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Report 21
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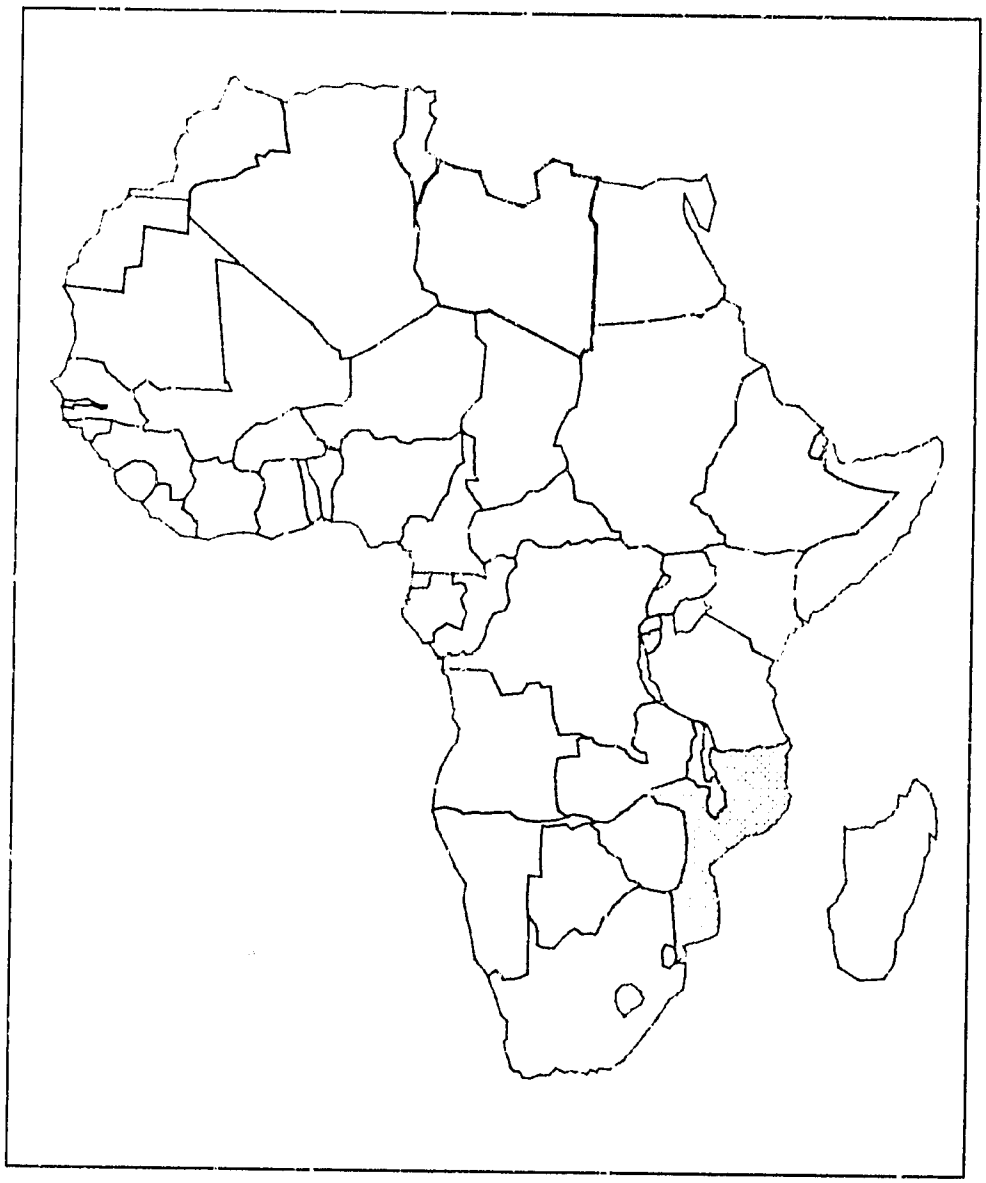
FEWS Country Report
MOZAMBIQUE



Famine Early Warning System
Africa Bureau
U.S. Agency for International Development

List of Figures

		Page
Map 1:	Summary Map	2
Table 1a:	Emergency Food Requirements Delivered	4
Table 2a:	Food Pledges For 1987/1988	5
Map 2:	Cumulative Weekly Precipitation	6
Image 1:	NDVI Image	7
Image 2:	Change in NDVI Values	8
Image 3:	Comparison of NDVI With Normal	10

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MOZAMBIQUE

Report 21, February 1988

Prepared for the
Africa Bureau of the
U.S. Agency for International Development

Prepared by
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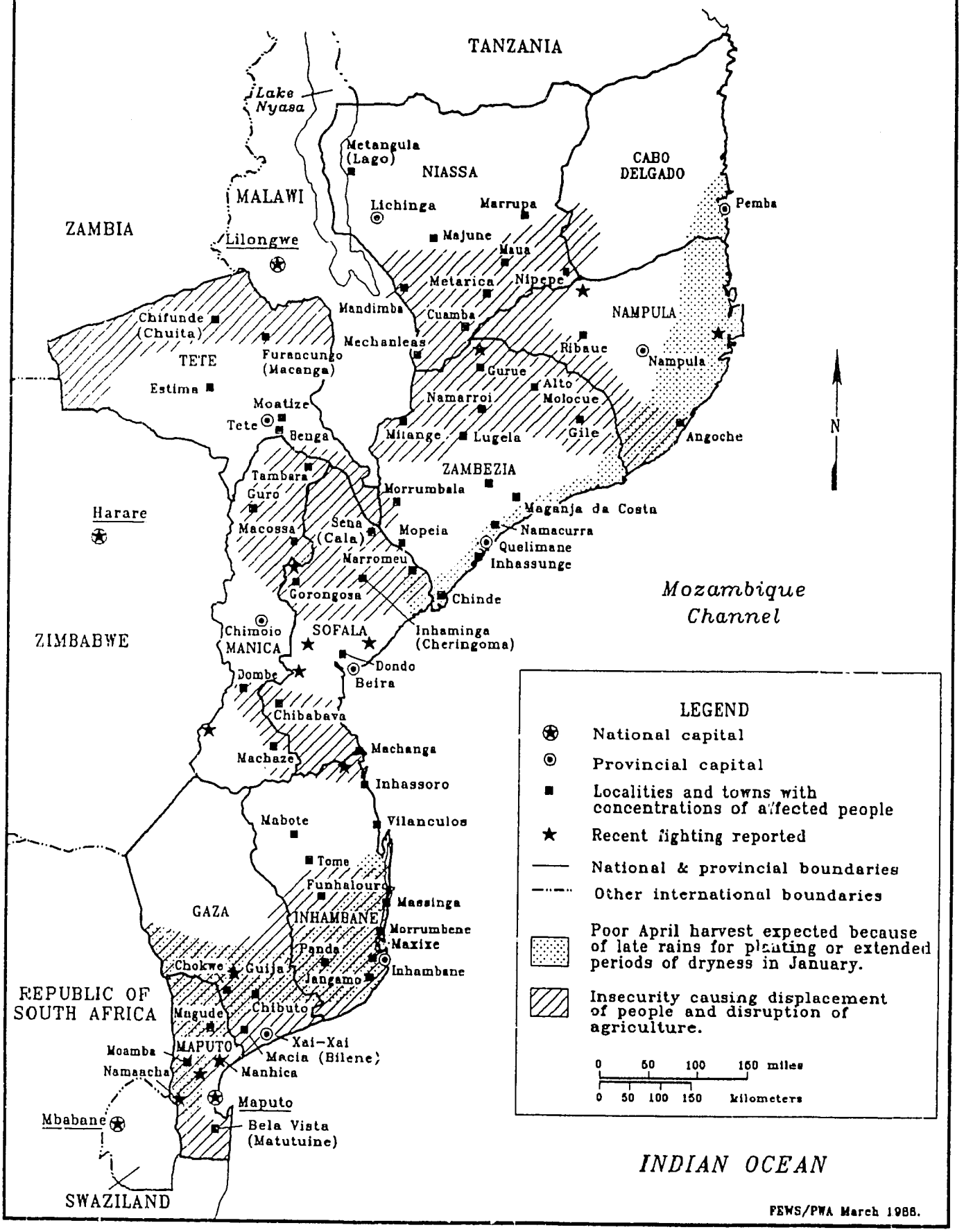
Contents

	Page
Summary	3
Populations At Risk	4
Food Distribution	4
Rainfall	5
Vegetative Conditions	5

MAP 1: MOZAMBIQUE

Summary Map



FEWS/PWA March 1986.

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MOZAMBIQUE

Mixed Prospects for Upcoming Harvest

SUMMARY

There has been no new information regarding the number of people at risk in Mozambique since the February FEWS Report. There are 3.2 million people at-risk, according to the Government of the People Republic of Mozambique (GPRM). However, the estimate was prepared in June 1987, and information provided by provincial authorities in early December suggests there has been an increase in the number of at-risk people. The current food emergency was caused by widespread insurgent disruption during the 1986/1987 agricultural season in northern and central Mozambique. In central and southern Mozambique, the 1987 harvest was also reduced by poor rains in early 1987. Since June, civilians in central and southern provinces have been subjected to an increasing number of armed attacks. In northeastern Mozambique, rainfall has improved since mid-January and vegetative conditions appear to be near normal. However, a poor cereal harvest is still expected in the northeast since the rains began after the end of the normal planting season for sorghum -- a cereal which accounts for approximately 40% of total cereals harvested in the north. In southern Mozambique, abnormally poor rain and high temperatures during January probably stressed cereal crops in the reproductive-to-filling stage of development. Though agricultural conditions appear to be favorable elsewhere in Mozambique, continued insurgent displacement of the peasant sector will probably have a negative impact on agricultural production. Mozambique is expected to reap a fair-to-poor harvest in April.

Key Events and Issues

- In northeastern Mozambique, extremely late rains during the normal planting season will probably have a significant adverse impact on the upcoming April harvest.

- The lean season, when food stocks from the previous harvest are depleted, is generally most pronounced between January and March, prior to the April harvest.

- Relief workers report that monthly food shipments are not meeting the calorie needs of the population, and that district-level food distribution is increasingly hampered by insurgent disruption.

- The USAID Mission in Maputo reports that food stocks for emergency relief and normal market distribution are expected to be depleted by early summer because the quantity of food pledged did not meet requirements for 1987/1988 and food shipments have fallen behind schedule.

POPULATIONS AT RISK

There has been no new information regarding the number of people at risk in Mozambique since the February FEWS Report was published. Officially, the GPRM estimates there are 3,211,900 people at risk. The estimate was prepared by the Emergency Operational Committee (COE) in June 1987, and only includes people living in areas accessible to relief operations. Since June, estimates by provincial authorities and foreign news reports indicate that the emergency situation has deteriorated rather dramatically, primarily because of large scale population displacement and associated agricultural disruption caused by the insurgency, and secondarily because of poor rains in central and southern Mozambique during the 1986/1987 agricultural campaign.

It is likely that Mozambique's affected and displaced population has increased, but the size of the increase is not known. A committee that includes representatives from the GPRM and donor groups is currently reassessing the emergency situation. The results of this reassessment will be used to determine the food requirements for the upcoming May 1, 1988 - April 30, 1989 crop year.

FOOD DISTRIBUTION

During the last two months of 1987, the amount of food distributed was barely one fifth of the food requirements for the estimated 3.2 million people at risk (Table 1a). If the estimated food requirements are correct (i.e., if estimates of the population at-risk and their daily food rations are correct), it is reasonable to expect that the level of malnutrition will increase rather dramatically, especially if there is no improvement in food distribution. The USAID Mission in Maputo reports that food stocks for emergency relief and normal market distribution are expected to be depleted by early summer because the quantity of food pledged did not meet requirements for 1987/1988 and food shipments have fallen behind schedule. Food distribution has been hampered by insurgent attacks on food convoys, as well as by a lack of vehicles, fuel, and spare parts. Recently, the International Committee of the Red Cross (ICRC) was forced to suspend airlifts after insurgents refused to guarantee safe passage over rebel-held territory. The South African Press Association (SAPA) reports that 10,000 villagers in central Mozambique face starvation because of the disruption in emergency supplies.

Table 1a: Emergency Food Requirements Actually Delivered (Expressed as a percentage of requirements)

	November	December
Maize	18%	11%
Pulses	27%	57%
Vegetable Oil	55%	88%

Source: World Food Program Emergency Telex Reports, No. 129 and 131.

Table 1b: Food Pledges For The 1987/1988 Crop Year

	Maize	Pulses	Veg. Oil
% Of Food Needs:			
Pledged	53%	33%	24%
Delivered	24%	20%	15%
% Of Food Pledges:			
Delivered	44%	60%	63%
Confirmed	42%	31%	36%
Unconfirmed	13%	10%	N/A

Source: U.S. Mission cable, MAPUTO 00363, Feb. 1, 1988

RAINFALL

The chronically dry areas of northeastern Mozambique finally received good rainfall in late January and early February (Map 2). In late January, Tropical Cyclone Doaza dumped locally heavy rains along the coastal areas of Sofala, Zambezia, and Cabo Delgado Provinces, raising the possibility of crop flooding in areas which had been planted. The extremely late rains came at the very end of the normal planting season, finally enabling farmers to plant in coastal areas of Zambezia, eastern Nampula, and southern Cabo Delgado Provinces (See FEWS Report 20). Because of the extremely late rains, northeastern Mozambique will experience a shortened growing season that will last through early April, when rainfall normally declines. Maize accounts for 50% of the cereals grown in the north, whereas sorghum accounts for 44% of total cereals. Though maize can be planted as late as the end of January and harvested into June, the outlook for the sorghum harvest is not good, since the rains came too late in the season for planting sorghum. Because of the late rains, there was little opportunity to stagger maize plantings -- a strategy which would otherwise reduce the risk of complete harvest failure caused by a single unfavorable meteorological event. For these reasons, it is likely that southeastern Cabo Delgado, eastern Nampula and coastal Zambezia Provinces will experience below average cereal harvests.

In southern Mozambique, good rains in early December should have enabled farmers to plant, but these newly planted crops were then stressed by below normal rains and above normal temperatures from late December through January (Map 2). The rain station at Maputo reported weekly rainfall amounts of less than 10 mm (25% of normal) during this 6-week period. Rainfall improved during the second week of February as many crop areas in southern Mozambique received between 10 and 50 mm of rain, but the extended period of moisture stress probably stunted crops that were in the reproductive-to-filling stage of development.

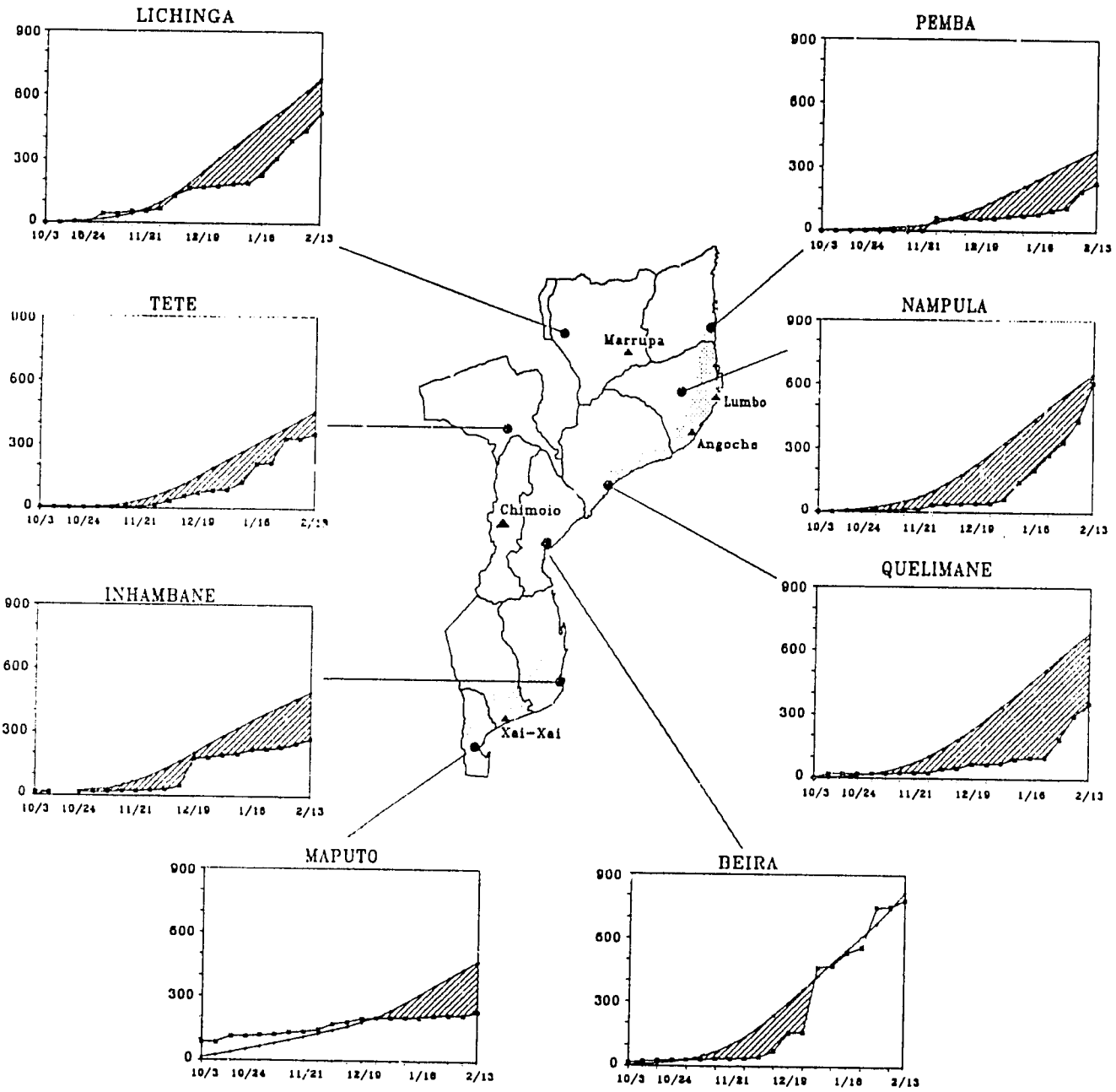
VEGETATIVE CONDITIONS

Normalized Difference Vegetation Index (NDVI) images for the last decade of January (21-31) and the first decade of February (1-10) indicate generally healthy vegetation throughout Mozambique (Image 1). The January 21-31 image shows significant improvement in vegetative conditions in northeastern

MAP 2: MOZAMBIQUE

Cumulative Weekly Precipitation

October 3, 1987–February 13, 1988



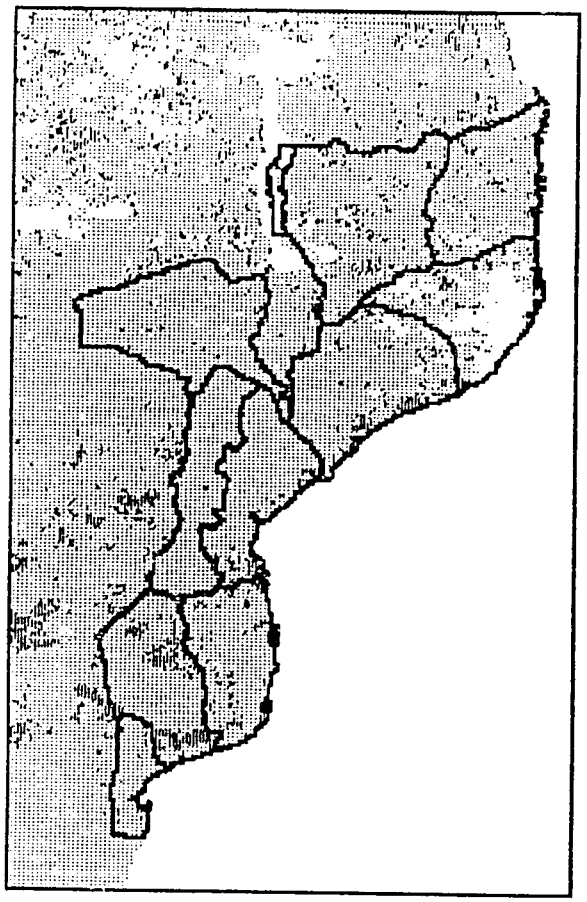
Cumulative weekly rainfall in millimeters (MM)
Reported cumulative rainfall curve
Normal cumulative rainfall curve
Weekly cumulative rainfall deficit
Reporting rain station
Other infrequently reporting rain station
Unfavorable harvest prospects.

Source: Rainfall data from NOAA Climate Analysis Center, supplemented by NASA NDVI February 1-10, 1988.

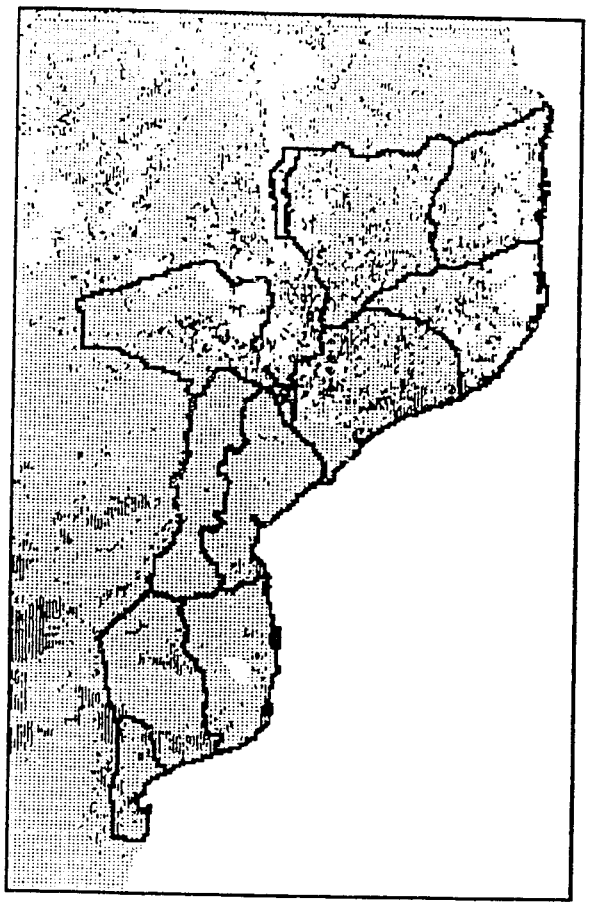
FEWS/PWA March, 1988.

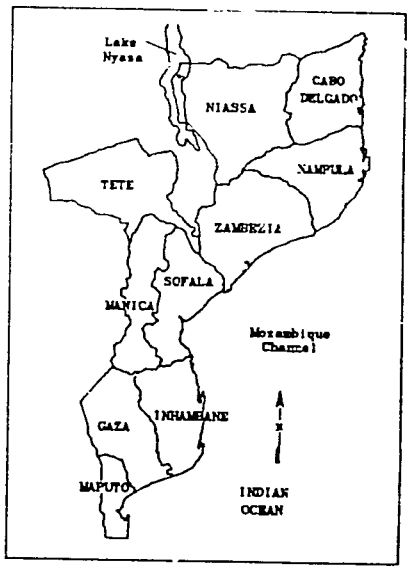
NORMALIZED DIFFERENCE VEGETATIVE INDEX (NDVI) IMAGES

JANUARY 21-31, 1988



FEBRUARY 1-10, 1988





Limited Vegetation

Moderate Vegetation

Heavy Vegetation

Ten Day Cloud Cover

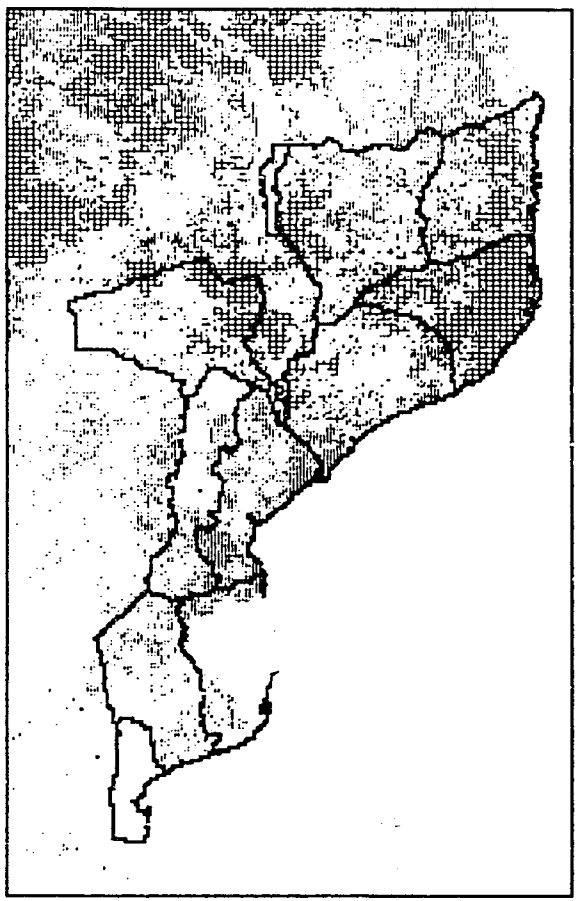
Source: NOAA NDVI derived from GAC imagery for the decades Jan. 21-31 and Feb. 1-10, 1988.

FEWS/PWA, March 1988.

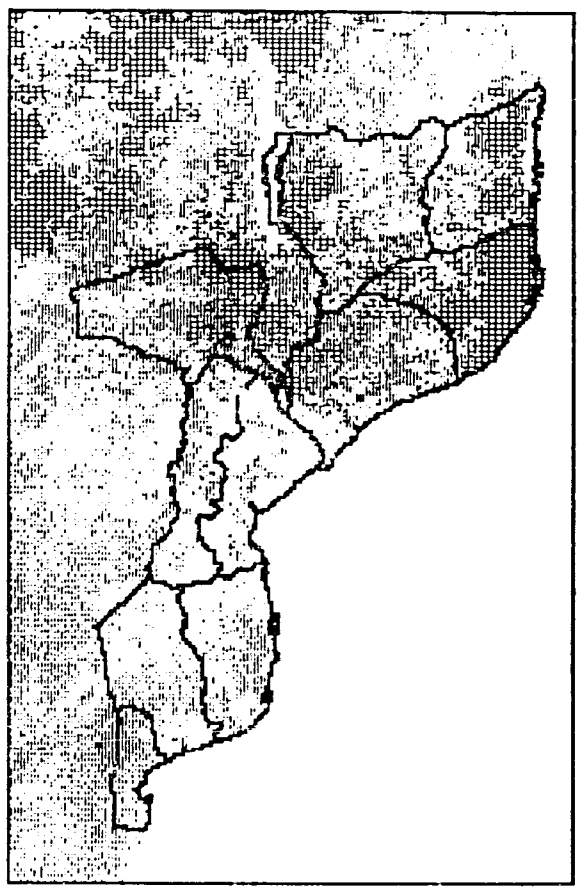
CHANGE IN NDVI VALUES

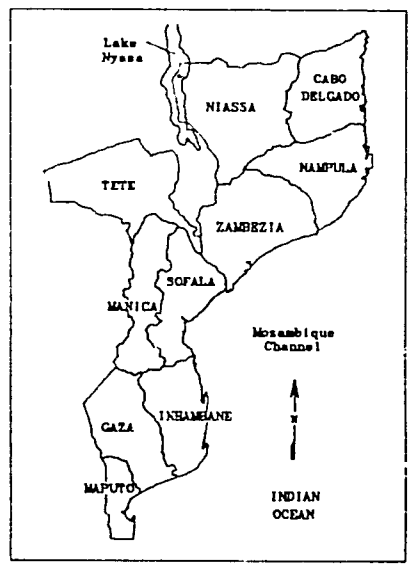
January 21-31 Compared With February 1-10

Increase in NDVI



Decrease in NDVI





Slight Change

Greater Change

Ten day cloud cover in one of the two images.

Source: NOAA NDVI derived from GAC imagery for the decades Jan. 21-31 and Feb. 1-10, 1988.

FEWS/PWA, March 1988.

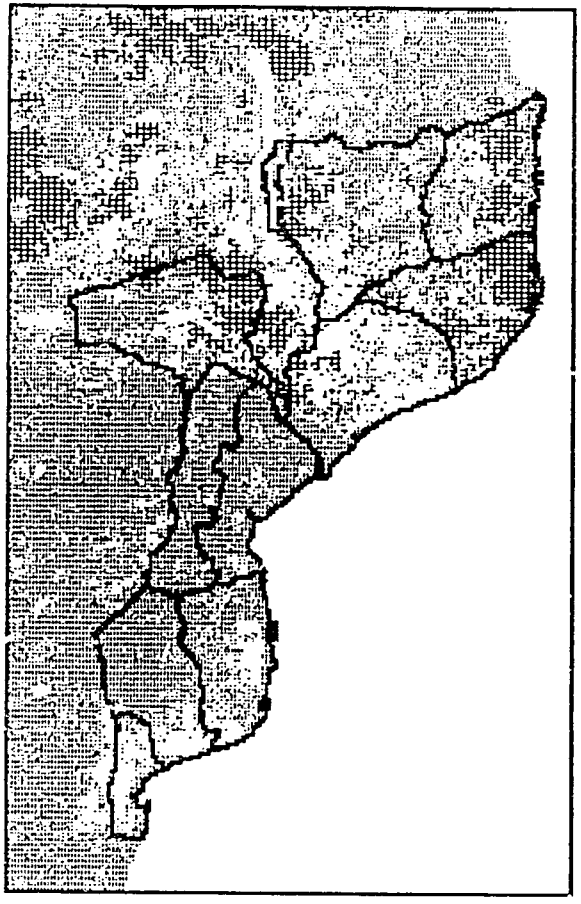
Mozambique compared with early January. Each of the NDVI images for the last three decades (Jan. 11 - Feb. 10) shows ten days of continuous cloud cover over eastern Nampula, indicating potentially good rains in the area previously affected by a chronic dryness. The NDVI image for the first decade of February shows isolated pockets of vegetative stress in Gaza and Maputo Provinces related to the moisture stress reported in the region. Vegetative conditions improved between January 21-31 and February 1-10 in southern Sofala as well as the area bordering Sofala and Zambezia Provinces, whereas conditions worsened in eastern Inhambane, southern Gaza, and Maputo Provinces (Image 2).

Compared with the same decades for the years 1983-1987, the February 1-10 decade indicates vegetative conditions are better than the 1983-1987 average (Image 3). Areas of northern Mozambique appear to be worse than the average, but some of the difference may be attributed to cloud effects in the February 1-10 image. NDVI values for coastal districts in Nampula and Zambezia Provinces improved dramatically between the second decade of January and the first decade of February. Current NDVI values for many of these districts approximate the 1983-1987 mean NDVI value, whereas in the second decade of January, the NDVI readings were lower than the minimum NDVI recorded for the historical series. In southern and central Mozambique, current NDVI values are greater than or equal to the 1983-1987 average, with the exception of isolated pockets in Inhambane, Gaza, and Maputo Provinces. Southern districts generally exceeded the maximum NDVI for the historical period through the first decade of January, but the dryness in southern Mozambique is reflected by a trend of decreasing mean NDVI values for districts during the period January 11 through February 10. Although many of these southern districts still have NDVI values which are greater than or equal to the mean 1983-1987 NDVI, the duration and rapidity of the decline in district level mean NDVI values suggests vegetation was stressed in January.

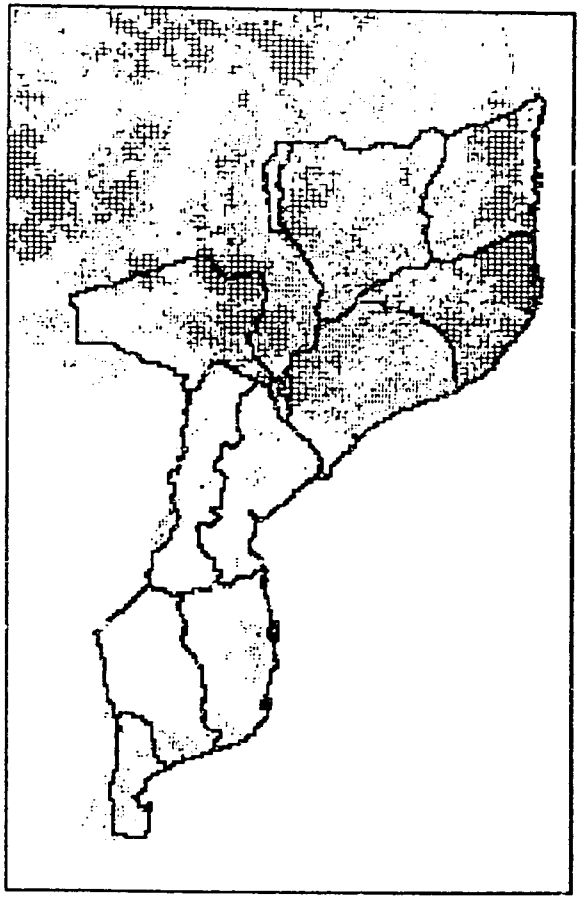
COMPARISON OF CURRENT NDVI WITH NORMAL

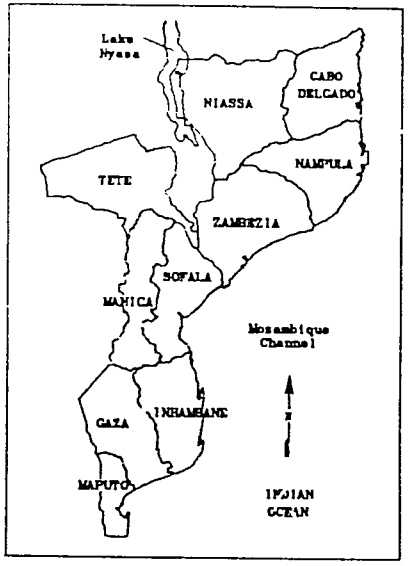
February 1-10, 1988 Compared With 1983-1987 Average

Above Average Conditions



Below Average Conditions





Slight deviation from Normal.

Greater deviation from Normal.

Ten day cloud cover in the current year image.

Source: NOAA NDVI derived from GAC imagery for the decade Feb. 1-10, 1988 compared with the 1983-1987 average for the same decade.

FEWS/PWA, March 1988.

Famine Early Warning System (FEWS)
Country Reports

FEWS publishes monthly reports on Burkina, Chad, Ethiopia, Mali, Mauritania, Mozambique, Niger, and Sudan. These reports are 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, and the proximate causes insofar as they have been discerned.

It is necessary to identify or "target" populations in-need or "at risk" in order to determine appropriate forms and levels of intervention. 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 nutritional condition below the status quo), and who, as a result, reuire specific intervention to avoid a life-threatening situation.

Perhaps of greatest 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 types of intervention can be of major importance both in the short term and in the long run, including medical, transport, storage, changes in economic development policy, 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.