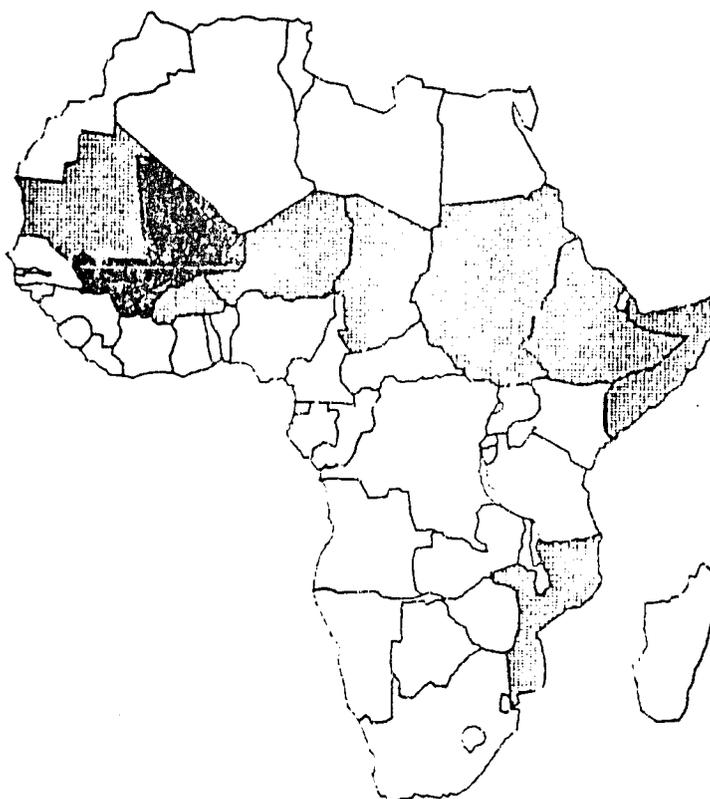


FEWS COUNTRY REPORT

MALI

#1



Africa Bureau, USAID
Room 105 SA-18
Washington, D.C. 20523

Africa Bureau, USAID
Famine Early Warning System (FEWS)

May 1986

INTRODUCTION

This is the first of a series of monthly reports issued by the Famine Early Warning System (FEWS)* on Mali. It is designed to provide decisionmakers with current information and analysis on existing and potential nutrition emergency situations. Each situation identified is described in terms of geographical extent and the number of people involved, or at-risk, and the proximate causes insofar as they have been discerned.

Use of the term "at-risk" to identify vulnerable populations is problematical since no generally-agreed definition exists. Yet it is necessary to identify or "target" populations in-need or "at-risk" in order to determine appropriate forms and levels of intervention. Thus for the present, until a better usage can be found, FEWS reports will employ the term "at-risk" to mean...

...those persons lacking sufficient food, or resources to acquire sufficient food, to avert a nutritional crisis, i.e., a progressive deterioration in their health or nutrition condition below the status quo and who, as a result, require specific intervention to avoid a life-threatening situation.

Perhaps of most importance to decisionmakers, the process underlying the deteriorating situation is highlighted by the FEWS effort, hopefully with enough specificity and forewarning to permit alternative intervention strategies to be examined and implemented. Food assistance strategies are key to famine avoidance. However, other interventions can be of major importance both in the short-term and in the long-run, including medical, transport, storage, economic development policy change, etc.

Where possible, food needs estimates are included in the FEWS reports. It is important to understand, however, that no direct relation exists between numbers of persons at-risk and the quantity of food assistance needed. This is because famines are the culmination of slow-onset disaster processes which can be complex in the extreme. The food needs of individual populations at-risk depend upon when in the disaster process identification is made and the extent of its cumulative impact on the individuals concerned. Further, the amount of food assistance required, whether from internal or external sources, depends upon a host of considerations. Thus the food needs estimates presented periodically in FEWS reports should not be interpreted to mean food aid needs, e.g., as under PL480 or other donor programs.

* FEWS is operated by AID's Office of Technical Resources in the Bureau for Africa in cooperation with numerous USG and other organizations.

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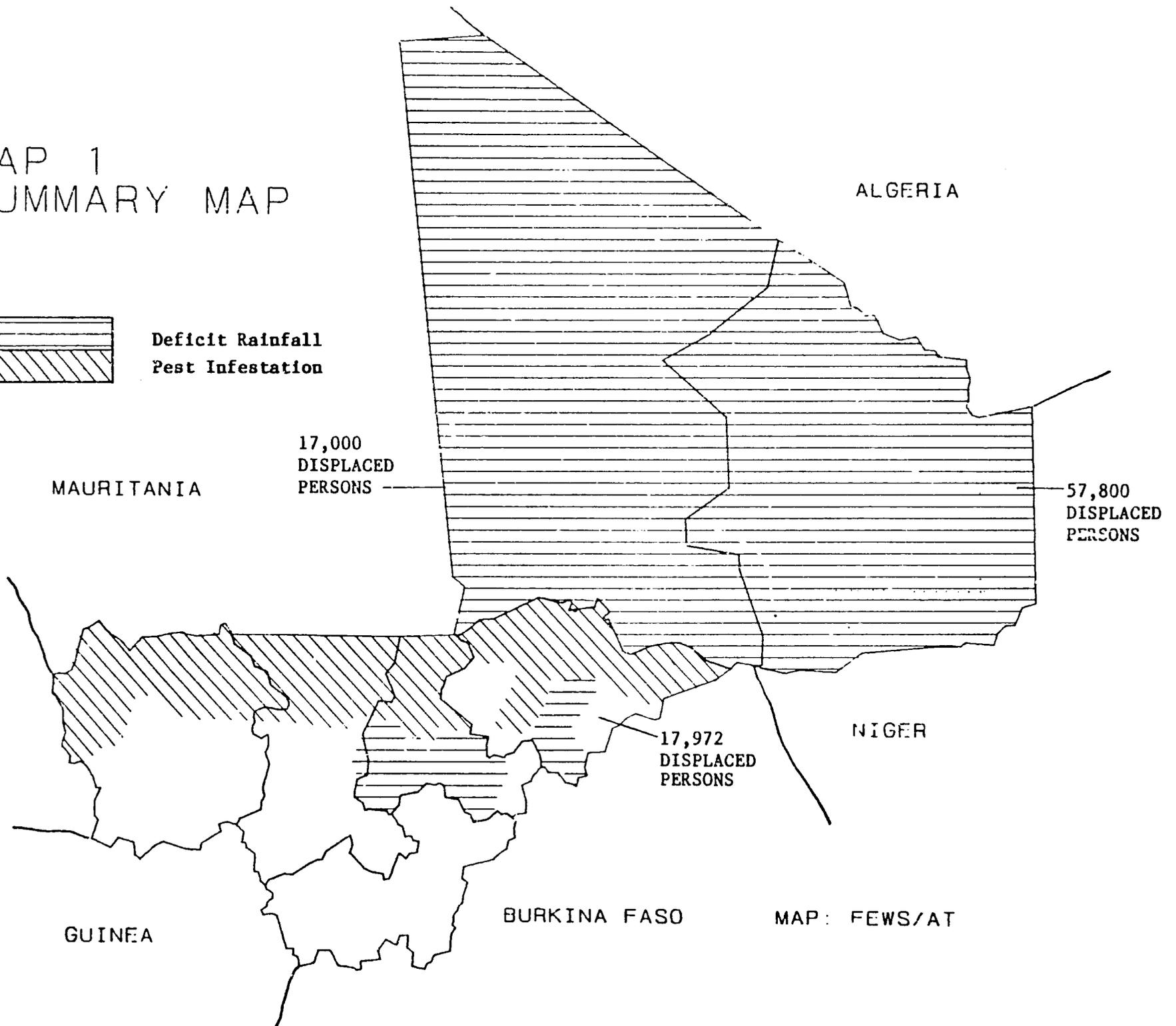
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MAP 1 SUMMARY MAP



Deficit Rainfall
Pest Infestation

1



MAURITANIA

17,000
DISPLACED
PERSONS

ALGERIA

57,800
DISPLACED
PERSONS

NIGER

17,972
DISPLACED
PERSONS

GUINEA

BURKINA FASO

MAP: FEWS/AT

MALI

SUMMARY

Mali rebounded in the fall of 1985 from the recent drought and famine with its largest harvest since 1979. Nevertheless, the country will continue to have significant relief and recovery problems at least through the 1986 harvest. In 1985, some areas continued to realize poor harvests because of insufficient precipitation or pest infestations (see Summary Map). In addition, there are still large numbers of displaced persons needing food assistance in the northern parts of the country. The majority are nomadic pastoralists whose herds were decimated by drought, who have few alternative resources, and who are still subject to pernicious health and nutrition problems. The UNOEOA estimate of persons at-risk in Mali is 420,000.

FOOD PRODUCTION

After the fall 1984 harvest, Mali had its largest cereal deficit since the turn of the century. Grain production in the fall of 1985 increased by a factor of two thirds to a level exceeding that of the past several years (see Table 1). Unfortunately, not all parts of the country shared in the bountiful harvest. In some areas inadequate precipitation, pest infestations, and/or labor constraints reduced the harvest.

The rains were poor in volume or spacing in the central and northern areas of Mali; while the northern areas of Kayes, Koulikoro, and part of southern Tombouctou were hard hit by locusts and birds (see Map 2). As much as 35% of the crop production was lost in these pest-infested areas. Recovery was also hampered in many areas by constraints on agricultural inputs, including labor, that limited final production totals.

Labor shortages were widespread because of the migration of young men to urban areas. The seasonal migration of men aged 18 to 35 to the cities has been common for many years. Because of the drought, many simply have not returned. The drought also increased farmers' indebtedness in 1985, forcing them to reduce agricultural inputs (seeds, fertilizer, wages to pay laborers, draft animals).

LIVESTOCK

Large numbers of livestock either died or were taken south during the recent drought. Estimates of total livestock losses range from 7% to 20%. Experience from other countries, however, indicates that the losses may be even greater. The significant loss of animals has meant that many nomads, who rely mainly on raising animals for their livelihood, have few alternative resources left. For this reason, they have been displaced to urban areas, and will require assistance until they can establish

a means of livelihood.

FOOD NEEDS

No single reliable estimate of Mali's food needs exists. Instead, there is a wide range of apparently reasonable estimates (see Table 2). The scarcity of reliable basic data has encouraged a multiplicity of different building block parameters (e.g., annual per capita consumption rates, milling and waste loss rates) and data (e.g., production, population, import capacity) to be used in the deficit calculations. Appendix 1 contains further discussion of the various estimation techniques. The disparate range of estimates indicates Mali's food deficit needs have yet to be reliably determined.

FOOD DISTRIBUTION

Despite the confusion surrounding the estimates of needs, 95,500 MT of food aid has been allocated or pledged for Mali (UNOEOA). The total U.S. food aid (excepting the 10,000 MT allocated for market restructuring) pledged for Mali is:

U.S. Food Aid

Cereals Remaining from FY1985 Distribution	7,000 MT
Cereals in the Pipeline	13,250 MT
Cereals Requested	15,000 MT
Probable Requests in the Future	3,000 MT

Total Emergency Food FY 86	38,250 MT

The USAID mission is sponsoring food distribution in the Tombouctou and Gao region in the form of remedial feeding centers, food-for-work programs, and bulk distribution. Smaller amounts are to be distributed in the marginal zones of Mopti, Koulikoro, and Kayes during the harvest period.

DISPLACED PERSONS

Two types of displacement have occurred in Mali: (1) the migration from north to south by persons in search of better pasturage and farm lands; and (2) the migration of nomadic pastoralists, who remained in the north, to urban areas in search of food and sustenance. The major groups involved in the north-south migration include the Dogons (cultivators from the area of Mopti region), Sonrais (also cultivators, from the Tombouctou and Gao regions), Tuaregs (pastoral nomads), and their former slaves, the Bellas. The majority of these immigrants have moved to the Sikasso region, which is an area where the rains are more reliable and population density is lower. They generally are living with distant relatives or acquaintances, and have harvested a crop this year.

The displaced persons in the north are residing in "camps" that ring the towns of Goundam, Dire, Tombouctou, Ansongo, Menaka, and Kidal (see Map 3 for location and numbers of displaced persons). The camp dwellers are receiving food assistance from several PVOs (CARE, Medecins sans Frontieres, Licross, World Vision and UNICEF) through remedial feeding centers, food-for-work programs, and bulk distribution. The people in these camps will require assistance until they are able to resume their livelihoods of herding and/or farming or are resettled.

Before these people can return to economic self-sufficiency, they need to overcome their remaining debilitating health and nutrition problems. Cholera and typhoid have not yet subsided to pre-famine levels due partly to limited water supplies and poor sanitation conditions found in the 'camps'. Nutritional surveys taken in the north evidence unusually high rates of malnutrition among children under five (see Map 4). The heightened vulnerability of young children to food shortages makes their health status a good barometer of food availability among the population at large.

The Malian government is opposed to formation of the 'camps' in the north due to the dependency that they can cause. Because of the government's policies, the 'camps' tend to be fluid in composition and pattern of settlement. The government is instead encouraging persons to permanently resettle in the south. The impact of increased demographic pressure on agricultural yields or natural resources in the south is not well understood.

POPULATION AT-RISK

The UNOEOA estimates that 420,000 persons are at-risk in Mali. They locate the majority of these people in the regions of Tombouctou, Gao, and Kayes. Of the total, 98,000 are displaced persons in the north.

The populations at-risk in the north (Tombouctou and Gao) are mainly nomadic herders who have been displaced to the urban areas. Additional information available to FEWS corroborates the UNOEOA estimate of 98,000 displaced persons (see Map 3). The remaining population at-risk is comprised of farmers in zones where the 1985 fall harvest was still below normal. These zones are located in the northern areas of the Kayes, Koulikoro, Segou, and Mopti Regions.

Table 1
Malian Agricultural Production

Year	Millet/Sorghum Production (000)Mt	Maize Production (000)Mt	Rice Production (000)Mt	Wheat Production (000)Mt
1975	800	70	144	2
1976	900	80	156	2
1977	800	50	131	2
1978	1000	55	138	2
1979	943	64	109	2
1980	654	73	109	2
1981	861	70	116	2
1982	805	95	88	2
1983	775	75	93	2
1984	750	65	83	2
1985	851	91	130	2

Source: ERS Agricultural Data, USDA.

Table 2

Mali Food Deficit Estimates
(000MT)

<u>Estimate Source</u>	<u>Food Gap(1)</u>	<u>Commercial Imports(2)</u>	<u>Deficit Estimate(3)</u>
USDA old(4)	69	125	0
USDA new	90	119	0
CNAVS low(5)	274	170	104
CNAVS high	432	170	262
FAO	275	170	105
MRP(6)	301	170	131
UNOEUA(7)			67

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1. The food gap is the difference between estimated production and consumption.
 2. These estimates are either potential or expected figures.
 3. The Deficit Estimate is the difference between Columns 1 and 2; set equal to 0 if negative.
 4. USDA has recently changed its estimates methodology; old denotes estimates based on the old methods and new denotes those based on the new.
 5. The CNAVS(National Committee for Relief to Drought Victims) high estimate is based on the per capita consumption rate found in Mali's Five Year Plan; the low estimate is based on a rate similar to those used by other organizations.
 6. Estimate based on most reasonable parameters calculated by FEWS derived from mean or median values from range available from other estimates.
 7. Food needs implied by UNOEUA persons at-risk estimate of 420,000.

TABLE 3
MALI - ESTIMATE OF TOTAL ANNUAL CEREALS REQUIREMENT FOR DONOR FEEDING PROGRAMS.

Based on a Per Capita Consumption = 160 kg/Person/year

Region	Estimated 1986 Pop	Sorghum & Millet Production			Maize Production		Rice Production		TOTAL PRODUCTION Sorgh Equiv. (000)Mt	Region Surplus/Deficit		Expected Commercial Imports (000)Mt	NET DEFICIT
		Reqd (000)Mt	Gross (000)MT	Net (000)MT	Gross (000)MT	Net (000)MT	Gross (000)Mt	Net (000)Mt		(000)MT	kg/pers/yr(3)		
Kayes	1,089,662	174	162	125	29	22	3	1	149	-25	-23		
Koulikoro	1,650,285	264	112	86	16	12	9	3	103	-162	-98		
Sikasso	1,366,025	219	401	309	62	48	18	6	366	147	108		
Segou	1,334,441	214	113	87	0	0	118	41	137	-77	-57		
Mopti	1,381,818	221	176	136	0	0	67	23	164	-57	-41		
Tombouctou	615,895	99	32	25	0	0	30	10	38	-61	-99		
Gao	457,974	73	5	3	0	0	6	2	6	-67	-147		
Total	7,896,101	1,263	1,001	771	107	83	250	88	962	-301 (1)	-38	170	131

	Sorghum and Millet	Maize	Rice
Milling and Waste Loss Rates -	23%	23%	65%

NOTES AND SOURCES :

1. Total Deficit equals Total Production minus Cereal Required.
2. Net Deficit equals Total Deficit plus Expected Commercial Imports.
3. Note a comparison of the national per capita deficit figure of -38 with individual provincial figures shows how working at an aggregate scale can mask problems since the deficit provincial figure in several cases in two or three times as bad as that of the national.

- * Agricultural Production Estimates from USAID Mission.
- * Per Capita Consumption Estimate from Mission Estimate/Laura Tuck, ABT Ass.
- * Milling and Waste Losses: Laura Tuck, personal communication.
- * Total Population from PADEM(COMMISSION NATIONAL DE PLANIFICATION). Distribution by Region from by Region from Mali : A Country Profile, Page 12-13, July 1983.
- * Commercial Imports from FAO.
- * Sorghum Equivalent Calculation based on calorie content :

Sorghum	Csg =	3,052
Millet	Cml =	3,052
Maize	Cmz =	3,167
Rice	Cr =	3,667

$$Psg = (Psg \cdot Csg + Pml \cdot Cml + Pmz \cdot Cmz + Pr \cdot Cr) / Csg \text{ (Production in Sorghum Calorie terms is total calories/sorghum calories.)}$$

Table 4

At-Risk/Food Aid Needs Comparisons for Mali

Estimate Source	Food-Deficit Estimate	Implied Person-Years of Food Aid(1)
USDA old	0	0
USDA new	0	0
CNAVS low	104,000	590,000
CNAVS high	262,000	1,480,000
FAO	105,000	597,000
MRP	131,000	744,000
UNOEOA	67,200 (2)	420,000 (3)

(1) Based on annual per capita consumption rate of 160 kg/yr/person.

(2) Implied figure from at-risk estimate; assumes complete dependency for entire year.

(3) Estimate actually measured in terms of number of people.

Appendix 1

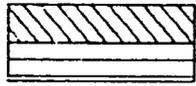
One of the food deficit estimates contained in Table 2 is the most reasonable parameters (MRP) estimate calculated by FEWS. The figures to calculate the MRP estimate are for the most part the mean or median values from the range available from the estimates made by the U.S. Department of Agriculture (USDA), the Food and Agriculture Organization (FAO), and Mali's National Committee for Relief to Drought Victims (CNAVS). The details of those calculations are contained in Table 3.

The MRP estimate is the largest except for the high CNAVS, which is based on an annual per capita consumption rate that is high relative to the status quo. The MRP estimate is higher than the rest because it includes milling and waste rates much higher than any of the other estimates. The lowest estimates (those of USDA) were those done at the national scale. One factor contributing to USDA's low deficit estimates is the absence of any adjustment for milling and waste losses.

An interesting cross-check comes from a comparison of the UNOEOA estimate of persons at-risk and the implied person-years of food aid based on the deficit estimates (see Table 4). If, on the one hand, the UNOEOA estimate is correct, then, in the worst case, where the persons at-risk are considered to be at-risk for the entire year, 67,200 MT are needed. If, on the other hand, the MRP estimate is accurate, then in the case where the number of persons at-risk is equivalent to the number of person-years of food aid needed (i.e., the number of persons at-risk would increase if some of them needed assistance only for part of a year), the estimate of persons at-risk is off by a factor of at least 75%. Again, the magnitude of Mali's food needs deficit remains to be reliably measured.

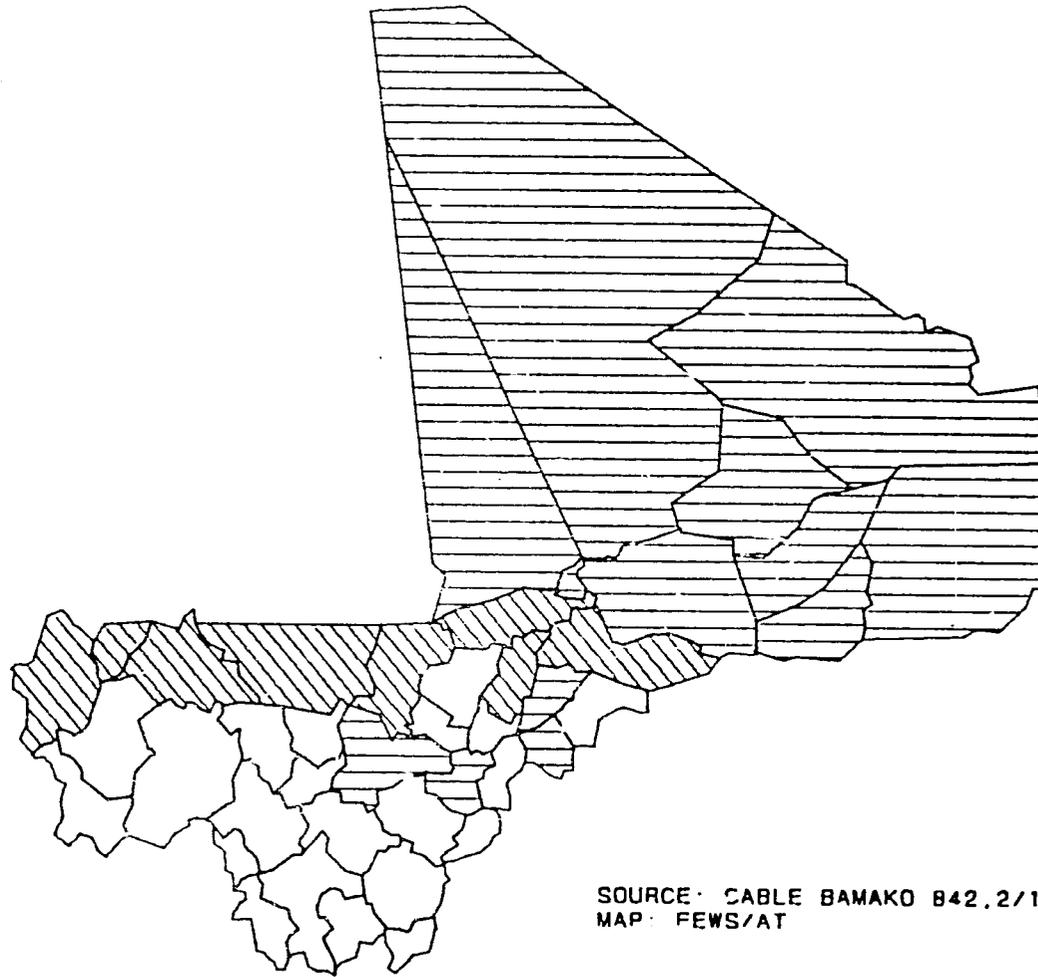
MAP 2

ADVERSE AGRICULTURAL CONDITIONS IN MALI



Locust/Bird Infestation

Deficit Rainfall

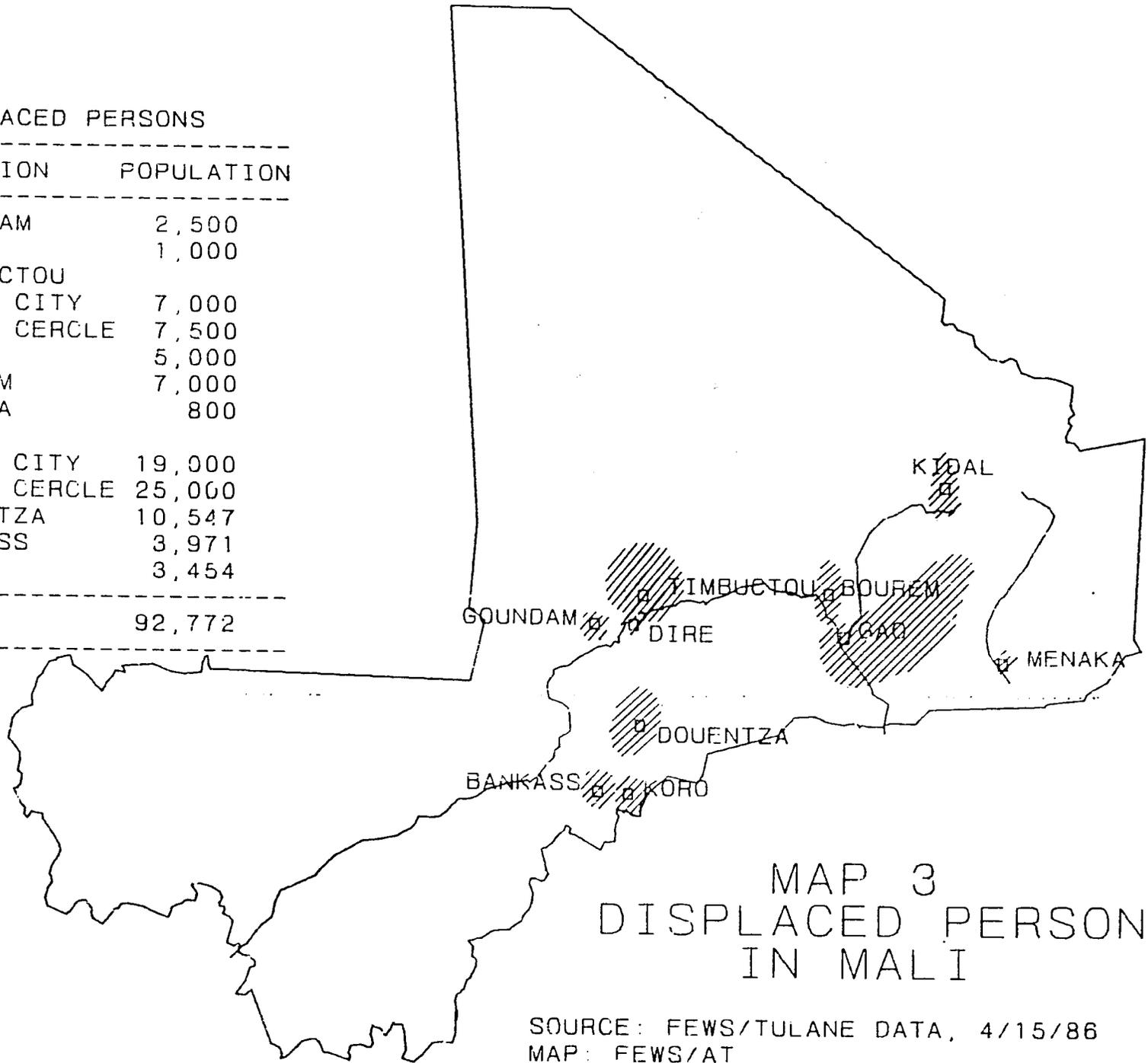


SOURCE: CABLE BAMAKO 842.2/11/86
MAP: FEWS/AT

DISPLACED PERSONS

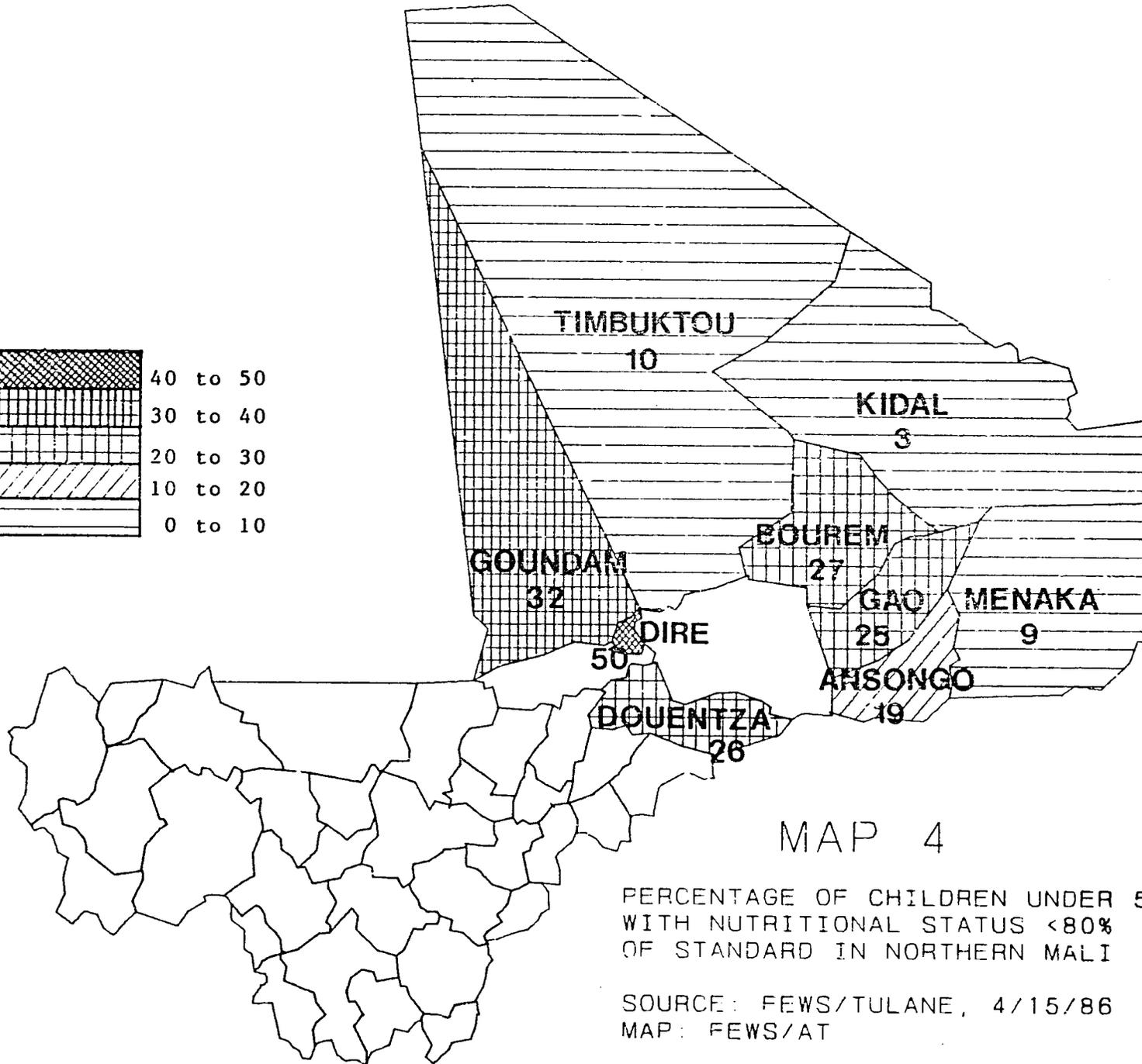
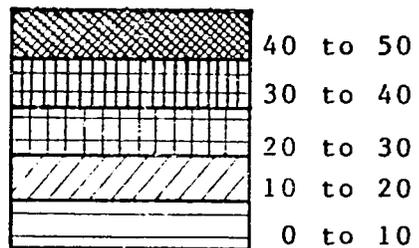
LOCATION	POPULATION
GOUNDAM	2,500
DIRE	1,000
TIMBUCTOU	
CITY	7,000
CERCLE	7,500
KIDAL	5,000
BOUREM	7,000
MENAKA	800
GAO	
CITY	19,000
CERCLE	25,000
DOUMENTZA	10,547
BANKASS	3,971
KORO	3,454
TOTAL	92,772

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MAP 3
DISPLACED PERSONS
IN MALI

SOURCE: FEWS/TULANE DATA, 4/15/86
MAP: FEWS/AT



MAP 4

PERCENTAGE OF CHILDREN UNDER 5 WITH NUTRITIONAL STATUS <80% OF STANDARD IN NORTHERN MALI

SOURCE: FEWS/TULANE, 4/15/86
MAP: FEWS/AT