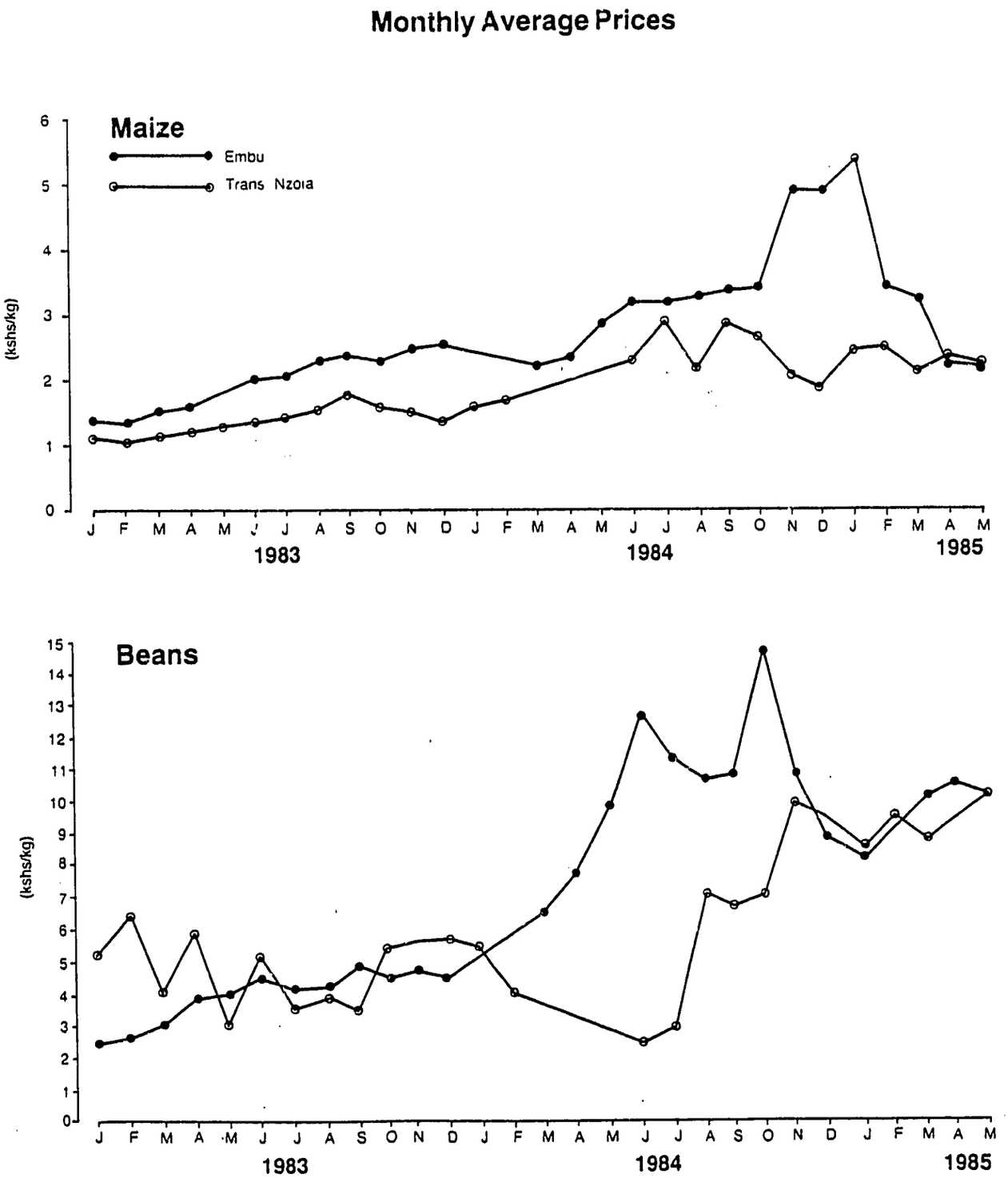
Other food crops are important in the local diet but are not marketed nationally as extensively as maize and wheat. Bean production was reduced by 50 percent in the Rift Valley, Central and Eastern provinces, although reliable harvest data are not available. Almost all of the sorghum and millet produced is consumed on the farm. The 1984 harvest was less than two-thirds of normal.

The effect of the shortfall in production of maize and beans was reflected in market prices. Figure 8.4 depicts monthly average prices in Embu, a drought-affected area, and Kitale, a surplus production area. The price of beans rose sharply in March to April 1984 in Embu and did not deflate until early 1985. Prices in Kitale also rose, but less sharply. Beans are primarily marketed locally, and their prices are traditionally more volatile and more reflective of food supplies in the area. The maize prices in Embu more than doubled between October 1984 and January 1985, but were soon reduced to normal.

Detailed data on livestock losses during the drought are not available. In Central Province, a government census estimated twenty percent of the cattle had died or been slaughtered. An aerial census of the semi-arid districts in northern Kenya reported that losses of livestock were commonly 50 percent (Mwendwa, 1986). Milk production was reduced by 50 percent at the height of the drought in August 1984 (FAO, 1984c).

Figure 8.4

Monthly Average Prices for Maize and Beans
in Embu and Kitale (Kenya), 1983-1984



SOURCE: Central Bureau of Statistics (1985).

III. A SUMMARY CHRONOLOGY OF MAJOR EVENTS RELATED TO THE DROUGHT IN KENYA, 1984-1985

Time	Event
February 1984	Meteorological Department long range forecast indicates the long rains may be delayed and light.
March 1984	Onset of rains delayed.
April 1984	Long rains began, but were light. Beginning of concern about drought.
May 1984	Long rains failure clear in the Rift Valley, the Central and Eastern provinces, GOK and others begin efforts to estimate impact on agriculture and planning responses.
June 1984	Government requests assistance from donors, orders commercial imports, organizes an ad-hoc Task Force on Food Supply and Distribution. Local supplies of maize begin to be distributed, but in small quantities. GOK makes first orders of commercial maize.
July 1984	USAID makes first pledge of assistance.
August 1984	FAO mission confirms need for emergency assistance; USAID report by Tom Ray summarizes needs.
October 1984	First commercial maize shipment recieved and distributed. Short rains begin early.
November 1984	Short rains heavy throughout country, production only near normal due to shortages of seeds and fertilizers.
December 1984	First concessional maize received. Large-scale distribution organized by GOK and NGOs.
March 1985	Long rains begin and are exceptionally good, with a bumper harvest.
September 1985	Most emergency food relief programs have ended and drought emergency considered over with adequate harvest from long rains.

IV. FOOD AID: PLEDGES AND DELIVERIES, US AND OTHER DONORS

Commercial and food aid imports of maize and wheat are presented in Table 8.5. Anticipating a "worst case" scenario, the GOK arranged to import 498,600 MT of commercial maize and 152,500 MT of concessional maize. The first shipment was 21,000 MT of commercial maize imported from Thailand in late September 1984. This shipment was crucial in beginning the flow to markets and establishing the capacity of the emergency program to handle off-loading, transporting, and distributing the maize. In October 90,000 MT of commercial maize, 17,000 MT of food aid maize, and 11,000 MT of food aid wheat were received. The increased volume of imports was sustained through January 1985, with sporadic shipments continuing through mid-1985. From September to December 1984, 91 percent of maize and 23 percent of wheat imports were on commercial terms. The proportions for September 1984 to May 1985 were 82 percent and 29 percent respectively. The US contribution was 213,703 MT of maize, or 35 percent of the total maize imports, and 29,998 MT of wheat (12 percent of the total wheat imports).

The Government of Kenya administration is structured hierarchically, from subchiefs and chiefs at the location level; to division, district, and provincial staff; and ministry headquarters in Nairobi. The focus on district planning in the last decade has led to greater staffing at the district level in an attempt to decentralize the GOK administration. Eligible food aid recipients were identified by the chiefs and subchiefs in each location and sublocation with assistance from local famine relief committees including KANU party representatives and local elders. Initially the GOK estimated the population affected by the drought to be four million people. The first list of eligible

Table 8.5

Scheduled Arrivals of Commercial and Food Aid Maize for Kenya
Included Within Situation and Outlook Report of 20 September 1985

Date	Ship	Source/Origin	Commercial (MT)	Food Aid (MT)
September				
9/27	Celtic Sky	Thailand	21,002	
September Sub-Total			21,002	0
October				
10/11	Dias	WFP		1,870
10/20	Han Pacific	Thailand	20,000	
10/21	Deka Concorde	Thailand	20,497	
10/21	Jean Lykes	USAID/Title II		10,509
10/23	Ocean Venus	Thailand	20,979	
10/23	Nikoleta K	Thailand	15,000	
10/28	Kavo Yossonas	Thailand	13,592	
10/28	Dolly Turman	USAID/Title II		5,000
October Sub-Total			90,068	17,379
November				
11/04	Lady of Lorne	Thailand	12,439	
11/10	Elly	Thailand	14,531	
11/11	Fotini D.E.	Thailand	14,995	
11/15	Alba I	Thailand	13,862	
11/17	Eastern Valley	Thailand	21,226	
11/22	Predeal	Thailand	13,377	
11/24	Ocean Leo	Thailand	19,176	
November Sub-Total			109,606	0
December				
12/01	Bulakid	Thai/Animal Feed	6,324	
12/03	Irish Cedar	Thailand	21,819	
12/10	Sherene	Thailand	21,200	
12/23	Atlanti	USAID/Title II		11,435
12/30	Katerina E	Thailand	19,049	
December Sub-Total			68,392	11,435
September - December Totals			289,068	28,814

Table 8.5 (cont'd.)

Scheduled Arrivals of Commercial and Food Aid Maize for Kenya Included Within Situation and Outlook Report of 20 September 1985

Date	Ship	Source/Origin	Commercial (MT)	Food Aid (MT)
January				
01/04	Loucas N	Thailand	19,716	
01/06	San Michael Bay	Thailand	13,285	
01/09	Eastern Saga	Thailand	21,218	
01/13	Faro	Thailand	14,277	
01/16	Golden Cross	Thailand	14,055	
01/21	Santorini	Thailand	19,799	
January Sub-Total			102,350	0
February				
02/25	Beaujolais	USAID/Title II		24,241
February Sub-Total			0	24,241
March				
03/03	World Nautilus	USAID/Title II		30,000
March Sub-Total			0	30,000
April				
04/13	Inger	USAID/Title II		20,400
04/20	Efthitis	USA/CCC	7,149	
04/25	Lekeito	USAID/Title II		4,831
April Sub-Total			7,149	25,231
May				
	Olympic Hope	USA/CCC	22,138	
	Sanko Duquesa	USA/CCC	26,000	
	Sanko Sovereign	USA/CCC	30,000	
	Sea Augusta	USA/CCC	20,000	
	Badnoti	USA/Animal feed	2,000	
May Sub-Total			100,138	0
January - May Totals			209,637	79,472
	GRAND TOTAL		498,705	108,286

SOURCE: A.I.D. (1987c).

food aid recipients, in August 1984, totalled 1,391,873 people. The number was much the same in January 1985, and then declined steadily to 319,416 in October. Table 8.6 gives an indication of the distribution of the food aid to each district. From December 1984 to October 1985, a total of 86,886 MT of yellow maize was distributed by the GOK famine relief effort. Additional relief supplies were distributed commercially, through private traders and nongovernmental organizations such as the Kenyan Freedom from Hunger Council. A complete listing of food flows within the country during the drought is not available. The average monthly ration, based on the eligible recipients, varied from four kg/head in Elgeyo Marakwet District to twenty kg/head in Isiolo/Marsabit/Laikipia districts. This variation may be due to continual reassessment of the extent of the famine, availability of relief supplies from other sources, difficulties in supplying food, as well as preferential treatment of certain districts.

All of the imported maize was yellow maize, which is about ten percent cheaper and more widely available than white maize, the local preference. During 1984 white maize was not available in the region. The distinct preference for white maize encouraged people to conserve their supplies and switch to alternative foods where possible. It also meant that in planning for the drought relief effort, it was essential not to import too much yellow maize. As white maize became more readily available, the demand for the yellow maize would drop rapidly, and residual supplies would be difficult to sell. This is a difficult problem in logistics and demands estimation. Despite awareness of the problem, the result in Kenya was a large surplus of yellow maize that could not be disposed of in the country. The regional demand for yellow maize is also low, particularly because of large surpluses of white maize in Zimbabwe and Zambia, and because only Mozambique required emergency assistance after

Table 8.6

Overall Distribution of Yellow Maize in Kenya, 1985
(per NCPB despatch records)

District	Jan 85	Feb 85	Mar 85	Apr 85	May 85	Jun 85	Jul 85	Aug 85	Sep 85	Oct 85	Nov 85	Totals	Av. Mo. Ration kg/head
Baringo	475.6	339.1	1912.5	985.3	2561.2	943.8	1666.0	1345.8	417.1	197.4	18.6	10862.4	15.3
Elgeyo Marakwet	362.9	177.4	87.7	272.1	-	388.4	189.5	245.9	42.6	4.0	-	1770.5	4.0
Embu	890.3	206.2	31.8	440.8	204.7	381.0	462.0	-	277.7	-	-	2894.5	12.0
Narok	-	-	104.4	804.2	378.5	-	71.2	50.0	-	-	-	1408.3	12.4
Isiolo	-	2538.2	2274.4	3536.7	203.5	297.0	4310.1	1498.7	160.0	-	-	18231.4	20.1
Marsabit	1103.7				1696.2					-	-		
Laikipia						362.9				250.0	-		
Kajiado	503.8	700.8	414.2	231.3	198.9	-	150.0	-	-	-	-	2316.3	
Kiambu			-	-	-	-	-	-	67.3	-	-		11.5
Muranga			-	-	-	50.0	-	-		-	-		
Kitui	3698.7	350.5	7.9	494.2	2178.9	-	710.0	1000.6	750.0	220.0	1772.6	11183.4	11.6
Lamu	1105.1	-	-	885.7	-	-	732.9	-	252.0	-	-	5626.7	9.9
Tana River		-	-	741.3	-	551.2	545.0	502.0		311.5	-		
Machakos	1106.8	2877.5	729.5	1627.3	3645.6	1212.9	1760.2	-	230.0	-	-	13198.8	10.9
Meru	2962.9	866.8	588.0	81.8	456.9	247.0	68.7	151.9	-	-	-	5424.0	9.4
Garissa, Wajir Mandera	-	1590.0	-	-	378.0	-	-	-	-	-	-	1968.0	5.3
Nyandarua	1978.3	1172.7	-	-	927.2	271.3	1292.3	201.8	-	-	-	8018.0	11.2
Samburu			1572.6	-					-	360.6	241.2		
Nyeri	57.2	124.3	389.0	-	-	-	-	-	-	-	-	570.5	13.0
Taita Taveta	-	-	-	-	1225.0	-	258.0	58.0	52.0	-	-	1593.8	12.3
Turkana	-	931.0	846.4	1116.2	-	-	1436.4	727.6	171.9	144.0	141.5	5965.0	4.0
West Pokot	-				-	450.0							
TOTAL (tonnes)	14245.3	11874.5	8958.4	11216.9	14055.4	5155.5	13652.3	5782.3	2420.6	1487.5	2173.9	91022.6	

SOURCE: Deloite, Haskins, and Sells (1985).

NOTE: Total quantity despatched for distribution, per NCPB (tonnes) 86,886.

1985. Some of the surplus has been exported, including animal feed (Table 8.2). Nevertheless, what remains incurs storage costs, both financial and in occupying space which could be used for the current harvest. In early 1987 the surplus yellow maize was being sold within Kenya at almost half the price of white maize, and for export at a loss of $30 to 40/MT.

V. SYNTHESIS: LESSONS LEARNED, QUESTIONS RAISED

In comparison with other African countries, Kenya responded to the drought emergency with a balanced program of commercial imports, concessional food aid, and assistance through monetization of commercial commodities. The government early in its planning adopted two slogans: "Planning, not Panic" and "Food Imports and Employment Generation." The government was effective in preventing famine through its emergency response program, and by and large, panic was avoided. Food imports were scheduled and received. The emergency program to create additional employment was subsequently supplemented with a larger food relief effort, as the dimensions of the food shortage in many areas became apparent.

Despite the considerable achievements outlined below of the response to the drought in Kenya, the situation came very close to reaching crisis proportion. This experience reveals that drought preparedness could be improved. The need to improve agricultural statistics based on the entire grain economy and to prepare a drought contingency plan have been noted. In their absence, and with a different set of policy makers and economic conditions, a similar drought in the future could have very serious consequences. The Government of Kenya and donors should not be overconfident.

VI. ACHIEVEMENTS OF THE US AND GOK RELIEF EFFORT IN KENYA

A. Government Capacity to Respond

The Government of Kenya demonstrated that it had the capacity to respond adequately to the threat of a national disaster. Famine was prevented. The GOK response can be attributed to several factors. The government felt the need to forestall political instability that would result in the event of a widespread famine. The coup attempt of 1982 reminded many people of the fragility of the Kenyan political system. The government, early in the drought, adopted the policy of a managed response. The drought was not to be considered a crisis, but a pertubation of the natural environment which could be incorporated into more or less normal planning responses. Kenya has a well-developed infrastructure that is adequate to transport large amounts of food throughout most of the country. The middle professional levels in Kenya are the primary information processors and fairly well trained and capable; many are highly motivated and dedicated to the country and their professions. They were able to mobilize the available information and make informed decisions. In addition, there are many donors and donor projects related to food supply and drought which were able to shift their responsibilities and provide crucial assistance. The USAID/Nairobi mission was particularly helpful due to its early preparedness, begun in March 1984 at the first signs of a possible drought, and because it had an agriculture section and a Food for Peace officer. Although the GOK is often characterized as being amorphous, with a lack of clear policy guidance, the ad-hoc Task Force was able to mobilize key personnel and make timely decisions.

B. Commercial Importation of Relief Food

Early in the drought, the government realized it did not have sufficient food reserve to wait for delivery of concessional imports from donors. The amount stored equalled a four to six month reserve. It then decided to import quite large quantities commercially from September to January. This was possible because of the adequate foreign exchange reserves held in the Central Bank of Kenya. The economic impact of the drought was subsequently lessened by the high world prices of coffee and tea and the continued revenues from tourism. The Kenyan economy and budget had recovered from the 1982/83 crunch, due largely to the GOK austerity measures and beneficial world prices.

C. Market Distribution

The government adopted a policy to avoid the dependency implications of free food distribution by distributing most of the emergency food imports through market channels. The drought was, in retrospect, a short-lived event. Most households have access to the monetary economy and can draw upon cash or capital reserves in times of need.

In the early stages of the response, the government intended to implement emergency work programs to ensure households had access to cash. Although many such programs were initiated through the Rural Development Fund and NGOs, the need became apparent to provide free food to certain households and, before the food for work or cash for work programs could be started, to many others.

D. Monitoring

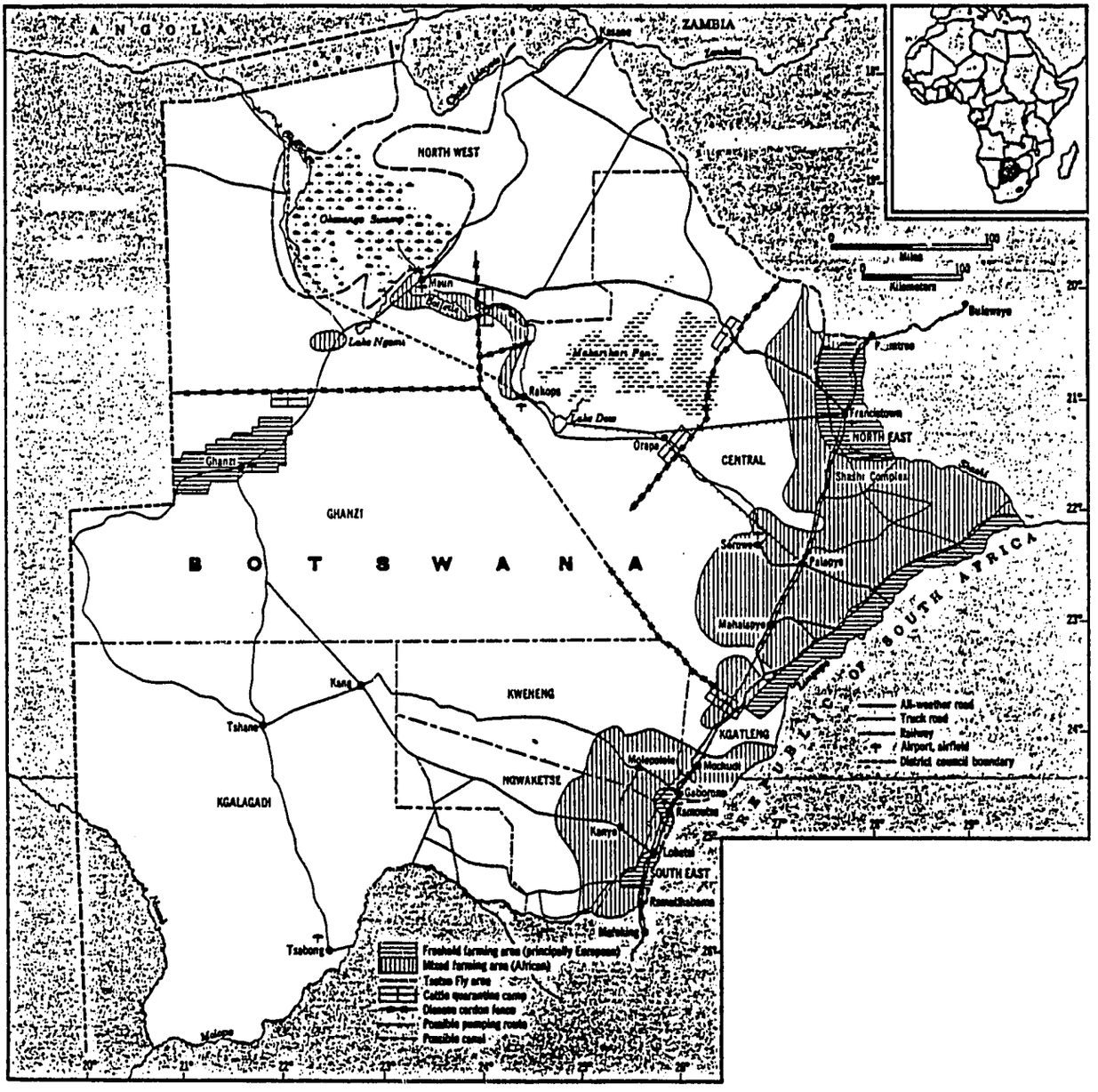
One of the most significant responses to the drought was the implementation of an effective monitoring system for the GOK/USAID food distribution effort. A consulting firm was hired to monitor the entire process of food importation, transportation, storage, and distribution to needy households.

They were able to report on inadequacies as they arose and assist both USAID and the GOK to correct deficiencies. The final report on the monitoring experience indicates that the effort was successful, although there were problems which could be addressed in the future.

E. Post-Drought Responses

While the GOK has not embarked upon a detailed, systematic drought preparedness plan, a number of long-term responses have been initiated. The National Environment Secretariat is about midway through a process to publish a set of papers on the drought. The papers are mostly being written by officials responsible for drought responses in various ministries and NGOs. The Central Bureau of Statistics has prepared a bulletin which reports the results from crop forecast surveys, market prices, NCPB stocks, and other information relevant to an early warning of drought or food supply fluctuations. The Ministry of Health has revised its health monitoring system to include more precise nutrition indicators and more rapid appraisal of trends. The Kenya Rangeland Ecology Monitoring Unit (KREMU) has begun an aerial monitoring system for maize. A number of donors and NGOs have also improved their monitoring systems.

Botswana


ANGOLA
ZAMBIA
Kasane
NORTH WEST
Okavango Swamp
Maun
Lake Ngami
Makarikari Pan
Rakops
Lake Dow
Orapa
CENTRAL
Francistown
NORTH EAST
Shashi Complex
Bulawayo
Palapye
Serowe
Mahalapye
GHANZI
Ghanzi
B O T S W A N A
REPUBLIC OF SOUTH AFRICA
Kang
KWENENG
Tshane
KGALAGADI
KGATLENG
Molepolole
Mochudi
Gaborone
Ramotswana
NGWAKETSE
Kanye
Lobatse
SOUTH EAST
Ramatlabama
Mafeking
Tsabong
Molopo
All-weather road
Track road
Railway
Airport, airfield
District council boundary
Freehold farming area (principally European)
Mixed farming area (African)
Tsetse Fly area
Cattle quarantine camp
Disease cordon fence
Possible pumping route
Possible canal

CHAPTER 9. BOTSWANA: THE DROUGHT, 1981-1986

I. INTRODUCTION

The recent drought in Botswana has been the worst in recorded history, persisting for approximately seven years at the writing of this report (June 1987). The impacts have been deleterious to humans and agricultural activities; increasing rural poverty, heightening rural malnutrition, and vulnerability to disease, and weakening cattle. Nonetheless, one formal and three informal evaluations of the drought experience concluded that it did not precipitate a crisis or result in any loss of human life (Borton, 1984; Holm and Morgan, 1985; and Segosebe, 1985).

Given the regularity of rain failure in Botswana, significant levels of rural poverty, and a large percentage of the population in remote areas, one might expect a major and prolonged drought to have had disastrous effects. Such, however, was not the case. This section examines some of the reasons why Botswana fared reasonably well in spite of rain shortfalls of between 20 and 30 percent for each of the 4 years, between 1981/82 to 1984/85, and crop shortfalls between 60 and 80 percent, during the same period.

Five drought response capabilities which explain Botswana's effective coping mechanisms are identified:

1. A mostly effective monitoring and early warning system.
2. A political environment that supports drought preparedness, including contingency planning, strategic food reserves, a willingness to learn from and be honest about previous failures in drought management, and an effective interministerial/interagency committee to coordinate drought management at the central government level.

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3. Serious and effective decentralization of drought management planning and implementation.

4. Public and private sector infrastructure that enables the government to respond effectively.

5. Cooperation among donors, UN agencies, and the Government of Botswana in responding to drought emergencies.

Because Botswana shares many physical, social, and technical characteristics with other nations in Africa, an assessment of the country's effective drought management may be an important and useful exercise for other governments, donor agencies, and private relief agencies.

A. The Environmental Context

Botswana's rainfall pattern is part of a larger Southern African climate regime linked to its location on the Tropic of Capricorn. Rainfall is also affected by the country's elevation (about 1,000 meters). Mean annual rainfall decreases from north and northeast to southwest, and for much of the country, is less than 500 millimeters. During the winter months, April to September, high pressures are the rule causing the air to be warm and dry by day, and cold by night. Little rain falls during this season.

During the summer months, the sun comes almost directly overhead; and while high pressure systems remain in the upper atmosphere, thermally induced lows develop at lower altitudes. These low pressures allow moist air from the Indian Ocean to penetrate into the eastern and northern edges of the country; the lows also allow moist air from the Atlantic Ocean to push into the northwestern region. Average rainfall is higher in these northern and eastern regions than for other parts of the country.

The fluctuation in Botswana's rainfall results from the uncertainty of how far the Indian Ocean and Atlantic Ocean air masses will penetrate into the high plateau and how long they will stay. If the summer low pressure systems are short or sporadic, the rains will be poor; longer or deeper lows mean better rains. It is the cyclical nature of these low pressure systems that gives rise to the twenty year rainfall cycles and cyclical drought period. The previous record drought period was only 20 years ago from 1961-66.

Drought is a long-standing phenomenon in Botswana. In prehistoric times, geological records indicate periods of considerable moisture, with examples including several dry river beds which previously contained large volumes of water. The geology also notes extended periods of prolonged drought with evidence including vast expanses of very old sand dunes. For the last 200 years, oral traditions of the people and evidence of travelers tell of brief spells of flooding and abundant rainfall as well as many instances of late rains or total failure of the rains.

B. The Cultural Context

Botswana's sparse rainfall has given rise to a resilient people who have devised effective ways to survive and prosper in the harsh environment. Perhaps best known are a small minority of San (sometimes called Bushmen) who hunt and gather in the Kalahari and who seem to have no difficulty coping with 350 millimeters average annual rainfall. The more common Batswana lifestyle and livelihood systems revolve around cattle. Though only about half the rural residents actually own cattle, approximately 80 percent of the Batswana derive, at least, a portion of their economic well-being from livestock or from livestock-related activities.

Though there are only about one million people in the country, there are roughly three million cattle. The abbatoir slaughters about 220,000 head in an average year or only about 7 percent of the national herd which means that much of the national herd lives well beyond an economically optimal age. Part of the value of cattle is related to their market worth; but an equal value accrues from the prestige and economic security that the cattle provide.

Crop production is also an important livelihood system, although secondary to livestock raising. There are many active farms and many small holders, mostly in the eastern rim of the country. National averages of harvests amount to about 50,000 MT, mostly sorghum and maize with some millet and beans (Table 9.1). As the average annual consumption of foodstuffs is about 120,000 MT, Botswana is perpetually importing food. In drought years, crop production slips to about 10,000 MT. Thus, in normal years, Botswana imports between 50,000 and 70,000 MT of foodstuffs, while in drought years, the imports can soar as high as 100,000 MT of food.

Skilled cattle ranchers can manage herds on as little as 400 millimeters annual average rainfall, though they would prefer more. Further, a single year of drought is not a major problem because centuries of cattle management and dryland farming experience have instilled a variety of drought response mechanisms that are well understood and broadly practiced throughout the nation (Segosebe, 1985). These include:

1. Mafisa: literally, cattle loaning. The system allowed those with few or no cattle or those hard-hit in time of drought to borrow a cow(s) for a stated period. The borrower had use of the draft power of the animal, the milk, and if the cow produced a calf during the contract time, possession of the calf. In return, the borrower provided food and care for the cow, thereby allowing the owner to "own" the cow without caring for it.

Table 9.1

National Averages of Harvests in Botswana, 1981-1985

Year	Total Production (MT)			Average Yield/ Planted Hectare (kg)	
	Traditional	Commercial	Total	Traditional	Commercial
1981	47,285	7,000	54,285	180	693
1982	8,050	9,170	17,220	45	650
1983	9,075	5,350	14,425	41	1,009
1984	6,320	955	7,275	34	80
1985	14,650	4,000	18,650	74	440

SOURCE: Bhalotra (1985b).

2. Selling: clearly established guidelines prevailed in traditional management practices, whereby cattle owners would sell stock in the face of drought; but not so many as to leave them without draft power for the post-drought plowing. The balance between when to sell and how many was based less on the economic return of the sale and more on how to protect losses while keeping a draft (plowing) capability in tact.

3. Masotla: chief's fields which were worked in communal groups, under the direction of the chief. The harvest went to the chief who would put it in a communal grain storage facility. In good years, the harvest was rotated with new grain going in; in bad years, the "masotla" grain was given to the village's poor and sold at low prices to the wealthier residents.

4. Dikgafela: a harvest tax or tribute, collected in kind as a percentage of the harvest by the chief and put in communal storage facilities, to be used in time of need.

5. Trade restrictions: chiefs controlled sales of grain outside the village as a means to ensure that all village needs would be met before allowing an individual to sell. This system assured that village needs would take priority over personal profit.

6. Majako: exchanges of labor among relatives or friends. Individuals would form groups and work on each other's fields which would, in turn, build up obligations for the friend to reciprocate. Sometimes the obligation would be paid with a part of the harvest; for example, when village women help a friend to scare birds away from a field, the women might receive a few bags of grain as reward.

Although these and other traditional practices are still found in varying degrees throughout the nation, their effectiveness lessens as drought deepens. For prolonged drought, such as that experienced in the 1960s or the 1980s, responses beyond these traditional practices are mandatory. Fortunately, Botswana has at least four sources of income to support such responses.

The nation is one of the world's leading producers of gem-quality diamonds. In 1984, diamonds yielded about P600 million in exports; and in 1985, over P900 (about US$600 million), which provided 40 percent of the government's revenue. Diamonds account for about 75 percent of exports by value. Although some of the profits continue to leak to South Africa because of contractual arrangements with De Beers, at least half remain in Botswana.

Beef is also an important source of income with much of Botswana's slaughtered beef exported to Europe. In most years, livestock is the second largest earner of foreign exchange (P100 million in 1984), after diamonds.

A third income source for Botswana is copper and nickel (about P100 million in 1984). Although the world mineral market has been generally depressed, copper and nickel exports have been an important and durable money earner for Botswana.

Finally, Botswana exports labor. In the mid-1970s, upwards of 40,000 Batswana men were working in the mines and related wage-producing activities in South Africa. The number has diminished to less than 20,000 in the mid-1980s. Considering that Botswana's total population is one million, that half are female, and that half of the males are below fifteen; one concludes that there are about 250,000 adult male Batswana. Thus at the present time, approximately 10 percent of the adult males earn wages during at least part of the year in South Africa. Although this number has been declining in recent

years, and given the present turbulence in South Africa, will almost certainly continue to decline, it is clear that wage remittances have been an important factor helping Botswana to earn hard currency to import food.

In summary, Botswana is a country with a small human population, moderately well diversified income sources, and with an awareness that drought has been and will continue to be a persistent phenomenon for both the short and long run.

C. Organization and Infrastructure for Dealing with Drought

Two points are paramount is assessing Botswana's drought management capacity. First, the basic infrastructure, independent of drought planning, generally works well. The economy has functioned effectively over the last few years with the per capita GDP (US$960 in 1984) being one of the highest in Africa. For example, in 1982, the first year of the drought, Botswana had on hand an enviable cash reserve of about P60 million or approximately US$40 million. For a developing economy with a relatively small population, such a reserve is impressive.

Further, Botswana's cash income is such that drought, although difficult, is not an economic catastrophe. For example, in 1984/85 when the drought was reaching its most severe cumulative impact, the government paid for 94 percent of the non-food costs of drought (Holm and Morgan, 1985).

In addition, Botswana's basic infrastructure is accustomed to delivering food. Botswana has been and probably will continue to be a large food importer. Table 9.2 indicates that even in good years, there are food deficits. As total food consumption will probably continue to grow; one assumes that food imports will also increase, even when the rains are good. As a result, transportation, storage, pricing, distribution, marketing, and

Table 9.2

Summary of US Food Aid for Botswana
PL 480 Title II/Section 416/Food Security Reserve
FY 1981-1986

	FY81 [a]		FY82 [a]		FY83 [a]		FY84 [a]		FY85 [b]		FY86 [c]	
	$/000	MT	$/000	MT	$/000	MT	$/000	MT	$/000	MT	$/000	MT
Title II Regular	5,308	11,606	1,678	3,602	1,796	7,802	5,512	19,925	-0-	-0-	6,576	16,461
Emergency GTG	-0-	-0-	765	1,000	-0-	-0-	2,547	5,000	1,654	4,000	2,511	4,360
Section 416 GTG	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0- *	775	513	600
FSR/GTG	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
TOTAL	5,308	11,606	2,443	4,602	1,796	7,802	8,059	24,425	1,654**	4,775	9,600	21,421

SOURCE: [a] A.I.D. (1984c).
[b] A.I.D. (1986d).
[c] A.I.D. (1986e).

* Data not available.
** Data incomplete.

retailing outlets are already in place and are handling much of the nation's food distribution, even in normal years. Moreover, the system manages food distributions mostly without government involvement. The infrastructure can easily absorb distribution of additional food imports in time of drought.

Second, Botswana is prepared for drought in organizational and psychological ways. In fact, one analysis argues that politicians look forward to drought in order to advance their individual and party influence among the nations's poor, all of whom are potential voters (Holm and Morgan, 1985).

Drought preparedness takes several forms and has evolved over many years. Its post-independence origins grew from the disastrous experience of the 1960s when the government was totally unprepared to deal with drought, and during which the national herd shrank from 1,350,000 in 1962 to 900,000 in 1966. This computes to a loss of 33 percent of the nation's cattle in 4 years. The drought also fostered hoof and mouth disease, so that the adverse impact on livestock and cattle owners was doubly severe. In addition, Botswana's diamond potential was undeveloped in the earlier years, making the impact of the drought all the more devastating on virtually the entire nation.

Resolved to do something about drought, the new government, which gained independence in 1965, embarked on a series of steps and programs. After recovering in the 1970s, a number of consultancies were invited to a national symposium on drought held in 1978 which was jointly sponsored by the Botswana Society, the National University, the National Library, and the Ministry of Finance and Development Planning, with assistance from several groups in Europe and North America. The symposium captured national attention, was chaired by the then Vice President and now President Masire, and included virtually every decision maker in the public and private sector. Discussions covered the full scope of issues related to drought response, including

careful reviews of previous Botswana droughts, the experience of drought in other parts of Africa as well as Australia, and steps which could be taken in two areas. The first is monitoring and early warning and the second, drought contingency planning.

As a result of suggestions from the symposium, renewed planning and implementation efforts began to carry out the following:

1. Organize a monitoring and early warning system including rainfall, nutrition, rangeland condition, livestock, and water.

2. Determine the composition of a national interministerial committee to coordinate action during time of drought.

3. Establish the districts and district governments as the principal agencies to take action during time of drought.

4. Set in motion a series of drought management contingency programs including prearranged eligibility for food relief, emergency work and income-generating programs, emergency water drilling, adjustments in cattle off-take quotas at the national abbatoir, and post-drought recovery programs, such as assisted plowing for farmers who had lost cattle in the drought.

Unfortunately, these preparations had not been fully implemented when the rains failed again in 1979/80. Although the symposium and preliminary plans had gained the attention of the nation, leaders had not had time to install a fully operational plan. The 1979/80 drought, though short, revealed many weaknesses, as noted in a thorough evaluation prepared by Toby Gooch and John MacDonald (1981).

Some argue, however, that the 1979/80 drought was a great asset to Botswana, as it provided the government with a dress rehearsal for what was to come in 1982-85. For example, the 1979/80 experience helped the government to de-emphasize food-for-work programs, and instead design an impressive emergency work effort called the Labor Based Relief Projects (LBRW) that paid wages to the needy workers. This program could be reviewed with an eye toward adaptation and implementation in other drought-prone nations.

The drought also helped the government to deal with and remove any difficulties in the early warning and food distribution systems which, in some areas, had not worked very well in 1979/80. The experience suggested that it would be better to move the coordination of food and related relief from the Ministry of Local Government and Lands, which managed the nation's district government officers, to the Ministry of Finance and Development Planning, which managed the nation's money.

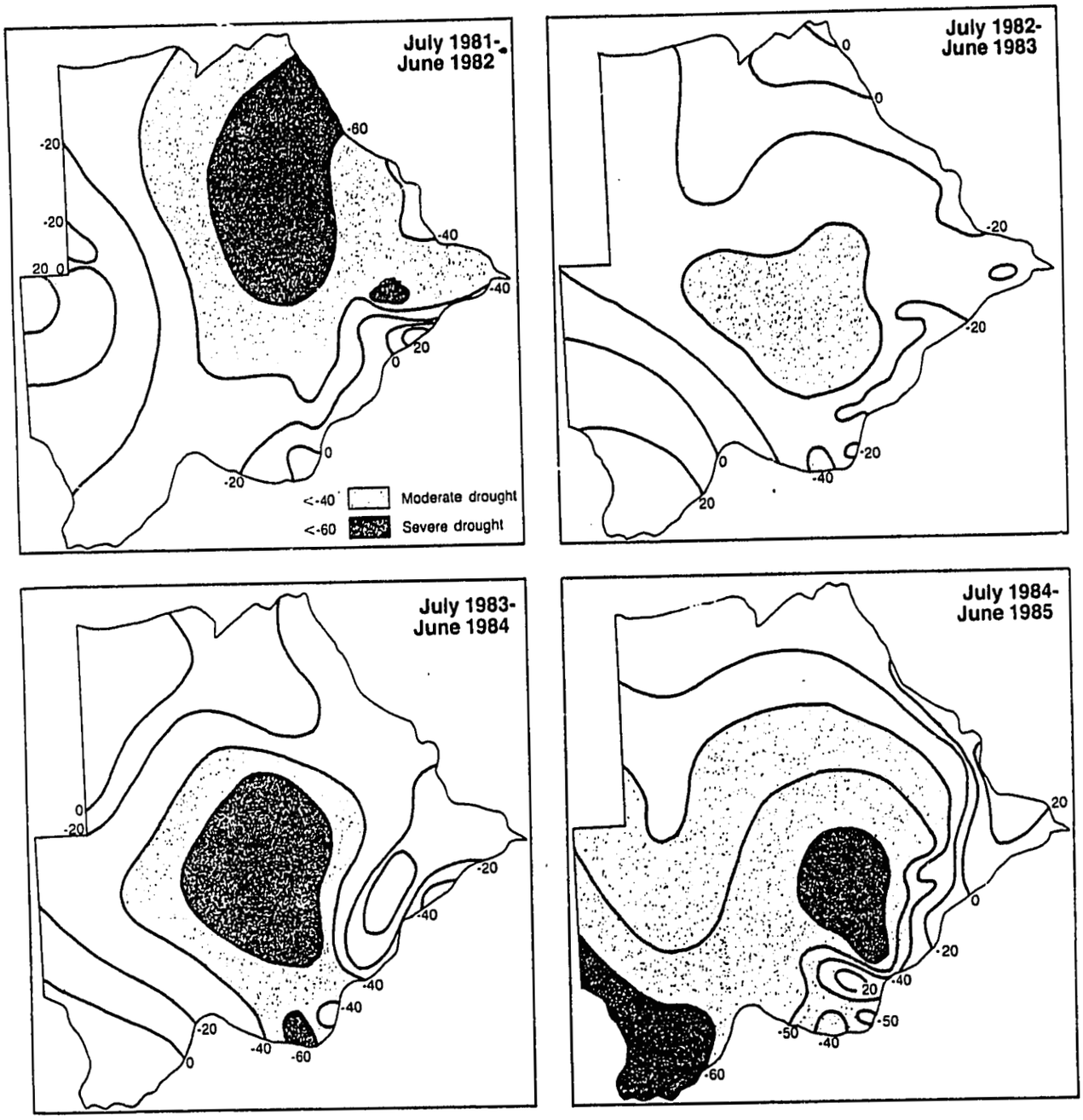
By 1982 the government had put in place contingency plans and emergency procedures that turned out to be mostly well-suited for the imminent challenge. It must be underscored that one of the main reasons why Botswana succeeded in managing the drought in the 1980s was because of the country's political will to learn from those experiences.

II. THE IMPACTS OF THE DROUGHT IN BOTSWANA, 1981-1986

The drought of the 1980s began in Botswana in late 1981 (Figure 9.1). Rainfall in the west and along the southeastern border with South Africa was about average. Elsewhere rainfall was 40 to 60 percent below normal for the 1981/82 year. Only the extreme north and south of the country received normal or above normal rainfall in 1982/83, although the deficiencies (20 to 40 percent of normal) were not as great as in the previous year. The next year was the worst of the drought. Only small areas in the northwest and southwest received average rainfall, and departures of 40 to over 60 percent were widespread. Rainfall was 40 to over 60 percent below normal in the entire country west of a line joining Maitengwe, Nkange, Francistown, and Machaneng in 1984/85. The eastern strip of the country received 15 to 30 percent above normal rainfall. Drought again plagued much of the country in 1985 (the countrywide average rainfall index was 30 percent below normal) and parts of the country in 1986, but the deficit were not as severe as in previous years.

Figure 9.1

Drought in Botswana, 1981-1985



III. A SUMMARY CHRONOLOGY OF MAJOR EVENTS RELATED TO THE DROUGHT IN BOTSWANA, 1981-1986

Time	Event
February 1982	Rainfall stations across country report 50 to 60 percent rain shortfalls from normal year [33].
March 1982	Government distributes drought relief funds to districts for purchase of food for populations in remote areas [33].
April 1982	President Masire declares country is drought stricken, appeals for international assistance, and explains the main components of drought relief program [33].
June 1982	Provision for Destitutes guidelines are sent to districts; schools begin Hand Stamping Project [33].
August 1982	Donor aid, including maize purchased in Zimbabwe under WFP Emergency Program, begins to arrive in-country [33].
April 1983	Drought continues; President Masire announces continuation of relief program [33].
1983/84	Lowest recorded rainfall during the five-year drought period [32].
1984/85	Below average rainfall in most areas of country; average deficiency rate of 29 percent for all of Botswana [34].
June 1985	Estimated 80 percent of population in need of drought relief [4]; 880,000 people are affected [25]; total livestock has declined by 600,000 [4].
July 1985	Domestic food production is down as much as 80 percent due to drought [25].
September 1985	Number of people affected by drought is estimated at 610,000 [8].
November 1985	Malnutrition rates have stabilized and overall health conditions show improvement in most areas [8].
December 1985	Drought continues with rainfall 35 percent below normal levels [8].
February 1986	People affected by drought and in need of food aid numbers 648,000 [8].
March 1986	Locust and quelea-quelea bird infestations strike many crop areas in Botswana [8].

IV. THE RESPONSE TO THE DROUGHT IN BOTSWANA

The chronology of Botswana's experience in the recent drought (see supplemental appendix) provides a detailed review of events while Table 9.2 indicates the US response in terms of Title II food aid and borehole drilling equipment. The story of drought and the relief effort in Botswana reveals three important points.

First, the early warning system worked. Decision makers had several months lead time to begin importation arrangements, relief programs, off-take planning, and more. It is interesting to note here that the government acted earlier and faster than many of the donor and relief organizations and actually paid for much of the imported food, up front, to be reimbursed later by the more cumbersome and bureaucratic donor agencies.

Second, the decision makers not only listened to the findings of the early warning system but they also acted. Part of this quick response lies in the credibility and trust enjoyed by leadership in the Interministerial Drought
Committee; part is due to the small and almost familial relationships among the different government ministries, between central and regional/district civil servants, between nationals and expatriates, and between the public and private sectors. There is no substitute for good flow of information in a trusting environment, and Botswana seems generally to have a generous supply of both.

Third, the chronology indicates that most of the drought management was carried out through existing organizations, both in the public and private sectors, that were already in operation.

A brief example is presented below to illustrate the response system in place at the district level. Each district had a prerarranged plan to deal with drought including:

1. Designations of where food would be stored and distributed.
2. Specifications for who would be eligible for what kinds of food and under what terms.
3. A previously agreed-upon set of LBRP projects, on line and waiting.
4. Emergency well drilling equipment and procedures in place.
5. Transportation and fuel procedures in place.

Further, each district designated a District Drought Committee (DDC) to be chaired by the District Commissioner and coordinated by a Drought Committee Secretary who was seconded from one of the district's technical offices. The DDC became the prime agent for drought management and coordination for the district. Monthly meetings conducted routine business; emergency situations could bring a special meeting, usually on less than 24 hours notice.

Membership on the DDC included all the technical officers in the district such as lands, health, water, education, treasury, community development, agriculture, livestock, food depot management, and more. Further, private citizens and representatives from the private sector were free to attend any meetings. Frequently visitors to the district from Gaborone or from relief agencies also participated.

Agendas included reports from various technical officers blended with discussion of the situation. Bottlenecks could be assessed and responses coordinated in the open arena of the meeting. Proposals for additional action or assistance went through the DDC to the District Commissioner and, through the commissioner, directly to the IMDC in Gaborone, where requests could be acted upon immediately.

The point which emerges from this example is that the ability of Botswana to use its existing public and private institutions to deal with drought became one of its greatest assets in coping successfully with a severe crisis. Other variables also contributed to Botswana's success in dealing with drought. One source emphasizes that Botswana's effectiveness demonstrated to the donor community that a positive policy in Southern Africa existed as an alternative to supporting South Africa. Therefore, assistance flowed easily and in quantities proportionally greater than for other drought-stricken nations. Another supporting factor was the region's good transportation network that depends, in part, on the Port of Durban (South Africa) and the well-functioning rail network in much of Southern Africa. The unique political style in Botswana resulting from its mostly homogeneous ethnicity was able to cut through red tape faster and with little conflict. However, the small size of the government means that virtually every civil servant in Gaborone knows one another. Finally, Botswana's political stability was a crucial variable, especially when its drought experience is compared with the ordeal of Sudan, Ethiopia, or Mozambique.

In conclusion, this brief review of Botswana's drought response suggests that combinations of early warning, drought preparedness, decentralization, strong public and private infrastructures, a spirit of cooperation among donors, government offices, and the private sector were the ingredients that enabled Botswana to respond in timely and responsible ways to the drought emergency. Whereas, the physical and climatic characteristics of Botswana's drought may have been similar to much of the rest of Africa, the response was not. This report suggests that there are many lessons within the Botswana experience that can provide insight and example to many other nations and

agencies; and that a more rigorous assessment of why Botswana coped well should be carried out, while the memory of the experience is still fresh in the minds of those involved.

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LIST OF ACRONYMS AND ABBREVIATIONS

ADF	African Development Fund
ADRA	Adventist Development and Relief Agency
AED	African Economic Digest
AGRICOM	(Mozambican agricultural marketing parastatal)
A.I.D.	Agency for International Development
AMC	Agricultural Marketing Corporation
AMREF	African Medical Research Foundation
ANC	African National Congress
ASG/EOE	Assistant Secretary General for Emergency Operations in Ethiopia
BBC	British Broadcasting Company
BDF	Botswana Defense Force
CCAU	Coordinating Committee for Emergency Actions
CCCE	Caisse Centrale pour la Cooperation Economique
CDAA	Christian Relief and Development Association
CDC	Center for Disease Control
CIDA	Canadian International Development Agency
CIF	Cost, Insurance, Freight
CNAVS	Comite Nationale d'Aide aux Victimes de la Secheresse (National Committee for Aid to Drought Victims)
CRS	Catholic Relief Service
CRSP	Collaborative Research Support Program
CSM	Corn-Soya-Milk
CSO	Central Statistics Office
DANIDA	Danish International Development Agency
DC	District Commissioners
DCC	District Drought Committee

DOD	Department of Defense
DPCCN	Departamento de Preveneao e Combate as Calamidades Naturais (Department for the Prevention and Control of Natural Calamities)
ECU	European Currency Units
EDF	European Development Fund
EEC	European Economical Commission
EPDF	Ethiopian People's Democratic Front
EPDM	Ethiopian People's Democratic Movement
EPLF	Ethiopian People's Liberation Front
ERA	Ethiopian Relief Agency
ERS	Economic Research Services
ESF	Economic Support Funds
EWS	Early Warning System
FANA	Food Aid National Administration
FAO	Food and Agriculture Organization of the United Nations
FAO/OSRO	Food and Agriculture Organization/Office for Special Relief Operations
FEWS	Famine Early Warning System
FFP	Food For Peace
FRD	Food Resources Department
FRG	Federal Republic of Germany
GAO	General Accounting Office - US
GE	General Electric
GDP	Gross Domestic Product
GNP	Gross National Product
GOB	Government of Botswana
GOE	Government of Ethiopia
GOK	Government of Kenya

GOS	Government of Sudan
GPRM	Government of the People's Republic of Mozambique
GRM	Government of the Republic of Mali
ICO	International Coffee Organization
ICRC	International Committee of the Red Cross
IDA	International Development Agency
IDI	International Disaster Institute (also known as Relief and Development Institute)
IEFR	International Emergency Famine Relief
IFP	Institutional Food Program
IGETSU	Interagency Group on Ethiopia and the Sudan
IMDC	Inter-Ministerial Drought Committee
IMF	International Monetary Fund
ITCZ	Intertropial Convergence Zone
KCC	Kenya Cooperative Creameries
KNCSS	Kenya National Council for Social Services
KP&L	Kenya Power & Light
KREMU	Kenya Rangeland Ecology Monitoring Unit
LBRP	Labor Based Relief Program
LICROSS	League of International Red Cross Societies
LSU	Logistical Support Unit
LWF	Lutheran World Federation
MDM	Multi-Donor Mission
MFDP	Ministry of Finance and Development Planning
MNR	Mozambique National Resistance (also known as RENAMO)
MOA	Ministry of Agriculture
MOH	Ministry of Health
MSF	Medecins Sans Frontieres (Doctors Without Borders)

NBC	National Broadcasting Company
NCPB	National Cereals and Produce Board
NFDM	Non Fat Dry Milk
NFS	National Food Strategy
NGO	Nongovernment Organization
NMSA	National Meteorological Services Agency
NOAA	National Oceanic and Atmospheric Administration
NSC	National Seed Company
NSI	National Sugar Institute
OEOA	Office for Emergency Operations in Africa of the United Nations
OFDA	Office for Foreign Disaster Assistance
OLF	Oromo Liberation Front
OMB	Office of Management and Budget
OP	Office of the President
OPAM	Mali Office of Agricultural Products
OPEC	Organization for Petroleum Exporting Countries
OXFAM	Oxford Committee for Famine Relief
PC	Producer Cooperatives
PMAC	Provisional Military Administrative Council
PMSMLGL	Permanent Secretary Ministry of Local Government and Lands
PRMC	Cereal Marketing Restructuring Project
PVO	Private Voluntary Organization
REDSO	Regional Economic Development Services Offices
RENAMO	Mozambique National Resistance (also known as MNR)
REST	Relief Society of Tigray
RRC	Relief and Rehabilitation Commission
SBM	Southern Baptist Mission

SCF/US	Save the Children Fund/United States
SGR	Strategic Grain Reserve
SIDA	Swedish International Development Agency
SPLA	Sudanese People's Liberation Army
SRC	Sudan Railways Corporation
STH	Subtropical high pressure zones
SUNA	Sudan News Agency
TDY	Temporary Duty
TMC	Transitional Military Council
TPLF	Tigre People's Liberation Front
UK	United Kingdom
UMOA	West African Monetary Union
UN	United Nations
UNDP	United Nations Development Program
UNDRO	United Nations Disaster Relief Coordinator
UNEOS	United Nations Office of Emergency Operations/Sudan
UNESCO	United Nations Economic, Social, and Cultural Organization
UNFPA	United Nations Population Activities Fund
UNHCR	United Nations High Commissioner on Refugees
UNICEF	United Nations International Children's Emergency Fund
UNRESREP	United Nations Resident Representative
UNV	United Nation Volunteers
US	United States
USA	United States of America
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USG	United States Government

USSR	Union of Soviet Socialist Republics
VALCO	Volta Aluminum Company, Limited
WFP	World Food Program
WHO	World Health Organization
WMO	World Meterological Organization
WPE	Workers' Party of Ethiopia
WVRO	World Vision Relief Organization