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Information and Commentary about Food Security and Nutrition in Mozambique

Food insecurity levels decrease significantly

EDITOR'S NOTE

In May/June 2003, the multi-sectoral Vulnerability Assessment Working Group (GAV) of the Technical Secretariat for Food Security and Nutrition (SETSAN) identified 659,000 people who were facing extreme food insecurity and 255,000 people at risk of food insecurity by the end of 2003 due to the prevailing drought. Major efforts were undertaken by the Government of Mozambique and its partners to address the critical situation. In its November 2003 survey, the GAV found the food security situation had stabilized, mainly due to targeted interventions and second and off-season crop production.

The first half of the current rainy season, from October-December 2003, was marked by low and erratic rainfall, raising fears that another poor harvest and a subsequent increase in food insecurity could result. At that stage, the GAV began planning a major data collection exercise to provide detailed information about vulnerable populations. Rainfall improved in the second half of the season, improving harvest prospects.

This **InfoFlash** presents a summary of the most relevant conclusions and short term recommendations from that survey. This report is aimed at supplying information about current levels of food insecurity to meet immediate information needs. The data and livelihoods framework utilized provides a rich foundation for further analyses of the root causes of food insecurity, and appropriate responses beyond short-term emergency relief. The full report contains additional details and longer term recommendations, and additional targeted analyses are planned.

The GAV would like to thank all of the participating partners, especially DFID, WFP, FAO, UNICEF, FEWSNet, Save the Children Fund-UK, and other partners for technical, administrative and financial support. The support provided by provincial, district and local authorities and other institutions was an important contribution to the field assessment. The full report is currently available in Portuguese from SETSAN and an English translation is planned.

Highlights

- Current food insecurity levels have decreased sharply from last year, mainly due to favorable rainfall in the second half of the season and ongoing interventions.
- The GAV survey of 4950 households in 42 districts identified a total of 202,000 people vulnerable to acute food insecurity: 108,000 people who require continued emergency support from now until the next harvest and an additional 94,000 people who are at-risk of food insecurity and who may eventually require emergency assistance from October 2004 until March 2005.
- The GAV used a livelihoods based analysis to estimate emergency assistance needs. Seven different livelihood groups were formed through statistical clustering of key indicators. Each group has a unique vulnerability profile, faces a different set of risks, has a different ability to respond to risk, and therefore, has different food security outcomes.
- All of the people vulnerable to acute food insecurity come from Livelihood Groups 1, 2 and 3, which are characterized by a lack of diversification in production and income strategies.
- The GAV survey did not include Nampula, Cabo Delgado or Niassa. Reports of food insecurity, especially in coastal Nampula, will be assessed in detail by SETSAN-Provincial, GAV and partners in the next few months.
- Preliminary analysis of data on chronic illnesses (a commonly used but inexact proxy indicator for HIV/AIDS) shows that 10% of the households reported someone in the family had been sick for three months during the last year. This high rate was reported even among the economically productive 18-45 year old age group, and the rate of chronic illness among household heads was even higher. In-depth analyses of these findings are underway and will be published in a separate InfoFlash.

Data collection methodology

The survey was carried out among 4950 households in 42 districts of Maputo, Gaza, Inhambane, Sofala, Manica, Tete and Zambézia between 8 March and 4 April 2004. The districts included in the survey were those suffering from the combined effects of drought and high HIV/AIDS prevalence, and were largely the same districts included in the 2003 VA. The districts were grouped into eleven regions, each with a total population of approximately 300,000 (see regions on the map). Sampling was based on Probability Proportional to Size, using the CENACARTA list of villages and population. This methodology provides a confidence interval of 95%.

A total of 22 survey teams were formed, each including a supervisor and three enumerators. As part of SETSAN's efforts to build local capacity in food security and nutrition, 30 of the enumerators were final year students of nutrition. A team of 20 data entry specialists, plus supervisors, completed the data entry (double entry) and cleaning.

Additional information was gained from a qualitative survey carried out in the same eleven regions.

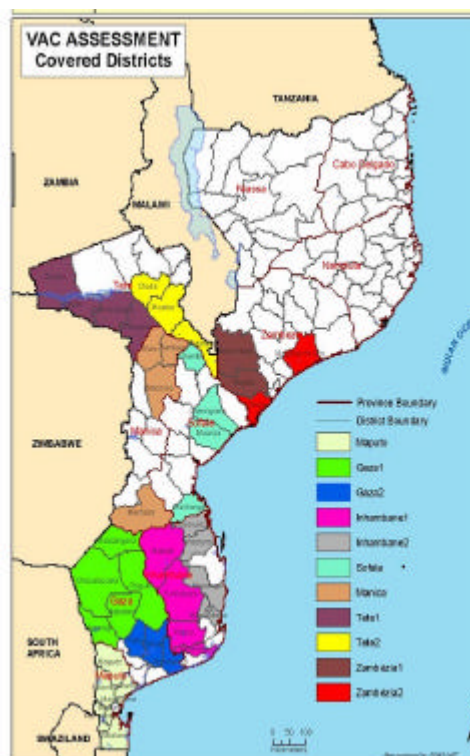


Figure 1 – Districts and regions covered by 2004 GAV survey

Analytical Framework: welfare and livelihood analysis

Data analysis was carried out by the GAV, with international technical assistance. Socio-economic data was analyzed first, to provide a picture of the general welfare status of the population. Initial comparisons of data on access to water, education, health services, etc. were made with other recent assessments, such as the Demographic and Health Survey, the IAF, the TIA and the previous rounds of vulnerability assessments.

The second part of the analytical framework involved creating livelihood groups. Based on the data collected, seven different livelihood groups were formed through statistical clustering of key indicators. Each of the seven livelihood groups has a unique vulnerability profile – that is, they face a different set of risks, have a different ability to respond to risk, and therefore, have different food security outcomes. The full GAV report contains much greater detail on the characteristics of these livelihood groups.

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7
Deficit Subsistence Farmers	Basic Subsistence Farmers	Cereal Dependent Farmers	Diversified Farmers with Informal Labor Opportunities	Diversified Farmers with Livestock	Diversified Self-Sufficient Farmers with Agricultural Income	Diversified Farmers with Formal Sector Income and Remittances
13.5% of population, or 452,000 people	9.6% of population, or 322,000 people	11.7% of population, or 392,000 people	13% of population, or 437,000 people	8.9% of population, or 299,000 people	34.8% of population, or 1.17 million people	8.4% of population, or 283,000 people

Preliminary findings: current food insecurity less than last year

Current levels of food insecurity have declined significantly compared to the past two years. Despite the late and erratic start to the agricultural season, good rainfall in the last half of the season, and continued efforts to mitigate and respond to the drought, have led to a widespread improvement.

Table 1: Duration of Household (HH) Stocks

Duration	GAV 2003	GAV 2004
< 1 month	79%	61%
1-3 months	13%	23%
4-6 months	5%	9%
>6 months	3%	7%
HH with crops still to harvest	66%	88%

Comparing several key indicators between this year's and last year's vulnerability analysis shows the general improvement in current food insecurity. Table 1 shows that the duration of existing household food stocks has improved – fewer households have less than a month of stocks. In addition to this improved level of stocks, almost all households still had crops in their fields, awaiting harvest. The late harvest in 2004 will make a positive contribution to household food security.

Table 2 - Quality of Diet Scores

Another indicator of the general improvement is seen in the "Quality of Diet" scores.¹ Compared to last year, fewer households had a very poor quality of diet, and there was a significant increase in the number of households with an acceptable diet. The average quality of diet also improved significantly, indicating a greater diversity and better quality foods are being consumed.

Quality of diet	GAV 2003	GAV 2004
1 (< 12) Very poor	54%	40%
2 (12-19) Poor	40%	44%
3 (>19) Acceptable	6%	16%
Average	10.8	13.3

Other interesting comparisons with last year showed a very large decrease in the number of households involved in informal labor (*ganho ganho*). At the same time, there was a significant increase in the number of households selling agricultural products. This can lead to the conclusion that many households resort to *ganho ganho* in years of poor agricultural production, when they have little surpluses to sell.

Disaggregating the data by livelihood groups shows that large differences in outcome indicators by group. The quality of diet score (Figure 2) shows that Livelihood Groups 1 and 2 have much poorer diets than the other groups. Also, Figure 3 shows that the majority of the people who only consumed one meal in the previous day came from Livelihood Groups 1 and 2.

Figure 2



Figure 3



¹ The GAV uses a "Quality of Diet" rapid assessment tool index created by the Ministry of Health. The index scores foods according to the following point system: four points for meats and animal proteins, three for legumes, two for cereals and one for fruits, vegetables and other foods. The total scores are ranked according to the three levels shown on Table 2. Detailed descriptions of the methodology are available from SETSAN.

Preliminary findings: high rates of chronic illnesses

Contrary to the positive findings related to current food insecurity, the VA found high rates of chronic illnesses among prime age adults and heads of households. Given the difficulties in assessing the presence of HIV/AIDS at the household level, chronic illness is a commonly used, although imperfect, proxy indicator. Two relevant questions were asked: Has anyone in the household been ill for more than three months in the last year? In addition, the survey asked if any of the people who had died in the past year had been sick for three months or more before their death.

The two previous rounds of VA did not ask whether a living member had been sick for three months in the last year, but asked if an adult was not working, whether it was due to illness. As a result, the estimates of "chronic illness" among living members may not be strictly compared among the three VAs. However, the 2002 TIA did phrase the question in the same way as the VA2004. Results of all four are presented on Graph 4.

Figure 4

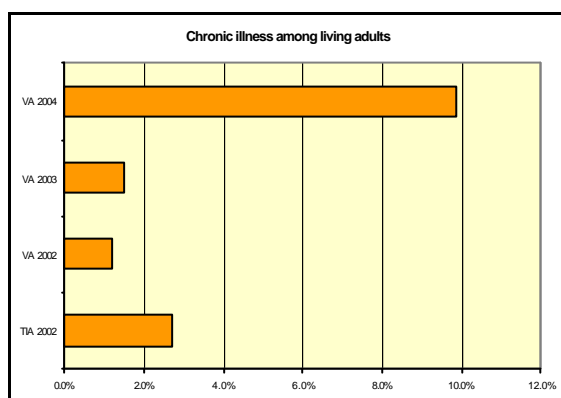


Figure 5

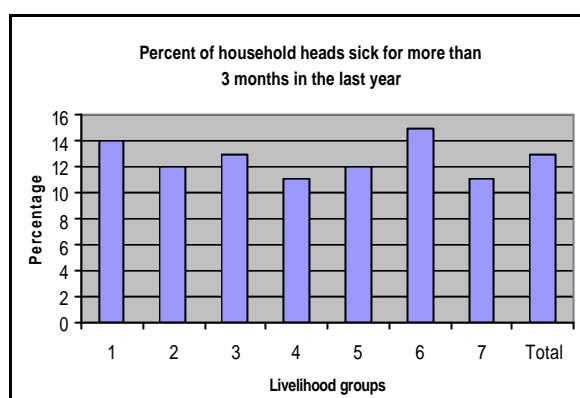


Figure 5 shows rates of chronic illness among heads of households. Although high rates were found in all seven livelihood groups, Livelihood Group 6 showed the highest rate (15%).

The second question about household members who had been sick for more than three months before they died, showed that 10.5% of the people who died in the last 12 months had been ill for more than three months. This ranged from a high of 17% in coastal Zambezia to 6% in Manica. SETSAN plans to conduct further analysis on this data and the results will be published in a separate InfoFlash.

Table 3

Information about HIV/AIDS

Most of the households surveyed had heard of HIV/AIDS, with little variation across geographic regions. Radio was the main source of information on the pandemic. Table 3 demonstrates variation in the percentages of households which know one of more way to avoid HIV/AIDS, those who know someone who has the disease or has died of the disease.

Region	Have heard of HIV/AIDS	Know how to avoid	Know someone who has HIV/AIDS	Know someone who died of HIV/AIDS
Maputo	98%	84%	18%	32%
Gaza West	96%	58%	16%	35%
Gaza East	94%	86%	19%	31%
Zamb. Interior	95%	81%	31%	33%
Zamb.Coast	89%	80%	13%	24%
In'bane Interior	98%	70%	11%	26%
In'bane Coast	94%	67%	16%	33%
Sofala	94%	71%	18%	25%
Manica	93%	66%	36%	52%
Tete East	98%	83%	27%	35%
Tete West	98%	84%	24%	41%
Total	95%	75%	21%	33%

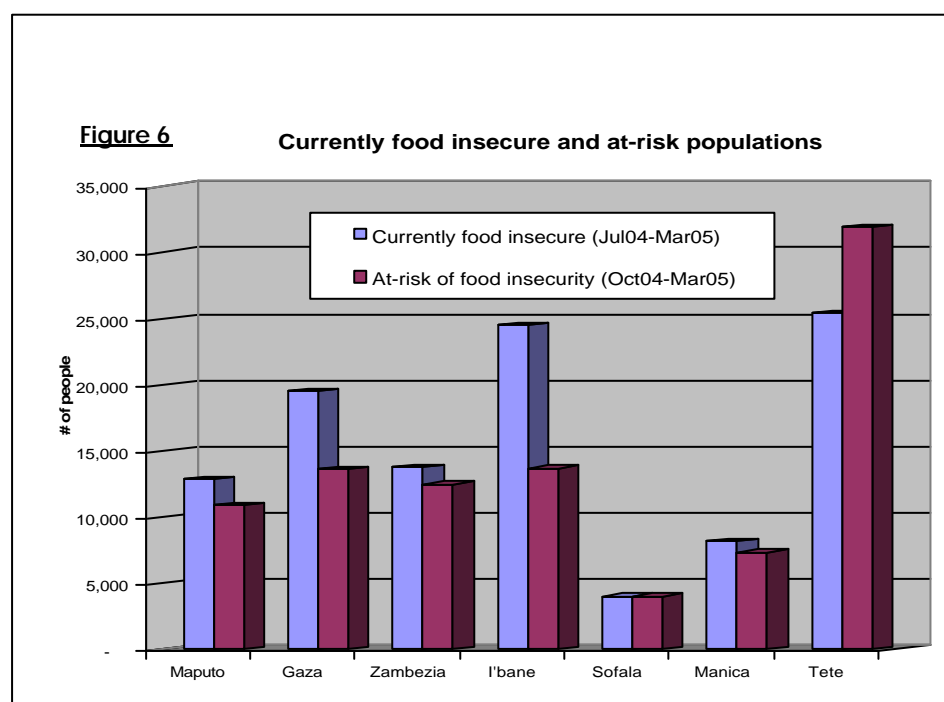
Population currently food insecure and at-risk of food insecurity

In order to provide estimates of the population currently food insecure, the GAV used the following indicators:

- Poor quality diet (<12)
- No food stocks
- No crops in the fields to be harvested

The population facing these difficulties was crossed with the seven livelihood groups (LG). Among the seven livelihood groups, LG 1, 2 and 3 are characterized by much more limited diversification of cropping patterns and income options. When Livelihood Groups 1, 2 and 3, which depend heavily on small scale agriculture, face the conditions outlined above (poor diets, no food stocks and no crops yet to be harvested) their food insecurity is at-risk. They have few options to fall back on, and hence, are considered to require some form of short-term, emergency assistance. A total of 108,000 people from Livelihood Groups 1, 2, and 3 face these conditions and require emergency assistance until the next harvest. Members of other livelihood groups (LG4, 5, 6, and 7) face the same short-term conditions above, but they have other resources available such as livestock, informal labor, remittances or formal sector wages to overcome these short-term difficulties. (These livelihood groups are vulnerable to other risks and may require other types of assistance – see recommendations section).

Within Livelihood Groups 1, 2 and 3, a second group was also considered – those with a poor quality diet and no crops in the fields, but with 1-3 months of food stocks. It is assumed that this group may exhaust its available resources between now and September. Therefore, an additional 94,000 people from LG1, 2 and 3 may become food insecure and may require emergency assistance from October 2004 until March 2005. The GAV will monitor this second group carefully, especially in light of potential improvements that may have occurred after the survey was completed in March/April. Rains continued unusually long and second season prospects are good in many places, so it is possible that a portion of this second group may be able to meet its own food security requirements.



Of the total population that may require emergency assistance, 50% is from Livelihood Group 1, 20% from LG2, and 30% from LG3. A summary by province and time period is shown on Figure 6, and the district and livelihood group breakdown is shown on the table on the following page.

**Population currently food insecure and at-risk of food insecurity,
by district and livelihood group**

Region	District	Currently food insecure (July 04-Mar 05)				At-risk of food insecurity (Oct 04-Mar 05)			
		LG1	LG2	LG3	Sub-Total	G1	G2	G3	Sub-Total
Maputo	BOANE	2,354	603	1,238	4,196	1,083	750	2,321	4,154
	MAGUDE	209	161	110	479	96	199	206	501
	MANHIÇA	2,457	298	136	2,891	1,131	371	255	1,756
	MARRACUENE	495	127	-	622	228	158	-	386
	MATUTUINE	1,504	241	132	1,876	692	299	247	1,238
	MOAMBA	1,038	100	137	1,275	478	124	256	858
	NAMACHA	296	512	675	1,483	136	636	1,265	2,038
	Maputo total				12,822				10,931
Gaza 1	CHICUALACUALA	2,257	77	246	2,580	1,038	96	461	1,596
	CHIGUBO	689	235	107	1,032	317	293	201	811
	MABALANE	937	180	90	1,206	431	224	168	823
	MASSANGENA	379	157	92	629	175	195	173	542
	MASSINGIR	339	212	89	640	156	263	167	586
Gaza 2	CHIBUTO	5,381	632	734	6,747	2,476	785	1,375	4,637
	GUIJA	1,347	570	567	2,483	620	708	1,062	2,390
	MANDLACAZE	3,779	351	46	4,175	1,739	436	86	2,260
Gaza total				19,491				13,644	
Zambézia 1	MOPEIA	886	341	-	1,227	408	423	-	831
	MORRUMBALA	2,472	1,584	2,552	6,609	1,138	1,969	4,785	7,891
Zambézia 2	CHINDE	288	443	50	782	133	550	95	778
	MAGANJA DA COSTA	4,294	826	-	5,120	1,976	1,026	-	3,002
Zambezia total				13,737				12,502	
Inhambane 1	FUNHALOURO	924	222	81	1,227	425	276	152	853
	INHARRIME	4,331	194	35	4,560	1,993	241	66	2,300
	MABOTE	3,201	150	137	3,488	1,473	186	257	1,916
	PANDA	848	179	-	1,027	390	223	-	613
Inhambane 2	GOVURO	2,951	239	109	3,299	1,358	297	204	1,859
	INHASSORO	784	-	321	1,105	361	-	601	962
	MASSINGA	3,957	706	-	4,664	1,821	878	-	2,699
	MORRUMBENE	5,128	-	53	5,181	2,360	-	99	2,459
l'bane total				24,551				13,660	
Sofala	CHEMBA	148	1,010	221	1,379	68	1,255	414	1,737
	CHERINGOMA	221	17	155	393	102	21	291	414
	MACHANGA	1,129	590	158	1,877	519	733	297	1,550
	MUANZA	197	51	92	340	91	63	173	326
Sofala total				3,989				4,026	
Manica	GURO	241	500	894	1,634	111	621	1,676	2,408
	MACHAZE	4,040	367	52	4,458	1,859	456	97	2,411
	MACOSSA	162	62	57	281	75	77	107	259
	TAMBARA	496	648	643	1,786	228	805	1,205	2,238
	Manica total				8,160				7,316
Tete 2	CHIUTA	524	906	1,653	3,083	241	1,126	3,099	4,466
	MOATIZE	275	529	2,699	3,503	126	657	5,061	5,844
	MUTARARA	2,047	2,254	2,087	6,388	942	2,800	3,914	7,656
Tete 1	CAHORA-BASSA	1,965	378	947	3,289	904	469	1,776	3,149
	CHANGARA	1,548	1,302	2,782	5,632	712	1,618	5,216	7,546
	MAGOE	1,719	413	603	2,735	791	513	1,130	2,434
	ZUMBO	345	398	81	824	159	495	151	805
Tete total				25,453				31,899	
TOTAL				108,205				93,978	

General Recommendations

While a small number of people in LG1, 2 and 3 continue to face acute food insecurity, the overall situation has improved compared to last year. Hence recommendations are mainly directed towards recuperation and strengthening livelihoods, in addition to alleviating current food insecurity among the most vulnerable. The comprehensive set of recommendations is included in the full report available from SETSAN.

The general recommendations are:

1. Immediate free food or Food for Work until the next harvest for households facing food insecurity (108,000 persons). Free food distribution is recommended for the most vulnerable (for example, elderly, orphans, and female headed households); for others, Food for Work serves as an incentive for households to participate in productive community activities.
2. In a few surplus districts where currently food insecure populations are found, cash distribution or local level purchases would serve several functions: facilitate household access food available locally; enable food secure households to generate income from crop sales and maintain the livelihood group dynamics through normal market mechanisms.
3. Approximately 94,000 people are at-risk of food insecurity between October 2004 and March 2005. Careful monitoring by GAV and partners is recommended to assess if these populations require assistance, when second season production is included.
4. In collaboration with schools, orphanages and health centers, direct programs to assist orphans and vulnerable children, and households living with HIV/AIDS.
5. Promote the usage of radio to divulge educational programs about HIV/AIDS, and promote less intensive labor crops.
6. Expand regular public works activities during off-season to absorb local labor, with payment made in cash. This will facilitate household income earning.
7. Promote integrated nutrition education programs aimed at improving household diets.
8. Intensify epidemiological and nutrition surveillance through sentinel posts.

Recommendations by Livelihood Groups

The Livelihoods Groups used in this analysis provides a framework for detailed recommendations aimed at reducing vulnerability to food insecurity and other causes. Recommendations oriented toward reducing food insecurity are included below. See the full report for additional recommendation targeted at other sectors.

Livelihood Group 1: Deficit subsistence farmers

- Promote crop diversification, introducing tolerant and short cycle crops.
- Promote the introduction of suitable technology to fully explore production in lowlands, and promote small scale irrigation programs.
- Promote food based approaches to nutrition education as a way to diversify the food sources and enrich consumption.
- Due to the group characteristics, livelihood strengthening through diversification of income sources is strongly recommended, especially those that require less labor, facilitate the access to credit, and encourage the formation of group savings and rotational credit.

Livelihood Group 2: Basic subsistence farmers and Livelihood Group 3: Cereal dependent farmers:

- Promote the combination of more intensive agriculture with crops diversification to overcome the risk of intensive mono cropping. Greatly expand sweet potato cultivation.
- Promote integrated pest management and encourage construction of improved granaries to reduce post harvest losses.
- Intensify extension activities for livestock management including the diversification of animals, pasture and, animal health care.
- Capacitate households to explore investment and employment opportunities.
- Promote association groups particularly for women.
- Support local credit concessions.

Livelihood Group 4: Diversified farmers with informal labor opportunities:

- Support small scale irrigation schemes.
- Improve extension assistance on vegetable production and second season cultivation through seeds and high quality vegetative material supply.
- Promote the diversification of income sources, through fruit sales, animal and processed agricultural products.

Livelihood Group 5 : Diversified farmers with livestock:

- Encourage local seed conservation and improve post harvest conservation.
- Because of high level of animal ownership in this group, the provision of regular veterinary assistance to maintain health animal and assist ance to households in the marketing, consumption and sales of animal derived products is recommended.

Livelihood Group 6: Self-sufficient farmers with agricultural income:

- Improve the interaction between producers and agriculture markets in order to benefit small farmers.
- Introduce suitable technologies for pest control and post-harvest management, and seed production.
- Examine the possibility of formalize credit and saving through expansion of credit institutions into rural areas.
- Develop programs to absorb skilled labor available in the rural areas.

Livelihood Group 7: Diversified framers with formal sector income and remittances:

- Provide nutrition educational programs with purpose of diversifying consumption and balancing the diet.
- Introduce suitable technologies for pest control and techniques to reduce post -harvest losses.
- Promote seed production and marketing.
- Promote production of fruit trees and cash crops with export potential.
- Provide market information, particularly about seasonal price variations.