

A.I.D. Evaluation Special Study No. 49

# An Evaluation of the African Emergency Food Assistance Program in Mali, 1984-1985



June 1987

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AN EVALUATION OF THE AFRICAN EMERGENCY  
FOOD ASSISTANCE PROGRAM IN MALI, 1984-1985

A.I.D. EVALUATION SPECIAL STUDY NO. 49

by

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The views and interpretations expressed in this report are those of the authors and should not be attributed to the Agency for International Development.



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FOREWORD

The 1984-1986 drought in Africa resulted in the continent's most severe famine in recorded history. Countless lives were saved by the massive outpouring of assistance from around the world. The U.S. response to this crisis was larger than that of any other donor nation as a result of the concerted efforts of numerous Government agencies, private voluntary organizations, businesses, and U.S. citizens.

To reflect on and record the lessons learned from our response to the emergency, the Agency for International Development commissioned assessments of the U.S.-financed emergency activities. This report presents the findings concerning the U.S. effort in Mali; separate reports have also been published for Chad and Sudan. The findings of these three studies were consolidated in another report, The U.S. Response to the African Famine, 1984-1986, Vol. I, An Evaluation of the Emergency Food Assistance Program: Synthesis Report. A companion report, Vol. II, An Analysis of Policy Formation and Program Management, focuses on policy and management issues, including legislation and funding, early warning systems, donor relations, the role of the commercial sector, public and congressional relations, and the transition to development.

The lessons learned from this emergency should guide us in responding to such disasters and provide insights for determining the actions necessary to abate the ravages of future droughts.

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The team had the benefit of extensive briefings A.I.D./ Washington arranged by the A.I.D. Bureau for Food for Peace and Voluntary Assistance. Special appreciation is due to Ms. Julia Chang Bloch, Assistant Administrator and Food for Peace Coordinator, for her valuable guidance and to Ms. Judy Gilmore, Office of Program Policy and Evaluation, for her constant support and help in preparing, reviewing, and improving on our findings and recommendations. However, any errors or inaccuracies are entirely the responsibility of the team.

Albert R. Baron

## SUMMARY

### PURPOSE, SCOPE, AND METHODOLOGY

The purposes of the evaluation were to analyze the impact, timeliness, and appropriateness of the 1984-1985 emergency food aid efforts in Mali and to derive recommendations of practical measures to improve future programming and impact. In addition, the evaluation considered ways of programming for emergency food assistance in Mali to support national food strategies, including rehabilitation and longer term development.

The generic statement of work for the evaluation (Appendix A) illustrates the many issues considered during the course of the preparation, fieldwork, and writing of the report.

For its evaluation methodology, the team depended on reviews of secondary sources, interviews, and observations in both Washington, D.C. and Mali.

### THE COUNTRY SETTING

Mali is a drought-prone, food-deficit country, with a chronic dependence on food aid and a well-established pattern of cooperation among major food aid donors. Mali has been dependent on imports of cereals to meet its food requirement since the early 1970s. Most of the country lies in the Sahelian and Sahelian-Guinean zones, where short and highly variable rainfall results in frequent droughts and where grazing and farming are high-risk occupations.

Since the beginning of the 1980s, major donors have participated in a common project, the Mali Cereal Market Restructuring Project. Donors provide food aid within a structural adjustment context; in return for the food aid, the Government of Mali has agreed to policy and program measures to restructure the cereals market, to improve the operations of the Grain Marketing Board (OPAM), and to provide increased incentives for food production.

### THE 1984-1985 DROUGHT

Overall, the 1984-1985 drought was the worst on record. Famine threatened much of the rural population as the country faced the largest food grain deficit in its history. The rural population was particularly vulnerable because farm food stocks

and other resources of herders and farmers were close to exhaustion after 4 to 5 successive years of drought.

Disaster areas extended to all of Regions VI and VII, most of Region V, and the northern portions of Regions I, II, and IV. These areas include the country's traditional breadbasket in the inner delta of the Niger River. The delta area (20,000 km<sup>2</sup>) was affected not only by poor rainfall in the fall of 1984, but also by the extremely low levels of river flooding. Region III, in the favorable Sudano-Guinean rainfall belt, did not suffer crop or pasture failures, but a large number of migrants entered the area for food, shelter, and work.

Because Mali is a food-deficit country, it was accustomed to seeking food aid to meet its structural deficit and to providing emergency food for free distribution. But the severity and widespread occurrence of the drought, combined with the exhaustion of rural resources, presented the Government with a problem of major dimensions: how to organize a massive effort for distribution in difficult-to-reach rural areas.

#### The U.S. Role in Helping Mali Plan and Carry Out a Program of Free Food Distribution in Rural Areas

A.I.D.'s goals were to help the Government of Mali provide sufficient food to ensure social stability in the urban areas, preserve the rural structure, and avoid famine among the needy. The strategy adopted by USAID/Mali was (1) to use the well-established mechanism of OPAM public distribution for sales in urban markets; (2) to use in-country private voluntary organizations (PVOs) to manage free distribution to needy populations in rural areas; and (3) to work for close donor cooperation with the Government. The following were the specific objectives:

- Provide cereals to those with purchasing power at reasonable prices without disrupting the market for local production
- Provide cereals to those without purchasing power, especially in rural areas
- Permit people to stay in their villages and grazing areas
- Provide sufficient food over a long enough period to enable farmers to plant a crop in 1985

Ensuring food supplies for the urban population, even though it was swollen by migrants from the countryside, was relatively easy. Distribution mechanisms developed in prior years for commercial and food-aid import sales were well established and re-

liable. U.S. food aid for urban distribution during 1984-1985 was 35,000 metric tons (MT).

Providing food for the rural areas, however, was the difficult task. It meant targeting and managing distribution plans covering hundreds of thousands of people in scattered, difficult-to-reach rural communities. The solution to the problem was worked out cooperatively by the Government of Mali with USAID/Mali and other donors. The innovative approach involved mobilizing in-country PVOs and international organizations as agents for the Government of Mali in managing emergency distribution of Government-owned, donor-contributed grain to rural areas. Under the program, PVOs received grain from OPAM warehouses and arranged for its transport and delivery in accordance with distribution plans worked out with regional and local authorities. The Government of Mali estimated requirements for this program at 60,000 MT. The United States programmed 40,300 MT in support of this effort as government-to-government emergency food and grants. A.I.D. also financed the costs of grain delivery to OPAM storage/distribution points and the transportation costs of PVOs for moving U.S. grain.

In all, the United States allocated 95,000 MT of food to Mali between November 1984 and October 1985. This represented--with the nonfood aid support component--a US\$46 million investment, compared with an annual development program in Mali of about US\$15 million per year.

### General Findings

The evaluation shows that the mechanisms for commercial and emergency food distribution were well conceived and worked to provide badly needed food to millions of people. In rural areas, over 2 million persons benefited from free distributions of U.S. grain in 1985.

However, food needs for rural areas were seriously underestimated by the Malian Government and donors. As a result, early deliveries fell considerably short of the amount needed. The consequent human suffering cannot be accurately evaluated because of lack of data, although it was extensive and severe in many areas during March-July 1985.

The evaluation found that U.S. intervention and assistance was decisive in helping Mali avert massive famine and rural exodus and sufficient to substantially achieve the objectives cited above. Several measures to improve the cost-effectiveness of future U.S. emergency food aid in Mali are presented below.

## EVALUATION RESULTS

Findings, conclusions, and recommendations are presented on the timing, management, and impact of the U.S. emergency effort in Mali.

### Timing

Timing was a critical factor in the 1984-1985 program in Mali, affecting both the impact and cost-effectiveness of the U.S. effort. Not enough food was available for emergency distribution during the March-July 1985 period.

### Findings

- Not enough food was available for emergency distribution in the period (March-June 1985) before the rains or during the first part of the rainy season in July and early August.
- Six months elapsed between the initial USAID/Mali request for emergency food assistance and the arrival of assistance at port. The time required for the supplemental appropriation for the African Hunger Relief Initiative contributed to delays in organizing emergency distributions needed at the beginning of March 1985.
- Nonavailability of emergency food during March-June was partly due to unforeseen delays in delivery of food aid from the ports and lack of contingency planning.
- Distribution problems were compounded and costs were increased by the need to move the bulk of emergency food destined for remote and inaccessible areas during the rainy season (July-September 1985).

### Conclusions

- The timing of shipments and deliveries of emergency food aid for distribution through commercial channels to urban centers is less critical than the timing for supply of food aid for free distribution in rural areas.
- Food aid for free distribution in Mali can be supplied most cost-effectively and with greater impact by delivery for distribution and pre-positioning during March-June before the heavy rains.

- Early repair of the highways linking Mali's Region VII with Niger would provide a practical alternative for supply of that region.

### Recommendations

- In the event of a severe food emergency, A.I.D. should plan to ship the bulk of its emergency food aid to Mali between February and May for distribution and pre-positioning during March-June.
- A.I.D. should work with other donors to help the Government of Mali maintain its National Food Security Stocks in readiness for emergency food needs.
- In the event of a food emergency affecting Region VII, the United States should be prepared to assist in early repairs to the highways linking Region VII with Niger.

### Management

Management was the critical issue in the 1984-1985 U.S. program. The problem for the Government of Mali and USAID/Mali was how to effectively manage emergency distributions for hundreds of thousands of families in thousands of isolated communities. USAID/Mali played a significant role in helping Mali address this problem.

### Findings

- Improved organization and management of emergency food distributions resulted in a U.S. program effectively targeted to significantly relieve the threat of famine for several hundred thousand rural families. PVO and international organization management of local distributions of U.S. emergency food aid during 1984-1985 was well executed; distributions of available food were well targeted on needy persons in hard-hit areas. Losses and misuse of food were small.
- A second critical management problem facing the Government of Mali, A.I.D., and other donors was the difficulty of obtaining accurate information on food shortages and needs of disaster areas. Both the extent of the drought and the need for emergency food in rural areas were underestimated by USAID and the Government of Mali. The needs assessment system failed to provide the Government of Mali, USAID, and other donors with the

information needed to plan and manage the program for maximum cost-effectiveness.

- USAID/Mali resources for planning, organizing, and managing the U.S. emergency food assistance program were strained, as were those of the Government. The Food for Peace staff of the A.I.D. Regional Economic Development Services Office (REDSO) was fully occupied managing transshipments from West African ports to Mali and other Sahelian countries and was unable to provide guidance or assistance.
  
- Donor efforts were well-coordinated at the national level. However, planning for emergency distribution in disaster areas (i.e., administrative cercles) was largely ad hoc and often uncoordinated.

### Conclusions

- The Mali emergency food program of 1984-1985 overcame serious program deficiencies experienced during previous years. An important byproduct of the strategy of using PVOs to help manage emergency food distributions is that several PVOs are now better able to provide assistance for relief, rehabilitation, and development.
  
- Improved needs assessment is critical for planning and managing timely emergency food and disaster relief programs in Mali.
  
- USAID's increased access to experienced personnel for designing and managing emergency food programs will improve program impact and cost-effectiveness and will help USAID/Mali maintain effective management of on-going development activities.
  
- REDSO played a valuable and strategic role in coordinating and expediting transshipments of food aid. Increased availability of REDSO staff to advise and guide the Missions would help improve the management of U.S. food emergency programs in Mali and the rest of West Africa.
  
- Greater use can be made of Malian local institutions to strengthen needs assessment (at less cost) for disaster relief planning and to manage local rehabilitation and development.

### Recommendations

- A.I.D. and USAID/Mali should give high priority to helping Mali improve its system of needs assessment.
- USAID/Mali and the Government of Mali should design emergency food aid programs to increasingly tap the capabilities and local knowledge of Mali's regional, district, and local authorities to plan and carry out such programs, with assistance and guidance from PVOs.
- A.I.D. should gear up to provide experienced personnel to assist USAID Missions in the Sahel when needed for food emergency and disaster relief planning and programming. Such personnel should be available early in the planning cycle. A computerized A.I.D. roster of such personnel should be prepared. Indefinite quantity contracts should be negotiated to provide such personnel from the private sector when needed.
- A.I.D. should test the option of shipment and transshipment using through-bills of lading (bulk shipments, with bagging on arrival at West African ports) as a means of (1) transferring the work of transshipments from REDSO to the private sector; (2) reducing delays and costs; and (3) enabling REDSO personnel to provide guidance and assistance to West African governments and USAID Missions.
- USAID/Mali should continue to support a strong Government of Mali role in coordinating donor emergency food relief assistance. Increased donor coordination should be sought in recovery and rehabilitation efforts.

### Impact

The U.S. program was decisive in helping Mali avert massive rural famine and exodus, but emergency food needs for rural areas were underestimated and timeliness and lack of management resources were problems.

### Findings

- There was an effective melding of regular food and emergency food aid through the Government of Mali's Annual Food Distribution Program.
- The system for supplying food aid through commercial markets worked well to meet the needs of urban dwellers. Commercial marketing was important in helping meet the

needs of migrants from rural areas. Monetization of Title II food grain worked well to augment supplies for urban consumers, including migrants, and to generate local currencies to cover costs of free distribution.

- The need for emergency food supplies for rural areas was underestimated by at least 100 percent, and emergency food supplies were not programmed in time. Supplemental feeding of vulnerable populations was ad hoc and insufficient. The United States helped Mali establish an effective system of cholera treatment and control, but support of other health efforts was minimal. Only limited resources for rehabilitation and recovery were made available during 1984-1985. Food for work was largely limited to U.S. donations to the World Food Program (WFP).
- Available U.S. food was effectively targeted. Rations were appropriate and large enough to make a significant contribution to relieving the threat of famine. Free distribution of U.S. food reached several hundred thousand families, an estimated 2 million persons. Because U.S. food reached the villages, rural dwellers were able to remain and plant a new crop in 1985. The U.S. effort accounted for about half the free food distribution program carried out by Mali's National Committee for Aid to Drought Victims (CNAVS) and PVOs with donor assistance.
- The United States financed important studies to assess the drought situation in the country and to forecast the agricultural situation during 1985-1986.

### Conclusions

- The response of the United States and other donors was effective in meeting the needs of urban dwellers. Monetization of Title II food grain was an appropriate and useful technique to augment urban supplies, help meet the needs of urban migrants, and generate local resources to cover costs of free distribution.
- Food supplies for free distribution were inadequate in the period March-June before the rainy season and during the early part of the rainy season. Free distributions of U.S. emergency food aid were well-targeted to needy families facing famine conditions throughout the country. These distributions together with those of other donors helped Mali avert widespread famine and massive rural exodus.

- U.S. emergency food programs in Mali and in other Sahelian countries will have more impact and will be more cost-effective when food supplies are programmed to arrive between February and May for distribution and pre-positioning during March-June.
- In Mali supplemental feeding should be programmed as a standard procedure to accompany emergency food distributions in order to protect vulnerable populations and reduce immediate suffering and the long-term irreversible effects of malnutrition among the very young.
- A more cohesive program of studies is needed to illuminate the food security and development problems and potentials of drought-prone areas in Mali.
- Programming for recovery and rehabilitation should be carried out during the emergency relief phase of emergency food distribution programs and not be delayed until the end of the emergency relief effort. Important opportunities exist for food-for-work programs in the drought-prone areas of Mali.

#### Recommendations<sup>1</sup>

- The United States should work with the Government of Mali and other donors for an earlier response to food emergencies and for timely delivery of food aid for emergency distribution in rural areas (as opposed to commercial distributions of food aid, which can be programmed more uniformly throughout the year).
- As a standard operating procedure, the United States should design emergency food aid programs in Mali to include supplementary feeding programs, in cooperation with other donors and PVOs. The operations manual should be revised accordingly.
- USAID/Mali should support, with other donors, a more comprehensive Government of Mali program of studies to increase knowledge of local conditions affecting populations in drought-prone areas and opportunities for local development and drought-proofing measures. Such studies

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<sup>1</sup>An attempt has been made to avoid repetition of recommendations derived from the sections on timing and management; for example, the recommendation for overhauling the needs assessment system of Mali, covered under management recommendations, is not repeated here.

should be an integral part of a system of drought planning.

- A.I.D. should revise its guidelines and operational manuals to emphasize that short-term food emergencies are not simply episodes spanning 9 months; they normally involve recovery and rehabilitation efforts extending at least through the following year. Recovery and rehabilitation plans should be made early, before and during the relief operations.
- USAID/Mali should support multiyear food-for-work programs in Region VI and other drought-prone areas to be managed with the assistance of PVOs in close collaboration with the regional governors and cercle administrators.

#### Recommendations for Relating Emergency Assistance to Development

The following is a list of recommendations for planning and implementing emergency food assistance programs in Mali that are more closely related to national food strategies, including rehabilitation and development.

- View the emergency as a disruption in the development process, and design the emergency food assistance or drought-relief program to help the country move back to the development track.
- Design the emergency food assistance and drought-relief programs to assist affected populations recover from the disaster/emergency as soon as possible.
- Use the experience from the emergency to improve development programming and to increase practical knowledge about local conditions, needs for rehabilitation, drought-proofing possibilities, and local development potential.
- Build efficient and effective systems for drought detection and needs assessment. Note that basic food needs assessment data (crop yields, acreages, production, food consumption, stocks, and nutritional status) are also essential for development planning and programming.
- Design emergency food assistance and drought-relief programs to reinforce institution building (national, regional, district) and local/popular participation in relief, rehabilitation, and development.

- Integrate rehabilitation and recovery programs with local and regional development programs and plans.
- Design emergency food assistance and drought-relief programs to support private sector development, including the development of local PVOs.
- Ensure that the national food and development strategy properly addresses the problems of drought-prone areas and of drought-proofing such areas through appropriate structural and other adjustments in food and agricultural production and marketing.
- Institute more Government of Mali/food-for-work programs in collaboration with other donors, the WFP, and PVOs in Regions VI and VII and in other food-short, drought-prone areas of Mali.

GLOSSARY

- A.I.D. - Agency for International Development
- CCAU - Coordinating Committee for Emergency Aid
- CDC - Centers for Disease Control
- CILSS - Inter-State Committee on Drought Control in the Sahel
- CNAVS - National Committee for Aid to Drought Victims, Mali
- DOD - U.S. Department of Defense
- EEC - European Economic Community
- FAO - United Nations Food and Agricultural Organization
- FCAF - currency used in Mali (also called CFA franc); US\$1.00= FCAF 400 in October 1985
- LICROSS - International League of Red Cross Societies
- MSF - Medecins sans Frontieres (PVO)
- NCA - Norwegian Church Aid (PVO)
- NOAA - National Oceanic and Atmospheric Administration
- OFDA - Office of U.S. Foreign Disaster Assistance
- OPAM - Malian Grain Marketing Board (Malian Office for Agricultural Products)
- PVO - private voluntary organization
- PRMC - Mali Cereal Market Restructuring Project
- RCO - Regional Contracts Office
- RFFPO - Regional Food for Peace Office
- REDSO/WCA - A.I.D. Regional Economic Development Services Office for West and Central Africa (in Abidjan)
- SBM - Southern Baptist Mission (PVO)
- SDR - Swiss Disaster Relief (PVO)

GLOSSARY (cont.)

SECAMA	-	Catholic Relief Services of Mali (PVO)
SMF	-	Stromme Memorial Foundation
UDPM	-	People's Democratic Union of Mali
UNDP	-	United Nations Development Program
UNDRO	-	United Nations Office of Disaster Relief
UNICEF	-	United Nations Children's Fund
USAID	-	A.I.D. country field Mission
WAAC	-	West Africa Accounting Center
WFP	-	World Food Program
WHO	-	World Health Organization
WVRO	-	World Vision Relief Organization

## 1. INTRODUCTION

### 1.1 Background to the Evaluation

Drought has characterized the African scene since the beginning of the decade, culminating in 1984-1985 in food emergencies in 20 countries. U.S. food shipments to Africa in that year reached unprecedented levels, exceeding 3 million metric tons (MT). The United States alone supplied more than half the food aid requirements of Sub-Saharan Africa.

Although the harvests of 1985-1986 are much improved and the outlook is better for 1986-1987, the causes of the emergency are deep rooted and systemic. They involve interrelated historical, social, political, economic, and technical factors that have resulted in food demand outrunning food production in most African nations. Since the end of the 1960s, countries like Mali, which had traditionally been self-sufficient, have become increasingly dependent on grain imports to feed their growing populations. In Mali and in other countries, the drought-prone nature of many farming areas leads to a chronic emergency food aid syndrome.

The root causes of the food crisis in Mali can only be addressed by long-term development involving research, technological innovation, changes in the structure of food and agricultural production and marketing, and, above all, real incentives to farmers to produce and market more food crops. Meanwhile, emergency food aid situations will continue to occur and require response by the international community. Because of their magnitude, these food aid programs can be expected to significantly affect the process of African development.

The expectation that food aid programs, both short- and medium-term, will have important effects on country development led the Agency for International Development (A.I.D.) to plan an assessment of its emergency food aid programs in Africa to explore "options for organizing emergency food aid to alleviate immediate distress while at the same time setting the stage for longer-term development." A first step in this process was the review of A.I.D. experience from the 1983-1984 drought, which resulted in a report on lessons learned from that period. A second step was to commission evaluations of the 1984-1985 emergency food aid programs in Sudan, Chad, and Mali. The findings of these evaluations were then synthesized in a final report (A.I.D. November 1986a). A companion report presents the results of an analysis of issues related to policy formation and program management (A.I.D. November 1986b).

## 1.2 Purpose and Scope of the Evaluation

The principal purposes of the evaluation were (1) to assess the timeliness, appropriateness, and impact of the 1984-1985 emergency food assistance program in Mali; (2) to recommend measures to improve future U.S. emergency food assistance and disaster relief programs in Mali; and (3) to consider measures to improve the design of emergency food assistance programs in Africa in order to relate them more closely with national food strategies, including rehabilitation and longer term development.

In general, this study encompasses the various points set forth in the statement of work (see Appendix A) for the evaluation. However, only issues that apply to Mali are specifically addressed in this report. Suggestions applicable to the Sahel and other African countries are drawn from the experience in Mali.

## 1.3 Evaluation Methodology

The evaluation team spent 20 days in Mali. Team members met together and individually with Government officials; village leaders; beneficiaries; U.N. agency officials from the U.N. Disaster Relief Office (UNDRO), the World Food Program (WFP), the U.N. Children's Fund (UNICEF), and the Food and Agriculture Organization (FAO); donor agency representatives; and private voluntary organization (PVO) personnel.

The entire team visited Region VI, and individual members visited Regions III, IV, and VII. The team reviewed secondary sources such as PVO field and headquarter reports to the USAID Mission, USAID/Mali reports of food monitors, Government reports, and Mission memoranda and situation report cables to A.I.D./Washington. A comprehensive report, including recommendations, on the 1984-1985 drought, published in March 1985 by the A.I.D. Office of U.S. Foreign Disaster Assistance (OFDA), was particularly useful.

### 1.3.1 Assessment of Institutional Capacity and Responses to the Food Emergency

The team members met with the USAID Mission Director, key Mission personnel, the U.S. Ambassador, the Mali team of the Drought Relief Assistance Group, senior government officials (central, regional, and local), U.N. agency heads and staff, and PVO heads and staff at headquarters and in the field. The team attended a meeting of the Mali National Committee for Aid to

Drought Victims (CNAVS) and reviewed minutes of CNAVS-donor meetings that took place during 1985.

The evaluation team reviewed the history of U.S. food aid programs in Mali, along with institutional arrangements within the Government and cooperation with donors. The USAID/Mali Country Development Strategy Statement was reviewed, with particular reference to U.S. developmental strategy for food and agriculture and U.S. participation in the multidonor-supported Cereal Market Restructuring Project (PRMC). The team also reviewed, from a Malian perspective, the role of the A.I.D. Regional Development Services Office for West and Central Africa (REDSO/WCA) in Abidjan, Ivory Coast.

Secondary sources reviewed by the team included special studies of the drought situation in Mali in 1984-1985, which were carried out or commissioned by USAID/Mali, and the system for early warning and needs assessment. The team discussed at length the lessons learned from the 1984-1985 program with the USAID/Mali Food for Peace officer, the Drought Relief officer, and other Mission officials. The team discussed its preliminary findings and conclusions with the country team's Drought Relief Action Group a few days before the team's departure.

### 1.3.2 Examination of the Role of Private Voluntary Organizations

The team interviewed officials of nearly all private voluntary organizations (PVOs) involved in the distribution of U.S. emergency food aid: CARE, the Southern Baptist Mission (SBM), Africare, the Stromme Memorial Foundation (SMF), the World Vision Relief Organization (WVRO), Medecins sans Frontieres (MSF), and the Malian Catholic Relief Agency (SECAMA). The team reviewed reports of PVO operations that PVOs submitted to USAID/Mali and reports prepared by USAID staff assigned to monitor the situation and food distributions in the field (see Appendix B).

The team selected one PVO, CARE, for a more in-depth review (see Appendixes C) because A.I.D. had arranged for CARE to handle over one-half of the U.S. government-to-government food grants to Mali for free distribution. The team was able to review CARE's operations with the staff who were responsible for all field distributions during the year and to observe some end-of-year distributions in Dire in Region VI.

### 1.3.3 Examination of Social, Nutritional, and Health Impacts and Interventions

The team met with the USAID/Mali health officer and the operating heads of UNICEF and Medecins sans Frontieres to obtain a picture of health and nutritional interventions and their impact on the drought-affected populations. The team reviewed key reports on the nutritional situation in Regions II and VI in 1984. The team sociologist interviewed local officials and beneficiaries on field trips to Regions III, IV, VI, and VII (see Appendix D).

### 1.3.4 Assessment of Logistical Aspects of the Emergency Food Assistance

The team visited the storage and grain handling facilities of the Malian Grain Marketing Board (OPAM) in Bamako, Sekou, Goundam, Dire, and Timbuktu and CARE's facilities in Region VI. The team was accompanied by a REDSO logistics adviser who provided an analysis of the logistics of moving grain from the ports of Abidjan to Mali--which accounted for most of the U.S. food shipped in 1984-1985--and reviewed with the team the West African regional context within which the emergency food assistance program took place in Chad, Burkina Faso, Cameroon, Niger, and Mali (see Appendix E). Discussions with USAID/Mali and OPAM staff helped clarify logistics planning and the resolution of problems encountered, particularly in connection with freight rates for trucking food from the ports to inland points in Mali; the emergency Gao ferry operation; delayed Ghanaian bartered corn shipments; delayed trucking from the Port of Lome, Togo to Region VII via Niger; and supply of Region VI. The team also reviewed various country transportation studies including those prepared by UNDRO with Swiss Disaster Relief in the period May-October 1984.

## 2. COUNTRY SETTING

Several factors are important to an understanding of the country setting and the nature of emergency food assistance programs in Mali.

### 2.1 Recurrence of Drought

The 1984-1985 drought was the fourth in 5 years and the worst in Mali's history. Domestic cereal production during crop year 1980/1981 reached only 56 percent of the nutritional norm.

Rains were better for the 1981/1982 crop year, but during the following 3 years, Mali's herders and farmers experienced drought of increasing severity. By 1984/1985, many communities had experienced up to 5 years or more of crop failures. As a result, on-farm stocks of seed and food grain were at an all time low.

Analysis of grain consumption requirements and production by region indicates that only Region III, in the favorable Guinean-Sudanian rainfall zone, and Region IV, with the significant irrigation potential of the inner delta of the Niger River, are surplus producers. Regions I and VII produce less than 20 percent of their needs; Regions II and VI, less than 60 percent; and Region V, about 70 percent (see Table 1 and Figure 1).

Table 1. Estimates of the Proportion of Food Requirements Met by Local Production in the Regions of Mali, 1984

Region	Production (MT)	Food Requirements (MT)	Percent Covered
I Kayes	36,126	239,000	15
II Koulikoro	151,423	255,000	59
III Sikasso	364,992	301,000	121
IV Segou	316,704	296,000	107
V Mopti	220,278	309,000	71
VI Timbuktu	74,058	134,000	55
VII Gao	8,655	101,000	9
Bamako	<u>(100,000)</u>	<u>150,000</u>	<u>(-50,000MT)</u>
Total	1,172,236	1,785,000	66

Source: Government of Mali (December 1985).

The most vulnerable groups are farmers dependent on rainfed agriculture and herders dependent on livestock and transhumance grazing in the northern and central regions of the country--the Sahelian and Sahelian-Sudanian zones (see Figure 2). In these regions, the rainy season is short (90 to 130 days) and the rainfall light (usually less than 30 to 40 inches), and variability is high: interannually and intraseasonally and in spacial distribution and quantity. The extreme variability of rainfall, the poor moisture retention of the soil, and the lack of supplemental irrigation make crop production (mainly millet, sorghum, and cowpea) a high-risk, drought-prone venture and pasture production unreliable.

Figure 1: Map of Mali Showing Drought-Affected Areas, 1984-1985

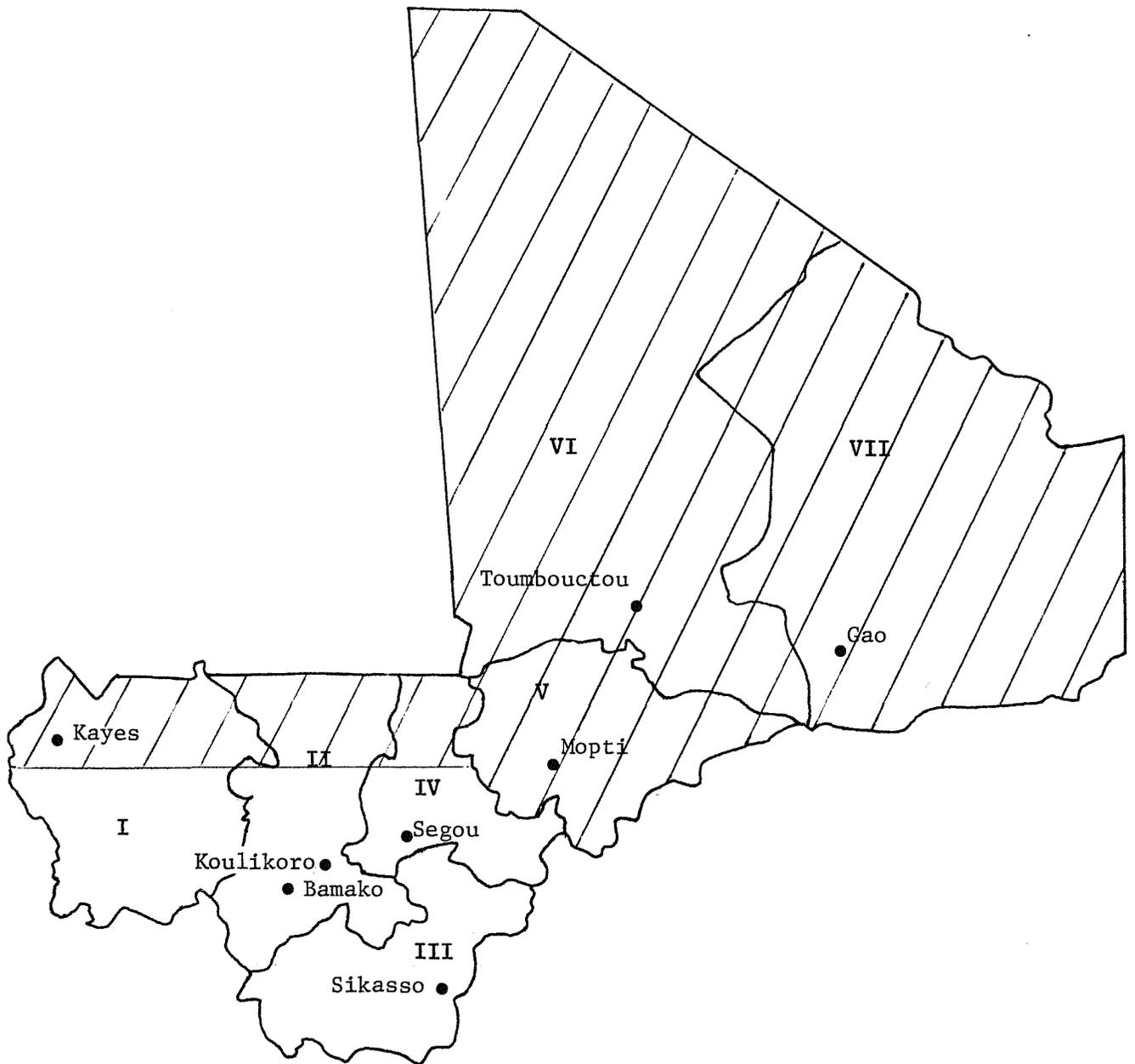
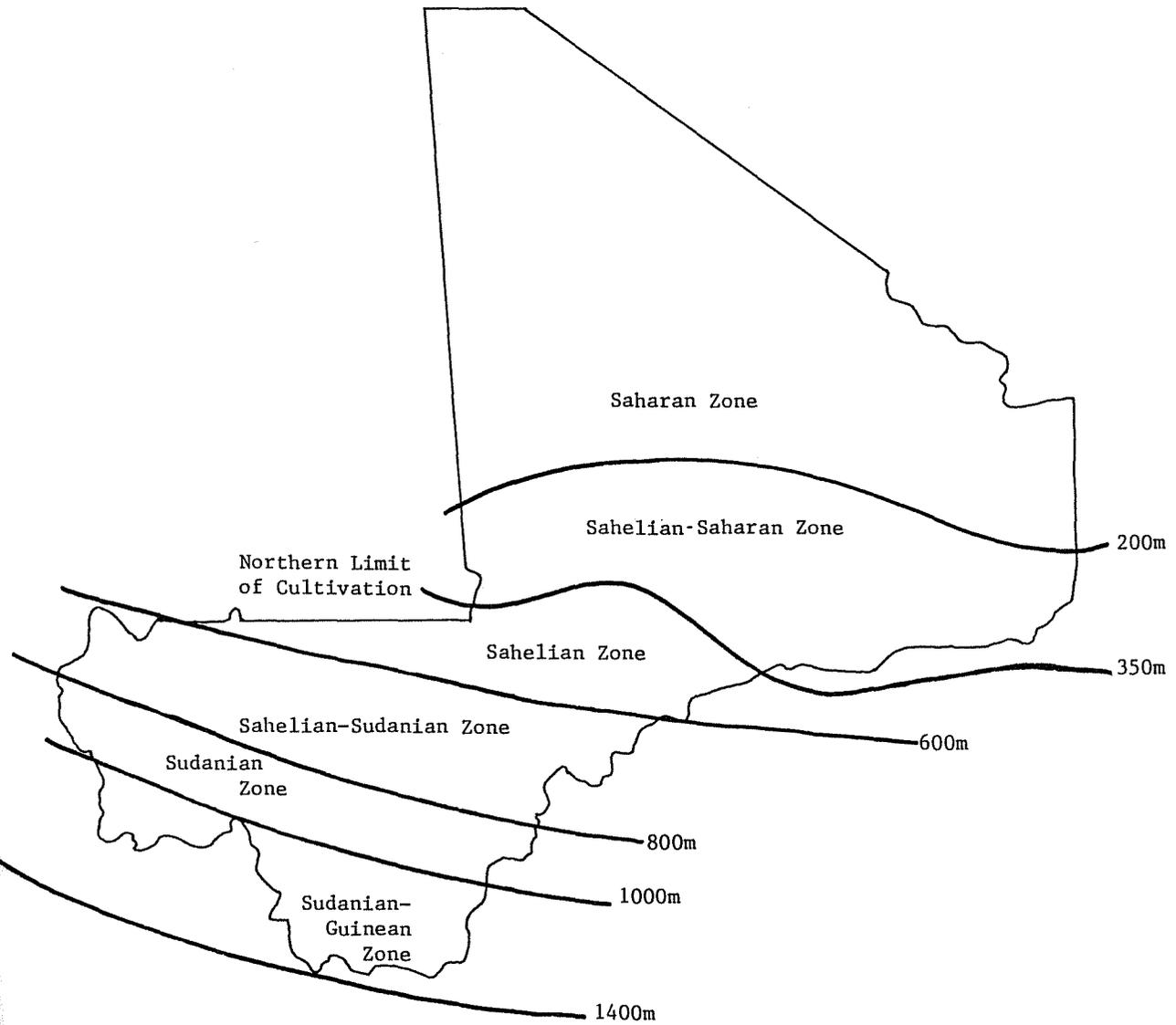


Figure 2. Rainfall and Ecological Zones of Mali



Source: Government of Mali (December 1985).

## 2.2 Food Deficits

With population increasing at about 2.6 percent annually and grain production in most cercles stagnant or increasing less than population (see Table 2), Mali has, since the early 1970s, been a food-deficit country obliged to import increasing amounts of food grain to meet its domestic requirements. As a poor country with limited exports and stringent balance of payment constraints, Mali has become increasingly dependent on donor assistance to finance its cereal imports. These imports increased from 18,560 MT in 1979-1980 to 32,610 MT in 1980-1981, 53,460 MT in 1981-1982, 83,800 MT in 1982-1983, 124,580 MT in 1983-1984, and about 250,000 MT (estimated) in 1984-1985.<sup>1</sup>

Table 2. Growth in Food and Agricultural Production in Mali, 1960-1982 (percentages)

Category	Total		Per Capita	
	1960-70	1970-82	1960-70	1970-82
Total Agricultural Production	1.6	2.7	-0.9	0.0
Food Production	1.3	2.5	-1.2	-0.2

Source: World Bank, cited in Government of Mali (December 1985).

## 2.3 Donor Cooperation

Mali is unique, at least in Africa, in that, since 1981-1982, major food aid donors have cooperated under a common project--the Mali Cereal Market Restructuring Project (PRMC)--to provide food aid (250,000 MT of cereal imports over the 5-year period 1982-1986) in exchange for policy and program reforms by the Government, cereal market liberalization, improved management

<sup>1</sup>Data on food aid imports through 1983/1984 are taken from a May 1985 report by the Cereal Market Restructuring Project (PRMC) after three consecutive cereal campaigns. The estimate for 1984-1985 is that of the evaluation team.

and organization of OPAM, and production incentives as part of the national food policy strategy.

A unique feature of this project is the understanding that the use of the local currency proceeds from sales of the PRMC donor grain imports requires the common agreement of all the donors and the Government. The project has achieved success in liberalizing grain marketing and in improving operations of OPAM (reducing its deficit considerably). The donors have also been working with the Government of Mali on the intractable problem of improving operations of the Office du Niger on a major irrigation development effort (50,000 hectares) on the Niger River.

Policy dialogue among major donors and the Government of Mali on food strategy, financial stabilization, economic recovery, and development has been underway since 1979. The United States has been an active participant in this dialogue. However, U.S. participation in food aid programs was suspended in 1977 pending resolution of counterpart account problems. As a result, the United States was not an original member of PRMC.

U.S. food aid was reinstated in 1982 with a small emergency food aid program, and in the following year the United States and Mali reached agreement on a Title II Section 206 program, which provided for U.S. participation in the PRMC in FYs 1983-1985--the final 3 years of the 5-year program. Under the Section 206 agreement, the United States is to supply a total of 25,000 MT of rice. Of this, 10,000 MT was programmed in 1983-1984 and 5,000 in 1984-1985, and the balance was to be programmed in 1985-1986 (for 1986). U.S. food aid amounted to 10,000 MT in 1982-1983, 25,810 MT in 1983-1984,<sup>2</sup> and about 95,000 MT in 1984-1985.

#### 2.4 Indigenous Institutional Arrangements for Managing Food Assistance

Because of Mali's increasing dependence over the past 15 years on food imports and emergency food requirements, the Government of Mali has gradually established mechanisms to deal with food aid. These include OPAM, which processes and receives Government grains for sale and acts to regulate the grain market; CNAVS, which administers emergency food aid and coordinates donor assistance; the National Food Security Stock program, which with German aid, stores and manages 38,000 MT of security food stocks (with plans for expansion to 58,000 MT); and the Ministry of Agriculture, which has purview over the World Food Program.

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<sup>2</sup>Of which 10,000 MT of rice under Section 206 was delivered in the beginning of 1984-1985.

## 2.5 Private Voluntary Organizations

Several PVOs in Mali were already involved in development activities in 1984. As the drought continued and increased in severity, these organizations became increasingly concerned about measures for relief and rehabilitation in drought-stricken areas. The work of the Southern Baptist Mission (SBM) in 1983-1984, which had handled a large distribution of grain, suggested that PVOs could assume a greater role in helping deal with the 1984-1985 food emergency. PVOs in Mali included SBM, MSF, CARE, SECAMA, WVRO, UNICEF, International League of Red Cross Societies (LICROSS), Norwegian Church Aid (NCA), OXFAM, Africare, Swiss Disaster Relief (SDR), Euro-Action Accord (EAA), and Veterinaires sans Frontieres (VSF). (Appendix B reviews the activities of several PVOs in 1984-1985.)

## 2.6 Regional Organization of Food Aid Programs

Emergency food operations in Mali are organized by region. The bulk of imported food arrives from overseas at several West African ports that are used by all donors to supply Mali and other West African/Sahelian countries. In 1984-1985, major emergency food aid programs in Cameroon, Niger, Burkina Faso, and Chad competed logistically with Mali for port access and donor resources.

A.I.D.'s Regional Economic Development Services Office for West and Central Africa (REDSO/WCA) in Abidjan, Ivory Coast was available to assist in managing transshipments from West African ports to Mali (as well as to the other Sahelian countries that received U.S. emergency food assistance in 1984-1985).

# 3. THE 1984-1985 EMERGENCY AND THE U.S. RESPONSE

## 3.1 Introduction

The very positive features of the Mali program provide valuable lessons for the future and for other countries in grappling with the problem of organizing and managing effective emergency food assistance programs. By building on the positive features and by strengthening planning and implementation efforts to correct shortcomings, where necessary, Mali can improve the impact and cost-effectiveness of future emergency food programs.

The following sections trace highlights in the evolution of the 1984-1985 food emergency in Mali and the U.S. response to

it. A time-line shows the three-phase evolution of the emergency and the U.S. response.

### 3.2 Phase 1: May-December 1984

The first phase covers the last 6 months of the 1983/1984 crop year and the 1984 rainy season and harvest. It encompasses the period of early warning, needs assessment, and initial planning for the 1984-1985 food emergency. During this phase, total requirements for food grain aid were established at over 200,000 MT. Requirements for Government free distribution of grain to feed rural populations facing famine conditions--the difficult task--were estimated and programmed by the Government at 60,000 MT. By December, Mali had received shipments of about 56,000 MT of food aid--some of which were carryovers of food aid committed by donors to help meet needs in 1983-1984. Donors made firm commitments to deliver 69,000 MT more of food aid, of which A.I.D. agreed to deliver 30,300 MT.

#### Time-Line: May-December 1984

1984  
May-  
June

- The United States plans implementation of a small emergency food aid program of 10,000 MT, of which 2,000 MT is for free distribution by the Government and 8,000 MT is authorized for sale. In addition, the Southern Baptist Mission (SBM) is importing about 5,500 MT of Title II grain for distribution to needy persons.
- Reports indicate that serious famine conditions are developing. An MSF study reveals that malnutrition among young children in Region VI is more serious than during the "great" Sahel drought in May 1974. USAID Mission and U.S. Embassy specialists visit Region II, 60 miles from Bamako, and find drought-related acute undernutrition in all villages surveyed.

July-  
Mid-Aug.

- PVOs and Government officials at regional, cercle and arrondissement levels increasingly report food shortages, drought stress, and migration.
- Africare requests information on emergency food distributions.
- SBM is distributing Title II grain.

- July-  
Mid-Aug.           -- USAID/Mali envisages increasing use of PVOs to help manage emergency distribution in 1984-1985.
- The Government, through CNAVS, declares a food emergency in Regions VI and VII.
- Aug.-  
Mid-Sept.          -- USAID/Mali advises A.I.D./Washington of the likelihood of an early emergency food requirement in 1984-1985. USAID/Mali formalizes a request for 10,000 MT of emergency food aid for distribution in Regions VI and VII.
- Donors agree to organize a multidonor emergency food and disaster relief assessment as early as possible, starting in October.
- U.S. Ambassador Ryan uses his discretionary disaster relief fund (US\$25,000) for grants to UNDR0 in Mali and to the Malian Coordinating Committee for Emergency Aid (CCAU) to help cover inland transportation costs of food to stricken areas.
- The A.I.D. Office of U.S. Foreign Disaster Assistance (OFDA) grants US\$330,000 to CCAU and US\$50,000 to UNDR0 for inland transport of food to stricken areas from its 1983-1984 supplemental allocation.
- USAID/Mali surveys conditions in Region VI.
- Sept.-  
Mid-Oct.           -- Evidence accumulates that the harvest will be very poor and range conditions bad. Rainfall ranges from 20-80 percent of normal, and its distribution is very poor. Hard-hit areas are northern portions of Regions I, II, and IV and most or all of Regions V, VI, and VII.
- In addition to poor rainfall, the Niger River, whose floods normally provide for irrigation in a 20,000 square kilometer area--the inner delta--is at a 100-year low.
- Reports from the Dogon Plateau and other areas indicate disastrously low water tables, widespread crop failures, and increasing migration from rural areas.
- USAID/Mali asks A.I.D./Washington to expedite approval of its initial request for 10,000 MT of emergency food assistance and requests allocation of another 10,000 MT.

Sept.-  
Mid-Oct.

-- The Malian Government analyzes the situation and finds the following:

- The largest national food deficit ever recorded: 481,000 MT
- An estimated 1.2 million people severely affected in Regions I, II, IV, V, VI, and VII
- An estimated 95,000 people displaced (migrants, or population flottante)
- A requirement for 233,000 MT of food aid

Oct.-  
Mid-Nov.

-- The U.N. Food and Agricultural Organization (FAO)/Multidonor Mission reviews emergency food disaster relief requirements (October 14-28). It finds Government estimates of total national deficit "plausible" and recommends the following:

- Total food aid of 202,000 MT
- Provision of free food distribution in FY 1985 of 70,000 MT, with emergency reserves of 30,000 MT positioned in Regions I, V, VI, and VII
- Relief and rehabilitation assistance to settle displaced groups and for village wells
- Reclassification of certain pastoral and agro-pastoral zones and resettlement assistance to those living in these zones

-- In October, the Government of Mali distributes 2,000 MT of emergency U.S. food in Regions VI and VII under the 1983-1984 program.

-- Early in November, two U.S. epidemiologists from the Centers for Disease Control begin to investigate cholera outbreaks, which had caused several hundred deaths between July and December. The team recommends reorganization of cholera control measures in Mali.

-- USAID/Mali formulates "lessons learned" from the 1983-1984 program for the Food for Peace Office of A.I.D.

-- As of early November, according to a USAID/Mali telegram to A.I.D./Washington, no consensus has evolved among donors on the emergency response.

- Oct.-  
Mid-Nov.           -- A.I.D./Washington informs USAID/Mali of its approval of 15,000 MT of emergency food aid: 5,000 MT for sale and 10,000 MT for free distribution through CNAVS.
- Mid-Nov.  
-Dec.               -- A USAID/Mali-commissioned study carried out in the Djenne, Tenenkou, and Youvarou cercles in Region V reveals widespread famine, rural exodus, and threatening disintegration of rural structures.
- USAID/Mali requests A.I.D./Washington to allocate an additional 15,300 MT of Title II food (15,000 MT of grain and 300 MT of nonfat dry milk) and outlines its strategy to provide emergency grain for sale and free distribution.
- In December 1984, 10,000 MT of rice programmed under the PL 480 Title II Section 206 agreement in 1983-1984 arrive; public stocks in the country are very low.
- CARE officials survey conditions in Region VI.
- The difficult situation in the Timbuktu and Gao Regions (VI and VII) attracts the attention of the media. A "Sixty Minutes" telenews team visits Mali to report on the drought.
- CNAVS and OPAM complete the annual Food Distribution Plan (Appendix G) for FY 1985, which includes the following:
- Plans for a total distribution of 205,000 MT (145,000 MT by sale)
  - Emergency distribution of 60,000 MT of Government grain (reduced from the 70,000 MT proposed by the evaluation team)
  - Assumption that donor food aid deliveries (in time for use) will be 157,000 MT in response to total Government request of 233,000 MT
  - Programming of three-quarters of the 60,000 MT for free distribution for Regions V, VI, and VII
- A.I.D. approves the additional request for 15,000 MT of Title II emergency food, raising the amount committed to 30,000 MT. In addition, small amounts have been approved for PVOs.

As of the end of December, donor deliveries of food aid for 1984-1985 amount to 56,000 MT, of which 10,000 MT are from the United States. Firm commitments amount to 69,000 MT, of which 30,000 MT are from the United States. The shortfall is still more than 100,000 MT.

### 3.3 Phase 2: January-June 1985

The second phase opened early in January 1985 with the announcement of the African Hunger Relief Initiative by President Reagan. USAID/Mali mobilized for the emergency by redirecting staff resources and placing top priority on the emergency.

During this period programming of U.S. food assistance was completed. Total U.S. food programmed amounted to 95,344 MT (Table 3). This does not include the 10,000 MT of rice delivered to Mali in December, which was programmed under the regular Section 206 food aid program for 1983-1984. Of the 95,344 MT, 76,939 MT was emergency food aid, of which 60,300 MT was government-to-government Title II grants for emergency feeding. Other emergency food provided totaled 16,639 MT:

- 10,000 MT of Title II barter corn from Ghana granted to WVRO for free distribution in Regions I and VII
- 5,439 MT of rice, nonfat dry milk, and vegetable oil granted to LICROSS and used for general and supplemental feeding
- 1,200 MT of nonfat dry milk granted to the World Food Program (WFP) and LICROSS under Title II Section 416 for supplemental feeding

In addition, 18,405 MT of regular food aid was programmed in 1984-1985: 5,000 MT of rice under the Title II Section 206 program (shipped to Abidjan on October 12, 1985) and 13,405 MT of food for the regular WFP food-for-work program and for general distribution.

Shipment of the 60,300 MT of government-to-government Title II food to West African ports began in February 1985 and was completed by June 23 (see Table 4). Transshipments from these ports to Mali totaled 4,620 MT through March, 12,237 in April-May, and 19,839 MT in June (Table 5).

Distribution during Phase 2 began in March 1985 with the initial 10,000 MT "tranche" that had been programmed in September/October 1984:

Table 3. U.S. Assistance Programmed for the  
1984-1985 Drought Relief Program in Mali

Food and Nonfood Assistance	Volume (MT)	Cost (\$000, including transport)
<b>Food Aid</b>		
Emergency Food Aid (Supplemental)		
Title II (government-to-government)	60,300 <sup>a</sup>	28,272.1
Title II (through LICROSS)	5,439 <sup>b</sup>	3,021.6
Title II Barter (through WVRO)	10,000 <sup>c</sup>	4,000.0 <sup>d</sup>
Title II, Section 416 (through WFP)	360 <sup>e</sup>	336.6
Title II, Section 416 (through LICROSS)	840 <sup>e</sup>	785.4
Regular Program		
Title II Section 206 (government-to-government)	5,000 <sup>f</sup>	2,549.7
World Food Program	<u>13,405</u>	<u>4,227.8</u>
Subtotal, Food Aid	<u>95,344</u>	<u>43,193.2</u>
<b>Nonfood Aid--OFDA Funded</b>		
Cholera Supplies, CDC Team		25.0
OFDA Assessment		22.9
DOD Airlift, Relief Supplies		65.0
DOD Survey Team, Consultant		15.5
DOD Airlift and Operations, Gao Raft		810.0 <sup>g</sup>
CARE Emergency Food Transport Grant		2,154.8 <sup>g</sup>
Cholera Supplies and Support		112.0 <sup>g</sup>
Koro Cercle, Self-Help Wells		36.0 <sup>g</sup>
Food Monitor		30.0 <sup>g</sup>
Other		<u>50.0</u>
Subtotal, Nonfood Aid		<u>3,591.2</u>
<b>Total</b>		<u>46,784.4</u>

<sup>a</sup>20,000 MT rice, 15,000 MT cornmeal, 25,000 corn, 300 MT nonfat dry milk.

<sup>b</sup>Rice, corn, cornmeal, and nonfat dry milk.

<sup>c</sup>White corn from Ghana.

<sup>d</sup>Estimated by evaluation team.

<sup>e</sup>Nonfat dry milk.

<sup>f</sup>Rice; not including the 10,000 MT programmed in 1983-1984 that arrived in 1984-1985.

<sup>g</sup>Supplemental appropriation, African Hunger Relief Initiative.

Source: A.I.D. 1985.

Table 4. Title II Shipments of Government-to-Government  
Emergency Food to Mali in 1985

Ship	Commodity	Port	Arrival	Gross Quantity Shipped (MT)
Telfair Pilot	rice	Abidjan	2/18/85	2,565
Princess	cornmeal	Abidjan	2/26/85	5,087
	rice	Abidjan	2/26/85	2,582
Kallastratsos	corn	Lome	3/09/85	5,012
Cape Matapas	cornmeal	Abidjan	4/22/85	5,104
	nonfat dry milk	Abidjan	4/22/85	303
Kraigher	rice	Dakar	4/24/85	5,070
Fratzia	corn	Abidjan	4/30/85	10,046
Gundulie	corn	Dakar	5/07/85	6,265
	cornmeal	Dakar	5/07/85	1,524
	corn	Abidjan	5/16/85	3,760
Chelmer	rice	Abidjan	6/02/85	10,024
Epos	cornmeal	Abidjan	6/23/85	3,560
Ltacqueville	sorghum <sup>a</sup>	Abidjan	9/24/85	1,300

Totals

corn:	25,083 MT
cornmeal:	15,275 MT
sorghum <sup>a</sup> :	1,300 MT
rice:	20,231 MT
nonfat dry milk:	303 MT

<sup>a</sup>Replacing 1,113 MT of corn that was transferred to Senegal.

Table 5. Weekly Port Dispatches of Government-to-Government Emergency Food Shipments to Mali From Abidjan, Lome, and Dakar (based on weekly port dispatch cables; in metric tons)

Week of	Abidjan			Lome	Dakar
	U.S. Food	All Donors	Balance	U.S. Food	U.S. Food
2/25-3/02	648.5 <sup>a</sup>				
3/04-3/09	648.5 <sup>a</sup>				
3/11-3/16	648.5 <sup>a</sup>				
3/18-3/23	648.5 <sup>a</sup>			480	
3/25-3/30	919			635	
4/01-4/06	1,191			report missing <sup>b</sup>	
4/08-4/13	857 <sup>c</sup>			1,222	
4/15-4/20	1,224			0	
4/22-4/27	1,033			0	
4/29-5/04	1,837			0	
5/06-5/11	540 <sup>d</sup>			0	
5/13-5/18	1,640	3,912	26,042		0
5/20-5/25	report missing	--	--	0	
5/27-6/01	2,082	8,972	17,070	0	
6/03-6/08	3,240	5,281	21,836	245	
6/10-6/15	3,441	4,228	17,692	30	
6/17-6/22	3,633	5,063	16,119		0
6/24-6/29	4,273	6,718	9,401	427	4,550
7/01-7/06	4,177	4,898	5,763	320	1,576
7/08-7/13	2,883			607	2,287
7/15-7/20	1,276	10,001	7,052	199	
	Abidjan complete				
7/22-7/27				170	795
7/29-8/03				94	
8/05-8/06				198	
				Lome complete	

<sup>a</sup>Average dispatches during the period 2/25-3/23; the 25-percent premium trucking rate went into effect on 3/23.

<sup>b</sup>Estimated at 4,875 - 4,625 = 230.

<sup>c</sup>Short week because of Easter.

<sup>d</sup>Completed available stocks.

- 2,500 MT of corn by CARE in Douentza cercle in Region V
- 2,200 MT of cornmeal by the Stromme Memorial Foundation (SMF) in the Djenne, Youvarou and Tenenkou cercles of Region V
- 650 MT of cornmeal by CARE in Niona and Ke-Macina cercles in Region IV
- 2,150 MT of cornmeal by Norwegian Church Aid (NCA) in Gossi and Gourma cercles in Region VI
- 2,500 MT of corn by Swiss Disaster Relief (SDR) and UNDRO in all cercles in Region VII

These distributions provide a substantial ration per person of 4 to 6 weeks. For example, in the Douentza cercle program completed on May 12, CARE distributed 2,486 MT of food to 120,899 needy persons in 262 disaster-stricken villages with a basic ration of one sack of corn (46 kilograms) for three persons.<sup>3</sup> In all, these distributions assisted about one-half million people.

Distributions by CARE in Region VI began at the end of June.

Time-Line: January-June 1985

- 1985  
Jan.
- President Reagan announces the African Hunger Relief Initiative. The United States guarantees to meet half the relief food needs of Africa and challenges donors to supply the rest. Congress is requested to vote supplemental financing of US\$60 million.
  - The United States announces a Food for Progress policy aimed at solving long-term food and agricultural problems through policy reforms, research, training, private sector involvement, and improved rural infrastructure.
  - A.I.D./Washington establishes the African Inter-Agency Task Force to deal with the African Hunger Initiative.
  - USAID/Mali mobilizes for a major effort to continue through 1985.

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<sup>3</sup>Rations are based on a requirement of 500 grams per day per person. (See also Appendix H, Section 1.5.)

- Jan.
- USAID/Mali surveys conditions in Region VII and reports to A.I.D./Washington. The number of refugees is 20,000. USAID/Mali requests A.I.D./Washington to finance medical supplies and food for supplemental feeding.
  - First Government of Mali/donor drought coordination meeting (CNAVS, with donor representatives); subsequent meetings are scheduled every 2 weeks with major donors and prove a valuable mechanism for strengthening Government/donor coordination.
  - USAID/Mali provides A.I.D./Washington with an updated needs assessment. Based on a national food balance accounting approach, it calculates that an additional 71,000 MT of food grain aid will be required to meet needs in 1985.
  - USAID/Mali requests an additional 35,000 MT of emergency food aid: 15,000 MT for sale and 20,000 MT for free distribution (using CARE).
  - The National Transport Organization calculates that from November 1984 through January 31, 1985, 88,688 MT of cereal had been transported from the ports of Lome, Abidjan, and Dakar to centers in Mali.
- Feb.
- An OFDA assessment team working closely with the USAID/Mali drought office conducts a complete review of the food emergency in Mali.
  - The first U.S. shipment of 2,550 MT of rice arrives in Port Abidjan on the USS Telfair on February 18 and is unloaded in 2 days (see Table 4). The USS Princess arrives in Port Abidjan with 5,085 MT of cornmeal and 2,576 MT of rice on February 26 and is unloaded by March 4.
  - The United States approves 20,000 MT more of Title II emergency food aid for free distribution.
  - USAID/Mali requests two additional food monitors, bringing the total to four.
  - Washington reviews the request for 15,000 MT of additional Title II food for sale and approves 10,000 MT. This approval brings total U.S. emergency food assistance grants to the Government of Mali to 60,300 MT.

- Feb.           -- USAID/Mali completes planning for the first tranche--10,000 MT--of the free distribution program. Distribution is planned for March-May with the assistance of CARE, SMF, NCA, and SDR and UNDRO in Regions II, V, VI, and VII. Distribution of the second tranche of 10,000 MT is tentatively planned for June-September in Regions I, II, III, IV, and VI with assistance from MSF, SBM, and CARE. Distribution of the third tranche of 20,000 MT is tentatively planned for July-October in Regions II, IV, and VI with the help of CARE (A.I.D./OFDA 1985, 61).
- The U.S. Inter-Agency Task Force on the African Famine assesses transport problems. The Task Force recommends that all grains be brought through the ports to Mali by June or July, prior to the rains. However, USAID/Mali has projected that much of the food aid could be delivered as late as October, giving 8 months (March-October) to put food aid in place--an estimate that appeared reasonable to the OFDA assessment team because the harvest would not be available until late October and food would be required through that month (A.I.D./OFDA 1985, 48). Therefore, USAID/Mali advises A.I.D./Washington that it disagrees with a June 15 cut-off date for food aid deliveries and a 4.5-month food aid delivery year.
- The Malian Ministry of Interior announces that the drought has affected 60 percent of Malians and that 135,000 MT of food is still needed for 1.9 million drought victims (news report, MTM, February 22, 1985).
- Government of Mali-controlled tariffs on trucking rates present a problem: the tariff is too low to attract sufficient trucks to transport the food from West African ports to Mali. USAID and other donors urge the Government to increase the rate. The Government authorizes a 25-percent premium for truckers, which goes into effect March 23, 1985. A.I.D. authorize REDSO to pay the premiums in order to expedite food deliveries.
- The USAID/Mali Deputy Mission Director surveys the drought situation in Region II.

- Mar.-  
Apr.
- The USS Kallastratsos arrives in Lome with 5,000 MT of corn on March 9; unloading is completed by March 22. About 2,000 MT are transshipped, but poor road conditions delay transshipment between May and July. Transshipment is completed August 6, 1985.
  - USAID/Mali requests an emergency OFDA grant of US\$2.56 million for the CARE Emergency Transport project (March 19) and advises that it will borrow US\$834,000 in local currency from the Cereal Market Restructuring Project (PRMC) to purchase four-wheel drive trucks for use by CARE in the program.
  - Vice President Bush arrives in Mali with a plane-load of relief supplies; he reviews the disaster relief program with Malian Government, U.S. Embassy, and USAID/Mali officials.
  - The OFDA consultant report on the drought situation, with recommendations, is published in March. Its salient features are the following:
    - Endorses USAID/Mali's request for an additional 35,000 MT of food aid
    - Notes USAID/Mali's emphasis on food needs; recommends consideration of other needs such as seed and animal restocking
    - Recommends assistance to improve the important 150-km stretch of road between Ferkessidougou, Ivory Coast and the Malian border
    - Recommends the use of the Port of Lome (but fails to recommend repairs to roads from Niamey into Region VII)
    - Notes the problem of inadequate ferry facilities on the Niger River at Gao (Region VII), which hinders the crossing of heavy trucks
    - Endorses suggestions for the barter of Title II rice (to be provided later) for Ghanaian corn and Senegalese sorghum for Mali
    - Endorses the proposal for financing CARE emergency food transport for the Government of Mali; suggests that PVOs should make financial contributions for such efforts

- Mar.-  
Apr.
- Notes the need for more accurate demographic information; lack of data makes general planning and specific targeting of food aid a guessing game; recommends assistance to Mali to improve demographic data
  - Recommends that a full-time drought relief officer be appointed for a period of 2 years--recognizing that Mali's emergency food problems are long-term, requiring long-term attention
- The first delivery of U.S. grain arrives in Segou on March 27.
- CARE, SMF, and NCA commence food distributions in April under the first tranche programs.
- A representative of the A.I.D. Office of Food for Peace visits PVO distribution programs in Region V and observes conditions in Regions VI and VII.
- A.I.D. grants 10,000 MT of Title II-bartered corn from Ghana to WVRO. Arrangements for bagging and turning the corn over to WVRO are initiated with the Ghana Food Distribution Corporation.
- USAID/Mali develops a plan to deal with the critical problem of supplying Region VII. Road conditions rule out supply from Niger. The normal Gao River crossing ferry is out of commission, and the replacement ferry is too small to handle large trucks. USAID/Mali endorses the recommendation of technical specialists to airlift a military raft to Gao for supply operations through October. An OFDA grant is requested.
- May-  
June
- The CARE Emergency Transport project is approved on May 21. CARE orders 25 trucks to carry out the program and rents and borrows trucks until they arrive. CARE mobilizes its second team for operations in Region VI. Seven of the 25 CARE trucks are delivered. CARE begins distribution at the end of June.
- OFDA approves the Gao ferry project. The military raft arrives by airlift and is put into operation by a U.S. military team (with amazing efficiency and equally amazing lack of press coverage).

- May-  
June
- USAID/Mali negotiates a local contract for emergency transport of grains to Region VI, hoping to move in 2,000 MT in June. The contractor fails. Emergency airlifts by Italy and Algeria deliver 750 MT of grain to Timbuktu in June. CARE commences distributions in hard-hit Goundam cercle late in June.
  - USAID/Mali studies the agricultural situation in the Dogon Plateau (Region V) and hunger, immigration, and resettlement in Region III.
  - A.I.D. assigns a full-time disaster relief officer to Mali for 2 years to oversee implementation of the program and plan for future activities.
  - The first transshipment of Ghanaian Title II-barter corn begins at the end of June. WVRO begins distributions in Region I (Niono cercle) and Region VII (all cercles) in the first week of July.
  - Africare submits a proposal to continue the village self-help pump irrigation scheme in Dire, Region VI.
  - UNICEF requests medicines and vaccines for at-risk populations.

### 3.4 Phase 3: July-November

This final phase in Mali was marked by the rainy season and the harvest in October and November. (The crop year runs from November 1 to October 31.) Most of the emergency distribution was carried out in this period. In Regions VI and VII, CARE and WVRO continued distributions well into November to meet continuing needs.

#### Time-Line: July-November 1985

- 1985
- July -  
Aug. -- WVRO initiates emergency distributions in Regions I and VI early in July.
  - REDSO completes transshipments of the 60,300 MT of U.S. food aid from the ports of Lome, Dakar, and Abidjan in August.

- July-  
Aug. -- USAID/CNAVS allocate 400 MT of cornmeal to Medecins sans Frontieres and 400 MT to UNICEF for supplemental feeding programs.
- CARE distributes food in Ke-Macina and Niono cercles in Region IV and in Goundam cercle in Region VI.
- Other agencies continue their distributions: SMF, SBM, NCA, SECAMA, and the People's Democratic Union of Mali (UDPM).
- CARE receives delivery of 18 trucks in August.
- Sept.  
Oct. -- In preparation for 1985-1986, CNAVS, at donor request, establishes a subcommittee, which includes donor participation, to deal with needs assessment and forecasting of national crop and range conditions.
- USA for Africa announces a contribution of US\$563,000 for nutritional programs and trucks for UNICEF.
- Oct. -- The National Oceanic and Atmospheric Administration (NOAA) issues its Special Climate Impact Assessment for Mali for the period May-September 1985. It indicates the best growing season since 1981, far better than the drought-affected years of 1983 and 1984, and significantly improved rangeland conditions. Yields are indicated to be near or above the 5-year average.
- Evaluations by FAO (Crop Assessment Mission in October), CNAVS, and donors indicate a far better crop than in 1984-1985 (up by about 27 percent). The expectation is that exceptional food emergency programs will not be required in 1985-1986 but that continued assistance for recovery and rehabilitation will be needed.
- CNAVS discontinues full-scale emergency feeding.
- CARE requests A.I.D. assistance to carry out a 2-year food-for-work project in Region VI.
- Oct. -- UNICEF requests A.I.D. assistance of US\$1.7 million to continue supplemental feeding and nutritional services in Regions V, VI, and VII; logistical support; and a village water program in Macina, Niono, Tenenkou, and Youvarou districts.

Oct.           -- The U.N. November 1 "Status Report on the Emergency Situation in Africa" reports that the affected population remains at 1.2 million and that some of the displaced persons are returning to their areas of origin.

### 3.5 Accounting for U.S. Emergency Food Distributions

A final accounting of U.S. emergency food distributions was not available at the time of the evaluation team's visit to Mali, October 26-November 16. The team estimated that emergency distributions of U.S. emergency and regular program food aid amounted to about 60,500 MT, including supplemental feeding and food-for-work programs:

- 34,000 MT by PVOs
- 6,639 MT by LICROSS and WFP
- 13,405 MT by WFP/UNDRO for general feeding and food for work

The team further estimated that approximately 2 million people were recipients of this food.

## 4. EVALUATION RESULTS

### 4.1 General Findings

Overall, the 1984-1985 U.S. emergency food assistance program was decisive in helping Mali plan, organize, and carry out a major effort to supply food to famine-threatened populations in rural areas. U.S. food helped alleviate hunger and malnutrition in the worst hit areas for an at-risk population estimated at over 2 million persons. U.S. nonfood aid helped Mali mobilize for distribution in thousands of isolated, difficult-to-supply areas. Combined with the assistance of other donors, the U.S. program helped Mali substantially achieve its goal of averting the widespread famine and massive rural exodus that threatened the country.

The evaluation shows that the mechanisms used for emergency food distribution were well conceived and worked to provide badly needed food to millions of at-risk persons. However, it also shows that the food needs of rural areas were seriously underestimated by the Government of Mali and donors and that adequate measures were not taken to verify these estimates. As a result,

early deliveries were insufficient. The extent of the resulting human suffering could not be properly determined after the fact, although the evaluation team established that it was widespread during the March-July 1985 period.

#### 4.2 Problem, Goal, Strategy, and Objectives

A.I.D. does not use the logical framework as a guide in the design of emergency food aid programs. Consequently, no single document, such as a Project Paper, contains an analysis of the goal(s) and objectives of the program, how the problem was perceived, what strategy was proposed to address the problem, and how inputs and outputs relate to purpose and goal. Nor does the documentation on the program establish verifiable objective indicators to be used to evaluate results.

Based on its study, the evaluation team derived the following statements of problem, goal, strategy, and objectives for the 1984-1985 program:

1. Problem. Simply put, the problem was that, as a result of widespread crop failures and poor pasturage, Mali faced severe food shortages. A large increase in food aid over previous years' levels was needed. In addition to increased supplies of grain for urban markets, a large increase in emergency supplies for free distribution was needed for at-risk populations facing famine conditions in isolated rural areas. How to manage large-scale free distributions effectively was a major question facing the Government.

2. Goal. A.I.D.'s goal was to help the Government provide sufficient food to ensure social stability in urban areas, preserve the rural structure threatened by massive rural exodus, and avoid hunger and famine among the needy.

3. Strategy. The strategy involved three approaches: (1) to use the well-established and reliable mechanism of Malian Government distribution, through OPAM, of for-sale food in urban markets; (2) to encourage the Government, through the CNAVS, to mobilize in-country PVOs to manage free CNAVS distributions; and (3) to work for close donor coordination with the Government to effect an adequate response to the problem.

4. Objectives. The specific objectives developed by USAID/Mali were as follows:

- Provide cereals to those with purchasing power at reasonable prices without disrupting the market for local production

- Provide cereals to those without purchasing power, particularly to those in rural areas
- Help people remain in their villages and grazing areas
- Provide sufficient food over a long enough period to enable farmers to plant a crop in 1985

#### 4.3 Evaluation Findings

##### 4.3.1 Timing

Timing was a critical factor in the 1984-1985 emergency food assistance program in Mali, affecting the impact and cost-effectiveness of U.S. and other donor efforts. Not enough food was available for emergency distributions to at-risk populations during March-June 1985 before the heavy rains, or during the first part of the rainy season. The bulk of emergency distributions took place during the rainy season--when transport becomes difficult if not impossible and costs of transport soar--thus substantially reducing the cost-effectiveness of the program.

#### Findings

1. The time-line of events and decisions shows that 6 months elapsed between the initial USAID/Mali request for emergency food assistance and arrival of such assistance at port. The time-line (see Section 3) shows that the Government of Mali announced a food emergency for Regions VI and VII in August 1984 and that USAID/Mali forwarded an initial request for emergency food aid soon thereafter in September, with additional requests in October, December, and January as it was realized that larger quantities of food aid would be needed. The first shipments arrived at port (Table 4) in mid-February 1985, a delay of 6 months after the initial request.

The first Title II food request of 10,000 MT for Regions VI and VII was made early in September 1984; the second, for 10,000 MT, in October 1984. A.I.D./Washington advised approval of 15,000 MT in November, of which 5,000 MT was authorized for monetization (i.e., to be sold in Mali) and 10,000 MT for free distribution. The third request for Title II emergency food aid (15,000 MT) was made early in December 1984 and approved that month. The fourth request (35,000 MT) was submitted on January 28, 1985 after a needs reassessment by the USAID Mission was cabled to Washington on January 16. On February 16, A.I.D./Washington cabled approval of the 20,000 MT requested for free distribution. The request for 15,000 MT of emergency grain for

monetization was subject to further review by A.I.D./Washington, which cabled U.S. Government approval of 10,000 MT for monetization by the end of February 1985.

2. The time required for approval of supplemental appropriations for the African Hunger Relief Initiative contributed to delays in organizing emergency food distributions in Mali, which were needed beginning March 1985. The U.S. response through the African Hunger Relief Initiative, launched in January 1985, required several months for approval of critical nonfood aid--with Congressional approval in March and the A.I.D. approval processes completed in April-May 1985. Associated with the delay in approval of the supplemental appropriation was a considerable delay in submission and approval of the CARE Emergency Transport Project Grant. This grant project was reviewed and recommended by the February 1985 OFDA-financed survey of the Mali drought and emergency food requirements. The formal USAID-CARE proposal was forwarded to A.I.D./Washington on March 19 (cable no. 1919 to A.I.D./Washington). The grant agreement with CARE was not concluded until May 21. The several-month delay seriously retarded the organization of rural distributions by CARE in the period March-June 1985 (Adams and Hoskins 1985, 79-83).

3. U.S. food shipments in 1985 demonstrated the feasibility of earlier delivery and distribution of emergency food supplies for rural areas. Shipment of the 60,300 MT of U.S. emergency food aid (government-to-government) started in February 1985 and was completed by the end of June.

Food shipments for Mali can be programmed to arrive through the West African ports of Dakar, Senegal; Abidjan, Ivory Coast; Tema, Ghana; Lome, Togo; and Cotonou, Benin. The experience in 1985 demonstrates the feasibility of shipping large quantities of emergency food aid for arrival in port during February-May and for delivery to Mali for pre-positioning and distribution during March-June, before the rainy season.

4. Nonavailability of emergency food in the period March-June 1985 was at least partly due to unforeseen delays in delivery of food aid from the ports and from Ghana. Food transshipments from Abidjan were delayed in February and March by the difficulty of hiring trucks at the low Malian Government tariff rate for truck transport. However, weekly dispatches from the port rose dramatically when the rate was increased by 25 percent effective March 23, 1985.

Transshipments from Lome, Togo, to Mali via Niamey, Niger, were delayed for several months (see Table 5 in Section 3.3) by poor road conditions for heavy trucks to Gao and from Niamey to Menaka. This situation delayed delivery to Region VII of about 3,000 MT of U.S. Title II corn during March-June when food sup-

plies in that region were very short. The poor road conditions delayed transshipments of other donor food aid as well.

In April 1985, the U.S. Government and the Government of Ghana agreed to a barter arrangement for the exchange of Ghanaian white corn now for U.S. rice later. Shortly thereafter, also in April, A.I.D. granted 10,000 MT of this corn to WVRO for free distribution in Mali, with the expectation that delivery could begin in several weeks. Delivery of this food was held up by a series of administrative bottlenecks in Ghana. According to a report by WVRO, "project implementation was plagued with delays which began when the Transport Agreement between the U.S. Government and the Ghana Food Distribution Corporation had to be renegotiated at the last minute and wasn't signed until the end of June, a month late. This meant that the commodities began arriving in Mali in early July just as the first rains had begun to make rural roads impassable" (WVRO, 1985).

Delayed arrivals of emergency food supplies also retarded distributions to Region VI. Emergency efforts were required to supply the region in June and July 1985 until the Niger River rose enough to allow river transport to the region. Despite the early warning (dating back to mid-August 1984) of food shortages in Region VI, adequate supplies were not placed in the region before the rains (June and July) made road transport virtually impassable.

Distributions in Region VII were also held up by such factors as poor road conditions for truck transport from Niger and the unforeseeable breakdown of the 40-ton ferry at the Gao River crossing (necessitating the impressive A.I.D.-Department of Defense airlift and operation of a 60-ton military raft).

5. Distribution problems were compounded and costs increased by the need to move the bulk of emergency food destined for remote and inaccessible areas during the rainy season. Because adequate food supplies were not pre-positioned before the rainy season, grain had to be transported to the most difficult-to-reach areas during the rainy season, causing serious distribution problems. CARE's project staff estimated that on one out of every five food transport trips, a truck got stuck in the mud, which normally meant that it had to be unloaded until it was light enough to be extricated.<sup>4</sup>

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<sup>4</sup>CARE reported that the major distribution problem in the Mali program was caused by the need to transport grain to the most inaccessible parts of Mali during the rainy season. It noted that under its emergency food transport grant from AID, it ran more than 500,000 km in its own vehicles, nearly all during the rainy season.

In fact, the bulk of U.S. free distributions took place in July-October 1985 during the rainy season. During this period, extending into November for Regions VI and VII, over 1.5 million persons received rations. Some areas could not be supplied because of impassable roads or other difficulties; other areas were supplied late because of lack of food and/or logistical capabilities. The need to move the bulk of emergency food supplies during the rainy season substantially increased the cost of the program.

6. USAID/Mali made arrangements in October 1985 to augment food security stocks for Region VI and VII. To increase the availability of food security stocks in Regions VI and VII, A.I.D., at USAID/Mali's request, programmed 10,000 MT of food grain in October 1985. This decision was based on the understanding that the allocation officially increased the size of the National Food Security Stocks from 38,000 to 48,000 MT.

### Conclusions

1. Augmenting security stocks in Regions VI and VII was a prudent move. The provision of 10,000 MT of grain by A.I.D. in 1985-1986 to augment security stores for Regions VI and VII was a positive step in increasing the availability of National Food Security stocks for free distribution when needed.

2. Timing of food aid shipments for commercial distribution and monetization in urban centers is less critical than the timing of deliveries for emergency free distribution. For the most part, the 52 markets serving urban areas in the country are reached by major highways, so transport during the rainy season does not present the same problems and costs as in rural areas. To ensure an orderly, steady supply of food over the year, the practical strategy for supplying food aid for commercial distribution is to schedule shipments and deliveries to Mali to meet the peak demand period for imported grains--from April through October.

3. Food aid for free distribution can be supplied more cost-effectively and have greater impact when delivered for pre-positioning during March-June, before the heavy rains. Such deliveries require donor commitments and program decisions to be made during December-January and shipments to arrive in West African ports during February-April for delivery to Mali for pre-positioning and distribution during March-June. Such pre-positioning requires careful planning based on reliable surveys of local needs so that food is not pre-positioned in outlying areas where it may not be required.

4. Supplying Regions VI and VII requires early planning. Early arrangements for repairing the highways linking Region VII

with Niamey, Niger (the Ansonga-Gao and Niamey-Menaka links) would have expedited transshipments of U.S. and other donor grain from Lome, Togo during March-June and would have reduced the costs of such shipments. Also, costly arrangements to supply Region VI could have been avoided by preplanning and scheduling shipments and transshipments earlier.

5. Title II barter arrangements are worth exploring. Title II barter arrangements under which food grains such as corn, millet, and sorghum are procured from neighboring West African countries in exchange for Title II food grain later are promising avenues for meeting emergency requirements in Mali and other Sahelian countries.

### Recommendations

1. A.I.D. should join other donors to help the Government of Mali maintain a ready supply of National Food Security stocks and to make them readily available for free distribution and for sale when needed.

2. Emergency food supplies for rural distribution should be shipped earlier. In the event of several emergency food needs, A.I.D. should plan for delivery in February-May of the bulk of food aid for free distribution in rural areas and for distribution and pre-positioning in March-June, before the onset of the rainy season.

3. Pre-positioning for free distribution should be based on careful surveys of needs and targeted distribution at cercle and arrondissement levels.

4. A.I.D. should continue to explore the possibilities of using Title II barter arrangements for procuring food grains in neighboring West African countries in order to respond to Mali's food aid requirements.

5. In the event of a food emergency affecting Region VII, the United States should be prepared to assist in early emergency repairs to the highways linking Niamey with Menaka and Gao in order to permit heavy truck transport from the African ports of Lome, Cotonou, and Tema during the dry season.

#### 4.3.2 Management

Management was the critical issue of the 1984-1985 U.S. program. The problem was how to effectively organize and manage emergency food distribution for hundreds of thousands of families in thousands of isolated communities. The principal management

issue was that of ensuring effective targeting, control, and followup of emergency food distribution to relieve famine conditions in the northern half of the country. This issue was substantially resolved when the Government of Mali agreed to call on PVOs and international organizations already in Mali to manage CNAVS distributions from the OPAM warehouses to recipients. The decision led to an important positive by-product: the strengthening of PVOs to handle other relief, recovery, and rehabilitation programs. A drawback was that, to some extent, the use of PVOs rather than Malian institutions meant that opportunities were missed to build the capabilities of local and district institutions. Nevertheless, the improved management system (compared to prior years) for handling free distributions is a major achievement of the 1984-1985 program.

A major management problem in programming food aid was the difficulty encountered by donors and the Government of Mali in obtaining accurate information early enough to act quickly and to plan responses appropriately.

The U.S./Mali 1984-1985 emergency food program cost over US\$46 million (see Table 3 in Section 3.3). USAID/Mali's resources to manage a major disaster relief program were very limited. The Mission was obliged to draw heavily on development management resources to manage the 1984-1985 emergency. Program impact and cost-effectiveness could have been improved by Government of Mali preplanning in concert with USAID/Mali and other donors and by mobilizing management resources for the emergency food assistance effort earlier.

### Findings

1. Organizing effective management of the free food distribution was a problem at first. The critical problem facing A.I.D. and the Government of Mali was that of organizing a system to effectively manage free food distribution for hundreds of thousands of families facing famine conditions in thousands of scattered, isolated communities. U.S. experience with free food distribution in 1982-1983 and 1983-1984 had shown a limited Government capacity to target and manage free distributions effectively.

The decision taken by the Government of Mali in November 1984--at the urging of USAID/Mali--to call on PVOs and international organizations to manage CNAVS's free distributions from OPAM warehouses to recipients was a major step in solving this problem. A.I.D. and the European Economic Community (EEC) provided resources to help PVOs mobilize to carry out these distributions and to carry on other disaster relief, recovery, and rehabilitation efforts: for example, the A.I.D./OFDA grant to CARE for emergency food transport, and the EEC grants to MSF for

supplemental feeding and nutrition centers. All told, PVOs and international organizations managed emergency free distributions of food from all donors estimated at 120,000 MT.

PVO programs for food distribution in 1984-1985 were in general well executed. Distribution of available supplies was well targeted to needy people in hard-hit areas. Losses and misuse of food were small. PVOs prepared distribution plans with help from local authorities (using tax rolls and other information on populations and areas of need) and cleared them at the regional level and sometimes at the cercle level (Appendixes B and C). As noted earlier, however, the problem of managing free distribution was magnified by the scheduling of distribution operations in the rainy season, when transport is much slower and more difficult.

PVOs delivered food assistance with efficiency, but the delivery was dependent on expatriate planning and implementation (Appendix D). The PVOs were well staffed by capable young expatriates; however, few Malians were observed to participate in planning and implementing the programs for which the young European and American cadres were responsible. At the local level, it did not appear that the emergency food program was structured to encourage the transmission to Malian personnel of managerial skills necessary for coping with food emergencies.

The use of PVOs may also lead to district and local authorities being bypassed in the design of local distribution programs. In this context, USAID/Mali fully supported PVO cooperation with local political authorities, including the requirement that the commandant de cercle sign off on plans before food is distributed. USAID/Mali noted that in the heat of urgency, all the proper steps were not always followed and that often there is a natural tension of conflicting interests between those responsible for the free food distributions and the local political authorities. For that reason, USAID/Mali recommends that the PVO after consultation with and approval by the local authorities, have the deciding role on where and when cereals are distributed. Unresolved differences of opinion should be settled by USAID/Mali and the appropriate ministry.

2. OPAM food distributions through commercial channels were handled effectively. A satisfactory management system was in place for handling food aid for distribution by sale in urban areas using OPAM and the commercial grain marketing system. Under the PRMC project, OPAM had gained several years of experience with structural food aid; thus donors were confident that OPAM would be able to manage and account for such distributions--including collection and deposit of sales proceeds in PRMC and emergency food aid counterpart accounts.

In total, OPAM effectively managed the distribution of about 145,000 MT of food to urban markets in accordance with the 1985 Food Distribution Plan. This food included 15,000 MT of Title II Section 206 grain provided by the United States under the PRMC project and 20,000 MT of Title II emergency grain aid authorized for monetization.

3. Food aid provided through the WFP, including the U.S. contribution of 13,405 MT (47 percent of WFP distributions), was distributed under the auspices of the Ministry of Agriculture with UNDR0 assistance and the cooperation of regional/local authorities. WFP has reported that it had 28,314 MT available for distribution in 1985: 10,007 MT for free emergency food distributions under the CNAVS, 15,107 MT for food-for-work projects, and 3,200 MT for sale by PRMC.

4. Obtaining accurate, unambiguous information about the food emergency was a continuous problem. A critical management problem facing the Government of Mali, A.I.D., and the other donors was the difficulty of obtaining accurate and unambiguous information on the extent of the food emergency and the situation in disaster areas.

Accurate data by region, cercle, arrondissement, and village on population, migration, land under production, production levels, food stocks, per capita consumption, food needs, and other relief needs were not available.

The early warning system established by USAID/Mali and the U.S. Embassy used available Government of Mali and donor information and numerous field trips to the affected regions to assess conditions. Given the limited personnel available, the lack of effective monitoring by other donors, and the time pressure of a full blown emergency, USAID/Mali considered these assessment efforts to have been substantial, a view shared by the evaluation team. However, the evaluation team concluded that more valuable planning data could have been collected had more resources been allocated for field studies in the summer and fall of 1984 (as was done in 1985) and that more use could have been made of local authorities to help the Government of Mali assess and monitor the situation.

5. Estimates of food deficits derived from national food balance calculations are based on insufficient and unreliable data for an accurate assessment of rural food shortages. Estimates of total national requirements for food were derived from national food balance calculations (Appendix F). The process estimates national food deficit and import requirements using information on prior year imports, the current state of food stocks, and indications of how much production has dropped in the current year compared with that of the past year. This estimate is then fitted into a national food balance calculation to deter-

mine its plausibility. The reliability of this approach depends on the margin of error in the estimates of the components--production, stocks, imports, population, per-capita grain consumption--that enter into food balance calculations. These calculations can provide plausible and useful estimates of global deficits and import requirements but the calculations are unreliable and inadequate to determine shortfalls and emergency food needs in rural districts and arrondissements, as was demonstrated in 1984-1985.

The FAO/Multidonor Mission, in reviewing Government of Mali estimates for 1984-1985 food requirements, confirmed the plausibility of the estimates but recommended that donors help the Government establish an improved system for collecting data that permits better estimation of the components of the food requirement calculations (see Appendix F).

The Government of Mali's Food Supply Plan, which has been prepared annually since 1982, provides a breakdown on planned distributions for each of the seven regions of the country and for Bamako (see Appendix G). Because OPAM considers the statistics on regional production, population, stocks, and per capita grain requirements to be unreliable, estimates of regional food supply needs are based on the following:

- Quantities distributed in previous years
- Current stocks
- Indications of any change in regional requirements under the plan, such as acute shortages or cases of oversupply
- Anticipated availabilities countrywide

The annual plan is drawn up in November and December and covers the following calendar year. The 1985 annual Food Supply Plan called for emergency free distributions of 60,000 MT of Government (CNAVS) stocks, not including WFP grain. This estimate was used by A.I.D. (and other donors) in planning its response to the emergency. However, as the crop year advanced, the requirement for emergency distribution was found to be much greater than this figure.

6. The extent of the drought and the need for emergency food distributions were underestimated by the Government of Mali and donors. Estimates of areas and population affected by the drought were far off the mark. Population affected by the drought was estimated, as of December 1984-January 1985, at 1.2 million persons. The areas affected were considered to be concentrated in Region I, V, VI, and VII with only one administrative cercle affected in Regions II and IV. As the crop year progressed, it was found that the areas affected included many

more cercles in Regions II, IV, and V (see Table 6). Estimates of population affected were based on estimated population in cercles considered seriously affected multiplied by a factor of about 0.55. The resulting estimate of 1.2 million is probably off by 100 percent. U.S. emergency distributions alone are estimated to have reached about 2 million persons.

The estimate of 60,000 MT used by the Government of Mali and accepted by USAID/Mali was not based on local surveys, which could have provided a more viable estimate of need. No document is available to explain how the 60,000 MT estimate was derived. The USAID/Mali Food for Peace officer believes that it was based on no more than a rough judgment that requirements were several times greater than in 1983-1984, for example, three times 20,000 MT. No attempt was made to organize and conduct local surveys and, as the Food for Peace officer noted, with the limited management resources available in the fall of 1984 to USAID and CNAVS, there was no time to organize and conduct such surveys.

The FAO/Multidonor Mission recognized the lack of a solid basis for estimating total free distribution needs. It recommended that donors provide 70,000 MT for free distribution and an emergency reserve of 30,000 MT to be pre-positioned in local storage areas in Regions I, V, VI, and VII. The recommendation for this emergency reserve was not taken up by USAID/Mali on the grounds that such stores might not be used; the USAID strategy was to move shipments of emergency food to distribution points as soon as possible after arrival in-country. The Government of Mali's reduction of the Multidonor Mission's recommendation of 70,000 to 60,000 MT appears to be based on a concern that too much food for free distribution might disrupt local markets, a concern that was not realistic.

7. USAID/Mali resources for planning, organizing, and managing the U.S. emergency food assistance program were strained, as were those of the Government of Mali and REDSO. USAID/Mali had only limited resources available to plan and carry out a major disaster relief program in 1984-1985. In the critical planning period, the staff assigned to the program included one full-time but junior Food for Peace officer, an assistant program officer (half-time), and a food monitor. With the declaration of the African Hunger Relief Initiative in January 1985, USAID/Mali gave the emergency top priority and diverted staff from ongoing development work to the emergency. Several more food monitors were engaged during December-March. Based on the recommendations of the OFDA survey team, the A.I.D. Bureau for Africa authorized the hiring of a drought relief officer, who arrived in May 1985. This officer was assigned for a 2-year period because it was recognized that drought and food emergencies in Mali are systemic and will not end with this emergency.

Table 6. Administrative Cercles Affected by the Drought in Mali in 1984-1985

Region	According to WFP Review <sup>a</sup>	Identified During the Drought <sup>b</sup>
I. Kayes	Nioro Diema Yelimane	Nioro Diema Yelimane
II. Kouikoro	Nara	Nara Kolokani Banamba
III. Sikasso	--	--
IV. Segou	Niono	Niono Bla Ke-Macina Tominian San
V. Mopti	Youvarou Tenenkou Mopti Douentza Bandiagara Djenne	Youvarou Tenenkou Mopti Douentza Bandiagara Djenne Koro Bankass
VI. Timbuktu	All <u>cercles</u>	All <u>cercles</u>
VII. Gao	All <u>cercles</u>	All <u>cercles</u>

<sup>a</sup>Dated January 1985.

<sup>b</sup>Compiled by the evaluation team.

The USAID Mission/U.S. Embassy Drought Relief Action Group would reemphasize the amount of human and material resources allocated to the drought effort by both the Embassy and USAID/Mali. Included is time spent by Embassy and USAID/Mali staff in field visits, by the controller's office and management office providing backstopping support, and by the program and director's office in almost daily crisis management. Unfortunately, corresponding support to staff the drought team was not granted by Washington until the food monitors and a drought specialist came on in May and June, somewhat late.

REDSO managed the unloading and transshipment of food aid from ports in West Africa as well as the monitoring and coordination of all U.S. government-to-government shipments to West African ports for Mali, Burkina Faso, Chad, Niger, and Cameroon. REDSO contracted with freight companies to move the shipments from the ports by truck to the country destination points. In the case of Mali, these points were Kayes, Bamako, Segou, Mopti, and Gao. This work left the senior Food for Peace officer and contract logistician in REDSO little time or opportunity to provide advice or guidance to USAID Missions in planning their programs or in handling in-country logistic problems. Nor was there time for these officers to visit recipient countries to ascertain the local setting and to meet the people at the other end of the delivery line.

In the fall of 1984, CNAVS was essentially a one-person office (a senior Malian technical counselor) reporting to the Ministry of Interior. CNAVS had good lines of communications within the Government of Mali and with donors and had access to assistance from Malian Government agencies such as OPAM. However, the capacity of the Government to manage a major food emergency through CNAVS was limited. In many respects, the Government was forced into the passive role of responding to donor initiatives and keeping track of what was being planned and carried out on its behalf.

During 1985, steps were taken to strengthen CNAVS. UNDR0 assigned several advisers, and additional secretarial support was provided to CNAVS. In May-June, an UNDR0 consultant drew up a comprehensive proposal for strengthening the organization and management of CNAVS, which was under consideration at year's end. In September 1985, the Government of Mali took the important step of establishing a forecasting unit (Cellule de Prevision) to coordinate and improve needs assessment efforts.

8. Donor coordination on emergency food aid was reinforced by close donor relations on regular food aid programs. Regular food aid in Mali has been programmed for several years in the context of a united donor effort to undertake reform and restructuring for cereal marketing and production (the PRMC project). Emergency food aid programming for 1984-1985 took place in this

context, with good donor-Government of Mali coordination through CNAVS. Coordination included the exchange of information, joint approaches by donors to the Government on critical issues (such as truck tariff rates), mutual help on logistics, and joint support of desirable programs. However, there were instances of duplication of effort, for example, grain from more than one donor would be programmed for the same area. Donor-Government of Mali coordination in drawing up programs for particular disaster areas (i.e., in administrative cercles) was limited.

### Conclusions

1. The Mali emergency food program in 1984-1985 overcame the deficiencies experienced in previous years in managing emergency food distribution in rural areas. The Government of Mali adopted a system for using PVOs to ensure a well-managed distribution program that effectively targeted needy persons.

An important by-product of the strategy of using PVOs to manage emergency distribution is the number of PVOs that are now better equipped and positioned to provide assistance for relief, rehabilitation, and development operations. The availability of these PVOs to carry out such operations is an important asset for development in Mali, meriting the continuing support of the Government of Mali and of A.I.D. and other donors.

However, the use of PVOs meant that, in varying degrees, the usual Government channels were bypassed and opportunities were lessened for developing local, district, and regional capabilities and for using their knowledge for planning and managing the program.

2. An improved needs assessment system is a critical requirement for the management of emergency food and disaster relief programs in Mali as well as for development planning. Regional, cercle, and arrondissement authorities can provide important resources and knowledge for needs assessment. Increasing the capabilities and responsibilities of Malian local institutions will not only improve needs assessments and disaster relief planning, but it will also help develop local capacity to manage rehabilitation and development programs.

The establishment by the Government of Mali in September 1985 of the CNAVS/intergovernmental donor unit for forecasting food and other disaster relief needs was an important positive step. However, the inadequacy of the present needs assessment systems remains a major constraint to effective management of food aid in a country where drought and food shortages are chronically recurring events.

Needs for emergency food distributions in rural areas were underestimated by over 100 percent (as of February 1985) by the Government of Mali and donors. Data required to improve assessments of emergency food needs are the same as those needed for food and agricultural development planning and programming.

Improvements in needs assessment will require collection of more accurate data on acreage planted and harvested and on yields. Improved acreage data are required by region, cercle, and arrondissement. Data collected using remote-sensing technologies, combined with information obtained from ground surveys, can be used to dramatically improve the quality of agricultural statistics in Mali.

There is also the need to improve data on migration and population by region, cercle, and arrondissement and down to the village level. Better data are also needed on farm grain stocks and on food consumption.

Increasing the capabilities and responsibilities of Malian local institutions can strengthen needs assessment (at less cost) and disaster relief planning and develop local capability for rehabilitation and development.

3. Greater and earlier access by USAID Missions to experienced personnel to design and manage emergency food programs will improve program impact and cost-effectiveness and will help USAID Missions to maintain management of ongoing development activities. USAID/Mali lacked sufficient experienced personnel to plan and manage the U.S. program and to work with the Government and other donors to resolve planning, coordination, and implementation problems. The size of the program--US\$46 million worth of resources--underscores the point that under-resourcing disaster relief programming and program execution is not sound strategy. A.I.D. could have improved USAID/Mali's management of the 1984-1985 program by assigning experienced personnel on short- and longer-term assignments to assist the Mission. Substantial savings could have been achieved as a result of the better pre-planning such management resources would have allowed.

4. Increased availability of REDSO staff to provide advice and guidance to USAID Missions would help improve management of U.S. food emergency programs in Mali and the rest of West Africa. REDSO played a valuable and strategic role in coordinating and expediting transshipments of food aid to Mali but was unable to provide assistance to USAID Missions in planning and carrying out their emergency food assistance programs. Contracting with a private company to manage shipments of emergency food from the United States to reception points in Mali, using a through-bill of lading, would free REDSO personnel to provide planning and consulting services to USAID Missions.

5. Donor coordination of emergency food aid at the national level was greatly facilitated by regular meetings with the Government of Mali (through CNAVS) and reinforced by the already close cooperation among major donors on regular food aid programs. However, coordination was less effective at the regional, district, and local levels, and more coordination is needed at all levels for recovery and rehabilitation operations.

### Recommendations

1. High priority should be given to improving Mali's needs assessment systems. USAID/Mali should, as a matter of high priority in its overall program, work with the Government of Mali and other donors to achieve radical improvements in data collection for needs assessment. Greater reliance should be placed on regional, cercle, and arrondissement authorities to collect data and carry out assessments.

A.I.D. should continue to support monitoring and estimation of crop yields and pasture and range conditions by NOAA and the Ministry of Planning's Department of Statistics. High priority should be given to developing a system to produce reliable estimates of acreage planted and amount of grain harvested by regions, cercles, and arrondissements. The system developed for Mali would also have broad and important application throughout the Sahel, particularly for Senegal, Niger, Chad, and Burkina Faso.

As a second step, A.I.D. should support compilation of improved, updated estimates of migration and population data for drought-prone areas of the country (i.e., all of Regions V, VI, and VII and the northern portions of Regions I, II, and IV). As an initial step, surveys should be organized with the assistance of local authorities. The objective should be to carry out an in-depth survey of each cercle, to review all existing data on migration and population, to identify gaps, and to estimate the reliability of data in hand.

A third step is to establish a system for estimating on-farm grain stocks and per capita grain consumption. More reliable data should be developed by organizing and carrying out sample surveys using well-trained investigators and pretested questionnaires. The Ministry of Planning's Department of Statistics can manage this work in cooperation with regional, district, and local authorities and should receive donor assistance to provide the necessary financial and other resources for the work.

2. A.I.D. should provide additional experienced personnel to Sahelian USAID Missions to assist in food emergency and disaster relief planning and programming. Such personnel should be made available to Missions early in the planning cycle. A.I.D.

should prepare a computerized roster of such personnel and should negotiate indefinite quantity contracts with qualified private firms to provide such personnel when needed.

3. A.I.D. should explore more effective mechanisms for shipment and transshipment of emergency food aid using the private sector. A.I.D. should test the option of shipment and transshipment using a through-bill of lading (for bulk shipments of grain, with bagging at West African ports) as a means of (1) transferring the work of transshipments from REDSO to the private sector, (2) reducing costs and delays, and (3) freeing REDSO personnel to guide and assist USAID Missions.

4. USAID/Mali should continue to support a strong role for the Government of Mali in coordinating donor emergency food assistance. This role should include the development of measures for planning such programs more effectively at the district and local levels, in collaboration with authorities at the regional level and below.

5. The Government of Mali, A.I.D., and other donors should increasingly use and rely on local-level government and institutions to assess local situations and needs, develop local distribution plans, and manage program implementation. PVOs should be used to assist in this process. The aim should be to develop local institutions that are increasingly capable of dealing with local problems of disaster relief, migration and resettlement, rehabilitation, and local development.

A.I.D. should work with the Government of Mali, including its regional and local authorities, and with other donors to achieve integrated planning of emergency food distribution and other disaster relief and rehabilitation on the cercle level.

#### 4.3.3 Impact

The U.S. program was decisive in helping Mali avert massive rural famine and exodus, but emergency food needs for rural areas were underestimated and timeliness and lack of management resources were problems.

#### Findings

1. There was an effective melding of regular food aid and emergency food aid. This melding took place through the Annual Food Distribution Program for calendar year 1985 (See Appendix G), which was prepared by CNAVS and OPAM in close collaboration with the donors. OPAM performed effectively in managing urban distributions (sales) and in managing distribution of all Title

II foods to regional and district supply points. CNAVS was strengthened over the year and performed effectively in coordinating emergency food aid and distribution (free general feeding) to rural areas with the help of PVOs and international organizations (WFP, UNDRO, UNICEF, LICROSS).

2. The system for ensuring adequate food grain supplies through commercial markets met the needs of urban dwellers well. Under the Annual Food Distribution Plan, the Government of Mali programmed 145,000 MT for sale by OPAM to ensure that the 52 commercial markets of the country received the necessary supplies and to maintain the level of subsidized sales to public-interest groups (hospitals, schools, cooperatives, army). A higher proportion of corn, sorghum, and millet than in previous years and a smaller proportion of rice (which was more expensive) were included in the program.

The sales program managed by OPAM helped avert exploitive pricing by private traders. Distributions were scheduled to minimize disruption of markets for local production. The Government of Mali encouraged private imports of rice and the less expensive coarse grains.

3. Commercial marketing in urban areas was important in helping meet the needs of migrants from rural areas. Commercial marketing was important not only in meeting the needs of the regular urban population (estimated at about 1.6 million persons, or 20 percent of the total population) but also in meeting the needs of migrants from rural areas. Migrants flowed into cities and towns throughout the country and were, in the African tradition of extended family aid and mutual support, helped by their urban relatives and "cousins and brothers" from their home villages (see Appendix D). Accounts indicate that the number of migrants to cities and towns was large. By one account, urban populations may have expanded by 20 to 30 percent as a result of the drought (Adams and Hoskins 1985, 8). However, while the increase was observed in all towns and cities, no data were collected to permit a reliable estimate of its extent.

4. Monetization of Title II food aid worked well to augment supplies for urban consumers and to generate local currency to cover costs of free distribution. U.S. food aid for urban distribution amounted to 35,000 MT of rice. Of this, 15,000 MT was provided under the Title II Section 206 program (the PRMC project). The balance was provided through Title II emergency food aid, authorized for sale to augment supplies for urban areas and to generate local currency to help cover costs of free distributions. OPAM managed the Title II food with little loss and good accountability.

5. U.S. free food distributions are estimated to have totaled about 60,700 MT. This total includes 13,400 MT of U.S.

corn donated through the WFP, grants of 6,639 MT to LICROSS and WFP for supplemental feeding, 10,000 MT of Ghanian barter corn provided under Title II through WVRO, and 34,000 MT provided to CNAVS and distributed by PVOs. It excludes Title II foods authorized for sale and Title II Section 206 regular food--also authorized for sale.

It is important to distinguish the U.S. Government response to the drought from that of other donors. The USAID/U.S. Embassy Drought Relief Action Group felt that relative to other donors, the U.S. Government was in the forefront in providing aid to the affected areas. U.S. shipments were the first to arrive in February 1985. The level of U.S. food assistance, which accounted for about 50 percent of donor food assistance, was substantial and appropriate.

6. Total food supplied for free distribution by donors was about 134,000 MT, according to a computation prepared by WFP and released after the evaluation team's visit to Mali. However, a substantial portion of these donations arrived in-country too late for distribution in the November-October period under review. The evaluation team estimated that total free distribution plus food-for-work projects through November 1985 amounted to about 120,000 MT, or double the estimated requirements.<sup>5</sup>

7. Emergency food supplies were not timely. Most of the emergency food programmed for 1984-1985 by the United States and other donors arrived in Mali in June or later, so that the bulk of distributions took place in July-October 1985. As a result, supplies for earlier distribution were sharply limited. PVO representatives stressed to the evaluation team that, based on their first-hand observations throughout the country, a major lesson to be drawn from the 1984-1985 program was the need to program emergency food supplies for earlier distribution.

The surveys carried out by PVOs to prepare distribution plans for specific areas indicate a need during March-June that was much greater than was addressed. U.S. food distributions in this period accounted for about one-fourth of the total and reached about 500,000 persons, but indications are that requirements in March-June were several times actual distributions. As a result, much of the hunger and suffering could not be alleviated, and distributions to farm families could not be carried out in many areas during the critical period of April and May, when

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<sup>5</sup>Total food aid provided to Mali in 1984-1985 according to the WFP amounted to 281,220 MT of cereals and 10,711 MT of other food, of which 141,364 MT was scheduled for sales, 118,829 MT for free distributions, 15,426 MT for food-for-work projects and 15,200 MT for National Food Security Food Stocks. The unutilized carryover was reported by AID to total 41,400 MT.

farmers traditionally consume more food in order to build strength for farming operations that begin at the end of May.<sup>6</sup>

Sufficient food was also not available to relieve the hunger of distressed families in many areas during the first part of the rainy season, July-September. Distributions in this period were limited both by logistical capability and the availability of food. The limitations were particularly evident in Region VI. In some areas, distributions could not be undertaken because of impassable road conditions.

By September and October, food supplies had increased and distribution coverage was more complete. Based on interviews conducted by the evaluation team in Regions III, VI, and VII in October and early November 1985 (Appendix H), food assistance had reached all sectors of the population who were at greatest risk.

8. U.S. food for free distribution was effectively targeted and made a significant contribution to relieving the threat of famine and helping people remain in their villages and grazing areas. U.S. food aid was distributed to at-risk populations throughout the drought-affected areas of the country. Through arrangements with CNAVS and the financial assistance of the U.S. Government, PVOs and international organizations managed the free food distributions. They carried out local surveys by administrative cercle in order to determine needs and establish distribution plans, which were reviewed and approved by regional authorities. The process ensured careful targeting of available food and its distribution to families in need (see Appendix H).

The total population requiring assistance through free feeding programs exceeded 2 million (by evaluation team estimate), a figure that is considerably greater than the Government of Mali/USAID Mission needs assessment estimate of an at-risk population of 1.2 million.

Distributions started in March and were suspended in most of the country in October, at the time of harvest. However, distributions were continued in Regions VI and VII, where needs were greatest and harvests are somewhat later. U.S. food was distributed by CARE, MSF, NCA, SBM, SMF, SECAMA, UDPM, WVRO, UNDRO/SDR, UNICEF, LICROSS, and WFP. Distributions were carried out in every region and in most of the administrative cercles affected by the drought. These distributions, it is estimated, provided 2 million people with U.S. emergency food assistance.

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<sup>6</sup>There was no cercle-by-cercle assessment of total food requirements on which to base and schedule distributions and by which to judge the extent to which needs went unmet.

In some areas, multiple distributions were organized to support at-risk groups. This was so in the program organized by Norwegian Church Aid in the Gossi area of Gourma, in the program organized by WVRO (using mainly Title II-bartered corn) throughout Region VII, and for the refugee camp at Dire in Region VI serviced by CARE.

However, most of the U.S. food was distributed through one-time emergency food drops in hard-hit areas. A studied effort was made by CNAVS and USAID/Mali to ensure that the rations were sufficient to contribute significantly to family food supply and to enable families to stay at home rather than migrate to seek food. Often rations amounted to a 4-6 week supply of grain (corn or cornmeal). In some instances, rations for up to 90 days were authorized.

The Southern Baptist Mission (SBM)--which distributed nearly 8,000 MT of food to needy families in 74 arrondissements in 12 cercles (in Regions III, IV, V, and Bamako) between June and October--used a ration of three sacks of grain (150 pounds, or about 68 kilograms [kg]) for a family of five. This ration, considered ample, amounted to about 500 grams of grain per person per day for 30 days. Most SBM distributions took place within 3 months of the harvest. SBM followed a rough rule-of-thumb in its distributions during this period: SBM tried to distribute sufficient food to families to meet about one-third of their requirements. The Stromme Memorial Foundation (SMF), which distributed in Regions I and V, used the same criterion in its distributions.

CARE distributed about 15,500 MT of emergency food in seven cercles in Region VI to about 700,000 persons (see Appendix C). In Macina and Niono cercles in Region IV, CARE gave 100 pounds (about 45 kg) of kernel corn to each person--in some cases via several distributions--equivalent to a 3-month supply at the standard rate of 500 grams per person per day. These distributions began in May and extended into September. In Nara and Bambara cercles, CARE distributed 45 pounds per person in September, sufficient for 6 weeks. In Goundam and Timbuktu cercles, CARE distributed one sack of cornmeal per person (45 pounds), also sufficient for 6 weeks. In the case of Goundam, where distributions commenced late (in late June) and where food supplies were very low, CARE noted in its final report that distributions were clearly insufficient. Those who received distributions in late June would consume their 45-day ration by early August, and most never received any other food, posing a considerable hardship on the population. In Gourma Rharous cercle in Region VI, CARE increased the rations of several of the hardest hit arrondissements to 45 kg per person to support the population for 90 days until their December 1985 harvest.

9. Eating famine foods, a traditional coping mechanism, contributed to the survival of many people in rural areas of

Mali. Each of the ethnic groups affected by the drought--the Bambara, Dogon, Bozo, Temachek, Sarakolle, Sonrai, and Maures--has a different repertoire of famine foods that are regularly gathered as a supplement to field and garden crops. These famine foods played an important role in helping food-short groups survive (Appendix D).

10. Supplemental feeding of vulnerable population groups was ad hoc and insufficient. Although few data are available on the nutritional status of the Malian population, studies in May 1984 reported serious malnutrition among children in Regions II and VI. Data collected by MSF on the nutritional status and progress of children in its feeding centers in 1985 had not been analyzed at the time of the team's visit in October-November.<sup>7</sup>

Supplemental feeding was not part of the strategy of USAID/Mali or the Government of Mali. However, PVOs developed such programs largely on their own initiative, and these grew substantially in scope by the end of the year as their need was increasingly recognized. The programs demonstrated widespread malnutrition among children in the areas where they were carried out--mainly in Regions V, VI, and VII. UNICEF/Mali estimated that by October-November, the programs were meeting about half the requirements for supplemental feeding for infants, young children, pregnant women, and lactating mothers.<sup>8</sup> The supplemental feeding appeared to have been well organized and administered and to have met a real need (Appendix D).

U.S. contributions to the program included grants of nonfat dry milk, rice, and vegetable oil to LICROSS and WFP--about 6,700 MT--and cornmeal to UNICEF and MSF--a total of 800 MT. In addition, NCA and WVRO received U.S. grain for free distribution in the supplemental feeding programs that they organized in their areas of activity.

11. The United States helped Mali establish an effective system for cholera control and treatment. Between July and December 1984, 1,700 cases of cholera or cholera-like illness occurred in Mali, resulting in 435 deaths. In November-December 1984, two medical epidemiologists from the U.S. Centers for Disease Control (CDC) investigated outbreaks in Bamako and Regions IV, V, VI, and VII. Their findings and subsequent discussions with public health officials in Mali led to a national cholera program, including a new surveillance system. The Gov-

<sup>7</sup>In December 1985, AID/Washington arranged for the assignment of a medical anthropologist to work with the Government of Mali and USAID/Mali to pull together better information on nutrition and health and the impact of the drought.

<sup>8</sup>As reported to the evaluation team in November 1985.

ernment of Mali also adopted the oral rehydration therapies recommended by CDC and the World Health Organization (WHO). Health workers and supervisors were trained in the new system. The United States supplied assistance under the supplemental appropriation for supplies of oral hydration salts, laboratory materials, vehicles, fuel, and two-way radio equipment to support the program, which is considered a major advance in public health service in the country.

Programs to address health needs of afflicted populations were not planned by A.I.D. and the Government of Mali. UNICEF and MSF organized vaccination programs in the summer and fall of 1985, but U.S. support of these programs was minimal.

12. The United States financed important studies to assess the drought situation in the country and to forecast the agricultural situation for 1985-1986. The special climate impact assessment for Mali--prepared by the National Oceanic and Atmospheric Administration (NOAA) under a grant from A.I.D.--provided regular, 10-day reports on rainfall to the Malian Government. The rainfall data were derived in part from the regional Agrymet project supported by A.I.D. and other donors since 1976-1977 and in part from satellite imagery of cloud cover. Agrymet also provides data on hydrology and ground water levels. NOAA also supplied remote-sensing data on vegetable growth and biomass production. USAID/Mali observed that the NOAA reports were often late, written only in English, and were of limited use except for the basic vegetation index, which provided a major objective indicator of crop conditions.

The May-September 1985 NOAA "Assessment for Mali," published in October, correctly projected that the 1985 growing season would be the best since at least 1981 and far better than the preceding two drought years. It also provided valuable data on crop yields, rangeland vegetation conditions, and weather and rainfall analysis. A sobering conclusion from the assessment was that the rainfall for the entire Sahel/Horn region, although abundant by standards of recent years, was still below the 1941-1970 and 1931-1969 averages and that it is "premature to assume that the long string of dry years that began in 1968 has ended."

Special studies commissioned by USAID/Mali also clarified the drought situation in several regions and provided a clearer understanding of the problems facing rural communities--both in the short-term emergency and from a longer-term development perspective. These studies included the following:

- A November-December 1984 study of three cercles in the Dogon Plateau, Region VI

- A spring 1985 study of the agricultural situation on the Dogon Plateau, Region VI
- A spring 1985 study on hunger, immigration, and resettlement in Region III
- A November 1985 study on the 1985 harvest in Mali

13. Rehabilitation programming was limited. U.S. programming was limited largely to relief efforts through the emergency food assistance program, studies and assistance on cholera control, and provision of equipment. Only limited resources for rehabilitation and continuing assistance to those still in need were made available to USAID/Mali. The Mission had begun to prepare a series of proposals for such activities when it became clear around mid-1985 that such funding would not be available.

### Conclusions

1. Commercial distribution and monetization. U.S. and other donor responses were effective in meeting the needs of urban dwellers, including migrants from rural areas. The sale of emergency U.S. food aid to populations with purchasing power was appropriate and effective in generating resources to cover costs of free distribution.

2. Emergency free food distributions. The availability of food for free distributions was inadequate during the March-June period and in the early part of the rainy season, July through September. Because of lack of data, there was no way to measure the effects of the food shortfall in terms of human suffering and deaths.

Free distributions of U.S. food were well targeted to needy families facing famine conditions throughout the country. Rations were appropriate. Although there was no attempt to supply all family needs, these emergency distributions plus those of other donors were decisive in helping Mali avert widespread famine and massive rural exodus. Use of traditional famine foods was also important in enabling rural families to withstand the food shortage.

U.S. emergency food programs in Mali and in other Sahel countries will have more impact and will be more cost-effective when emergency distributions are programmed to arrive during February-May for pre-positioning and distribution during March-June.

3. Supplemental feeding. In Mali and in other Sahel countries, supplemental feeding programs should be planned as a standard element of emergency distributions in order to protect

vulnerable populations and to reduce immediate suffering and the irreversible, long-term effects of malnutrition in the very young. Supplemental feeding programs should include health surveillance activities. The increased vulnerability of malnourished children to disease suggests the need for donors to support vaccination programs (see Appendix D).

4. Special studies for drought relief planning/programming. The special studies carried out by USAID/Mali provided valuable insights into the emergency situation and the longer term situation facing the rural populations in drought-prone areas of the country. Had such studies been carried out in 1983-1984, they could have improved Government of Mali and USAID/Mali planning of the 1984-1985 emergency food assistance program. A more cohesive program of such studies, making greater use of indigenous resources, is needed.

5. Recovery and rehabilitation. The need to assist people affected by a food emergency does not usually end with the next harvest. The plight of thousands of herders and farmers in the Dogon Plateau, in the northern areas of Region I and II and in Regions VI and VII, made evident the need for continuing programs of rehabilitation to help resettle migrants and to help herders and farming communities recover and begin anew.

The chronic nature of drought and food deficit production and unemployment in the northern regions of Mali--combined with opportunities for useful development activities such as minor irrigation works, reforestation, rural road development and maintenance--strongly suggests the desirability of expanding food-for-work programs in Mali with the help of PVOs and local government. Food-for-work programs can play an important role in helping rural populations "catch up" by providing additional resources to enable them to build up their depleted resources. Programming for recovery and rehabilitation appeared constrained by two factors: planning for recovery and rehabilitation was instituted by USAID/Mali late in the year, and significant amounts of A.I.D./Washington funding for recovery and rehabilitation did not materialize.<sup>9</sup>

## Recommendations

1. Earlier response. The United States should work with the Government of Mali and other donors to ensure an early

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<sup>9</sup>AID's Bureau for Africa tentatively earmarked US\$5 million, to be provided by OFDA under the Congressional supplemental appropriation, but this funding did not materialize because of competing demands for relief operations in other countries.

response and more timely delivery of food aid for emergency distribution.

2. Supplemental feeding. As a matter of standard operating procedure, the United States should plan with the Government of Mali to provide assistance for supplementary feeding programs in cooperation with other donors and PVOs.

3. Studies of drought-prone areas. A.I.D. should encourage and support a more comprehensive program of studies to increase knowledge of local conditions facing populations in drought-prone areas and opportunities for local development and drought proofing. Such studies should be seen as an integral part of a system of planning for drought.

4. A.I.D. procedures for recovery and rehabilitation. A.I.D. should revise its guidance and operational manual to clarify the understanding that in Mali (and in other Sahelian countries) short-term food emergencies are not simply episodes spanning 9 months; rather, they normally involve recovery and rehabilitation efforts, which should be planned for as soon as possible during the relief operations.

5. A.I.D. support of multiyear food-for-work programs. A.I.D. and USAID/Mali should support multiyear food-for-work programs in Region VI and other drought-prone areas to be managed with PVO assistance in close collaboration with the governors and cercle administrators.

## 5. IMPROVING PLANNING FOR EMERGENCY FOOD ASSISTANCE TO SUPPORT NATIONAL FOOD STRATEGIES, REHABILITATION, AND LONGER TERM DEVELOPMENT

### 5.1 Introduction

This section is concerned with "the planning, design, implementation, and evaluation of emergency food aid programs, with emphasis on how they can more effectively foster long-term development initiatives and contribute to increased food security" (evaluation scope of work; see Appendix A, Section 2). The following points were raised as policy issues in the scope of work:

- Linkages of emergency food programs with regular food aid programs and other development assistance activities
- Planning food emergency programs to support sector and macroeconomic policy reforms, food self-reliance, disaster prevention, and long-term development initiatives

- Opportunities and constraints presented by the "chronic food emergency syndrome" with regard to funding mechanisms, multiyear planning, program design, conditionality requirements, and the like

To place this discussion in context, the African Hunger Relief Initiative, announced by President Reagan in January 1985, includes a "Food for Progress" policy aimed at solving Africa's long-term food and agricultural problems through economic policy reforms, research, training, improved rural infrastructure, and private sector involvement. The Government of Mali, with donor encouragement and support, has been attempting to follow such a policy (during its 1981-1985 plan period). Malian policy has been heavily influenced by recommendations of the World Food Council and major donors to follow a concerted national food self-sufficiency strategy. The Government is planning to reinforce its efforts to achieve food self-sufficiency and promote food and agricultural growth in its 1986-1990 plan (Government of Mali, December 1985).

## 5.2 Linkages of Emergency Food Programs With Regular Food Aid Programs

A striking point about the Mali food emergency assistance program in 1984-1985 is the extent of the linkages with regular food aid programs of the donors. Regular food aid in Mali is provided under a combined and unified effort through the Cereal Market Restructuring Project (PRMC) by the Government of Mali and donors. PRMC is designed to help meet "structural food aid needs" through grain assistance and by helping the Government restructure food grain markets, improve the operations of OPAM, and improve incentives for food production.

The 1984-1985 emergency food assistance program was designed with full consideration for the impact it might have on the PRMC program. In fact, the fear of disrupting domestic markets by free distributions appears to have caused the Government of Mali to understate emergency food needs for free distribution. Moreover, OPAM played an important role in implementing the emergency food program, and the PRMC counterpart fund was drawn upon heavily, via loans, to help finance emergency distribution. Linkages between the emergency food assistance program and other development programs are not as strong as they are with the PRMC project.

### 5.3 Relating Emergency Food Assistance More Closely to Longer Term Development

#### 5.3.1 Basic Considerations

1. Emergency food programs provide opportunities to sharpen policy dialogue with host governments experiencing chronic food deficits. The cost of the 1984-1985 emergency food aid programs was high relative to the cost of ongoing development programs. The U.S. emergency assistance program in 1984-1985 amounted to an estimated US\$46 million, while the regular program of development support to the Government of Mali amounted to only about a third of that, or about US\$15 million. Two points emerge from this observation:

- More cost-effective programming of emergency food programs can lead to significant savings of donor and national resources, which would be better applied to rehabilitation and development activities.
- Planning for drought and emergency food shortages--including drought warning, drought prevention, and drought proofing--can lead to lower requirements for emergency assistance, which is in everyone's interest.

The experience with the emergency food aid program in Mali in 1984-1985 shows that such programs may provide opportunities for policy dialogue among donors and the Government on such matters as the following:

- How to design and manage emergency food assistance to adequately and cost-effectively meet the needs of hungry people
- How to anticipate and better plan for food emergencies and disaster prevention
- How to relate emergency food programs to ongoing regular food aid and development programs in order to support such programs--or limit their disruption--and to support sector and macro-policy reforms

2. The first consideration should be to view the food emergency as a disruption in the development process and the design of the food emergency program as a vehicle to help the country or afflicted region move back to a development track as soon as possible. The emergency or disaster should normally be viewed as a disruption in the development process. The emergency program should thus be designed to help the needy, affected communities, and the country move back to the development track as

soon as possible. This means programming not only for relief but also for recovery and rehabilitation. Recovery and rehabilitation, therefore, need to be planned and programmed at the same time as the relief effort.

Furthermore, the experience in Mali in 1984-1985 suggests that the close coordination that exists among donors and the Government of Mali in programming emergency food for relief operations should be sought in programming recovery and rehabilitation efforts as well.

3. The emergency food assistance program should be taken advantage of to gather useful knowledge about local conditions, drought-proofing possibilities, and local development potential and to build local institutions for planning and carrying out both emergency food programs and local development. The evaluation of the 1984-1985 food emergency program in Mali showed a surprising lack of knowledge about food and agricultural circumstances at the district and local levels. Such information is essential for proper needs assessment and planning of emergency assistance programs. It is also essential for effective development initiatives. A major effort is needed to improve the availability of reliable data on demography, plantings, yields, production, and food stocks.

Emergency food programs provide opportunities to focus on gaps in data on local conditions and to initiate efforts to gather practical knowledge about local conditions, needs for rehabilitation, drought-proofing possibilities, and local development potential.

In countries like Mali where a "chronic food emergency syndrome" is operative (see Section 2), it is imperative to ensure that efficient and effective mechanisms are in place to detect and anticipate drought conditions and to assess resulting needs. As noted in Section 4, USAID/Mali and A.I.D. should give high priority to supporting Malian Government efforts to improve its needs assessment system. The data collection systems required for such assessments are also required for improving development planning and programming in Mali.

Emergency food assistance programs also provide opportunities to the host government and donors to strengthen the capabilities of local institutions and institutions dealing with food security to plan and implement local food relief, recovery, and rehabilitation operations. In addition, such programs should be designed to support private sector development including domestic PVOs (such as SECAMA). The process of building host government capabilities at the national, regional, and local levels for

dealing with food emergencies is in itself a development activity.<sup>10</sup>

4. The need to plan for drought, emergency food shortages in rural areas, and drought proofing is critical, and opportunities should be explored for multiyear conditional planning by donors and the government in countries facing a chronic food emergency syndrome. This evaluation stresses the need for planning for drought in Mali. USAID/Mali is conscious of the need to improve the needs assessment system and is to be applauded for the useful studies of the drought situation that it organized in 1985. However, discussions with the Mission and a careful reading of the Country Development Strategy Statement suggest that USAID/Mali may wish to emphasize this issue more in its country development strategy in the future. (The current Country Development Strategy Statement was prepared in 1982-1983; an updated strategy statement is expected in 1986-1987.)

The team observed that the Mission's agricultural program is very much oriented toward investments in areas where payoff is most assured. Therefore, the USAID/Mali program focuses largely on development in the Guinean and Guinean-Sudanian zones, where the agricultural potential is much greater.<sup>11</sup>

Considering the problems of the drought-prone areas and the large resources required to respond to food emergencies in these areas, USAID/Mali should also consider focusing more support on the food and agricultural problems of drought-prone areas. As far as possible, it should provide such support in the framework of a unified program with other donors, involving PVOs like CARE, Africare, and WVRO, which are prepared to provide local developmental assistance. Such a program approach would provide opportunities to deal much more comprehensively with the chronic food

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<sup>10</sup>When a comparison is drawn of the 1973-1974 drought and that of 1984-1985, there are encouraging indications that the ability of Malian society to cope with drought and emergency food shortages has improved substantially. It is indicative that livestock losses, for example, were much smaller in 1985 than expected and far smaller than those experienced in 1974. This is a topic that warrants further study. The focus of such a study would be the extent to which rural communities have adapted to changed farming and grazing conditions so as to deal better with the increased risk of farming and grazing which Sahelian populations have faced in the past 15 years?

<sup>11</sup>USAID/Mali's approach, in effect, focuses efforts outside the Sahelian and Sudanian-Sahelian zones. It would be interesting to carry out a comparative analysis to examine how Niger, which is entirely in these less favorable rainfall zones, has been able (apparently) to produce more grain than Mali.

emergency syndrome via multiyear funding and program design involving local resource generation, popular participation, and private sector development.

### 5.3.2 General Recommendations

- The emergency should be viewed as a disruption in the development process, and the emergency food assistance or drought relief program should be designed to help the country move back to the development track.
- The emergency food assistance and drought relief programs should be designed to assist affected populations recover from the disaster/emergency as soon as possible.
- The experience of the emergency food assistance program should be used to improve development programming: to increase practical knowledge about local conditions, needs for rehabilitation, drought-proofing possibilities, and local development potential.
- Efficient and effective systems for drought detection and needs assessment should be developed. Basic data on food needs (crop yields, acreages, production, food consumption, stocks, and nutritional status) are also essential for development planning and programming.
- Emergency food assistance and drought relief programs should be designed to reinforce institution building (national, regional, district) and local/popular participation in relief, rehabilitation, and development.
- Rehabilitation and recovery programs should be integrated with local and regional development programs.
- Emergency food assistance and drought relief programs should be designed to support private sector development, including the development of local PVOs.
- Efforts should be made to ensure that the national food and development strategy is properly addressing the problem of drought-prone areas and of drought-proofing such areas through appropriate structural and other adjustments in food and agricultural production and marketing.
- More Government of Mali/food-for-work programs should be instituted in coordination with other donors, the WFP, and PVOs in Regions VI and VII and in other chronically food-short, drought-prone areas of Mali.



## APPENDIX A

### STATEMENT OF WORK

#### 1. BACKGROUND

Emergency food aid shipments to Africa have reached unprecedented levels. Between FY 1983 and 1984, U.S. emergency food aid more than tripled in tonnage and value; by June of FY 1985 approved emergency levels for Title II, Section 416, and food reserves combined had again more than tripled in tonnage (1.8 million metric tons [MT]) and quadrupled in value (US\$738.4 million). For Sub-Saharan Africa alone, the U.S. Government has supplied more than 50 percent of total food aid requirements. Given the chronic nature of the emergency in Africa, this substantial commitment cannot be viewed as a one-time event. Not only will continued emergency relief be required in the short term, but given the magnitude involved, this assistance will have significant impact on the future of African development. How we program this food aid in the short and medium term can be an important determinant of whether we have positive or negative effects.

It is in this context that the assessment of our emergency food aid programs is conceived. Based on an evaluation of current operations, we will be exploring options for organizing emergency food aid to alleviate immediate distress while, at the same time, setting the stage for longer term development. This means looking at the larger picture when designing emergency interventions--the interrelationships between micro projects and macro policies, the linkages between emergency and regular food aid programs as well as with dollar-funded development assistance activities, and the effects of different distribution mechanisms. It means understanding better the smaller picture--the perceptions of beneficiaries, their socioeconomic and cultural environment, their decision-making processes, and how we can provide for their material needs while preserving a sense of self-worth and human dignity and fostering appropriate changes in behavior patterns. This assessment will provide the opportunity to take stock of our successes and failures to date with a view to programmatic changes and improvements. It is hoped that this review will contribute to improving the effectiveness of our food aid programs in the short and long term and also to developing new models or documenting existing ones that can be used by other donors and host governments.

As a first step in preparing for this review, the A.I.D. Bureau for Food for Peace and Voluntary Assistance canvassed all USAID Missions in Africa with emergency food aid programs regarding their experience during the 1983/1984 drought. An exhaustive list of questions was cabled to the field, and the response formed the information base for the Lessons Learned paper pre-

sented at the Food for Peace Officers Conference in Abidjan in April 1985. A primary purpose of this assessment will be to verify, supplement, and update this information with field visits, independent data analysis, and the perspective of program participants. Ultimately, we would like to develop guidelines for the design of future emergency food aid programs.

## 2. OBJECTIVES

1. To assess the timeliness, appropriateness, and impact of emergency food aid programs in Africa and suggest ways they can be improved
2. To assist USAID Missions, private voluntary organizations (PVOs), host governments, and other donors in programming future emergency, rehabilitation, and disaster prevention activities
3. To provide A.I.D. and the donor community with lessons learned regarding the planning, design, implementation, and evaluation of emergency food aid programs, with emphasis on how they can more effectively foster long-term development initiatives and contribute to increased food security

## 3. SCOPE OF WORK

The following questions are illustrative of the kinds of issues that should be examined in depth by the evaluation team in carrying out the objectives of this assessment. Emphasis, of course, will vary from country to country and will depend on the particular type of intervention being examined and the degree of severity of the emergency situation. Priority should be given to information gathering and analysis leading to improved programming, redesign, and exploration of new options for the formulation of emergency food aid programs.

### 3.1 Causes of the Emergency

- What is the nature of the problem (both immediate and underlying causes)?
- To what extent is the country's food problem related to agricultural and macroeconomic policies that may discourage local agricultural production and marketing?

- How can the basic food problem be best addressed with emergency food aid?

### 3.2 Preparedness and Contingency Planning

- Do national procedures exist for responding to emergencies? Are they followed when an actual emergency occurs?
- Describe the types and levels of public and private sector security stocks, distribution mechanisms, and how they can be used in a disaster situation.
- What planning activities could be undertaken to strengthen the government's capacity to respond more effectively to structural and emergency food deficit situations? (Consider the political will and financial capability of the host government to handle emergencies in this context.)
- How do local people normally deal with food shortages, and how can this traditional coping behavior be reinforced?

### 3.3 Donor Coordination

- Were adequate mechanisms in existence, or were they established, to coordinate assessments of donor requirements and implementation efforts?
- Did these function effectively and how might they be improved?
- Assess A.I.D.'s role in relation to that of the host government and other donors in initiating and sustaining coordination functions.

### 3.4 Needs Assessment

- Describe the type of information (e.g., rainfall analysis, nutrition surveillance), collection system, analysis procedures, and use of data for early warning, assessment of requirements, declaration of disaster, design of programs, estimation of food input, and the like.

- Has the logistical capacity of the government and the private sector been adequately taken into account in determining food aid levels?
- Assess the accuracy, rapidity, and appropriateness of the needs assessment process and A.I.D.'s contribution.

### 3.5 Project Design

- How were target areas and groups of beneficiaries selected?
- Describe the basic characteristics of the beneficiary population (nomads, sedentary farmers, urban poor, displaced person/refugees), and their relationships to each other. How do these factors influence the food distribution mode selected.
- Have local food preferences and food consumption patterns of the target population as well as local market prices been adequately considered in the choice of commodities and the selection of distribution systems?
- Were necessary complementary inputs (i.e., seeds, vaccines, materials, technical assistance) incorporated into the food emergency program?
- To what extent have participation of beneficiaries and utilization of local organizational structures/resources been built into the project design?
- How were costs a factor in the design of the program?
- Were provisions for termination of emergency food aid and/or transition to rehabilitation and longer term development foreseen during the planning stages?
- Have linkages with regular food aid programs and other complementary resources been explored?

### 3.6 Management, Monitoring, and Evaluation

- Did the host government, USAID Mission, PVOs, and local community groups organize themselves effectively to manage the emergency? Discuss in terms of relief planning, organization, resource allocation, postcrisis rehabilitation, and longer term sustainability.

- What systems are in place for effective commodity accountability and program monitoring? Describe the information generated, costs, manpower, and similar features.
- What are the respective roles of the host government, USAID Mission, PVOs, community groups?
- How can management, monitoring, and evaluation be improved?

### 3.7 Timeliness of Emergency Response

- Discuss the effectiveness and quantify the exact time frames for the following:
  - Needs assessment and project design
  - Approval process
  - Procurement of commodities
  - Delivery of commodities to the country
  - Internal distribution of food to the target population
  - Arrival of technical assistance
- Describe constraints and how they were overcome. Suggest ways of expediting these procedures in the future. How can the private sector be used more effectively in the movement of food commodities?
- If food commodities did arrive late, were appropriate actions taken to avoid disincentive effects on local production and marketing?

### 3.8 Program Results

To the extent possible, and taking into account the constraints inherent in disaster situations, the evaluation team will present evidence of the effectiveness/impact of emergency interventions in terms of the following:

- Targeting: extent to which areas and/or victims with greatest need are being reached

- Coverage: percentage of the affected population being assisted (by the United States, by other donors)
- Increased availability of food in target areas and consumption by vulnerable groups
- Incentive/disincentive effects on agricultural production/prices/incomes
- Improved nutritional and health status of target groups
- Decreased infant and child mortality
- Demographic effects: population movements to centers and urban areas, age/sex distribution, and the like
- Dependency/self-reliance: Have relief programs weakened the self-help capacity of individuals and community groups? How can programs be better organized to re-empower individuals and strengthen local decision-making and resource generation/productivity?
- Policy and institutional reform: How has the emergency affected ongoing food strategy plans and price restructuring efforts? How has the emergency intervention strengthened the capacity of the government to respond more effectively to future emergencies?

### 3.9 Policy Issues

The following issues are complex and deserving of separate studies in themselves. Yet they are extremely important in thinking about programming options and provide a useful backdrop for discussions. As appropriate, the team should address these concerns in the context of recommendations for program improvement/redesign and lessons learned:

- Relative effectiveness (impact and costs) of various distribution modes (e.g., community free distribution, maternal and child health supplementary feeding programs, food for work, monetization, triangular transactions, rehabilitation activities) and consideration of alternative distribution mechanisms
- Comparative advantage and cost-effectiveness of different food distribution channels (WFP, PVOs, host governments) and criteria for selecting among them
- Linkages with regular food aid programs and other development assistance activities

- How food emergency programs can be planned to support sector and macroeconomic policy reforms and strengthen food self-reliance, disaster prevention, and longer term development initiatives
- Criteria for determining when and how emergency programs should be phased in and out
- Opportunities and constraints presented by the "chronic food emergency syndrome" with regard to funding mechanisms, multiyear planning, program design, conditionality requirements, and the like

#### 4. EVALUATION APPROACH AND DURATION

All team members will meet in Washington, D.C. during the first week of the assessment to review and clarify the scope of work, develop field protocols for site visits and interviews with local officials and program participants, and hold discussions with key A.I.D., USDA, State Department, OMB, and PVO officials.

After this prefield analysis is completed, the study teams will proceed to the country to carry out field investigations: reviewing additional documentation; interviewing key U.S. Mission, host government, PVO, and other donor officials; and inspecting appropriate field sites. Specific attention should be devoted to capturing the perceptions of program participants, either through structured interviews or informal conversations in their own language. The fieldwork will be carried out in approximately 18 working days per team member. If feasible, country studies should be scheduled in an iterative manner so that the approach can be tested and refined through the evaluation process.

Upon return from the field, each team will review its findings and will prepare a draft country report. When all the country studies have been completed, Mission comments received, and the final reports prepared, the contractor's core technical staff will prepare a synthesis of findings and recommendations, drawing out lessons learned about what works, what does not work, and why, from both the operational and policy perspectives.

USAID Missions would be expected to collect all existing data and reports and other relevant records for the team before their arrival. In those instances where in-house or local contractor capability are available, USAID Missions might conduct interviews with program participants in advance of the team's arrival. To the extent possible, USAID Missions should provide logistic support for the team while in-country.

## 5. COUNTRY SELECTION

Up to four countries will be selected on the basis of data availability, mix of distribution mechanisms and implementing organizations, type of beneficiary population, and government approaches/policies. The receptivity of USAID Missions/host governments, the ease of travel, and the representativeness of the emergency situation should also be taken into account. Because of the difficulty in operationalizing concepts such as "recovery," "rehabilitation," and "transition from relief to long-term development," the selection of programs and countries is critical to capturing the range of existing or potential experience.

## 6. TEAM COMPOSITION AND LEVEL OF EFFORT

In conducting these country assessments, the contractor will provide at least three specialists per country. Given the range of skills required to carry out this scope of work and the short time frame, the background of these specialists will vary according to the case in question, but must include all of the following areas of expertise:

- Language skills and country-specific experience
- Agricultural economics
- Public health/nutrition
- Social anthropology
- Food logistics
- Policy analysis/program design/evaluation

At least one of the team members, most probably the team leader, will be on the contractor's core technical staff. Although continuity in the evaluation team is assumed, it is not essential for the same consultants to go to all countries.

## 7. REPORTS

The team will submit a report on each country study as well as a synthesis containing an analysis of those factors that appear to determine program effectiveness, recommendations on how A.I.D. can improve its programming of emergency food aid, and lessons learned. Before departure from each country, the team will have engaged all concerned parties (A.I.D., WFP, other

donors, host country, PVOs) in a dialogue concerning their findings and recommendations. The draft country reports are due in A.I.D./Washington no later than 2 weeks after each team has returned to the United States. Five copies will be delivered. Missions will be asked to complete their reviews and respond with comments by cable within 2 weeks of receiving the draft. The final report (including an executive summary and synthesis of findings, recommendations, and lessons learned) will then be prepared and ready for print within 2 weeks of receiving all Mission comments. Ten copies of this report will be delivered. Any translation of the report will be the Mission's responsibility.



## APPENDIX B

### NOTES ON THE ACTIVITIES OF PRIVATE VOLUNTARY ORGANIZATIONS AND INTERNATIONAL ORGANIZATIONS

Under the Title II emergency food assistance program (government-to-government), private voluntary organizations (PVOs) distributed a total of about 34,000 metric tons (MT) of U.S. food grain grants to the Government of Mali in 1984-1985. In addition, World Vision Relief Organization (WVRO) distributed 6,889 MT of Ghanaian corn (bartered for U.S. Title II grain to be provided later), and the International League of Red Cross Societies (LICROSS) received 6,279 MT of vegetable oil, nonfat dried milk, and rice for distribution in supplemental feeding programs.

#### 1. CARE

CARE mobilized a team of 9 expatriates, approximately 120 Malians, and a fleet of 25 trucks to distribute the bulk of U.S. emergency food aid to the Government of Mali. The Agency distributed 17,178 MT of corn and cornmeal to 724,772 persons in Regions II, IV, V, and VII over an 8-month period beginning with Douentza cercle in Region V in late March 1985 and finishing in Region VI in November 1985. CARE has now concentrated its staff and logistic resources in Region VI, where it is planning a food-for-work program for rehabilitation and development (see also Appendix C).

#### 2. LICROSS

LICROSS ran emergency health and nutritional services around Gao and Timbuktu. It operated 99 feeding centers (its target was 160), serving 57,500 children a daily hot meal of mixed rice, nonfat dry milk, oil, and sugar. Later, LICROSS expanded its program to include grain distribution to families of the children. By May 1985 LICROSS was reported to be serving 290,000 persons per day. U.S. food assistance to LICROSS in 1984-1985 amounted to 5,439 MT of rice, vegetable oil, and nonfat dry milk under Title II and 840 MT of nonfat dry milk under Title II Section 416.

#### 3. CATHOLIC RELIEF SERVICES OF MALI

Catholic Relief Services of Mali (SECAMA) was established to help deal with the 1973/1974 drought. In 1984-1985 SECAMA was allocated 500 MT of U.S. food aid (government-to-government), which was fully distributed in Region IV. According to a report

by Dr. Brett-Smith, SECAMA distributed 891 MT of free grain between November 1984 and May 1985 in the Dogon Plateau area.

A discussion with a Catholic missionary, who has lived in Mali for 30 years, indicated that the drought of 1984-1985 was much more serious than that of 1973/1974. He also indicated that there are opportunities for food-for-work projects in Region V, which SECAMA could manage.

#### 4. MALI PEOPLE'S DEMOCRATIC UNION

Mali People's Democratic Union (UDPM) is the national political party. It was allocated 400 MT of U.S. food aid, which was distributed in Region VI in May and June 1985.

#### 5. MEDECINS SANS FRONTIERES

Medecins sans Frontieres (MSF) is a European PVO active in health and nutrition programs. Its work was concentrated in Regions VI and VII and was supported mainly by the European Economic Community (EEC) and LICROSS. MSF received an allocation of 400 MT of U.S. cornmeal through the Government of Mali's National Committee for Aid to Drought Victims (CNAVS) for its supplementary feeding programs in Region VI. During 1984-1985, MSF operated with an expatriate staff of 22 doctors and a Malian staff of 200. It established 210 supplemental feeding centers serving up to 25,000 children.

MSF has worked closely with UNICEF and Italian Cooperation and has been active in immunization programs (measles) and cholera care and prevention. In Region VI, MSF operates 34 health warehouses, with two trucks. MSF hopes to institutionalize the concept of health "sentinels" and of arrondissement health warehouses built, operated, and supported by local communities. It does not view its activities as long term; rather, it aims to build local/national capabilities in health care and nutrition. MSF has also supported food-for-work projects, including an irrigation canal employing 12,000 people in Region VI and village latrine programs.

MSF maintained records on the nutritional status of children in its feeding programs in 1984-1985. A medical anthropologist was posted to USAID/Mali for several months starting December 1985 to collect and review such data. In addition to collecting valuable data on the nutritional status of children over time in famine situations, MSF used the data to double check on any misuse of food. According to the MSF medical coordinator, the fact that some children in the feeding programs did not evidence

positive nutritional improvement showed that they were not getting the food programmed for them.

#### 6. NORWEGIAN CHURCH AID

Norwegian Church Aid (NCA) has agreed to carry out a 5-year program to support relief, rehabilitation, and development efforts in the Gourma area of Mali. This vast area, lying in the Sahelian zone, encompasses Region VI south of the Niger River and extends into the eastern part of Region VII. The well-established NCA has garages, warehouses, dispensaries, vehicles, and local and expatriate staff to assist in relief, rehabilitation, and development efforts in this famine-prone region. The organization employs 20 expatriates and 212 Malians. It has a fleet of 8 four-wheel trucks and 17 four-wheel drive vehicles. In 1984-1985 it distributed 4,287 MT of food aid, of which 2,150 MT was U.S. food aid under Title II (government-to-government). NCA operated a supplementary feeding program for 1,050 infants in 27 centers.

#### 7. SOUTHERN BAPTIST MISSION

In 1983-1984, the Southern Baptist Mission (SBM) received 5,000 MT of Title II food directly from the United States through Mt. Vernon Church, which had arranged shipment from Mississippi and distribution within Mali. Because of its familiarity with the SBM program, USAID/Mali based the 1984-1985 emergency food assistance program on PVO management of the U.S. grants and food for free distribution. Starting in June 1985, SBM managed the distribution of 7,826 MT of corn and cornmeal in Bamako and Regions II, III, IV, and V. In all, SBM worked in 74 arrondissements in 12 cercles. Based on an average ration of 67 kilograms (150 pounds) per family of five, SBM distributions reached up to 116,000 families and 580,000 persons. Distribution was carried out by expatriate staff and 35 pastors who served in the districts and communities. The Stromme Memorial Foundation assisted in the SBM program in Regions II and IV. SBM has decided not to work in food distribution in 1985-1986 but to concentrate on development work and its own program.

#### 8. THE STROMME MEMORIAL FOUNDATION

The Stromme Memorial Foundation (SMF) fielded an expatriate staff of 10, including 2 Americans (through the Christian Reform Church), 6 Norwegian drivers, a mechanic, and a Norwegian food distribution supervisor. The Foundation also provided four

trucks plus locally hired trucks. SMF distributed 2,121 MT of cornmeal on its own in Youvarou, Djenne, and Tenenkou cercles of Region V (in April, May, and June) and 488 MT of corn and cornmeal in Region I. In addition, MSF helped distribute 827 MT in Region VII (with WVRO), 1,350 MT of corn in the Dogon Plateau in Region V (with SBM), 1,918 MT in Region II, and 1,140 MT of corn in Region IV (also with SBM). In all, MSF distributed or assisted in the distribution of 7,852 MT of corn and cornmeal.

#### 9. SWISS DISASTER RELIEF

Swiss Disaster Relief (SDR) is a PVO that worked closely with the U.N. Disaster Relief Organization (UNDRO) in the distribution of food aid in 1984-1985, particularly in Region VII (2,500 MT allocated). SDR also contributed to a 1984 study of in-country transportation for emergency food distribution.

#### 10. U.N. CHILDREN'S FUND

In 1984-1985, the U.N. Children's Fund (UNICEF) operated four medical teams (two Swedish, one Norwegian Church Aid, and one Italian) in Region VI that provided curative care and conducted a measles vaccination program in October 1985 covering 45 to 60 percent of the children. Recognizing the seriousness of nutritional deficiencies in children, UNICEF headquarters authorized a supplemental feeding program. The organization operated nutrition feeding centers in Timbuktu and Dire cercles in Region VI (71 centers) and Region V (6 centers), serving 15,700 children.

Some 120 parent-run school canteens serving 24,000 children were also organized and supported in Regions I, IV, V, VI, and VII. UNICEF received food allocations of 2,100 MT: 1,200 MT from EEC, 500 MT from the World Food Program (WFP), and 400 MT from the United States.

In addition, UNICEF organized food-for-work projects for families with children in the nutrition feeding centers.

UNICEF plans in 1985-1986 are to continue the school canteen program and to keep nutrition centers open through 1986, gradually developing them into centers for health education. UNICEF has requested food from USAID/Mali for 6 months of operations in 1986 and financial assistance to establish a garage and procure additional warehouse space and three trucks (increasing its fleet to nine). UNICEF has also requested an A.I.D. grant, which was approved in February 1986, to carry out a village water supply program in Region V.

11. UNITED NATIONS DISASTER RELIEF ORGANIZATION

The United Nations Disaster Relief Organization (UNDRO) worked closely with CNAVS. It also worked with Swiss Disaster Relief on a study of logistic problems of the region. In 1984-1985, UNDRO maintained and operated for the Government of Mali a fleet of 38 trucks received from OPEC (20) and Italy (18) and managed distribution of food aid in the following areas on behalf of the Malian Government:

In Region VII (Gao):	2,500 MT - U.S., corn (Title II)
	1,500 MT - WFP, corn
In Region V (Mopti):	7,000 MT - WFP
	5,000 MT - France, corn
	1,900 MT - Government of Mali
In Region VI (Timbuktu):	1,500 MT - WFP
Total	<hr/> 19,400 MT

UNDRO operated this program with four expatriates working through Malian distribution committees at the regional, cercle, arrondissement, and village level. Normally, distributions were made by UNDRO from the arrondissement to the village level.

In 1985-1986 and 1986-1987, UNDRO expects to focus on medium-term rehabilitation.

12. WORLD RELIEF

World Relief was allocated 347 MT of food aid, which it distributed in Regions IV and V.

13. WORLD VISION RELIEF ORGANIZATION

World Vision Relief Organization (WVRO) distributed 500 MT of Title II government-to-government food aid in Region I. It also received 10,000 MT of Title II Ghanaian barter corn, 2,000 MT of which was allocated and shipped to Region II and 8,000 MT to Region VII. The Ghanaian corn started to arrive at the beginning of July, and only a part was delivered in time for distribution during 1984-1985. In all, WVRO distributed 6,889 MT as of the end of November. WVRO employed about 220 Malians and a number of expatriates. The organization maintains its own 12-vehicle truck fleet. WVRO also carried out a supplementary feeding program in Maneka and a well-drilling project in the

Dogon Plateau in Region V. The organization plans a continued major effort in Region VII involving food for work and activities to support resettlement, gardening, and minor irrigation. WVRO also plans to continue activities in Region I. However, a Canadian PVO (ODIC) has a major development program there, so the WVRO effort in Region I is expected to be relatively modest.

## APPENDIX C

### REVIEW OF THE CARE FREE FOOD DISTRIBUTION PROGRAM IN MALI AND THE MALI FOOD SUPPLY PROGRAM FOR REGION VI IN 1984-1985

#### 1. INTRODUCTION

To help understand how free distribution of U.S. emergency food was handled in 1984-1985 and to determine its appropriateness, impact, and timeliness, the evaluation team decided (1) to examine one private voluntary organization (PVO) program in some depth and (2) to review all free food distribution from all sources in one drought-affected region.

The CARE program was chosen for review because CARE was selected to manage about half the distribution of emergency U.S. food grants to the Government of Mali and because it received a large operating grant from the A.I.D. Office of U.S. Foreign Disaster Assistance (OFDA) to enable it to implement the program. The evaluation team also reviewed free distribution programs of other PVOs but in less depth because of time constraints.

The Malian National Food Supply Program for Region VI (Timbuktu) was also reviewed because CARE was managing the bulk of U.S. food distributions in Region VI and because it was one of the most severely drought-affected areas.

This review is based on USAID/Mali documents, including reports received from CARE and reports of USAID monitors; discussions with CARE personnel who organized and managed the distribution programs; interviews with USAID/Mali drought relief office staff who were monitoring the program; and a field visit to three cercles in Region VI where the bulk of CARE distribution took place. Information on the food supply and distribution for the Timbuktu region was obtained mainly from the Malian Grain Marketing Board (OPAM), supplemented by USAID/Mali data on the Norwegian Church Aid (NCA) program in Gourma.

#### 2. BACKGROUND

The USAID/Mali strategy for emergency food aid to Mali in 1984-1985 was based on A.I.D.'s experience with emergency food distribution in 1982-1983 and in 1983-1984. That experience suggested that the Government of Mali's capability to manage free distribution of grain was limited. USAID/Mali concluded that, to be effective, free distribution needed either to be sharply targeted toward needy populations, a process that regional and local governments find politically difficult, or to be thematic, that

is, managed in the framework of specific programs such as food for work or supplementary feeding for mothers and children.

Early in 1984-1985 (the disaster was officially declared for Regions V and VI in August 1984) USAID/Mali determined a strategy based on the following (USAID/Mali December 1984):

- Distribution of food for sale to help meet food needs where purchasing power existed, to ensure social stability, and to contribute to meeting the national food deficit
- Distribution of free food using PVOs whenever possible
- Distribution of food to enable people to remain in their villages or grazing areas in order to minimize migration and the establishment of camps
- Distribution of sufficient food to enable farmers to survive the drought and remain in their villages to plant their crops in 1985 when the rains came

Total U.S. food aid in 1984-1985 amounted to 95,444 metric tons (MT); the total food aid requirement was estimated at 233,000 MT. In general, donors considered this estimate to be realistic.

The plan for the free distribution of U.S. emergency food aid was drawn up by USAID/Mali and the Government of Mali for a total distribution of 60,300 MT.

A total of 20,000 MT of U.S. emergency food grains and rice was programmed for sale in Kayes, Koulikoro, Mopti, Timbuktu, and Gao Regions. The local currency sales proceeds went to a special counterpart account for drought relief. The counterpart funds generated by these sales, after deducting costs of sales, were reserved primarily to help defray the costs of free emergency distributions. Funds from a PRMC counterpart account were advanced against this account. Managed by donors and the Government of Mali, this account was to finance the purchase of vehicles for the CARE program (about US\$835,000) and a local contract for the transport of U.S. emergency food for free distribution to Region VI (about US\$750,000). Leftover counterpart reflows from 1983-1984 emergency food sales were used to finance local transportation costs of PVOs from the OPAM warehouses to disaster areas at the arrondissement and village levels.

Total emergency, or free distribution of U.S. food, amounted to 40,300 MT of corn and cornmeal provided as a government-to-government grant. Under the distribution program worked out with the CNAVS and OPAM, this food was to be distributed by CARE, World Vision Relief Organization (WVRO), Southern Baptist Mission

(SBM), Stromme Memorial Foundation (SMF), Medecins sans Frontieres (MSF), Norwegian Church Aid (NCA), Swiss Disaster Relief, and LICROSS.

As early as October 10, 1984, USAID/Mali advised A.I.D./Washington that it planned to use PVOs as much as possible to handle the free food distribution. By November 8, USAID/Mali advised A.I.D./Washington that it had identified six PVOs capable of handling the 23,000 MT of free food distribution then being planned.

On January 28, 1985 USAID/Mali requested an additional 35,000 MT of emergency food aid and indicated that its distribution plan would include 15,000 MT for sale and 20,000 MT for free distribution, probably by CARE. By February, the program for the 40,300 MT of free food distribution had been developed and agreed to by A.I.D./Washington and the Government of Mali.

In March 1985, USAID/Mali formally requested an operating grant to enable CARE to cover the costs of distributing 22,500 MT of food aid. The Office of U.S. Foreign Disaster Assistance (OFDA) signed the agreement with CARE on May 21, 1985. Subsequently, CARE prepared to distribute 22,500 MT of food aid in Regions II, IV, and VI. The 1984-1985 CARE program in Mali included an initial distribution of 2,500 MT of food in the Douentza cercle in Region V (Mopti).

### 3. THE DOUENTZA CERCLE PROGRAM, REGION V (MOPTI)

#### 3.1 Introduction

The Government of Mali and USAID/Mali selected Douentza as the area in the Mopti Region suffering the greatest food shortage. The program in Douentza was carried out in March and April, extending into May 1985, using procedures developed by USAID/Mali with the Government of Mali's National Committee for Aid to Drought Victims (CNAVS). A total of 2,486.4 MT of food was distributed to a population of 120,000. The program enabled CARE to hone its operating procedures. Operating costs, including the rental of 12 10-ton trucks, were covered by counterpart funds.

#### 3.2 Care Procedures

Under procedures developed by USAID/Mali, in consultation with the Government of Mali, each PVO was to prepare a distribution plan to be approved by local authorities, usually the gover-

nor of the region and the commandant de cercle. CARE procedures included the following:

- Initial survey of the area to be assisted
- Preparation of a distribution program to be approved by the governor of the region and the commandants de cercle
- Distribution of food aid, in cooperation with local authorities, based on a 6-week ration of 500 grams per person per day
- Distribution of food by a professional team with expatriate supervision and trained Malian distributors
- Targeted distributions to arrondissements with severe food shortages and at-risk populations; food was normally distributed to all families (directly to the head of family when time and circumstances permitted)
- End-use checking to determine the impact of the program and ensure that the distribution is correctly executed

The distribution team provided reports to CARE headquarters every 2 weeks. A final report was provided to USAID/Mali.

### 3.3 CARE/Government of Mali Distribution Plan in Douentza Cercle

The plan was to distribute 2,500 MT of corn to 262 needy villages in six arrondissements serving a village population of 120,899. The basic ration was one sack (46 kilograms [kg]) for three persons, equivalent to about 15 kg per person, or sufficient for 1 month.

### 3.4 Monitoring and Assistance by USAID/Mali

The program was reviewed by a USAID monitor, Mr. A. Keehn, who visited the area twice (internal USAID/Mali memorandum from Mr. Keehn, April 29, 1985). Mr. Keehn reported that in the N'Gouma village (the sector village in N'Gouma arrondissement), people were impressed by the open and efficient CARE distribution, which "gave them the strength and courage to stay put and farm should the rains come." Mr. Keehn also observed distributions in two Dogon villages where villagers expressed great satisfaction for the grain that supplemented the garden-grown vegetables they still had.

The USAID Food for Peace officer visited the area several times to develop a system to reroute grain trucks, which were scheduled to arrive in Mopti from Abidjan, so that they could reach Douentza directly.

### 3.5 CARE Final Report

The CARE final report on this program, prepared by Mr. L. Kabir, is dated May 30, 1985. It summarizes the distribution program, noting that the total distribution amounted to 55,253 sacks (2,496.4 MT) and that the end-use checking had covered sector-to-village-level distribution and village-to-beneficiary distribution and uncovered no problems. The report does not, however, provide information on the extent to which the food brought relief to seriously at-risk families, alleviated the threat of serious malnutrition and starvation, and enabled them to remain in their villages through the drought period and recommence farming when the June-July rains came.

### 3.6 Other Food Aid in the Cercle

Douentza received 500 MT of food aid from the Southern Baptist Mission (SBM), after the CARE distribution. The SBM distribution program was carried out in all villages but, in contrast to CARE procedures, was limited to needy families, as determined by village chiefs and elders and SBM distributors and volunteers. Medecins sans Frontieres (MSF) also conducted supplementary feeding programs in a number of mother/child health care feeding centers in the cercle. Finally, the World Food Program (WFP) carried out food-for-work projects in the cercle as well as free distributions.

## 4. CARE DISTRIBUTION IN REGION IV (SEGOU)

### 4.1 Introduction

The CARE program in Region IV was initially limited to the hard-hit cercles of Macina and Niono. Only 3 days after OFDA signed the contract for support of the CARE distribution program, CARE was able to commence distribution. The program in the two cercles was carried out from May 24, 1985 through the end of September 1985. At the governor's request, a special program was carried out in Segou cercle in October.

#### 4.2 CARE/Government of Mali Distribution Plan in Macina

CARE distributed 2,214 MT of food to 100,435 persons in 174 villages in five arrondissements in Macina. The first distribution plan, approved by the governor and the commandant de cercle, was dated May 13, 1985. The plan, which began May 24, was for the distribution of 350 MT of corn to some 24,532 persons, including migrants, in 42 villages. The second plan (dated July 5, 1985 and addressed to the governor) was for the distribution of 939 MT for 30,000 persons and was implemented in July and August. A third distribution plan, signed in August, provided for the distribution of 400 MT of food for two arrondissements. The fourth distribution plan (dated September 18, 1985 and addressed to the governor) called for the distribution of 101 MT of corn to 4,384 persons in 12 villages.

#### 4.3 CARE Program in Niono

CARE distributed 1,384.6 MT of corn and cornmeal to 41,992 persons in 90 villages in four arrondissements. The program was carried out under two plans. The first, dated May 9, called for the distribution of 298.4 MT of food and took place in late May and in early June. The second involved the distribution of 1,100 MT of corn, 45 kg per person, and took place in July according to a plan dated July 8, 1985.

#### 4.4 CARE Distribution in Segou Cercle

CARE also distributed 355.5 MT of grain to 35 villages in four arrondissements of the Segou cercle (total population reached was 28,273) in September-October in response to a special request from the governor of the region.

### 5. USAID/MALI MONITORING

USAID/Mali food monitor Yolanda Takesian visited Macina and Niono in June and late July 1985 and found that CARE was doing a good job: there was enough food, and it was reaching the needy and at-risk populations (see USAID/Mali internal memoranda dated June 15 and July 1985). The first trip showed that CARE and the local government (cercle level and below) were cooperating well and that the local government was supporting the program. (The commandant de cercle of Niono helped overcome a logistic problem in Macina by lending his truck for food distribution.)

Ms. Takesian reported that the beneficiaries in Macina were very positive about the program. Both the Niono and Macina commandants de cercle reported that the CARE distribution was well managed and effective in meeting local needs. However, the 45-kg per person distributed in Niono may have been too large because some of the distributed food appeared on the market.

#### 4.6 Other Food Aid and Disaster Relief Actions

A small French PVO, ANITU, distributed locally purchased grain to nomad populations who had sought refuge in the two cercles and assisted CARE in targeting distributions. The Catholic Fathers in the two cercles also distributed about 100 MT of food provided by the Government of Mali through OPAM.

### 5. CARE DISTRIBUTION IN REGION II (KOULIKORO)

#### 5.1 Introduction

In February 1985, USAID/Mali first assessed the situation in Region II (see internal memorandum from Jim Anderson, Deputy Director of USAID/Mali, March 1985). Subsequently, CNAVS and USAID/Mali agreed to a program of free distribution of 4,400 MT of U.S. food assistance in the region, of which 3,750 MT was distributed by CARE and 650 MT by SBM in cooperation with SMF.

Demonstrating the flexibility of programming response, the program was modified when it became apparent that CARE was unable to begin operations in the region until September and that SBM was prepared to undertake a sizable distribution earlier. Accordingly, USAID/Mali and CNAVS revised the program to provide for a CARE distribution of 2,500 MT and an SBM/SMF distribution of 1,950 MT of food assistance.

#### 5.2 The CARE/Government of Mali Distribution Plan

CARE presented a distribution plan to the Malian Government on August 30, which was approved. It provided for the distribution of 1,200 MT of corn and cornmeal to 89 villages in the Nara cercle and 1,250 MT of corn and cornmeal to 96 villages in the Banamba cercle. The commandants de cercle were not asked to approve this distribution plan and later objected to them as being unsatisfactory and insufficient.

### 5.3 The Nara Program

CARE distributed 1,347 MT of corn and cornmeal to 59,363 persons in the Central arrondissement and in Dilli arrondissement in the first 2 weeks of September. (See the biweekly report, September 1-15, by CARE's second food distribution team to CARE headquarters, prepared by L. Nichols.) The distribution program in these two arrondissements proceeded satisfactorily and addressed the problem in the worst-off, most populous, and most accessible arrondissements of the cercle.

However, both CARE and USAID/Mali agreed that distributions were also badly needed in the other arrondissements of Nara cercle. However, because CARE's resources were being fully utilized, it is doubtful that the agency could have handled distribution in several more arrondissements, particularly because of the considerable distances involved.

In retrospect, the governor and CARE made a mistake in proceeding with the distribution plans for the cercles without first obtaining the approval of the local commandants de cercle. Considering the situation, corrective action might have involved a special allocation by CNAVS to the commandants de cercle so that the needs in the other arrondissements of the cercle could be met, as was the case in Region VI (see Section 7).

### 5.4 The Banamba Program

CARE reported that actual distribution in the Banamba cercle was 1,282.7 MT of food to 139 villages in six arrondissements reaching 58,249 persons. Distribution took place in October and did not pose the same problems encountered in the Nara cercle. Although the end-use report of the program was not yet available, it appears that sufficient food was available and distributed to address the people's needs. In fact, because distribution was late, early millet was already being harvested in some areas.

## 6. CARE DISTRIBUTION PROGRAM IN REGION VI (TIMBUKTU)

USAID/Mali and CARE made several visits to survey needs in Region VI, including visits by the Food for Peace monitor in September, November, and December; a visit by a CARE director (Mr. Packard) in December; and a visit by the USAID Mission Director in January. By February, A.I.D./Washington had authorized 60,000 MT of food aid for emergency distribution on a government-to-government basis, and USAID/Mali and CNAVS agreed to allocate 12,500 MT of corn and cornmeal for free distribution

by CARE, plus 2,500 MT of rice for sale, to meet the needs of the region.

## 6.2 The Logistics Problem

Two problems confronted CARE's distribution program in Region VI:

- Trucks ordered for CARE at the end of May did not become available until relatively late. Seven of the 25 vehicles arrived in late June; the remaining 18 did not arrive until August. CARE was able to continue its work in June and July by borrowing five trucks from the U.N. Disaster Relief Office.
- Deliveries of corn and cornmeal to OPAM warehouses in Region VI for pickup and distribution by CARE were delayed. Deliveries did not commence until June 3 and amounted to only 782 MT (by land and air) through June 30. It was not until August 8, when boat transportation proved possible, that delivery rates accelerated.

## 6.3 CARE/Government of Mali Distribution Plan for the Goundam Cercle

The Goundam cercle was chosen for the initial distribution in the region along with the Timbuktu cercle because officials hoped to limit migration by commencing distributions outside the regional capital.

CARE finalized a distribution plan for Goundam cercle with the governor on June 5, 1985. The plan called for the distribution of 2,345 MT of cornmeal to 111,205 persons in eight arrondissements (one sack per person). Actual distribution began the third week of June and continued through July; distributions to the Goundam refugee camp continued until the end of August.

A second distribution of food was arranged for Farach, recognized as the most severely affected arrondissement in the cercle. Starting October 24, CARE distributed 360 MT of food to 13,216 persons, based on one sack of cornmeal (22.6 kg) per person or one sack of corn grain for two persons. Distribution was completed early in November.

USAID/Mali monitoring included a mission in May by a contract Food for Peace officer to help set up the program; a mission early in July to report on the food distribution ("off to a fine start"); a mission, including the USAID health officer,

later in July to review the situation in the refugee camp that had developed on the outskirts of Goundam City; and a mission by Ms. Elsadia Washington, who surveyed conditions in Region VI at the end of October. The evaluation team visited the area on November 6 and 7, 1985.

#### 6.4 CARE Distribution in Timbuktu Cercle

CARE finalized a distribution plan with the governor by June 5, 1985. It called for the distribution of 2,039 MT of cereals to 102,519 persons in the five arrondissements and for the city of Timbuktu. Distribution began in the middle of September immediately following the Goundam distribution program and was carried out very quickly in a 3-week period ending October 7. Distribution was carried out directly to heads of households (as was the case in Goundam cercle). The total distribution was 1,948 MT to 86,237 persons, including a floating migrant population of 17,641 persons. The people of the cercle were experiencing the third serious drought in as many years. The CARE distribution was needed and should have been planned and carried out earlier. However, logistic problems described above prevented this.

#### 6.5 CARE Distribution in Gourma-Rharaus Cercle

Gourma-Rharaus lies entirely south of the Niger River and is relatively difficult to supply from other Region VI supply points. An initial distribution was made to Haribomo and Bambara Mounde arrondissements in July by special arrangement: 400 MT were transported from Mopti to the region by the transport contractor to the chefs d'arrondissement who arranged for distribution of 300 MT in Bambara Mounde and 100 MT in Haribomo in July and August. This distribution was monitored by USAID/Mali (A. Keehn, memorandum, August 6, 1985).

CARE's distribution followed a plan worked out with the governor and local authorities for distribution in six arrondissements: Central, Madiakoye, Ouinerden, Haribomo, Bambara Mounde, and Inadiatafane. The seventh arrondissement of Gossi was not included because it was being assisted by Norwegian Church Aid.

The plan called for a total distribution of 3,149 MT to 114,590 persons in 14 sectors in the six arrondissements. Rations were two sacks of cornmeal per person (46 kg). Distribution began in September and continued until October 22 when CARE ran out of food, having distributed 1,822 MT. CARE completed distribution in November after receiving additional supplies.

In practice, the initial food ration in Gourma-Rharaus proved too large, and some food found its way to the open market. This was observed by USAID/Mali monitors, and a letter was transmitted to CARE requesting a reduction in the ration; CARE complied with the request when it resumed distribution in November.

#### 6.6 CARE Distribution in Dire and Niafunke Cercles

Dire and Niafunke were the cercles least affected by the drought. Situated by the Niger River, with a sedentarized and farming population, the cercles had somewhat better harvests than other areas. Furthermore, both cercles were recipients of substantial amounts of food for work.

Nevertheless, local governments urged a distribution for needy persons, and CARE developed a distribution program for both cercles, which was approved by the governor and the commandants de cercle on October 15. The Dire program targeted villages in two arrondissements that had been hard hit and were facing a poor harvest. Distribution was targeted even more tightly to needy families as determined by the village chiefs and elders and the CARE team.

The Niafunke program targeted the three northern arrondissements of the cercle that lay outside the river flood zone and had been affected by the locust invasion of October 1985.

CARE distributed 362 MT of cornmeal in the two cercles: 16,000 persons in 28 villages received food in Niafunke, and 16,000 persons in 87 villages received food in Dire. A USAID monitor observed the distribution from October 20 to 30.

#### 6.7 Other Food Distribution in the Region

Earlier in the year, distributions were made by the European Economic Community (EEC), using PVOs, and by the Malian Government using stocks from the National Security Stocks (eventually repaid by EEC and others). Medecins sans Frontieres (MSF) carried out supplementary feeding programs for mothers and children in all cercles except Dire and received a donation of U.S. grains of 400 to 21,000 rations a month (two rations per day). MSF is also managing a food-for-work project employing some 2,000 persons on an irrigation project--providing 1,500 kg per day to the workers, or a total of 200 MT per month. Isle de Paix, a small french PVO, is managing a food-for-work program in the region. Quakers Service is providing some free distribution and some food for work. UNICEF was active in Dire cercle with supplementary

feeding and received 400 MT of U.S. emergency food aid for this purpose. (For the record, we note that USAID/Mali provided 1,000 MT of grain for free distribution by OPAM in Region VI in October 1984, but this was considered to be under the 1983-1984 food distribution program.)

#### 6.8 Total CARE Distributions in Region VI

The original allocation of 12,500 MT for CARE distribution in Region VI was reduced by 1,035 MT to divert supplies to World Relief (335 MT) and to Segou through SECAMA (500 MT) and CARE (200 MT). Of the 11,465 MT of food aid remaining, CARE will have delivered about 8,557 MT before free distributions are stopped early in November. The remaining food is expected to be reprogrammed for other purposes, including food for work.

#### 7. IMPLEMENTATION OF THE 1984-1985 FOOD SUPPLY PROGRAM FOR REGION VI (TIMBUKTU)

OPAM developed the 1984-1985 National Food Supply Program in consultation with CNAVS, donors, and various technical departments of the country. Data on regional production, farm stocks, regional population, and regional consumption are all estimates subject to large margins of error; therefore, OPAM based its regional Food Supply Program largely on the food levels supplied in preceding years, adjusted for known changes and in light of the expected national food supply available for distribution. In November 1984, OPAM projected a distribution program of 205,000 MT of food, of which 32,000 MT was for Region VI.

The following preliminary data supplied by OPAM in November 1985 indicate that 36,908 MT of food was actually supplied to Region VI under the program:

- 15,764 MT--OPAM sales, including about 2,000 MT of U.S. rice
- 3,197 MT--OPAM free distribution from National Security Food Stocks in the period March-June 1985 (since repaid by EEC and other donors)
- 6,040 MT--EEC free distribution by PVOs in the period February-October
- 11,907 MT--USAID/Mali free distribution by PVOs

The U.S. free distribution is based on the following:

- 400 MT--People's Democratic Union of Mali, May-June
- 8,557 MT--CARE, June-November
- 400 MT--MSF
- 400 MT--UNICEF
- 2,150 MT--NCA

## 8. FINDINGS AND CONCLUSIONS

### 8.1 Total Distributions

CARE's allocation of 22,500 MT of food was reduced to 20,150 MT because supplies were diverted to other PVOs, as noted above. Including the Douentza distribution, CARE was programmed to distribute about 22,700 MT of food. Of this, CARE distributed an estimated 17,968 MT of corn and cornmeal: 2,500 MT in Douentza in Region V and 15,468 MT in Regions II, IV, and V from the end of May through early November 1985. Distribution was made to some of the most seriously drought-affected areas in the country. In all, rations were distributed to families at risk in eleven cercles--a total estimated at-risk population of 753,000 people.

### 8.2 Appropriateness of the Program

The program was designed to provide emergency food assistance to the most critically affected arrondissements and villages in the areas where CARE was assigned to work. Rations were appropriate in nearly all instances and were adjusted when not. Distribution was tightly targeted to address the needs of areas where food shortages were severe and starvation and severe malnutrition threatened the population. Thousands of lives were saved. Food was usually distributed directly to heads of households, normally with the close cooperation of local authorities. Distribution programs were worked out with the local government and approved by the regional government, including the governor of the concerned region and normally by the commanders of the different cercles. Local government and beneficiaries expressed appreciation for the equitable and efficient management of CARE distribution.

The program was well designed to meet the food needs of populations most at risk. The programs helped these populations to stay in their villages, thus encouraging and permitting farmers to hold out and plant a new crop when the rainy season came.

### 8.3 Effectiveness

The CARE program was effective. Its procedures were well designed to ensure sound, effective distribution plans and proper accountability. CARE's teams were well organized, staffed, and managed. The distribution plans were tightly targeted to populations in need of emergency food aid. The program helped people survive through the drought without leaving their villages and provided necessary assistance to enable families and groups who had fled their villages and areas to survive. There was little food lost or misused during distribution and no discernable corruption or misallocations.

### 8.4 Emergency Food Distribution by PVOs Under Government-to-Government Grants

The decision of the Government of Mali and USAID/Mali to manage free food distribution with the help of PVOs appears in retrospect to have been a wise one. Moreover, the contribution made by CARE and other PVOs in assisting regional and local development committees with the process of rehabilitation and development, which must now take place, can be extremely important in helping Mali continue its development efforts--a point stressed by the Government in a November 1985 meeting with PVOs.

### 8.5 Timeliness

CARE's distributions were timely once food supplies were delivered from OPAM warehouses. CARE's initial distribution of nearly 2,500 MT in the Douentza cercle, Region V, was timely and went as planned.

However, timeliness of the distribution program was a problem. The critical period for food distribution was, in most cases, particularly in Region VI, during the May-October period (the "hungry season"). It was urgent to distribute food to at-risk populations as much as possible in the May-July period. It was also critical to supply free food requirements for Region VI before the rains closed road transport because supplies could not reach the region again until the Niger River rose sufficiently to permit supply by boat.

Unfortunately, CARE received its food supplies late, so that most of its distributions had to be scheduled for the August-October period. Despite this shortcoming, Government of Mali officials recognized that A.I.D. was the first donor to get emergency food into the country and that the food, which arrived in February, helped address emergency food requirements at a very critical period when stocks were extremely low. As the technical adviser of OPAM put it, the early and timely delivery of U.S. food helped stave off a "rupture des stocks" at a point where supply requirements were becoming desperate.

In a year when PVOs were gearing up for a major and difficult food distribution program involving complex supply and logistic problems (due to the large quantities being provided by private and Government imports and by donors) the USAID Mission, A.I.D./Washington, and the Regional Economic Development Support Office (REDSO, responsible for monitoring and assisting in port operations) performed remarkably well.

#### 8.6 Program Implementation

The problems of timeliness affected CARE's ability to distribute the entire 22,500 MT as planned. From May 21 through early November, total distributions amounted to about 15,400 MT. However, during this period, adjustments and changes were made in the allocations for free distribution among the various PVOs. As a result, CARE's program target was reduced to about 20,150 MT. The execution rate, therefore, was about 75 percent.

#### 8.7 Measures That Could Have Improved the Timeliness and Effectiveness of the CARE Program

CARE operations could have been more timely and effective under the following conditions:

- If the small 7- to 10-ton trucks needed for local distribution and distribution in the arrondissement had been ordered earlier (sector- and village-level trucks were not ordered until the end of May, and only seven had arrived by July.)
- If the OFDA operating grant had been signed 6 to 8 weeks earlier

## 8.8 CARE Relief, Rehabilitation, and Development Programming

CARE is now prepared for continuing food relief and rehabilitation work in Mali and for development efforts with local and regional authorities. Region VI, which is a food-deficit and drought-prone area, offers opportunities to improve production--for example, by development of minor irrigation systems and training of farmers and pastoralists interested in farming, reforestation, and desertification control measures--and to address basic needs through such measures as improved schools and mother and child care. The Government of Mali strongly supports such ongoing cooperation with and assistance from CARE and other PVOs working with regional and local development committees.

The possibilities for food-for-work projects in Region IV, which besides addressing food needs could assist development, merit close study. The water table on both banks of the river is high, yet tree and vegetative cover is sparse and the region is becoming increasingly desertified. Food-for-work programs would help local communities with reforestation and revegetation programs, which could greatly benefit the area (note the experience with major food-for-work projects in such reforestation efforts in Algeria in the 1960s and CARE's successful experience with dune stabilization and wind breaks to help increase rainfed millet production in Niger).

Donor programs to promote agricultural production on the "Boucle du Niger" have not been successful, and various evaluations have indicated that agricultural development efforts along the river have not proven economic. It would be a major contribution to Malian development if PVOs working with farmers and local communities in this area could help establish viable food production systems using the water resources of the river. The Africare project (Activite Paysanne) offers one such opportunity in Region VI, and it is to be hoped that a PVO will seize the opportunity to provide similar assistance in Region VII.

## 8.9 Annual Food Supply Programming

Since 1982, Mali has had a system of annual food supply programming, which has proven extremely valuable in planning food aid distribution. Although such planning could be improved by improving systems for estimating farm production, household food consumption, village farm stocks, and population, such improvements evolve only over a considerable period of time. However, it would be very helpful if the United States could assist in efforts to improve information on planting major cereals. Satellite imagery could be used for this purpose. Techniques devel-

oped for and applied in Mali would have wide application throughout the Sahel and Southern Africa.

## 9. RECOMMENDATIONS

Recommendations are found in the main report; however, three are noted here:

- The need for sharply targeted free food distribution will continue in Region VI and elsewhere during 1985-1986. USAID/Mali should assist this effort, as it plans to, using CARE and other PVOs to help manage the distribution.
- A.I.D. should support CARE and other PVO follow-on efforts for rehabilitation and development, including assistance for well-designed food-for-work projects and programs.
- The A.I.D. Bureau for Science and Technology should examine possibilities of contracting with the National Oceanic and Atmospheric Administration (NOAA) or another organization to use satellite imagery to survey cereal-growing areas in Mali and to develop sampling techniques using satellite imagery for more reliable regional data on acreage planted.



## APPENDIX D

### SOCIAL, NUTRITIONAL, AND HEALTH DIMENSIONS OF THE MALI FOOD EMERGENCY, 1984-1985

#### 1. RESEARCH METHODS

The evaluation team spent 20 days in Mali, from October 26 through November 15, 1985. Ten days were spent in the field discussing the emergency food aid program with representatives of local private voluntary organizations (PVOs), members of the Malian administration, and--those of most concern to the team anthropologist--members of the communities most directly affected by the drought and ensuing famine.

To ensure comparable responses from representatives of the three groups to the same questions, a similar protocol was followed in framing basic queries. Questions were posed in simple terms: (1) did food assistance arrive in a timely manner; (2) was the food assistance appropriate; (3) what was the impact of the food assistance program on the local community; and (4) how might the food assistance program be coordinated with future development efforts?

Three separate field trips were made. First the team visited the cercles of Bougouni, Sikasso, and Koutiala. This area was selected because it lies in the southern, more fertile part of Mali where rainfall is heavier, and thus it has received the majority of immigrants and refugees from the areas in the north, where the drought has had its major impact. The Government of Mali's strategy for adjusting to famine conditions resulting from the drought has been to resettle populations from the north in this southern part of Mali; therefore, it was important to obtain data on the responses of groups adapting to the differing ecological conditions of the south. Their account of the famine conditions that had caused the exodus from their more northerly homelands was also important.

Three major ethnic groups have been involved in this southern migration: Dogon, cultivators from the area of Bandiagara southeast of Mopti; Sonrai, also cultivators, from Regions VI and VII (Timbuktu and Gao); and Tuareg, Temachek-speaking pastoral nomads, comprising "nobles" and their slaves, the Bela. Smaller numbers of Bozo, fishermen from the banks of the Niger between Mopti and Gao, have also migrated south. There are also some Maures, or Arabs, in the south.

The anthropologist was assisted in the field by Mr. Dogodiougo Dolo, a fourth-year student at the Ecole Normale Supérieure who is majoring in geography with an emphasis on problems related to economic development. Mr. Dolo speaks Dogon and Bambara, the lingua franca of southern and central Mali. He has

worked extensively for USAID/Mali, primarily on background studies commissioned by the Mission's drought office. The objectives of the field research were discussed with him in detail before departure from Bamako, and with his guidance the items on the standardized questionnaire were modified to make the queries more comprehensible to particular populations. At the conclusion of each field visit, the responses of the representatives of local PVOs, Malian officials, and recipients of emergency food assistance were compared, and discrepancies noted and analyzed.

A similar approach was taken to contacting food assistance recipient communities in the north, first in Region VI--Dire, Goundam, and Timbuktu during a 3-day visit, from November 6-8--and subsequently in Region VII--in Gao and in the directions of Ansongo, Bourem, and Menaka, from November 8 through the morning of November 12. In Regions VI and VII, the major population groups affected by the drought are the Temachek-speaking Tuareg, pastoral nomads, and the sedentary Sonrai who traditionally combine rainfed agriculture with livestock raising and rice cultivation along the banks of the Niger.

Many communities were visited in the environs of Timbuktu and Gao. In both instances time limitations and the difficulty of traveling off the main roads resulted in a skewing of the sample toward populations located along these major roads. The potential disadvantage of this bias was offset by the fact that nomads and farmers in the more outlying areas hardest hit by the famine have migrated toward Timbuktu and Gao to be nearer the more secure sources of water and food. Many are in camps on the outskirts of arrondissement and cercle headquarters and thus could be included in the sample of famine victims/food recipients interviewed.

In all these communities, in addition to the general queries on food assistance, specific questions were asked on the extent of supplementary feeding programs available to children and pregnant women, the nutritional status of those most at-risk, and the extent to which the medical needs of recipient populations had been addressed. Attention was also directed to the related issue of the transition from food assistance to development assistance.

## 2. SETTING AT THE LOCAL LEVEL

### 2.1 Ecology

The areas in Mali hardest hit by the drought are the Regions of Kayes (the cercles of Kayes, Yelimane, Nioro, Bafoulabe, Kenieba, and Kita), Mopti (the cercles of Niafounke, Tenenkou, Mopti, Douentza, Bandiagara, Djenne, Bankass, and Koro), Timbuktu

(cercles of Timbuktu, Kidal, Bourem, Ghourma Rharous), and Gao (cercles of Gao, Menaka, and Ansongo). A part of the Segou Region was also adversely affected, especially in the area of Yangasso, but the consequences have been less severe; harvests were smaller than in previous years, and there were shortages of food, but no famine comparable with that in northern Mali.

These regions suffer from a fragile land resource base. There is growing pressure, resulting from population growth, to shorten fallow, thus leading to further soil degradation. This common problem of the Sahelian zone is exacerbated by overgrazing and the deforestation caused by clearing marginal land for cultivation and cutting trees for firewood. This setting is further degraded by the drought; the lack of adequate vegetational cover, which hastens erosion; and the southward movement of herds that devour the sparse greenery and dried grass.

## 2.2 Population

The Bambara, Sonrai, Senufo, Malinke, Sarakolle, and Dogon are the principal farming peoples in the drought-stricken regions. The three major pastoral nomadic groups are the Peuhl, the Tuareg, and the Maures. Population density is highest east of Kayes, between Segou and Mopti, and in the cercles to the southeast of Segou. The last census was in 1976. There are no reliable data on the consequences of drought-related demographic shifts in the intervening 9 years.

Mobility is a principal strategy for adjusting to environmental change among both cultivators and herders. For farmers this traditionally takes the form of shifting cultivation, followed every 10 to 25 years by the movement of the entire community (but usually within a traditionally prescribed territory). Some Peuhl are now fully sedentarized, but most continue to make their living primarily from herding. The Temachek are found for the most part north of Mopti, Timbuktu, and Gao. The Maure are traditionally found to the northwest.

Both Tuareg and Maure populations have powerful ethnic affinities with neighboring groups in Senegal, Mauritania, Algeria, and Niger, and their traditional patterns of transhumance take them annually across international frontiers that are of little importance to them compared with the strong techno-economic, social, and political ties that unite them with linguistically and culturally related fellow nomads. However, these traditional patterns have been radically altered by the drought. Tribal "sectors" have splintered off, dispersing in an adaptive multidirectional search for water and pasturage. A major weakness of the demographic baseline data necessary for efficient drought-relief planning results from the lack of recent research

on the consequences for population distribution of the recent drought.

### 2.3 Patterns of "Technoenvironmental" Adaptation

Despite significant ethnically based differences in traditional patterns of "technoenvironmental" adaptation, some generalizations can be made.

Farmers in the drought-stricken areas have traditionally made their living from the rainfed cultivation of cereals, millet, sorghum, and some corn. Where water resources are adequate for irrigation, gardens provide an important supplementary source of food: tomatoes, onions, yams (in the south), eggplant, beans, and melons are major garden crops. In addition, most farming people keep some domestic animals, chickens, goats, a few sheep, and cattle, which are often cared for by pastoral nomadic peoples with whom cultivators have a long-standing relationship of economic symbiosis, exchanging herding services and milk products for cereals. Craft activities, metal working, basketry, pottery manufacture, mat weaving, and similar activities are confined largely to the dry season. For more than 50 years the seasonal migration of young men 18 to 35 years old to Ghana, Ivory Coast, Senegal, and Europe has provided a significant source of economic support for farmers in all regions.

Pastoral nomadic peoples have relied principally on their herding activities as a source of livelihood, subsisting mainly on the milk products of their cattle, sheep, goats, and camels. They derive additional income from the animals entrusted to them by farmers. Maures also engage in petty commerce in the cities throughout Mali. Some Temachek are now also traders, but in smaller numbers. The Peuhl who have shifted from pastoral nomadism have become farmers.

A numerically small population of fishermen, the Bozo, who have traditionally made their living from fishing and from rice cultivation along the banks of the Niger, have also been affected by the drought. Their homeland lies along the river banks from north of Segou to Timbuktu. The Bozo, where their traditional subsistence activities have been disrupted by the drought, are in the early stages of a shift to agriculture--cereal cultivation in the Sikasso region and, where there is the possibility of irrigation, small-scale truck gardening.

## 2.4 Society and Politics

In all these groups, a kinship system that emphasizes the authority of senior males within a lineage-based system of consanguinity provides both the basis for domestic group organization and the fundamental underlying structure of the local political system. Land is usually held by the lineage as a corporate group and allocated to individual family members on the basis of need. Certain fields are traditionally cultivated by the entire localized membership of the kin group, and harvested grain is stored in the granaries of the lineage elder.

Most members of the local community are united on the basis of descent or are bound together in cooperative alliance based on marriage. There is considerable social stratification. All groups are divided into noble and commoner categories. The descendants of slaves occupy an inferior position; and blacksmiths, leather workers, butchers, and griots (storytellers and musicians) comprise a separate endogamous category with the local population. The Maure and Tuareg have similarly stratified systems. As a consequence of the drought, many of the former slaves of the Tuareg have been liberated; however, many are still dependent on their "noble" masters.

In every society touched by the drought, women occupy a subordinate status, their property, labor, and what they produce being largely controlled by their male kinsmen. Political authority is ordinarily invested in the hands of the senior male members of the principal local patrilineages. The right of the chieftainship is ordinarily held by the eldest responsible male member of the founding lineage of the local community.

## 2.5 Implications for Food Assistance and the Transition to Development Assistance

All of these traditional patterns of production organization and distribution, settlement, mobility, family solidarity, and political cohesion have been disrupted by the drought. Individuals and small sectors of the local kin group have left their home communities in search of new and more reliable sources of farmland, water, and pasturage. Lands held by the lineage have been sold. Symbiotic economic ties between herdsmen and farmers have been broken. Traditional sources of authority are ignored as they have lost the economic power that sanctioned their right to leadership. In brief, traditional, economic, social, and political institutions are in a state of radical flux. The consequences of this drought-precipitated breakdown in traditional rural institutions has important implications both for those who are concerned with delivering food assistance in cooperation with

these institutions and to those who should be concerned with understanding the structure and function of such institutions in order to build upon them in the course of moving from food aid to development assistance.

### 3. THE SOCIAL, NUTRITIONAL, AND HEALTH DIMENSIONS OF THE 1984-1985 DROUGHT

#### 3.1 The Social Dimension

An assessment of the social impact of the food assistance program in Mali must forthright take into account the near impossibility of making such an assessment in numerical terms. There are several reasons for this. Government of Mali population figures are based on the 1976 census and do not take into account the massive population transfers that have occurred since, especially as a consequence of the recent drought. Pastoral nomadic peoples with strong ethnic affinities with Tuareg groups in Niger and Algeria have moved across these borders in numbers that, it can be assumed, are considerable, but have not been recorded. Thousands more have migrated to southern Mali and into Burkina Faso, Togo, and Ivory Coast; from the Kayes region there has been outmigration toward Senegal and to France.

Such migration used to be seasonal; young men left home after the harvest to seek dry-season employment to the south. Now some of this movement is permanent. In many instances families have lost all track of their departed kin; women with dependent children have been abandoned along the way, and many have died without their deaths being recorded. Drastic ecological change has resulted in shifts in traditional patterns of transhumance and labor migration. Thus projections that might be based on past migratory shifts are no longer reliable.

To further complicate the picture, a floating population has been created that now numbers in the hundreds of thousands. Further, the size and composition of both kin groups and local communities expand and contract amoeba-like in an effort to adapt to the ever-changing exigencies of an always fragile natural environment now severely degraded by years of drought, excessive deforestation, erosion, and the tendency to overwork and thus exhaust remaining fields.

There are therefore no hard figures on the numbers of people who have died in the famine, crossed the borders out of Mali, or resettled elsewhere in the country, or even of those who have been recipients of emergency food aid. Thousands have died. Hundreds of thousands have been saved by food assistance. Many have used this assistance to carry on with their traditional

subsistence patterns. Many others have used such assistance as a supplementary source of support as they sought to adapt their traditional technologies to the requirements of making a living under different ecological conditions elsewhere in Mali. A smaller number still depend almost entirely on food aid for survival, either in the camps that ring such cities as Boundam and Gao or, in accordance with a more dispersed pattern difficult for a visitor to discern, as the not entirely welcome "guests" in the compounds of distant kin or more fortunate acquaintances.

The best data available are those indicating the number of recipients of emergency food aid. To understand the data, evaluators must compare these figures with figures on the total population, which are available only as estimates. Such figures have a margin of error of about a million. But the distribution of this population is highly fluid. The absence of accurate demographic data is the result of Mali's weak infrastructure. Such a deficiency is a major, but currently unavoidable, constraint in evaluating the emergency food assistance program in Mali.

With this caveat kept firmly in mind, several dimensions of the social, health, and nutritional impact of the drought can be productively examined.

### 3.1.1 Displacement of Populations From North to South

Most of this southward migration has been voluntary and unmonitored. Sonrai and Dogon are the principal immigrants, with smaller populations of Bozo, Temachek, Sarakois, Peuhl, Maure, and Bambara also having made the move. The Senufo are the dominant ethnic group in the southern part of Mali; the area around Sikasso has received the brunt of this exodus from the north because population density is lower and the rains are more reliable. The risk here is that the lack of careful planning could result in the short-term solution of one problem and the creation of a long-term dilemma of more serious dimensions.

Ecological, technological, social, and political variables must be taken into account in planning assistance efforts; otherwise migration could create a serious problem of increased demographic pressure leading to further ecological degradation and to political conflict. We need to know how much good farmland is actually available for resettlement in the south (this estimate must consider that much apparently "unused" land in the south is actually in long fallow vital to its regeneration). We need to know how this land is held, by what means immigrant farmers can acquire the right to its use, and whether it can be inherited. Immigrant farmers uncertain of their long-term rights to tenure are often inclined to work the land in ecologically degrading

ways. And conflict over land rights between indigenous farmers and northern immigrants can result in serious political conflict.

### 3.1.2 The Critical Question of Sedentarization of Pastoral Populations in the North

The Temachek are the principal pastoral nomadic peoples in Regions VI and VII, Timbuktu and Gao. After their extensive livestock losses resulting from the drought, they have become heavily dependent on food aid to survive. Prior to the drought, they used their camels to bring salt from the mines, which they then traded for cereal grains. Their herds provided dairy products, which formed an important part of their diet. Only occasionally were these animals slaughtered for food. During the rainy seasons of the past, they received grain from their Sonrai neighbors in return for taking the Sonrai's cattle north with their own herds.

The Bela, their slaves (despite the legal abolition of slavery in Mali, the Bela's lack of property frequently makes it impossible for them to achieve independence from their masters) worked as herdsman and as cultivators of the gardens established around permanent water points within the Temachek's traditional territory. The Bela also cultivated millet and other cereals.

With the drought, many lost most or all of their herds, and their cereal crops failed. The garden produce of the Bela could not take up the slack. Thus, two of these three underpinnings of the Temachek's subsistence technology were removed. Many Temachek were destitute. Those who had failed to anticipate the duration of the drought were trapped too far north; many died along with their animals. Those who by luck or slightly better herd management were closer to water and emergency food resources survived. Many are still living in the refugee camps. A smaller number, better herd managers presumably, or luckier, survived the drought and moved their animals south fast enough to save them. But they also are still dependent on food assistance.

The Temachek assert that this experience has taught them a lesson. They recognize that their territory is undergoing a long-term change for the worse, and they must adjust to a new means of making a living. Recognizing that reliance on rainfed agriculture is as precarious as herding, they want assistance in establishing or enlarging their gardens. Specifically, they state that they need help in well digging. (Temachek lands are too far away from the Niger to allow for river or rain irrigation.) They then want motor pumps to irrigate their gardens. They need gardening implements, hoes, buckets, seeds, and technical assistance to learn how to garden.

The Temachek's assessment of their economic situation is open to question on several counts. What will be the consequences for the water table of increased well digging in an already hydrologically fragile setting? Will the Temachek work these gardens, or will they put their Bela slaves to work on them, using the hoped-for profits to return to the desert fringes to try to again build up their herds? This proposed strategy could restore a traditional pattern of technoenvironmental adaptation that may no longer be ecologically viable or economically cost-effective, with the possible cultural result of restoring a centuries old pattern of socioeconomic inequity.

### 3.1.3 The Strength of Private Voluntary Organizations Versus the Weakness of Malian Infrastructure

The generally excellent role played by private voluntary organizations (PVOs) in responding to the Malian drought creates a paradox. The organizations are staffed by strikingly bright, highly motivated, well educated, and deeply committed young expatriates who are almost all Europeans and Americans. They are generally very efficient, communicate readily and well with one another, and have often shown remarkable ingenuity in resolving serious logistic obstacles to ensure the effective delivery of food aid to desperately needy people. There is reason to assume that the similarity of their cultural backgrounds and level and quality of education has greatly facilitated the efficiency with which they were able to deliver food assistance under highly adverse conditions. Generally the young staffers of most PVOs involved in food aid appear to be very competent and optimally qualified to do their job.

However, virtually no Malians participate in planning and implementing the programs for which these young cadres are responsible. These expatriates work in Mali on emergency food relief for a season, a year, two years, developing a wealth of managerial know-how for dealing imaginatively and efficiently with the everyday and long-term emergencies that are an inevitable part of disaster relief efforts in a country such as Mali, where the managerial infrastructure is barely able to perform its administrative responsibilities under "normal" conditions and almost entirely unable to do so in emergencies. When these young PVO staff working on food assistance leave Mali, most of their acquired expertise leaves with them, or is passed on only to the expatriate staff who replace them. Over time a considerable body of managerial experience in handling food emergencies is accumulated--but not by Malians.

At the local level and, so it appears, nationally, the emergency food assistance program is structured in a way that does not permit the transfer of managerial skills necessary for

coping with food aid emergencies to Malian personnel. Such assistance is delivered with remarkable efficiency, but this delivery is almost entirely dependent on program planning and implementation conducted by an exclusively expatriate staff. There is no structural mechanism to provide for the gradual incorporation of appropriately trained and recruited young Malians into this exclusively expatriate-controlled system.

Thus, the immediate problem of emergency food aid is dealt with efficiently, but at the cost of perpetuating Malian dependency on expatriate skills. Each year Mali's Ecole Nationale d'Administration graduates more young administrators; an estimated 80 percent of them are unable to find work during the first year following graduation. By failing to develop a plan for the phased inclusion of these educated young Malians in the PVO work force at professional levels, a valuable opportunity for nation-building is being missed and the issue of Mali's continued reliance on external assistance in dealing with the food emergency remains unaddressed.

### 3.2 Nutrition

#### 3.2.1 Corn

In many instances corn from Ghana was an important component, sometimes the only component, in the food assistance package delivered at the village level. People in northern Mali, particularly the pastoral nomads, are unfamiliar with corn. They dislike its taste, find it difficult to process for consumption, and question its nutritional "completeness" or think of it as animal fodder. They are grateful for the food assistance, of course, but wish that a more familiar grain would be provided. All would prefer to receive sorghum. Whether recipients are correct in their assessment of the nutritional value of corn is not the issue; the fact is that they generally do not like it as a principal staple and have difficulty using it.

#### 3.2.2 Rice

Rice is distributed in Regions VI and VII as a significant component in supplementary feeding programs and in dry cereal allocations. People in the cities, and some pastoral nomadic groups, regard rice as a high-prestige food and may prefer it to millet. However, they are also accustomed to millet. Most rural farming people prefer millet; yet they also have received free rice. The nutritional justification for this strategy of distri-

buting rice is not apparent. If there is an economic reason for this, it ought to be clarified.

### 3.2.3 Supplementary Feeding

The daily and, in some instances, twice daily provision of supplementary feedings to children appears to be well organized and administered. A balanced ration of hot gruel made of millet, milk, oil, sugar, and rice is prepared by local women and ladled out at established feeding stations. Each child has a wrist bracelet that establishes his or her eligibility for food. Children are required to remain and consume the food they receive at the feeding station. The parents of children showing signs of severe malnutrition are enrolled in a program that entitles them to receive free grain. At outlying stations where daily supervision of supplementary feedings is not possible, records are kept of children's weight gains as a means of determining that feedings are being properly administered.

The PVO in charge records the number of children receiving supplementary feedings, noting their weight gains and improvement in their nutritional status. Program administrators are convinced that many lives have been saved. People's appreciation of the feeding operations are apparent during visits to these stations. Children shout enthusiastically at the arrival of PVO staff and rush to take their hands and so on. In brief, the program appears to be a success, but in the absence of overall figures on the total number of drought victims, it is impossible to determine what proportion of at-risk children have actually been reached. An accurate measure of success will not be possible until far more effective means are devised for census taking among mobile populations whose traditional patterns of transhumance have been disrupted by the drought.

### 3.2.4 Famine Foods

Each of the principal Malian ethnic groups affected by the drought--the Bambara, Dogon, Bozo, Temachek, Sarakolle, Sonrai, and Maures--has a different repertoire of famine foods and of famine-coping mechanisms. Fonio is the best known of these foods, but there are many more, including wild foods that are regularly gathered as a supplement to field and garden crops. And, of course, mobility is a major coping strategy. But there are more. They need to be more specifically identified for each region and included in developing plans for famine relief efforts that fully use locally available products and practices that can be called upon during emergencies. This is necessary in order to avoid weakening rural Malian's traditional means of protecting

themselves from the threat of starvation. And no planning for external food aid should be made without taking into account these potentially important famine relief resources. The gathering of some wild foods is arduous. Although receiving free food may seem easier, this easier course should be avoided.

### 3.2.5 Nutritional Dilution, Food Distribution, and Chefs de Famille

Much is made of the distribution of food to chefs de famille in the apparent hope that these people will conform in some approximate sense to Euroamerican concepts of the paterfamilias. Maybe they do. The traditional forms of domestic group organization and kin-based food distribution systems have undergone some radical changes in response to drought conditions. However, the half dozen or more major ethnic groups that receive food assistance still have very differently organized family systems. The patrilocal extended family is important among the Bambara, for example. But household composition is very different among the Dogon, and the unit of production and consumption among the Temachek takes yet another form. Such differences affect the way in which a chef de famille distributes the family food ration.

For example, it should be assumed that the food received by a Temachek chef de famille will be distributed differently than that received by a Sarakolle chef de famille. Such considerations as obligations to pay off past debts; contributions toward bride-wealth payments; funeral expenses; the purchase of animals, seed, farm implements, medicines, and so forth; and the pattern by which food is allocated to males and females, adults and children, family members of differing degrees of relatedness (e.g., the mother's nephews, wards, children of slaves) should be expected to vary greatly from one ethnic group to another and to significantly affect the distribution of food at the local level. These differences must be identified and addressed when planning food distribution targeted to the particularly urgent needs of those sectors of the local population most at-risk. Ignoring this variable could result in an unintended dilution of the nutritional support actually received by those whose needs may be greatest.

## 3.3 Health Issues

### 3.3.1 Drought, Disease, and Death From Famine

One of the difficulties in measuring the impact of the drought on mortality is, of course, the fact that the immune

systems of people weakened by hunger are vulnerable to a variety of secondary maladies that appear as the more immediate cause of death. In Mali, measles and diarrhea, followed by respiratory ailments and malaria, are the principal causes of death among children suffering from famine. For camp dwellers, cholera and typhoid have been major causes of death. All of these maladies are endemic in Mali, as are a variety of intestinal parasites. The drought has simply increased their incidence, the intensity of morbidity associated with them, and the rate of mortality because people are weaker. Also, people for whom water is in short supply, especially those in camps, are forced to prepare food and dispose of waste in even more unhygienic ways than is customary. In brief, people with lowered resistance to disease are often forced into living arrangements that are even more unhealthy than usual. Consequently, an already weak health care system is faced with the task of treating a growing population of sick and dying people.

PVOs provide ancillary assistance of great importance, building and stocking medical supply centers at the local level, mounting vaccination programs, and providing medications at subsidized rates. Again, as with PVOs working in other sectors of drought relief, the success of these enterprises is paradoxical, in this case, because (1) their intervention occurs largely outside the Government-controlled health system, thus perpetuating its weaknesses; and (2) the response to the health emergency occasioned by the drought perpetuates an approach of medical intervention that is curative rather than preventive.

Dirty water and unhygienic habits of food processing and waste disposal are major causes of mortality in Mali both in normal times and in times of drought. Such habits increase the incidence of disease and mortality. To address them adequately will require a shift from an emphasis on curing diseases that could have been avoided to inculcating the new behaviors that will lessen the incidence of disease.

But a period of emergency such as drought and famine is not the time to discuss a major shift in emphasis in health care delivery from expensive and ineffective curative measures to less costly--but far more difficult to inculcate--strategies of disease prevention. It is hoped that once the drought emergency is past the new health care providers now present in Mali because of the drought will stay on to assist the Ministry of Health in taking the difficult first steps toward the development of a health care system that makes far greater use of such familiar and inexpensive local health resources as traditional midwives and healers and herbal remedies of tested efficacy than is currently the case.

Physicians and other health care personnel working in the PVOs involved in famine relief and food assistance programs

recognize the need for such a transition. A role should be found for them not only in restoring a devastated population to health, but in turning around a health care delivery system modeled on an inappropriate European model that has proven ineffective in dealing with Mali's chronic and emergency health needs.

### 3.3.2 Health Surveillance at the Feeding Stations

Many of the children in Mali who are most at risk receive daily or twice daily "supplementary" feedings at stations set up by the PVOs. Although instances of serious malnutrition are now fairly rare in these centers, many children who come to the stations appear in need of medical attention. Eye infections, skin lesions, distended bellies, and evidence of guinea worm, respiratory infection, and so on are readily observable. Yet medical surveillance at these feeding centers seems to be quite haphazard. If the supervising PVO staff person happens to be a nurse and notices a sick child, a recommendation for medical attention may be made. But there is no established procedure for this, and most children's medical complaints go unattended at these centers. It should not be too difficult to initiate a surveillance protocol that would identify sick children, call them out of line, and arrange for a clinical followup.

### 3.3.3 Health and Drought Recovery

As Mali recovers from the drought and populations return to traditional subsistence tasks or try to learn new ones, they will continue to need medical attention and the support of food assistance programs. Careful monitoring of these efforts, emphasizing the establishment of baseline data on health and nutritional status against which progress can be measured, needs to be instituted. Growth rates, weight, and the reported incidence of disease should be major indicators in allocating and distributing resources under the aegis of such a program of continued support.

## 4. RESPONSE TO THE 1984-1985 DROUGHT

The response of local populations to the drought can be analyzed according to four categories: (1) those who misjudged the gravity of the drought and/or mismanaged their resources and died; (2) those who were able to reach the refugee camps and thus survived; (3) those who were able to modify their traditional subsistence strategies and so survived in or near their home communities; and (4) those who moved south.

#### 4.1 Those Who Misjudged the Severity of the Drought or Mismatched Their Coping Strategies

Those who perished in the drought appear to have been members of pastoralist groups located too far from reliable water sources and feeding stations to make it south before their animals perished. The old, the sick, and the very young also died. The more physically viable survived the walk south carrying some of their dependents and a few remnants of their property with them. Some sought refuge with kinsmen. Others found work as domestics or day laborers in the cities to the south. This sector of the drought-victim population is now nearly destitute. They have lost their traditional means of making a living, and they possess few marketable skills in the areas in which they are tentatively resettled. They live from hand to mouth. Because of the intensity of the crises they have survived, they are likely to make the necessary changes in their traditional modes of subsistence that will enable them to survive.

Most in this sector of the drought-victim population are pastoral nomads by tradition. For the "nobles" among them who scorn agricultural and manual labor, the transition to sedentary farming or to some other form of work in the towns will require extensive technical, economic, and "moral" support. The results of the study on the processes of sedentarization among the Temachek, sponsored by the World Vision Relief Organization (WVRO) and being conducted under the direction of French sociologist Gervais Copelle, should be very valuable in planning for the technoeconomic reintegration of this most difficult contingent of the population of drought victims.

#### 4.2 Those Who Reached the Camps

Some individuals and small family groups found shelter and at least temporary nutritional support in the refugee camps that ring such larger cities as Goundam, Dire, Timbuktu, Ansongo, Menaka, Kidal, and Kayes. Because of the Government of Mali's understandable opposition to the formation of these camps, they tend to be somewhat fluid in composition and pattern of settlement. When there is word that Government trucks will be moving in to take the camp inhabitants back north, the camps disperse and regroup at staggered intervals distant from, but still girding, the cities. Food distributions are made to camp dwellers. But to date there are no programs in place designed to facilitate their economic reintegration into Malian society.

The camp inhabitants also go into the towns to beg, or to try to sell their limited labor skills; they also send their remaining male children to southern Mali, Ivory Coast, or over

the border into Niger or Senegal to find employment as day laborers. With continued food assistance and the daily feedings their children receive, they can survive. But currently there is no apparent means by which they can be incorporated into the precarious local economies of the over-crowded cities near which they are encamped.

#### 4.3 Those Recovering From the Drought by Modifying Their Subsistence Strategies

A third sector of the drought victim population is already on the way toward adapting to the technological consequences of a changed environmental setting. These are people with some tradition of agricultural work, which they have been able to adapt, usually by switching from principal reliance on cereal cultivation to gardening. To make this transition without help, such groups must already be in fairly fortunate circumstances: they hold the right to use land close to a reliable water source and possess sufficient capital to acquire the required gardening implements such as shovels, buckets, hoes, and the seed necessary for cultivating potatoes, tomatoes, onions, lettuce, eggplant, and so on for home consumption and for sale.

Among the Temachek, only the former slaves, the Bela, were observed to be successfully making this adaptive change. There was no evidence that either the Maure or the Temachek nobles have taken up farming. For the Peuhl, this transition appears to be easier because many of the Fulani in northern Mali had already begun to settle down and to place greater reliance on agriculture as their subsistence base.

It should be emphasized that there are strong ecological and economic reasons not to assume that gardening alone, no matter how much assistance is provided, will offer an adequate alternative to farming and herding as a means of material survival. There may not be enough water. The local market for garden produce is quite small, and the possibilities of storage and transport to more distant markets remain moot.

#### 4.4 Those Who Resettled in the South

A fourth mode of adaptation to local drought conditions is migration. In southern Mali, the rains are more certain, and it is believed that land is available. The local populations have an apparently deserved reputation for generosity and hospitality, and ecological conditions are not so dissimilar to those the farmers already know; thus, with effort, these migrants from the

north can adapt their traditional food growing practices to the requirements of the changed natural setting.

From a short-term perspective this sector of the population of drought victims appears to have the best chance of adjusting to the consequences of the drought. They have concluded that their homeland is undergoing a fundamental change in climate and that they can no longer make a secure living there. As a result, either they have sold enough of their property to pay for passage south or they have walked. They have received food from their neighbors and from free food distributions. In 1985, they had a good harvest. If they can consolidate their right to use and pass on the new lands they are now working, their economic future appears to be relatively bright.

However, the long-term perspective is not quite so trouble free. Until the absorptive capacity of populations in the southern part of Mali is better understood, there is a potential danger that immigrants from the north may eventually find themselves in competition for land with the indigenous inhabitants; the immigrants' presence may increase the pressure on an ecology that is somewhat fragile. In brief, by solving one immediate economic problem for the victims of the drought, another longer term problem may be in the making.

## 5. IMPACT CRITERIA AND FINDINGS

### 5.1 Social Impact Criteria and Findings

#### 5.1.1 Has Food Reached the Needy in the Most Difficult-to-Reach Areas?

Based on interviews with local PVOs in the areas of Sikasso, Timbuktu, Gao, and the adjacent outlying areas, food assistance appears to have reached all sectors of the population at greatest risk. Whether they had received enough food is another question. PVOs generally argued that food allowances had been adequate and nutritionally sound. Sometimes, as indicated below in Section 5.1.7, aid recipients had a different perception. However, a time distinction must be made. It was generally conceded that much of the food assistance arrived late. Most likely some deaths occurred among the groups most at-risk before food deliveries were established by late summer. With improved advanced planning, pre-positioning of food stocks near the distribution centers, and improved communications with the beneficiary populations, the failure to adequately meet the needs of all at-risk populations in a timely manner can be averted in the future.

5.1.2 Did the Failure To Observe A.I.D.'s General Food Rations in the Homes of Beneficiaries Mean That They Had No Food?

At the time of this evaluation, some food beneficiaries still had a portion of the food assistance they received. Many others had not, and in several cases it had been consumed several weeks or months earlier. This does not mean that such beneficiaries were without food. By the time of this evaluation, the nutritional status of the population had been considerably ameliorated; grain was for sale in the market, and in some areas the recent harvest had been reasonably successful.

5.1.3 Was the Emergency Food Consistent With the Traditional Diet?

This query requires a diplomatic answer. First, beneficiaries were universally grateful for the food they received. However, for reasons that were beyond their understanding and, perhaps, beyond the control of local PVOs, some of the commodities distributed were unfamiliar to the beneficiaries, difficult to process, or perceived to be of questionable nutritional value causing stomachaches and diarrhea. Corn was a principal cause of complaint, and some recipients did not regard it as proper food for human consumption. Others reported that it was not a complete food, arguing that distribution of corn should be complemented by vegetables, which would enable the recipients to prepare a sauce to serve with the corn. In several areas rural farmers who would have preferred millet were given rice. There were also complaints about the red sorghum. Once drought conditions had begun to abate, unfamiliar or otherwise unwanted free foods were sold or left uneaten.

5.1.4 Was the Food Equally Distributed or Were Segments of the Population Discriminated Against?

Although extremely important, this question is difficult to answer. There was no evidence that sectors of the population were discriminated against in the distribution of food. However, within domestic groups some discrimination may occur, based either on tradition--for example, the custom of women eating after men and of children being fed last--or the presence in some households of dependent distant kin, who may receive less than an equal share of food. Furthermore, in most stratified societies, all sectors of the population are not regarded as having equal rights to available resources--slaves, for example, or the members of socially inferior endogamous castes.

5.1.5 Were Food Deliveries Predictable and Timely?

No. Food arrived from several weeks to several months late. Its arrival time was generally unpredictable. No explanations were given for the quantity, quality, or nature of the food received. Recipients were grateful, but they had no way to estimate how long they should endeavor to make the food last before they might expect further assistance. Sometimes local PVOs learned that particular sectors of the population had become ineligible for food assistance, but such persons were not always notified of their new status.

5.1.6 Were Feeding Centers Within Walking Distance of Beneficiaries?

Supplementary feeding stations for children were within walking distance, rarely more than 3 kilometers from their homes.

5.1.7 Under What Circumstances Did Beneficiaries Perceive Food Allocations To Be Mismanaged?

In some areas beneficiaries found that food distributions did not adequately meet their needs; for example, they had often received a single distribution and expected distributions to continue; when they did not, the beneficiaries assumed that the food aid intended for them had been misappropriated. Usually Government administrators (functionaries and teachers) were suspected of being the culprits. Whether such misappropriation occurred could not be verified; however, the perception was widespread among beneficiaries that misappropriations did occur. This was not an issue in areas where food distribution was supervised directly by PVO staff. Where this was not possible, food recipients frequently suggested that the problem could be regulated if a representative of their communities were delegated to be present at the time the shipments arrived at the distribution points. Such delegates, however, were often called to receive food only after the sacks had been received, placed in storage, and even opened. Recipients believe that "losses" occur at this receiving and storing stage in the distribution process.

5.1.8 Was Delivery of Seeds Timely and Helpful to Farmers?

Most recipients said that the seeds had arrived late, as much as several months after the optimum time for planting. In the north, where the planting season is very short, such a lapse

is obviously critical. Recipients did not know the origin of the seed donations or understand the criteria used in selecting the particular seed. There was a widespread sense that seed varieties were not well adapted to the soil and other ecological conditions that typify the fragile land resource base in northern Mali. Also, local PVOs were often not able to anticipate or control the types and varieties of seed they received. These decisions were sometimes made outside of Mali entirely, and they were made as much in response to the availability of a particular seed in Europe as to its suitability to the needs of the beneficiaries. Also, storage of seeds at distribution points was sometimes a problem, with regard to both the adequate preservation of seeds and their security.

## 5.2 Nutritional Criteria and Findings

### 5.2.1 Were Supplementary Feeding Programs Implemented Parallel to General Feeding Programs?

The distinction between supplementary feeding and general feeding is not very clear at the local level. PVO staffers recognize the recipients' fundamental need for general feedings, but they expect that the rations will be supplemented. In fact, it is unrealistic to assume that the most destitute sectors of the camp population will have access to any means of augmenting the free food they receive. Where the two programs were clearly separated, general feeding preceded supplementary feeding. Implementation was similar in both programs, with the exception that recipients of supplementary feedings were expected to consume their ration at the centers. Further, local PVOs made a more controlled effort to calibrate the quantity of supplementary food as alternative sources of food became more available and the nutritional status of recipients showed signs of improvement.

### 5.2.2 Was the "General Ration" Delivered Regularly and in Reasonable Amounts (450 grams per person per day)?

Rarely. Food assistance of every sort generally arrived from several weeks to several months after the need for the assistance was recognized. Because distributions were sporadic and sometimes were made only once, recipients could not efficiently integrate food donations with their other sources of food supply. Only in the camps and at distribution points in the cities were distributions sufficiently regular and well controlled to enable their impact on the nutritional status of drought victims to be measured. Elsewhere, especially in remote areas, food assistance was welcome and helpful, but because food

arrivals were unpredictable, no quantitative evaluation of the benefit of food assistance could be made. Recipients believed that such general rations helped save their lives, but by what margin cannot be determined in the absence of far more detailed and consistent monitoring.

Certain nutritional insufficiencies have been identified elsewhere in this report; for example, supplementary feedings in Gao apparently were not augmented with vitamin C even though scurvy was reported in that region. Where corn was the only ration distributed, recipients believed that the grain was nutritionally inadequate and a source of intestinal discomfort and diarrhea.

### 5.3 Health Criteria and Findings

#### 5.3.1 Were Curative and Preventive Health Services Part of the Emergency Food Program?

Health services were usually not adequately addressed by the emergency assistance program. Where such services were provided, the focus was on curative care--treatment of diarrhea, dehydration, respiratory infections, malaria, and so on that were in part a consequence of drought victims' generally weakened condition. Measles vaccination programs were widespread. But according to the USAID health officer in Bamako, problems in maintaining the cold chain may have resulted in many of these vaccinations being ineffective.

Because the general thrust of the emergency food aid program was crisis intervention, very little attention was directed to the far more critical long-term need to emphasize preventive medical intervention. Medecins sans Frontieres (MSF) and other health care organizations view this as a major inadequacy in their programs, but they argue convincingly that their limited resources must go first to saving the lives of those in immediate risk of death. The experience of this drought has made it possible to identify and locate those sectors of the population most likely to be at risk again and to plan an intervention strategy that is more preventive in its thrust.

#### 5.3.2 Were Vaccines and Oral Rehydration Therapy Available in Drought-Affected Areas?

According to local PVOs and dispensary personnel, vaccines and oral rehydration salts were not available in sufficient quantities. As indicated in Section 5.3.1, there is some ques-

tion that the measles vaccine was viable because of breaks in the cold chain. According to MSF, this technical problem has now been corrected. MSF reports that health warehouses are available at the cercle or arrondissement level. But at this point, these facilities, if present, are locked, in disrepair, vacant, or unstaffed. In brief, the inadequacy of the health care delivery system in rural Mali has been worsened by the drought.

## 6. GENERAL RECOMMENDATIONS

### 6.1 Short-Term Suggestions

- Food assistance should be more carefully adjusted to the varying dietary habits of the several groups who are the recipients of food aid.
- Food aid recipients would benefit from clearer communication on the food budgeting expectations of donors. How long should they expect the food to last? When will there be more? What kind of food will it be?
- In resettling people from the north, it is preferable to do so in small groups dispersed throughout a fairly wide area so they can be incorporated into existing political frameworks and not overstress locally available "free" land.
- The adaptation efforts of the immigrant populations that are already underway should be monitored; such data should then be used to guide possible future, larger scale southward migrations.
- Withdrawal of food assistance should be gradual and carefully integrated with the planned introduction of development assistance.
- Census data on abandoned women with dependent children needs to be collected in the Sikasso region in order to plan for their economic reintegration; training programs for their children are especially critical before they reach adolescence and, cut off from traditional controls, take to the streets.
- Evidence of free distributions of rice among populations that would prefer millet should be verified.
- The efficiency of an early warning system would be increased by conducting a sample postharvest survey of

food stores among populations and in regions known to be vulnerable to drought.

- The need for an increased caloric intake for farmers during the difficult months of the growing season must be better recognized and planned for.
- Much of the recipient's suspicion concerning irregularities in the existing system of food distribution in the south could be averted by permitting representatives of the recipient communities to be present when food is received at the local level to determine that local functionaries, teachers, and so on do not remove a portion of the supplies for themselves before distribution has begun.
- Given the prevailing salary levels of Government workers, the irregularity with which they are paid, their inability to identify with the peasant population, and so on, food distribution planners should, perhaps, plan realistically for the fact that a portion of the allocations will be held back by administrators.
- For all drought-prone populations, the local potential for generating income from alternative sources such as craft work, charcoal making, or basketry should be assessed as potential sources of money income to purchase food.
- There is an across-the-board need to develop a strategy for involving representatives of the recipient community in planning food assistance distribution. The so-called development committees do not exist in the local areas, only on the organization charts of administrators in Bamako.
- Children at all feeding stations should be regularly monitored for need of medical attention; a simple method for detecting need and providing care should be programmed into the food distribution system; the current system is too hit or miss.
- Although the strategy of distributing food at a distance from urban centers as a means of discouraging exodus from rural areas appears to be well considered, such a strategy must also be assessed in terms of the real ecological feasibility of keeping people in outlying areas that have repeatedly been devastated by drought.
- The correspondence (or lack thereof) between what donors regard as heads of families, or chef de famille, and the realities of domestic group organization and kinship-

- based systems of distribution needs to be carefully analyzed. The concept of "chef de famille" is a Eurocentric notion that often may not reflect the realities of local social organization.
- Not all recipient families distribute food internally in accordance with patterns familiar in the West. If the local tradition is that the man eat first, the women second, and children last, then this practice needs to be evaluated in terms of its implications for a food distribution program aimed at meeting the nutritional needs of the most at-risk.
  - Systems of social differentiation based on caste, class, ethnicity, and gender need to be assessed in Mali as they may affect the equity with which food is distributed. Such systems are usually characterized by unequal access to resources. Is this so with regard to food distribution? If so, an operational recommendation on this issue is required.
  - The so-called floating population needs to be better understood. Mobility has always been a means of adapting to the vagaries of a fragile ecology in the Sahel. We need to know to what extent people are still moving in accordance with long-established patterns of transhumance and the extent to which such patterns have been abandoned in favor of a more random search for sources of water and food.
  - Reports of numerous deaths around the wells need to be investigated. Did people die because they had migrated toward a water source that had proven insufficient? Did they arrive when they were already near death and too weak to survive? Were these new wells dug with proper regard for traditional patterns of population displacement?
  - A good survey of traditional famine foods is required, broken down by ethnic group and region: for example, the Bela gather fonio as a famine food, the Temachek nobles refuse to do so.

## 6.2 Rehabilitative Efforts

- Research is required on the long-term ecological and demographic consequences of voluntary migration to the south.

- The long-term rights to the land cultivated by people who have migrated to the south will require further clarification. Can they sell such land? Can the immigrants pass it to their heirs, and so on?
- It should be assumed that the well-deserved reputation of the Senufo and Bambara for hospitality and generosity toward immigrants from the north has limits and that those limits may soon be reached.
- People with a tradition of farming are more likely to succeed, with little outside support, in adjusting their indigenous patterns of subsistence to the changed ecological conditions they find in the south. Conversely, this process will be much more difficult for pastoral nomadic peoples such as the Temachek, for Bozo fishermen, and so on.
- The issue of assisting the nomadic Temachek in making the transition to settled farming, with a heavy reliance on gardening, should be approached with care. For many of them a return to pastoral nomadism is neither ecologically nor economically feasible. However, this does not mean that transition to heavy reliance on gardening for subsistence will be a readily accepted alternative. They are more likely to put their slaves, the Bela, to work on these gardens and return to the desert in the hope that their profits from agriculture can be used to rebuild their herds.
- Of the two sectors of the Temachek population, the slaves, the Bela, have previously performed agricultural work, and it should be assumed that they will find this transition easier than will their "masters."
- For the Sonrai and the Sarakolle, the transition from mixed reliance on farming and livestock raising to heavy emphasis on irrigation-based cultivation will pose serious ecological, technological, and economic questions. Those farmers from these two groups who are already making this transition on their own should be surveyed to get a better sense of what is feasible and what is not.
- The paradoxical relationship between the reliance on PVOs staffed almost entirely by Europeans and the perpetuation of the weaknesses of Malian institutions needs to be seriously considered. The current situation is efficiently responsive to the food emergency, but does nothing to enhance the Malian's capability to independently meet such crises. A program for phased inclusion of recent graduates from the Ecole Nationale d'Adminis-

tration into existing PVOs should be planned, recognizing that it may result in a temporary decrease in efficiency. With the rapid turnover of expatriate personnel, the experience they have accumulated in addressing Mali's food emergency is lost to Mali.

- PVOs likely to be involved in planning for development in northern Mali should work to achieve a much better understanding than they have at present of the economic implications of differing systems of land tenure and production organization in the region. Inattention to this major human variable in the production equation has repeatedly resulted in project failure in Mali.
- There is much interest in the north in increasing the reliance on gardening as a major component of the basic pattern of subsistence in the region. The ecological and economical feasibility of such a transition on a large scale is open to question. The implications of such a transition for the water table in the region need to be explored, as does the extent of demand for garden produce among populations who have traditionally used such foods only as a minor component in a diet based primarily on grains.
- The largest group of animals that has survived in the areas hardest hit by drought has been (alas) goats. Goats are particularly destructive to an already ravaged environment. Some measures should be considered for limiting their numbers.
- The people of the north frequently have the mistaken belief that the acquisition of motor pumps is the golden key that will open to them the possibility of irrigation-based cultivation. However, these pumps break easily, people rarely know how to repair them, spare parts are hard to come by, and their principal product is frustration for all.
- All populations feel strongly that food assistance should continue as they begin to make the transition to an alternative subsistence base. They say they are tired, weak, and that it will take them several growing seasons to recover physically and economically from the depredations of the drought. They are fearful that donors will fail to appreciate their need for sustained assistance as they make this difficult transition.

## APPENDIX E

### LOGISTICAL ASPECTS OF THE EMERGENCY ASSISTANCE PROGRAM IN MALI

by D.H. Swartzendruber

#### 1. INTRODUCTION

To conduct a fair evaluation of the emergency assistance program in Mali, one should understand, at least in some measure, the regional context of which the Mali program was a part.

Five countries in the region were affected by the drought to which the U.S. Government responded: Mali, Burkina Faso, Niger, Chad, and Cameroon. Over 240,000 metric tons (MT) of PL 480 emergency food was shipped into these five countries on a government-to-government basis. The responsibility for coordinating the transshipping of these commodities from the West African ports where they arrived to the countries involved fell to A.I.D.'s Regional Economic Development Services Office for West and Central Africa (REDSO/WCA) in Abidjan. Additional quantities of PL 480 food, not covered by this review, were shipped to the same countries and consigned to private voluntary organizations (PVOs) and to the World Food Program (WFP) of the United Nations for distribution. There were also substantial amounts of food from other donors (e.g., France, the European Economic Community [EEC]).

It should be understood that what follows is based on 9 month's experience in Abidjan and necessarily reflects events as viewed from that perspective. Although, for the most part, the points of view stated here are similar to those of the USAID Mission, in some cases they are different; probably they will more frequently only have a different emphasis.

It is useful to recall that as late as May 1985 the press, the British Broadcasting Corporation (BBC), and the Voice of America quoted predictions of impending serious, widescale malnutrition resulting in thousands of deaths. They attributed this situation to the inability to deliver food shipments from the ports to the countries before the rains began and made deliveries and distribution impossible. These predictions were largely unrealized; hence the programs must be viewed as at least a partial success.

#### 2. BACKGROUND: HOW THE SYSTEM WORKS

The emergency food program consists of three relatively unconnected processes: the procurement of the commodities in the

United States and their shipment to the African ports, the port clearing and transshipping operations, and the in-country distribution and monitoring activities.

Once the USAID Mission and A.I.D./Washington have agreed on the commodities and the amounts, the commodities are procured from the U.S. Commodity Credit Corporation and shipped by the U.S. Department of Agriculture (USDA).

The transshipping operation was assigned to REDSO/WCA in Abidjan and involves primarily the Regional Food for Peace Office (RFFPO), the Regional Contracts Office (RCO), and the West Africa Accounting Center (WAAC). When the RFFPO is informed by A.I.D./Washington that a given quantity of food has been procured and is to be shipped, the USAID Mission in the country concerned is asked to inform REDSO of the points of entry for these commodities and the quantity for each point. When this information is received, the RCO issues tenders to the surveyors and the qualified forwarding agents in the assigned port. They are given approximately 1 week to respond, at which time the bids are opened and the contracts are let. WAAC is given copies of the contracts with the relevant funding data, as they will eventually pay the contractors upon receiving invoices that have first been verified by the RFFPO.

When the RFFPO has been informed of the vessel name and its estimated time of arrival, the information is communicated to the contractors and is usually included in the contract. Information concerning changes, which are common, of vessel, estimated time of arrival, or quantities are also communicated to the contractors.

When the vessel arrives in port, a ship's survey is conducted by a surveyor appointed by the Commodity Credit Corporation in Kansas City. The survey is sometimes, but not frequently, shared with the RFFPO.

At this point the REDSO-appointed surveyor and transshipper take over, and REDSO's responsibility begins. The surveyor determines the quantity for transport, certifies that the trucks are appropriate for transporting the goods, and confirms the amount loaded onto the trucks. The surveyor informs the RFFPO by daily telex of each day's work.

The transshipper obtains the trucks and supervises their loading, issuing a way-bill for each and telexing this information daily to the USAID Mission.

During this period the RFFPO representative in Abidjan, or a designee in Lome, files weekly cables with the USAID Mission, summarizing the week's activities on a vessel-by-vessel basis. (Dakar has also filed regular reporting cables but not neces-

sarily weekly). This keeps the Mission informed of the status of shipments in port and of what commodities are en route at any given time.

### 3. PROBLEMS AND SOLUTIONS

Naturally a program of this magnitude with such a quick startup will encounter many problems, some serious and some minor, but all requiring attention.

To address these problems, donor committees were set up in most of the capitals. In Abidjan, there were two committees: (1) the donors' group, comprising heads of donor missions and, frequently, their logistics specialists, and usually chaired by the Resident Representative of the U.N. Development Program (UNDP) and (2) a second-level working group comprising the donors' logistics people, senior representatives of the forwarding agents, and chaired by the Assistant Resident Representative of the World Food Program (WFP). The first group dealt with policy issues and decided on appropriate actions to be taken. At the working level the problems were clearly identified and solutions debated. Their recommendations were then referred to the first group for final action.

By bringing the specialists together on a weekly basis, problems could be identified early on and steps taken to lessen their impact. The transshippers have been in business in Abidjan for many years and have clear ideas of the problems and of how to deal with them without creating even greater problems. Getting them together in a room with donor representatives tended to keep the rhetoric down and a search for realistic solutions at the front. (It was said that "your transshipper may lie to you and exaggerate his abilities, but not in front of his competitors who also covet your business.")

The main concern of both groups was how to increase the off-take capacity for the port of Abidjan. This was to be done by increasing the number of trucks available and reducing the turn-around time.

One of the first constraints was that Mali had few long-haul trucks available, and non-Malian truckers were not interested in hauling for the low rate mandated by the Government of Mali. Donors persuaded the Government in Bamako to increase the rate for emergency food shipments from FCAF 20 per ton/kilometer to FCAF 25 per ton/kilometer. This decision brought the rate more nearly in line with that in the Ivory Coast and other surrounding countries. Before the increase, the weekly offtake averaged 648 metric tons (MT) over a 4-week period. After the increase, the offtake moved past 1,000 MT per week and for 2 weeks reached over

4,000 MT/week. Clearly the market had spoken, and the fleet of trucks had increased, some coming from as far away as Nigeria.

Another constraint was the number of police checkpoints in the Ivory Coast between Abidjan and the Mali border, said to be about 60. If a truck spent 30 minutes clearing each of them, this would take 30 hours each way, or a total of 60 hours wasted. Reducing the checkpoints would reduce the turnaround time, thus increasing the truck capacity proportionally.

Several ambassadors, at the request of the donor group, approached the Government of the Ivory Coast at a very high level to see what could be done to reduce, if not to eliminate, the problem. The proposal of the Government was to run two convoys per week with police escorts on the up trip only. The donors would have to pay the costs for the escort (fuel, per diem). The transshippers did not consider the proposal to be helpful because trucks ran 7 days a week, not 2, and the trucks would still be stopped on the down trip. The net saving would be marginal if not negative. The offer was declined with thanks.

Another problem centered around a stretch of road in the Ivory Coast between Ferkessendougou and the Mali border, particularly a stretch of about 40 kilometers that was very bad. The WFP logistics specialist traveled the road early in the campaign and said that it had taken him over 3 hours to negotiate that one part. The donors agreed to provide funds to the Government of Ivory Coast through the WFP to provide emergency repairs and upgrading. This was done, and the WFP expert traveled the same road again with a REDSO engineer and announced that this time they made the trip in minutes and the trucks were moving at normal speed.

Other minor problems arose from time to time. The Malian representative in Abidjan is responsible for assigning available trucks and determining the cargoes to be hauled. Occasionally he had to be reminded that food was the priority.

The problem with the Lome port in Togo was of a different nature and fortunately affected only one shipment of 5,000 MT of corn that involved REDSO. WFP and other donors had considerably more cases. The problem centered around the portion destined for Gao. The logical and shortest route should have been via Niamey, Niger, but the road from Niamey to Gao was so bad in several stretches that passage by big trucks was impossible. They would have had to unload in Niamey and shift the cargo to small trucks, a costly and time-consuming process. With the establishment of the Gao ferry by the U.S. Army, it was decided to ship the corn to Gao via Mopti. Because this route does not seem to be a normal trade route from Lome, Togolese truckers were hesitant to make the trip. Eventually the trip was made, however, taking from March 22 until August 6 to move the lot.

The problem of Dakar, Senegal, centered solely around the railway. Too many donors had shipped too much food into Dakar without consulting each other, and suddenly the port of Dakar was swamped with food far beyond the capacity of this fragile, run-down railway. The railway was studied by an A.I.D.-sponsored consultant. To resolve the problems of the railway will take years and millions of dollars, and a quick remedy is not possible. It should, however, receive prompt attention in case of future emergencies.

One other constraint that must be taken into account in planning for any future emergency programs relates to the coffee and cocoa harvest. Between mid-November and the end of February, a major part of the Ivorian truck fleet is engaged in hauling coffee and cocoa to Abidjan for export. They receive premium rates, and it is of such importance to the Ivorian economy that it would be very difficult to obtain significant numbers of trucks. In future then, the commodities should be in Abidjan well before November, or arrive only during February so as to begin the transport in early March.

#### 4. RESULTS

There is an old logistics saying that goes, "if it ain't delivered on time, it ain't." Timeliness has to be the first measure by which this program is judged. We started late, but once the machine began moving, parts of it moved quite well (see Table E-1). The first approvals for Mali were confirmed in a cable from A.I.D./Washington on February 9, 1985, and the first vessel arrived in Abidjan on February 18. Clearly A.I.D./Washington and the USDA pulled out all the stops to get the food on ships and delivered.

As indicated earlier, once the trucking rates were adjusted the offtake jumped to very acceptable levels. By the end of April almost 12,000 MT of food (government-to-government) had been shipped from the ports of Abidjan and Lome. By the end of May, the total had reached over 16,000 MT. At the end of June, the figure rose to over 43,000 MT, including Dakar port. By August 6, when the last truck left Lome, over 60,000 MT had been forwarded from the three ports, leaving only about 211 MT still in the port of Dakar.

In sum, between the arrival of the first vessel, the MV Telfair Pilot on February 18 and the last vessel, the MV Epos on June 23, a total of 61,785 MT of food arrived against an approved 60,300 MT on 14 shipments to three ports.

Other logistics problems occurred inside Mali; these are dealt with in the main body of the study.

Table E-1. Weekly Port Dispatches of Government-to-Government  
Emergency Food Shipments to Mali From Abidjan (Ivory Coast),  
Lome (Togo), and Dakar (Senegal)  
(based on weekly port dispatch cables; in metric tons)

Week of	Abidjan			Lome	Dakar	
	U.S. Food	All Donors	Balance	U.S. Food	U.S. Food	
2/25-3/02	648.5 <sup>a</sup>					
3/04-3/09	648.5 <sup>a</sup>					
3/11-3/16	648.5 <sup>a</sup>					
3/18-3/23	648.5 <sup>a</sup>			480		
3/25-3/30	919			635		
4/01-4/06	1,191			report missing <sup>b</sup>		
4/08-4/13	857 <sup>c</sup>			1,222		
4/15-4/20	1,224			0		
4/22-4/27	1,033			0		
4/29-5/04	1,837			0		
5/06-5/11	540 <sup>d</sup>			0		
5/13-5/18	1,640	3,912	26,042		0	
5/20-5/25	report missing	--	--	0		
5/27-6/01	2,082	8,972	17,070	0		
6/03-6/08	3,240	5,281	21,836	245		
6/10-6/15	3,441	4,228	17,692	30		
6/17-6/22	3,633	5,063	16,119		0	
6/24-6/29	4,273	6,718	9,401	427	4,550	
7/01-7/06	4,177	4,898	5,763	320	1,576	
7/08-7/13	2,883			607	2,287	
7/15-7/20	1,276	10,001	7,052	199		
		Abidjan complete				
7/22-7/27				170	795	
7/29-8/03				94		
8/05-8/06				198		
				Lome complete		

<sup>a</sup>Average dispatches during the period 2/25-3/23; the 25-percent premium trucking rate went into effect on 3/23.

<sup>b</sup>Estimated at 4,875 - 4,625 = 230.

<sup>c</sup>Short week because of Easter.

<sup>d</sup>Completed available stocks.

## APPENDIX F

### COMMENTS ON THE FINDINGS OF THE FAO/MULTIDONOR MISSION AND THE INADEQUACY OF NATIONAL FOOD BALANCE CALCULATIONS

The initial appraisal of the emergency situation in Mali was conducted by the Multidonor Mission organized with the help of the U.N. Food and Agriculture Organization (FAO). Similar missions had evaluated Mali's food deficit situation in 1982 and 1983, so there was a background of experience on which to base the 1984 appraisal. During a 2-week period in Mali (October 14-28, 1984), the Mission reviewed the Government estimates for production, food availabilities, and consumption requirements, relating these estimates to data on rainfall, yields, and population. The Multidonor Mission concluded that the Government estimate of a national food grain deficit of approximately 130,000 tons greater than the 1983/1984 deficit was "plausible." (Food and Agricultural Organization 1984.) The word "plausible" reflects the difficulty of estimating when nearly all variables are subject to large margins of error.

Efforts to estimate food grain deficits in Mali using data on population, consumption, stocks, production, and postharvest losses are subject to numerous uncertainties. Population data based on the 1976 census, particularly those concerning regional projections, are known to be inaccurate. Production data in use are those compiled by the Ministry of Agriculture, which are considered to be based on uncertain methodology. Independent Ministry of Planning estimates, based on a well-defined and acceptable methodology, indicate that production in 1983 was underestimated by the Ministry of Agriculture by a resounding 67 percent. Consumption data are also unreliable (since they are not based on surveys of actual consumption) and vary from 160 to 180 kilograms (kg) per year of food grain requirements. Virtually no data are available on farm stocks--which traditionally had provided a 2- to 3-year reserve for farmers in the Sahel--but which obviously had fallen to very low levels in much of the country.

Under these circumstances, preparing a food balance sheet is largely an academic exercise, working backward from educated guesses of the current deficit considering (1) how production has fared compared with the previous year, (2) the state of demand for food, and (3) the state of public stocks. The balance sheet thus derived serves to establish the "reasonableness" of the estimates of food deficit, food consumption, and production.

The FAO/Multidonor Mission did not express the limitations on food balance analysis in Mali so frankly, but the Mission did recommend, as an urgent matter, improved data collection for use in appraising food availabilities and requirements in following years.

The FAO/Multidonor Mission noted a large increase in the number of needy persons requiring free distribution of grains (noting that only 27,000 metric tons (MT) had been so distributed in 1983/1984), stemming from the years of poor harvests and loss of income.

The FAO/Multidonor Mission recommended food aid of 202,000 MT: 80,000 MT from the Grain Market Restructuring Project (PRMC) of regular/structural food aid, 10,000 MT from National Food Security Stocks<sup>1</sup> (to be replaced by food aid), 12,000 MT from the World Food Program (WFP), and 100,000 MT to be mobilized through the Malian National Committee for Aid to Drought Victims (CNAVS), of which 30,000 MT of grain should be pre-positioned in small emergency stores in Regions I, V, VI, and VII, and 70,000 MT should be included for free distribution under the annual National Food Distribution Program (for calendar year 1985). It also recommended that commercial rice imports of 150,000 MT be maintained at the same level as in 1983/1984 and that the Government encourage increased private and public imports of less expensive millet, sorghum, and corn.

The FAO/Multidonor Mission report is silent on the method of estimation and the accuracy of the amount proposed for free distribution. As no surveys had been made to determine actual needs, the conclusion is that the 70,000 MT represented an educated guess. Indeed the Mission report notes that the 30,000 MT of emergency grain, plus 2,000 MT of nonfat dry milk, were needed to respond to unforeseeable requirements for free distribution.

The FAO/Multidonor Mission surveyed both the crop and live-stock situation and recommended seed assistance to farmers, assistance to help settle displaced farmers and herders, and assistance with livestock feed and to destock cattle from Region VI. As it had in 1983, it recommended the following actions:

- Reclassification of certain pastoral and agropastoral groups and assistance to help them resettle in other zones
- A series of agropastoral development projects (report FAO/OSRO No. 25/83)
- Assistance for village water supply development

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<sup>1</sup>National Food Security Stocks at the time were at a low of about 15,000 MT compared with storage capacity of 38,000 MT.

APPENDIX G

NOTE ON THE NATIONAL FOOD DISTRIBUTION PLAN

Criteria used by the Government of Mali in establishing the National Food Distribution Plan were as follows:

- Priority to food-deficit zones; free distributions of 60,000 MT planned
- Sales to regulate prices in urban markets to prevent abnormally high selling prices
- Assured supply to public institutions (e.g., schools, army, hospitals)

The plan notes that the national food deficit in 1984/1985 would be addressed by commercial imports of 150,000 metric tons (MT) of rice (private sector); 20,000 MT of corn and sorghum (public sector); structural food aid donations under the Cereal Market Restructuring Project (PRMC) of 82,000 MT; and emergency food aid of 152,000 MT mobilized through the Malian National Committee for Aid to Drought Victims (CNAVS). These imports would still leave a theoretical residual deficit of 77,000 MT (480,000 MT total deficit less 403,000 MT imports). Food stocks were considered negligible except for a small amount in the National Food Security Stocks, which needed to be reconstituted without delay (Government of Mali January 1985).

The Distribution Plan assumed that total availabilities through the public sector would be 205,000 MT for the period January 1 through December 31, 1985. Based on past experience, it assumed that aid donations would amount to 157,000 MT (74 percent of the emergency food aid requests), public imports would equal 20,000 MT, and the remainder would be drawn from stocks (including Food Security Stocks) (see Table G-1).

The plan provided also for a higher percentage of corn and cornmeal (50 percent) in the program and much less rice (25 percent) than in previous years because of the reduced purchasing power of the population. In 1983-1984, the Mali Grain Marketing Board (OPAM) had programmed a distribution based on 55 percent of the higher costing rice (and broken rice).

The plan stressed that the distribution of more than 200,000 MT of cereals in regions where access was often difficult, with very limited means for transport and storage, was a major undertaking for the Government. The help of nongovernmental organizations was considered necessary and desirable, and the plan assumed there would be collaboration between the private voluntary organizations (PVOs) and the local food supply committees

Table G-1. Government of Mali Forecast of Food Needs, 1985  
(metric tons)

Type of Distribution	Region								Total
	Bamako	Kayes	Koulikoro	Sikasso	Segou	Mopti	Timbuktu	Gao	
<b>Subsidized Sales</b>									
Army and Security Forces	8,760	1,480	130	910	1,680	1,210	950	2,800	17,920
Schools	400	380	70	30	100	180	80	110	1,350
Hospitals	180	140	20	40	50	75	20	50	575
Prisons	185	70	50	60	70	110	70	160	775
Cooperatives, Others	1,475	245	135	160	200	170	100	180	2,665
Subtotal	11,000	2,315	405	1,200	2,100	1,745	1,220	3,300	23,285
Free Distributions (emergency aid)	1,000	5,000	4,000	300	4,000	10,000	15,700	20,000	60,000
Commercial sales	<u>33,000</u>	<u>12,685</u>	<u>7,595</u>	<u>7,500</u>	<u>15,900</u>	<u>23,255</u>	<u>15,080</u>	<u>6,700</u>	<u>121,715</u>
Total	45,000	20,000	12,000	9,000	22,000	35,000	32,000	30,000	205,000

Source: Government of Mali (January 1985).

(established at each level of government). PVO participation in the program was viewed as a way of complementing and reinforcing existing food supply systems.

The Distribution Plan provided 122,000 MT for sales during the unusual period of food shortages (April to October) in order to ensure adequate supplies at reasonable prices. It programmed 23,000 MT for public institutions, the same amount as in 1983-1984.

The Distribution Plan programmed 60,000 MT for free distribution, which was less than the amount proposed by the FAO/Multi-donor Mission (70,000 MT, with 30,000 MT of reserves pre-positions in deficit regions) and reflected the concern of the Government that too much free distribution would depress the market for local grain sales (Adams and Hoskins 1985, 35). The planned free distribution excluded quantities to be distributed by the World Food Program (WFP) and PVOs using their own resources. The plan specified that the 60,000 MT would suffice for a total beneficiary population of 326,000, assuming a distribution to each of 184 kilograms as the standard requirement for a full year; elsewhere the Government had estimated a total at-risk population of over 1.2 million persons. The question of size of rations and frequency of distribution to particular populations in need was not addressed.

It is illustrative of the poor quality of statistics, and the problem of planning for food aid and food supply in Mali, that OPAM based its regional projects of needs almost entirely on experience from prior years and judgments about increased demand. OPAM programmers had learned that regional statistics on population, food production, and farm stocks were not useful in preparing regional food balance sheets for projecting food supply needs (communication from Mr. Durrand, technical adviser, OPAM).

Although the annual food program prepared by OPAM is a useful guide on the regulatory food sales program and on food expected to be available to or procured by public authorities, the emergency distribution program established for 1984-1985 was viewed as a very rough approximation of needs and how they would be addressed. No comprehensive emergency food program was prepared by region, a deficiency that related directly to the lack of an adequate assessment of needs by region and cercle.



## APPENDIX H

### DID THE FOOD GET TO THOSE IN NEED?

#### 1. THE DESIGN PROCESS

The design, implementation, and monitoring of the free distribution programs ensured that the food allocated for free distribution from Government stocks reached those in need with very little loss or misuse.

##### 1.1 Food Supply Planning by Region

The Malian National Committee for Aid to Drought Victims (CNAVS) agreed with USAID/Mali to allocate a portion of the 40,300 metric tons (MT) of food designated for free distribution to specific regions and cercles. This decision was based on the National Food Supply Program, requests received from regional and district authorities, food availabilities for free distribution (e.g., from USAID, the European Economic Community [EEC], National Security Stocks), and an assessment of the extent of need.

##### 1.2 Tentative Regional Allocations for Distribution by Private Voluntary Organizations

CNAVS and USAID/Mali allocated programmed food aid shipments by regions, assigning private voluntary organizations (PVOs) to distribute the food. For example, the first 10,000 MT of food aid (corn and cornmeal) programmed for free distribution was scheduled to arrive at port in February and March 1985. USAID and CNAVS scheduled distribution of this tranche by CARE, the Stromme Memorial Foundation (SMF), Norwegian Church Aid, and Swiss Disaster Relief in Regions II, V, VI, and VII during March-May 1985.

##### 1.3 Delivery of Food Aid to Warehouses

CNAVS and USAID/Mali determined the appropriate arrival point in Mali, normally a regional warehouse of the Malian Grain Marketing Board (OPAM) in Segou, Bamako, Kayes, Mopti, Gao, or Timbuktu/Dire.

#### 1.4 Area Surveys by Private Voluntary Organizations

PVOs then surveyed the particular geographic areas to determine need. For example, CARE would send in a needs appraisal team to consult with cercle, arrondissement, and village authorities. Once a needy village was identified, the PVO decided whether to distribute food villagewide or to target distribution to needy families. In some cases, the food situation was so critical that all families were recognized as in need. In these cases, the PVOs had to determine the number of families and family size. Using tax and other records, PVOs would draw up a list of families and family members. Local authorities were consulted for correcting errors in the list. The list was then used as the basis for the distribution plan. The distribution plan was drawn up and approved by the governor of the region and by USAID/Mali.

#### 1.5 Determination of Ration Size

The ration size was governed by local circumstances and the desire to provide a ration large enough to help people survive until the next harvest and permit farmers to gain or keep enough strength to plant and till their fields. CARE agreed with USAID/Mali to provide adequate rations for 6-8 weeks in order to build up farmer strength. In Macina cercle (Region V), CARE distributed a 100-pound sack of kernel corn per person, equivalent to a 90-day ration at the rate of 500 grams per day. In Region VI, the CARE ration was fixed at one 22.7-kilogram (kg) sack of cornmeal per person, enough for about 45 days. Overall, CARE distributed 14,691 MT of corn and cornmeal to 604,772 people (excluding the pre-May distribution in Douentza), or an average ration of 24 kg per person. On average, working farm families received more, and displaced families (who appeared to have a tendency to sell more of the food they received) received less.

The Southern Baptist Mission (SBM) based its planning on the distribution of three bags of corn (67 kg) per family of five, with 90 percent going to settled farm families and 10 percent to displaced families/migrants. Most of the distribution took place in July-August 1985, and the plan was to give families about 30 percent of their anticipated requirements until the next harvest. SBM and SMF, which together distributed about 10,000 MT of grain, used the same criteria for ration size. Together, they reached an estimated 746,000 people with rations adequate for approximately 4 weeks.

## 1.6 Distribution Process

Distribution was managed by PVO teams who drew down grain from OPAM warehouses, loaded it on trucks, delivered it to a distribution point (normally a village or a "sector"--a central point serving several villages), and supervised the distribution to heads of family or to village chiefs, obtaining properly executed receipts.

## 1.7 End-Use Checks

The PVOs then returned to a random sample of villages in the area served to confirm that the food grain actually reached the families for which it was intended and to investigate and rectify any problems.

## 2. OBSERVATIONS OF THE EVALUATION TEAM

The evaluation team was able to interview people directly involved in the distribution programs. These interviews confirm, as do the end-use checks and final reports by PVOs (the team reviewed the final reports of CARE and Norwegian Church Aid), that the food, without question, was distributed to the hardest hit areas in the country and to families in need. For example, CARE's final report noted that, due to limited stock availability, its western team served only the neediest villagers:

Certain hard choices had to be made by CARE because [Government of Mali] officials sometimes refused to differentiate between villages as to level of need.

During the course of surveying, CARE staff saw the harshest effects of Mali's prolonged drought. In some villages, there were no food stocks in any of the houses. In some of the camps of "population flot-tante," in Niono or Macina, the people were all prostrated by malaria and hunger, since they were originally from the drier north and had no resistance to the mosquitos and malaria of the south. Many families in Goundam subsisted on boiled grass for months during the summer, for want of any other food grains. Many [Government of Mali] officials had nomads or others camped outside their offices and residences, awaiting some help but the [Government] had no means to help them. In Nara and other areas, there were farmers who had not enough physical strength to cultivate; for these farmers, the 1985 harvest will not help them. In Macina,

CARE staff visited an open plain where hundreds of head of cattle had died. Many people were left with nothing at all with which to take up cultivation again or to continue herding activities (CARE 1985).

Norman and Beverly Coad, who managed the Southern Baptist Mission (SBM) food distribution program, reported to the team that the program had enabled farmers to stay in their villages and plant a new crop. They noted that the need was so great that in some areas the standard ration (67 kg per family) had to be reduced to 45 kg. The Coads also noted that losses were very small--less than 0.33 percent--because of careful monitoring and that all beneficiaries were preregistered by May and were aware that they were going to receive the grain.

Mary and Dave Creekmore, who managed the Stromme Memorial Foundation (SMF) food distribution (and assisted in World Vision Relief Organization distributions in Region VII and SBM distributions in Regions II, IV, and V) noted that, without question, the distributions served a real need everywhere and that the hardest hit areas received the bulk of the assistance. The Creekmores concluded, as did CARE, that a principal lesson to be drawn is the importance of getting the food in earlier.

The need in many areas was also documented in several reports. For example, Dr. Per Aarhaug, coordinator for Norwegian Church Aid, informed USAID/Mali of the desperate situation in the Gourma region in the spring of 1985 (Brett-Smith 1985):

- No cram cram or fonio (famine foods) or grazing grasses this year
- Livestock losses estimated at 60 percent
- People not starving, but eating leaves since March
- Migration to permanent water holes began earlier than usual

A village-level survey commissioned by USAID in the fall of 1984 (USAID/Mali December 1984) describes the situation in the cercles of Djenne, Tenenkou, and Youvarou, which were selected for free distributions from the first 10,000 MT of U.S. food aid delivered through SMF in April-May-June:

The effect of lack of flooding on water supply in the Djenne area has already been discussed. All villages agreed that the usual territory covered by the yearly flooding of the Niger and Bani had been dry for four years. The effect on agriculture has been disastrous and is the major reason for lack of food, especially in the Djenne area. Formerly the Djenne region was one

large rice paddy dotted with small hillocks on which were set isolated Bozo villages. Now the rice paddy resembles a cement parking lot, and the villagers have no wild plants or animals to support them through the famine. In Tenenkou and Youvarou the absence of the regular yearly floods has had similar if less catastrophic effects since some millet was always grown in these areas; the villages do not depend exclusively on rice.

In a study on the agricultural situation on the Dogon Plateau (Region V), Dr. Brett-Smith (1985) noted the report of the rural development chief in Sanga arrondissement (Bandiagara cercle) that as of June 15, 1985, 2,000 young men out of a population of 20,600 had migrated from the area following the poor harvest of 1984. She also noted the following percentage of emigrants from badly affected villages in Bandiagara cercle, as reported by the head (Father Pauwels) of SECAMA activities on the plateau:

<u>Arrondissement</u>	<u>Village</u>	<u>Migration</u>
Central	Borokanda	50%
Dourou	Sambourou	25%
Dourou	M'Pelou	25%
Sanga	Kama-Ganda	25%
Duo	Egala	100%



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