



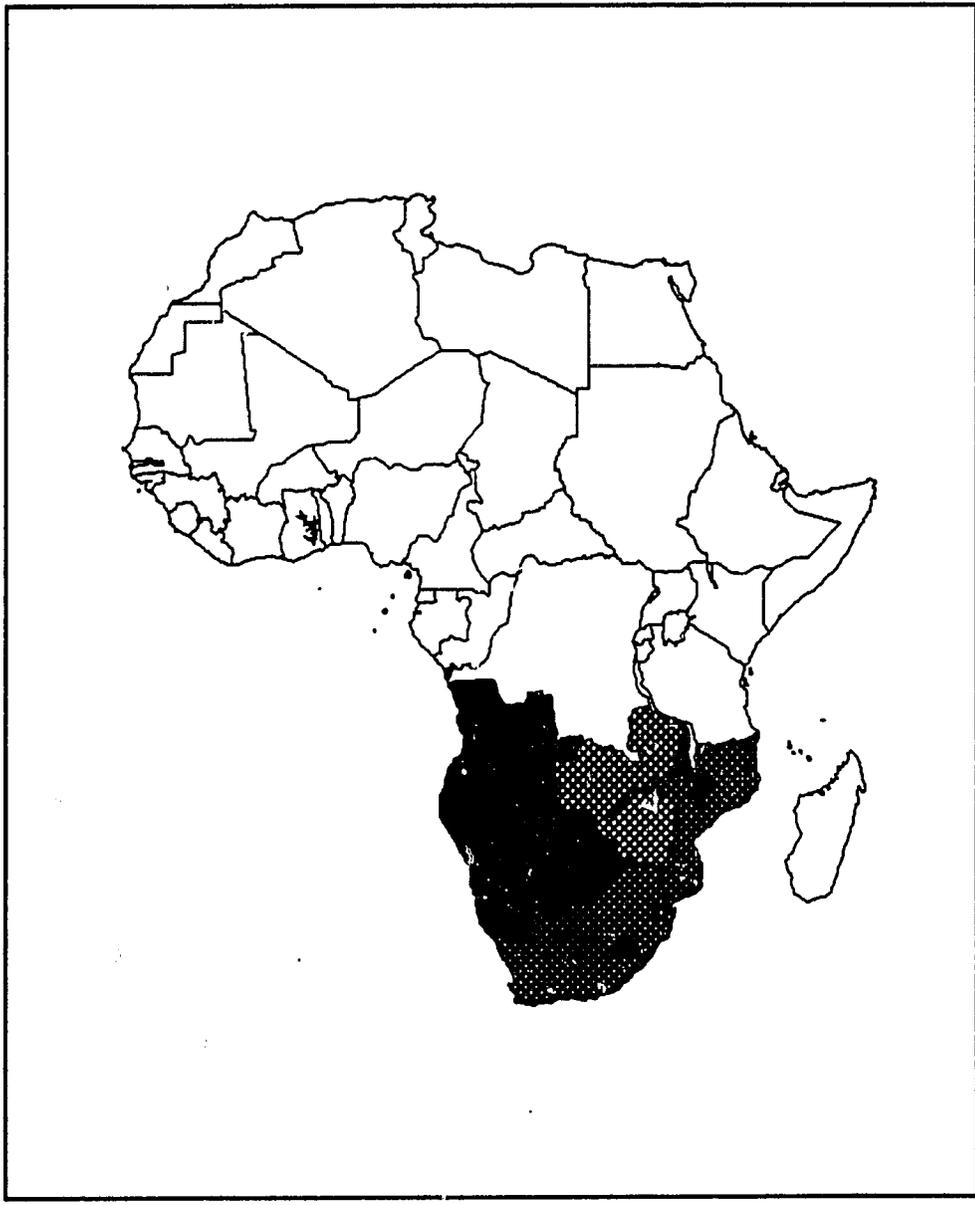
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Office of U. S. Foreign Disaster Assistance
Bureau for Food and Humanitarian Assistance
Agency for International Development

Southern Africa Drought Assessment

March 24 - April 29, 1992

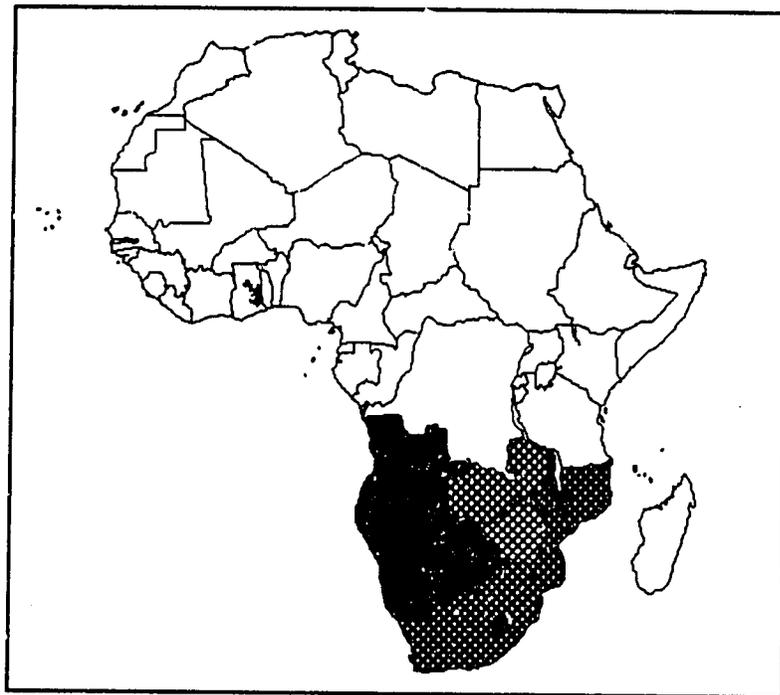




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Southern Africa Drought Assessment

March 24 - April 29, 1992



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Table of Contents

Executive Summary:	i
Introduction:	1
Regional Perspective:	3
Country Reports:	
Angola	44
Botswana	51
Lesotho	60
Malawi	78
Mozambique	90
Namibia	110
South Africa	130
Swaziland	138
Zambia	151
Zimbabwe	165
Annex	
Logistics Report	

OFDA DROUGHT ASSESSMENT TEAM REPORT

EXECUTIVE SUMMARY

REGIONAL FINDINGS

1. Southern Africa is facing the most widespread and serious drought of the century, causing even the traditional corn exporters of Zimbabwe and South Africa to become major corn importers.
2. Over ten million metric tons of corn and additional supplementary foods must be imported through the ports of South Africa, Namibia, Tanzania and Mozambique between now and July, 1993 to meet minimum regional food requirements. The ports of Angola will be used principally for ongoing emergency programs.
3. One third of the region's 100 million people are directly affected. Immediate provision of food and water to the most affected is crucial to avoid loss of life and movements of people.
4. The regional and national early warning systems have worked, giving governments and donors sufficient lead time to plan and implement relief programs and avoid loss of life. Most of the governments of the affected countries have already declared emergencies and begun commercial purchases of food on the world market. Some donors, including the United States, have begun allocating resources to respond to the emergency.
5. Many countries in the region (including Zimbabwe, Malawi, Zambia, and Lesotho) are undertaking economic structural adjustment programs, which are supported with multilateral and bilateral aid resources. The drought will jeopardize their abilities to sustain these programs as resources, that would have been dedicated to reform, and now will be diverted to food imports. The drought will lead to increased consumer food prices and the need for an even larger safety net for the vulnerable groups. The derailment of the structural adjustment programs will also inhibit ability to recover from the drought.

6. Cooperation of all countries in the region, including South Africa, will be vital to manage the logistics involved in docking, off-loading, and transporting such enormous quantities of food. The logistics coordination center in Johannesburg, which includes representatives of South Africa, the Southern Africa Development and Coordination Committee (SADCC) countries, and World Food Program (WFP), is an important step in the right direction. Complementing the logistics coordination center will be the regional transportation information center in Harare, coordinated by WFP and SADCC.
7. Due to the effect of the drought on the incomes of the poorest families in all the countries, there will be a need for targeted supplementary feeding of vulnerable groups (children under five, pregnant and lactating women, the elderly refugees and displaced persons).
8. Food needs are greatest in Mozambique, Zimbabwe, Zambia, and Malawi, where cereal imports of commercial, concessional and emergency food aid will exceed 3.4 million metric tons. Food delivery will be most difficult from a security point of view in Mozambique, where a substantial portion of the affected population is in areas held by RENAMO. The security situation in Mozambique could affect the flow of food to Zimbabwe and Malawi. Logistics will pose the most difficult constraints to the inland countries due to bottlenecks at transit points on the South African border at Beitbridge (Zimbabwe) and Plumtree (Botswana).
9. South Africa, Botswana, Namibia and Swaziland will meet most of their cereal imports through commercial purchases on the world market. In Zambia and Zimbabwe, between 40 to 50 percent of the food needs will be covered by commercial imports; the remainder will have to be met through concessional sales or emergency food aid. Concessional and emergency food imports will also be important for Angola, Mozambique, Malawi, and Lesotho.
10. While the regional food gap can be met and the regional transportation system can technically deliver the quantities of food required into the countries, it is unclear whether there are adequate transport facilities to handle the internal distribution of food to markets and (distribution) supply centers. Internal distribution schemes have not yet been fully worked out and, in some cases, are unwieldy as currently structured.
11. The extent of the drought has shown the dependency of the region on one crop--white hybrid maize and the extent to which countries in the region have moved away from traditional drought resistant sorghum and millet.

12. Acute water shortages in Mozambique and Zimbabwe will require environmentally sound emergency interventions to prevent the spontaneous or forced movement of people.
13. Diminishing water resources throughout the region will lead to poorer sanitary conditions and increased incidence of diarrheal diseases.
14. In urban areas, severe water rationing will affect sanitation systems and result in a general decline in public health.
15. With the exception of Mozambique, it is too early to measure significant health impacts of the drought in most countries of the region. However, large numbers of people will be at serious risk of undernutrition by August if food is not delivered regularly and in sufficient quantities. A decline in nutritional status will lead to an increase in morbidity and mortality.
16. Countries in the region have varying abilities to conduct accurate emergency nutritional assessments. Of the most affected countries, Malawi, through the Cornell University/UNICEF program, is probably best equipped to monitor changes in nutritional status on an emergency basis; Zimbabwe is next best equipped. Zambia has the least capacity to implement nutrition surveillance on an ongoing basis. While the health system in Mozambique is extremely weak, the presence of numerous NGOs in the affected areas suggests that early monitoring of nutritional crises will be possible.
17. The high underlying rate of HIV-positive conditions is cause for concern. There is the likelihood of an acceleration in the spread of AIDS, especially if large-scale population movements take place.
18. In rural areas throughout the region, the lack of water will have devastating effects on livestock herds, particularly in Zimbabwe, Swaziland, Lesotho, Botswana and Namibia. Some of these countries could lose over 50 percent of their livestock holdings. This loss for the small rural farmer will mean a lack of draft animals for next year's planting, shortage of milk and meat products and a loss of income. For the commercial sector and the governments, the loss of livestock will mean loss of foreign exchange earnings through sales to the European Community. Livestock recovery region-wide will take longer than crop recovery due to the longer reproductive cycle of animals.

19. The severity of the drought in Mozambique is already causing increased refugee flows into Zimbabwe, Malawi, Swaziland and South Africa. Unless significant quantities of food move to assist those most in need in all of Mozambique, these movements will continue.
20. Increased refugee feeding needs in the receiving countries could lead to conflicts between refugees and indigenous populations, if sufficient food does not reach the indigenous populations.
21. NGOs, both local and international, play an important role in providing relief to the most affected populations. NGOs will be involved in targeted feeding programs, water and sanitation programs and famine mitigation activities, as well as the provision of health services and medical supplies. In some countries, NGOs may be needed to assist with general food distribution.
22. There is an urgent need for short-term emergency food management training for both NGO staff and their government counterparts.
23. Given the enormous food and non-food needs in the region, donor coordination will be essential. The planned U.N.-led donor conference in Europe in early June is an excellent opportunity for donors to coordinate their responses to the drought.

OFDA DROUGHT ASSESSMENT TEAM REPORT**REGIONAL RECOMMENDATIONS**

1. Donors should move quickly to pledge food and non-food resources to avoid a major humanitarian disaster in Southern Africa.
2. Donors should focus on meeting the cereals gap and providing supplementary food (e.g. oil, beans, fortified milk, CSM) for special feeding of vulnerable groups (under fives, pregnant and lactating women, and the displaced).
3. Regional coordination should be enhanced through donor support of the regional coordination center in Johannesburg and through support of WFP's efforts to enhance information coordination in Harare. Computer bulletin boards may be a cost-effective way of managing this problem.
4. A regional emergency food stock should be established by using excess storage capacity in South Africa. This reserve could have commercial and emergency aid components. The former could be part of an agreement between the affected countries and commercial grain trading groups, while the latter could be managed by donors, either through the WFP or on some other multilateral basis. This stock could be utilized to channel food to affected countries if there are shipping delays or urgent food relief needs.
5. Donors should work with governments to ensure that internal distribution programs are well designed and effectively implemented to prevent increased undernutrition and loss of life. Special attention should be paid to internal transportation problems related to food distribution programs.
6. In countries that are presently trying to reform their cereal markets, the drought could be used to remove grain movement restrictions and facilitate market flows from surplus areas to deficit areas.
7. Pricing of grain sold commercially within countries should reflect the full cost of importation, internal transport and distribution. Otherwise, there is the possibility of large-scale cross border movements of grain due to regional shortages and price differences.

8. Over the next 15 months, the early warning system must be strengthened to include monitoring of market price information and deliveries of food, especially in areas with the greatest need. Price information and grain availability provide the best early warning of severe stress and can be used to improve targeting of commercial and emergency food.
9. Plans should be made now for agricultural recovery next year, including provisions of adequate seed, tillage equipment and agricultural credit.
10. The drought should be used as an opportunity to encourage crop diversification, according to agricultural conditions.
11. Emergency water interventions are needed now in Namibia, Zimbabwe, Malawi, and Mozambique. While hand-dug wells are simple and can be dug using food for work programs, some areas need bore holes because of the depth of the water table. Virtually all water rigs in the region have been reserved for various water interventions over the next year. Spare parts and fuel may be required to maximize use of existing pumps. Expansion of water programs will require additional rigs.
12. In addition to ongoing health programs, donors should support NGO, U.N., and government efforts to provide emergency health services to the affected populations. This includes support for EPI (Expanded Program of Immunization) and provision of oral rehydration salts (ORS,) as well as essential drugs.
13. Donors should support the continuation and improvement of basic nutrition and health surveillance systems in all countries in order to monitor the impact of the drought and to target emergency interventions.
14. The U.N., in each country should be encouraged to initiate regular meetings of donors and should be supported in efforts to coordinate regional transportation information. Computer bulletin boards will enhance the process.
15. Donors should consider whether a U.N. unit should be established in the region with responsibility for coordinating not only information on ship scheduling and food movements, but also for planning and implementing (with host governments, donors, and NGOs), ongoing assessments of the drought and its impacts. Donors should further consider whether such a unit should be headed by a senior U.N. official with the standing of a Special Representative of the Secretary General.

INTRODUCTION

BACKGROUND

Southern Africa is experiencing the worst drought of the century. According to SADCC Early Warning Reports, confirmed by WFP/FAO assessment teams, an estimated 30 million people are affected in all countries, resulting in a regional food import requirement of over 10 million metric tons of maize alone.

The magnitude of the drought threatens to cause widespread suffering due to shortages of food, water, and the deterioration of the population's health. The logistical requirements of moving the imported tonnages of food are daunting and will require additional management and physical support to regional ports and railroad systems. This is the second year of drought for some countries, and some experts believe that the El Nino affect could persist for another year, thereby increasing prospects for drought next year. For many countries, the impact of the drought on ongoing structural adjustment programs could have long lasting effects on the economy. The drought also effects the promising political initiatives for the region, especially the nascent democratic movements and peace processes. Declarations of emergency have been made by most countries in the region. Those that have not declared emergencies are preparing to do so.

The Office of U.S. Foreign Disaster Assistance, part of USAID's Food and Humanitarian Assistance Bureau, is responsible for coordinating the overall U.S. Government response to disasters worldwide. As soon as the seriousness of the disaster became known, OFDA dispatched two assessment teams to the region. The purpose of the assessment was to identify ways in which the U.S. Government and the international community could respond quickly and effectively to requests for assistance from the affected countries.

METHODOLOGY

The assessment teams, coordinated by the OFDA Regional Advisor for Africa, arrived in Harare on March 24, 1992 for preliminary briefings on the regional aspects of the drought. The two teams consisted of experts from OFDA, USAID African Bureau Food for Peace Offices from Nairobi and Abidjan, the U.S. Department of Agriculture, the Centers for Disease Control in Atlanta, and Water and Sanitation for Health, a U.S. NGO. In addition, the Department of State's Regional Refugee Programs Officer joined the team in Zimbabwe and participated in the Malawi country assessment.

The Coastal Team, led by OFDA Operations Officer Chris Keppler assessed Mozambique, Swaziland, South Africa, Lesotho, Namibia, and Angola between March 26 and April 18. The Inland Team, led by USDA Economist Brian D'Silva, assessed Zimbabwe, Zambia, Malawi, and Botswana between March 26 and April 15. Both teams returned to Harare after their field assessments to prepare the draft final report. 1/

In each country, the teams held extensive discussions with USAID Missions and Embassies; senior government officials; parastatals, including maize boards; representatives of U.N. agencies, the World Bank, NGOs; and donor governments, as well as gathered substantial secondary data. The teams also made field trips in the affected countries to see first-hand the crop, water, and health situations and to talk to government officials, NGOs, farmers, traders, teachers and health workers. The OFDA teams also met and exchanged information with the FAO/WFP Crop Assessment Missions, which were in the region at the same time, and with the World Bank Drought Recovery Mission for Zimbabwe. The teams are grateful for the cooperation of the USAID Missions, host government officials, non-governmental organizations (NGOs) and others who facilitated their visits, met with them continually during their country visits, and accompanied them on field trips.

ORGANIZATION OF THE REPORT

The report is divided into 2 major sections. The first section focuses on regional issues, initially discussing the primary issues of regional coordination and economic impacts of the drought, and concluding with regional sectoral analysis. The second section provides detailed country reports of the drought and its impact by country. In both the regional review and country reports, sector studies include Food and Agriculture, Health and Nutrition, Water and Sanitation, Livestock, NGO's and Donor Coordination. In each country, the teams considered famine mitigation activities, as well as famine relief, as part of the donor response, and in countries neighboring Mozambique, considered the impact of the drought on refugees. Each sectoral section makes recommendations for donor interventions.

1/ Since the teams' assessment, food needs have been refined and therefore the numbers in this report may vary somewhat with current available figures. The teams believe, however, that the magnitude of this drought is so large that the issues outlined herein apply even if food requirements change.

THE REGIONAL PERSPECTIVE

The drought in Southern Africa must be viewed in a regional perspective, given its magnitude and the interdependence of countries in the region. In this section, the teams provide an overview of the drought and examine some of the cross-cutting issues that affect most, if not all, of the countries in the region.

Donors have a unique opportunity to plan, support, and implement relief programs in the region to avoid loss of life.

In Southern Africa the early warning system has worked and sufficient information is now available that can be used to develop an effective response before the critical period of hunger begins in August/September;

Host country governments have taken the initiative in declaring emergencies in response to the early warning and have begun taking action; and,

A regional transportation infrastructure base exists which, if effectively utilized, will ensure sufficient supplies of relief food to needy populations.

Of all the regional issues, the two most significant in terms of the short- and longer-term effects of the drought are: (1) regional coordination and cooperation in the transportation of food and relief supplies, and (2) the impact of the drought on the economies and ongoing economic structural adjustment programs in the region. Other issues that will be discussed in the regional context include: food and agriculture, logistics and transportation, water, health, livestock, refugees, the role of NGOs, and donor coordination.

I. REGIONAL COORDINATION.

A. BACKGROUND.

The logistics of moving over 10 million metric tons (MT) of grain (not to mention supplementary foods, non-food assistance and regular commercial goods) through ports and onto the main rail lines and roads of Southern Africa to all countries in the region, will require the utmost coordination and cooperation

among all countries at both the ministerial and technical levels.

The landlocked countries of Zimbabwe, Zambia, Malawi and Botswana are especially at risk as they depend on rail and road transit through the coastal countries of South Africa, Mozambique, Tanzania and Namibia. The demands on the transportation system are such that experts calculate that most national railroads will have to operate virtually without breakdown 24 hours per day, 7 days per week. Without cooperation in the scheduling of ships, loading of railcars, and the transiting of cargo, there will be transport bottlenecks, slowing food deliveries to needy populations and fostering malnutrition and even starvation.

While there have already been some discussions at the technical and ministerial levels between countries of the region, and some communications infrastructure put in place, there is no time for delay as large commercial shipments of food are already beginning to arrive at the ports. Urgent and decisive actions must be taken now to put effective coordinating mechanisms in place.

B. FINDINGS.

1. Existing Coordination Structures.

There are already several structures in place to handle coordination within the region. The frontline states and Malawi are grouped together through the Southern Africa Development Coordination Committee (SADCC), which provides a forum for regional development and cooperation in a variety of sectors, including transportation and food security. This same structure was used to call senior government officials together in mid-April to discuss the logistics of food movements over the next 15 months. Issues that this group should address include the special handling of relief cargo at border points to reduce the time needed to complete paperwork; the lifting of restrictions on the numbers of trucks crossing borders, such as the Mozambique ban on Zimbabwean trucks moving food from Beira; and, the pricing of imported maize in order to control cross-border flows of food.

The South African Customs Union (SACU), grouping together South Africa, Botswana, Lesotho, Swaziland and Namibia, is a second regional structure that is important in the drought response as South Africa incorporates their needs in its own commercial purchases. Although they may need modest amounts of

grant food aid, these countries are virtually assured of obtaining the quantities of commercial food they need.

2. The Role of South Africa.

Despite many years of investment in the transportation infrastructure (ports and railroads) of the SADCC countries, the magnitude of the drought has placed South Africa, with its large port and rail capacity, in the position of primary port and transit point for most of the grain destined for the SADCC countries over the next 12 months. Consequently, the SADCC nations must look beyond regional politics and, in the interests of the very survival of their own populations, work closely with South Africa on all aspects of the emergency program.

TRANSNET, representing the port and rail network of South Africa, has already indicated its readiness and willingness to assist in the logistics of handling cargoes over the next year. PORTNET (South African Port Network) has made a provisional allocation of ports and tonnages to the inland countries (see Transportation Section), while SPOCRNET (the South African Railroad Network) has set up a 24-hour command center in Johannesburg to handle the scheduling and moving of cargo through South Africa. SADCC countries have been invited to assign a representative to the operations center, as have the World Food Program (WFP), the donors, and private transporters. TRANSNET officials have been energetically touring the region to discuss the import needs and timing of shipments of each country in the region.

On paper there are or will be adequate railcars, locomotives, and trucks in the region to move the large quantities of grain to the inland countries from all ports. Coordination is essential to ensure at the very minimum: efficient scheduling of trains, immediate notification of breakdowns, fast turn-around time of rail cars and prioritizing of cargoes through the choke points. This must happen at a time of great domestic pressure as some countries will be living literally from hand to mouth. In Zimbabwe alone, it is estimated that 5,000 MT of maize will need to be delivered into the country and distributed on a daily basis. In Zambia, the figure is at least 2,000 MT. There will be little margin for error.

3. Emergency Management and Information Flow.

While WFP will be providing a coordinating role for

information flow in the region, there is a need in each country for an Emergency Management Unit to play the role of a clearing house for all information on imports, internal distribution, transportation and trouble shooting. Such a unit should be located in the secretariat of the coordinating body/ministry that is responsible for the overall drought relief effort in each country. The Minister of Agriculture's Office in Zambia could fill such a role, or the Secretariat attached to the Vice-President's Office in Zimbabwe. This would be a "one-stop shop" for information, policy making and policy implementation. At the present time, there is considerable diffusion of authority and information flow in relationship to managing the emergency among countries in the region.

4. Regional Emergency Food Stock.

Countries in the region will be using a combination of both commercial and concessional imports to meet their food needs. As these imports are scheduled to arrive at different times over the next year, there could be times when there is an oversupply, or even a large backup of corn moving into one country. At the same time, another country in the region could be out of corn due to, for example, slippage in ship arrivals. A regional solution should be looked for to ensure that no country lacks corn if there are ample stocks available within the system.

5. Host Country Response.

While most of the ten countries have already declared drought emergencies, the extent to which governments have organized themselves to deal with the emergency varies. Directly related to the organization, or lack thereof, at senior government levels, is the way governments relate to donors in sharing information and requesting assistance.

The Government of Zimbabwe has named an overall drought "czar" in the person of the Vice-President and is establishing committees to handle various aspects of the drought. Even before going to donors Zimbabwe purchased hundreds of thousands of tons of food on the world market using its own resources. Donors have not been involved with the Government of Zimbabwe in developing drought response plans but now have a focal point to which to direct their concerns and questions. This contrasts with Swaziland where the U.N./WFP has taken the lead from the very beginning in helping the government come up with food aid

estimates and in formulating a response. In Malawi, an overall coordinator has not been named and this has put Malawi substantially behind most other countries in requesting food and planning programs. In Botswana, the national famine code, which lays out specifically what each branch of government will do in a drought emergency, is being reactivated and the government is moving forward to respond based on experience and lessons learned.

What should be recognized, however, is that no matter how organized countries are at the national level, the regional planning and coordination of relief shipments will determine whether the countries will be able to feed their people.

C. CONCLUSIONS.

The effectiveness of the regional coordination of food flows will basically decide whether or not the citizens of Southern Africa receive drought relief this year. Information must be accurate and constant to ensure that decision-makers are working with the most up-to-date shipping schedules and rail arrivals, and countries must be prepared to be sympathetic to their neighbors' plight, as well as their own, in prioritizing shipments on shared railroad systems. There is more than ample room for the system to break down, but there is also the possibility to achieve a great success.

D. RECOMMENDATIONS:

- Donors should use the opportunity afforded by aid contributions to continue to promote regional cooperation between SADCC and South Africa in this emergency drought response.
- Donors should support the presence of WFP staff at the SPOORNET Operations Center in Johannesburg to assist in coordinating donor shipments.
- Donors should support the full-time presence of staff from the national railroads at the SPOORNET Operations Center in Johannesburg to coordinate railcar loading out of South African ports.
- Donors should work with governments to support the creation of an Emergency Management Unit in each country to act as a

clearing house for information and action. These units should be vested with authority to make decisions to facilitate the movement and transit of food within and between countries.

- Donors should also support the WFP Information Center in Harare to ensure that regional information from all corridors is coordinated and disseminated. In this regard, a simple computer bulletin board linking all countries would greatly facilitate up-to-date sharing of information.
- Donors should urge the SADCC countries to ease customs regulations, transit fees, and other restrictions that make it difficult for food and other relief supplies to flow throughout the region.
- Governments and donors should consider the creation of an emergency revolving food fund in South Africa, where there is excess storage capacity. The reserve could be drawn upon by a country if its own corn shipments are delayed. The reserve could have a commercial and an emergency component. The emergency component could be under the auspices of the WFP, while the commercial one could operate similarly to the commercial import arrangements already being set up by Zambia to meet its food import needs.

II. IMPACT OF THE DROUGHT ON ECONOMIES AND ONGOING ECONOMIC STRUCTURAL ADJUSTMENT PROGRAMS IN THE REGION.

A. BACKGROUND.

Zimbabwe, Zambia, and Malawi are in the midst of vigorous economic structural adjustment programs (ESAP) and are also among the most severely drought-affected countries. While the pace of reform is different in each country, the scope and magnitude are similar. Zambia has also recently held multiparty elections, which placed a new democratically elected government in power. Zimbabwe and Zambia will each have donor inflows of over \$1 billion in resources each this year under their structural adjustment programs.

B. FINDINGS.

1. Impact of the Drought on Economies.

There is great concern among donors and governments that the drought will derail the economic reform programs, especially in Zimbabwe. In all countries, foreign exchange that is currently allocated to support the reform program will be diverted to purchase food for drought relief. Notably, Zimbabwe has purchased over 650,000 MT of corn on the world market and may buy even more. If so, it will place the country in an extremely serious and vulnerable economic situation and probably force the government of Zimbabwe to consider abandoning structural adjustment. To date Zambia has purchased 100,000 MT. To exacerbate the situation, countries that normally export agricultural products -- Zimbabwe, Zambia, South Africa, Botswana, and Swaziland -- will no longer have significant agricultural export earnings to help finance consumer imports.

There is concern that some governments may seize the drought as an excuse to go off the ESAP as decision-makers do not differentiate the drought and adjustment program impacts on their populations. This could cause the potential benefits of the adjustment program to be negated and a loss in donor resources already invested in these programs.

More importantly, abandonment of the ESAP will result in a loss of donor confidence in countries' commitment to economic reform and a consequent loss of future donor and World Bank/IMF resources which will be desperately needed for drought recovery. The result will be a downward spiral which would set economic growth back for years to come and place many countries in a position of requiring emergency assistance year after year.

2. Food Pricing.

With the existing system of regulated consumer and producer prices in these countries, it is likely that some consumer subsidies will be increased if higher import costs are not passed on to the consumer. Up until now, decisions on consumer pricing have not been made, but it appears that the extent to which full costs are passed on to consumers will vary by country. The region's leaders face the politically difficult decision to pass on higher costs to consumers who may be unable to pay. At present it appears that Botswana and Zambia will pass on a greater share of the import costs to consumers than Zimbabwe and Malawi.

3. Planning for Recovery.

Planning must begin now for agricultural recovery next season to ensure that, if the rains come, there are sufficient seeds and tools available for the region to regain former levels of production. Otherwise, if additional commercial food imports are required, there is a serious risk that countries such as Zimbabwe, Zambia and Malawi will feel compelled to abandon their structural adjustment programs. The World Bank, in its recent loan to Zimbabwe, has noted that investment in tractors and other agricultural inputs is critical to the recovery process. USAID/Harare, using regional funds, has moved quickly to fund the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) to produce sorghum and millet seeds on the lowlands of the Zambezi river. These seeds will be available for use in the region next season.

C. CONCLUSIONS.

The drought could not have come at a worse time for countries in the region undertaking structural adjustment programs. Not only will there be a decline in the economies of the region, but also a loss of foreign exchange, increased import bills, and increases in consumer prices due to higher prices of imported food. Efforts must be made to assist countries that are involved in the adjustment programs by increasing the food safety net as the impact of drought worsens, by improving targeting of food aid and by providing resources to generate an agricultural and economic recovery after the drought.

D. RECOMMENDATIONS:

- To prevent derailment of the reform programs and consequent medium-term setbacks in economic development, donors should continue to work with Zimbabwe, Zambia, and Malawi on structural adjustment issues, pointing out the differences between the effects resulting purely from structural adjustment and those hardships directly resulting from the drought.
- Donors should ease the burden of drought relief food purchases on the countries undergoing ESAP by providing maize and other food on both concessional and grant terms.
- Donors should assist countries in the region, particularly those involved in ESAP programs, to prepare for post-drought

recovery by supporting famine mitigation activities, as well as the provision of seeds, tools, and oxen or communally shared tractors.

III. FOOD AND AGRICULTURE.

A. BACKGROUND.

The agricultural year in most of Southern Africa got off to a good start with most countries receiving normal or above average rainfall during the critical period of November and December, 1991. A sudden and persistent dry spell in January 1992, which continued into February, caused the maize to wilt and die, just as it was at the critical tasseling stage. The FAO estimates that many SADCC countries are experiencing crop losses between 50 - 100 percent, affecting an estimated 30 million persons. FAO further estimates that of an aggregate average 12 million MT production annually, the region will produce only 6 million MT this year. South Africa, traditionally an exporting country to both the region and the world, has been equally hard hit and estimates a harvest of only 3.6 million MT against a normal production of 10 million MT. The consequent commercial corn and food aid import requirements for the SADCC region as a whole for the next 12 months are estimated to be between 10 and 13 million MT of cereals.

B. FINDINGS.

1. Priority Countries.

Of the countries assessed, Mozambique is the most seriously affected, with civil conflict and drought combining to put an estimated 3 million persons at risk of hunger and disease. Large displacement of populations due to lack of food and water is already occurring in Mozambique. The impact of the drought in Mozambique is being felt by neighboring Zimbabwe and Malawi, which are reporting alarming increases in refugee flows from Mozambique in recent weeks. Food shortages are already in evidence in Zimbabwe and Malawi, with long lines of customers at food depots and stores. In Zimbabwe, over 3.8 million people are already on the free food distribution rolls (and the number is expected to go much higher), but the internal distribution system cannot meet the needs. Zimbabwe and Zambia have moved aggressively into the world market, securing 550,000 MT and

100,000 MT of corn respectively in recent weeks (NOTE: Zimbabwe had already purchased 100,000 MT of maize from South Africa bringing its total to 650,000 MT). Due to the impact of the drought on the structural adjustment programs, it is expected that neither Zimbabwe nor Zambia will be in a position to purchase much more than they already have, except on concessional aid terms without seriously jeopardizing the structural adjustment programs. The smaller countries of Botswana, Swaziland, and Lesotho will be food-short in the near future, but, as their imports are covered under South Africa's import estimates, they can be expected to have less difficulty than the others in obtaining what they require. The economic impact on the government budgets of Botswana, Lesotho, and Swaziland will be significant, however, as South Africa will pass on the costs of imported corn to those countries, costs that will be substantially higher than what they are used to paying. Namibia, a drought-prone country even in normal times, has good access to the nearby port of Walvis Bay and should be able to import their requirements directly through Walvis Bay, thereby minimizing transport costs. Of all the countries of the region, Angola is the least affected by the drought. Only two provinces, Cunene and Kuando Kubango, will require assistance. Although food requirements are comparatively small in Kuando Kubango, the population there is particularly vulnerable since the roads are so bad that trucks can only carry 2 to 3 MT at a time.

2. Affected Populations.

The most affected groups in the region are refugees, the internally displaced populations and the landless rural dwellers who have no resources to support them. Even in normal times these groups are disadvantaged and require assistance through various government programs. The drought has added to this group the small farmers living on communal lands where soil fertility is comparatively poor and where erosion and deforestation are more advanced than on the larger commercial farms. This group, which in normal times would grow sufficient food at least for several months of the year, now must purchase food much earlier than usual, and is being forced to generate income by selling off capital assets such as livestock. Workers on commercial farms generally will be provided for by their employers and are somewhat cushioned from the effects of the drought. For example, in Zimbabwe, it is estimated that most commercial farms have stockpiled sufficient maize to support their employees for almost a year. The poor urban population is also severely at risk as a result of the drought as higher prices of commercially imported

grain may be passed along to the market place, making it more difficult for them to purchase basic foods.

The most vulnerable groups in all these categories are the children under five, pregnant and lactating women, refugees, and the internally displaced. These groups will require not only basic cereals distributions but also special supplementary feeding programs during the year.

3. Coping Strategies.

The drought affecting Southern Africa is different from the droughts of the Sahel and the Horn of Africa. While the Horn is heavily dependent on straight relief distributions, most countries in the Southern Africa region will meet a significant portion of their import needs through commercial purchases on the world market and will market these imports through the commercial distribution system. It is currently estimated that of a total cereal import requirement of 6,050,000 million MT, the SADCC countries will require only 1,582,000 MT of grant food aid. Of the remaining 4,468,000 million MT, 2,393,000 MT will be purchased on concessional terms and the remainder as straight commercial purchases. Commercial purchases could be even higher if countries feel politically they must fill the pipeline quickly, and if they feel that donors are not moving quickly enough to assist with concessional sales.

In the Horn of Africa, years of drought have increased the resilience of its populations to deal with food and water shortages and have taught villagers to exploit and eat special wild plants in times of hardship. By contrast, severe drought in Southern Africa (with the exception of Botswana and Namibia) is a relatively new phenomenon, and populations do not have coping strategies to buffer the impact of food shortages. In some areas, consumption of alternative sources of starch, (cassava and potatoes), has gone up. In other areas, the team noted that villagers were eating wild plants. But team members also saw hundreds of villagers, not having an alternative food source, sitting at village centers waiting for corn to be delivered by the government. In Malawi, there has been a noticeable increase in off-farm activities such as handicrafts, as farmers seek to replace lost farm income. Farmers are also trying desperately to sell off livestock before the animals die on the hoof, but the only result is the plummeting of livestock prices, which only worsens the farmers' economic situation.

Despite what the team perceived as a comparative lack of coping strategies in the region, it is anticipated that the extended family network, which links rural and urban dwellers, will play an important role in helping some of the most affected groups. For example, remittances from urban workers to farm families may be significant in helping communal farmers purchase the higher-priced imported maize. Conversely, city dwellers with families working on commercial farms may move to those farms where there might be a more secure supply of maize.

4. Estimated Tonnages Required by Country.

There is general agreement on the food needs numbers generated between countries, but there will always be variations between assessments related to the methodology of data collection as well as factors considered in making estimates, such as a) the duration for which food imports are required (e.g. 12, 14 or 15 months); b) the per capita consumption levels of maize used; c) the extent to which 'green maize' availability early next season is factored into the production estimates; d) estimates required for cross-border 'unofficial' trade; e) targeting of the needy populations for supplementary feeding and requirements for emergency food aid, and (f) changing food needs numbers over time as surveys and other assessments provide more accurate information. A final consideration to reflect upon is the reduction in demand that will take place as a result of increased consumer prices and decreased consumer incomes. The following table presents the WFP/FAO estimates at the time of the OFDA assessment.

TABLE 1. Country Food Gaps and Cereal Import Requirements.

Cereal Imports (in metric tons):

Country	Total Requirements^{1/}	of which Food Aid^{2/}	of which Emergency^{3/}
Angola ^{4/}	285,000	125,000	116,000
Botswana	240,000	15,000	3,300
Lesotho	297,000	75,000	11,200
Malawi	876,000	740,000	400,000
Mozambique ^{5/}	1,218,000	1,140,000	414,000
Namibia	125,000	60,000	16,500
Swaziland	129,000	60,000	41,000
Tanzania	500,000	280,000	15,000
Zambia	970,000	820,000	94,000
Zimbabwe	1,410,000	660,000	471,000
TOTAL	6,050,000	3,975,000	1,582,000

(Source: WFP/FAO Report, April, 1992)

1/ Cereal import requirements include commercial, concessional and food aid.

2/ Food aid includes concessional and emergency requirements.

3/ Emergency food aid requirements are those quantities needed for free distribution through food for work, general distribution programs, and targeted feeding. The difference between Cereal Import Requirements and Food Aid is commercial imports.

4/ Angola Emergency Needs include needs of displaced persons, demobilized soldiers, and returnees. Drought requirements for the two affected provinces are less than 15,000 MT for a six month period.

5/ Mozambique needs includes displaced persons due to civil strife.

5. Market Intervention versus Free Food Distributions.

It is important to keep in mind the possible negative effects on markets that can result from large tonnages of relief food being distributed. Large distributions of relief food can have a negative impact on internal markets by driving down free market prices, which, while relieving the impact of otherwise higher prices to the consumer, could be a disincentive

for farmers to plant the next season.

In all countries, the number of food distribution plans varied as did the share of the population that was to be receiving food through food for work/drought relief/free distribution.

Currently planned distribution plans in the region range from a maximum of seven in Zimbabwe to a minimum of three in Zambia, Swaziland, and most other countries in the region. Consequently, the number of beneficiaries and the amount of food required for these programs also varies. In Zimbabwe it is projected that by the end of 1992, approximately 4.5 million people (or 45 percent of the population) will be on the drought relief/food for work program implemented by the Ministry of Labor and Social Welfare. There will be difficulty generating the 600,000 new food for work jobs that would be required and it is probable that a majority of these people will actually be receiving free distribution of food. This is significant in that the Government of Zimbabwe will be forced to allocate some of their commercially purchased food for these purposes. Most other countries are planning for food distributions to assist about 25 percent of their population.

Presently Zimbabwe and several other countries in the region are planning full feeding levels of 500 grams per person per day for their general ration distribution programs. Except in the case of refugees, the internally displaced, and other highly impacted people that might be identified as needing full feeding rations, the team endorses standardization of the ration size at 300 grams per person per day for general ration distributions. This will ensure that markets are not disrupted and that excessive amounts of relief food do not go onto the market for sale.

The team believes that the impact of the structural adjustment programs, combined with the drought, will result in food aid requirements increasing as populations living on the margins will not be able to purchase food commercially. While concerned about the disincentive effects of large distributions of food as noted above, the OFDA teams believe that provision of an adequate ration of basic cereals to all needy people by a combination of market and non-market interventions should be the priority of the drought relief program. The general ration safety net needs to be flexible to absorb larger numbers of destitute people as the economic impact of the drought worsens.

Besides general ration distributions, food for work programs are popular with governments in the region as a way of providing food free of charge and many intend to expand existing programs to accommodate additional workers. The teams are mindful, however, that food for work programs require significant management and design resources and that unless they are well managed can be an inefficient way of providing food to needy populations. Food for work programs also do not address the market support question. As an alternative, cash for work might be considered a more appropriate relief response. Botswana has used such programs in the past and could be used as a model for other countries in the region.

Finally, it is clear that the nutritional situation in many rural areas of the region will decline significantly by August/September and that there will be a need for supplies of supplementary foods for vulnerable group feeding, in addition to the general ration. WFP estimates that over 200,000 MT of supplemental foods will be needed for the region.

6. Cross Border Food Flows.

Cross-border trade in grain is a normal phenomenon in a region where domestic grain pricing policies vary from country to country and where farmers can profit more by taking advantage of the price differentials for maize in a neighboring country. In the case of the relief program, however, cross-border flows could result in less food reaching the targeted populations if commercialized food or relief food is diverted to neighboring countries to capture higher prices. The price differentials of maize at a time when farmers are without cash resources could also lead to population movements across borders. For countries such as Zambia, which includes cross-border flows of maize to Zaire's Shaba province in its food aid estimates, this could be disastrous. Likewise, price differentials between Mozambique and Swaziland already attract quantities of Mozambican relief grain into Swaziland's markets.

7. Targeting and Monitoring Issues.

Monitoring of drought indicators will be critical to the process of targeting food to the most needy. All countries in the region have the ability, with some additional technical assistance and/or training, to improve data collection systems to monitor key indicators, such as basic market prices, which provide a quick indication of problem areas. Prices of

livestock, stock feed, and alternative "famine" foods such as cassava and potatoes are especially good indicators of stress.

Even though problem areas may be identified, most governments and NGOs in the region have little or no experience in planning or organizing the necessary relief programs, and even less experience in accounting for and monitoring food distributions.

8. Diversification and Agricultural Recovery.

The extent of the drought has shown the dependency of the region on white hybrid maize and the extent to which countries in the region have moved away from traditional drought resistant sorghum and millet. This has occurred through an historical emphasis of the agricultural research infrastructure and agricultural pricing and marketing policies on white hybrid maize.

C. CONCLUSIONS:

The drought facing the Southern Africa region is extensive, serious and could have long-term social and economic effects on the region. The OFDA team believes that the situation in Southern Africa will become critical throughout the region by August/September when any existing on-farm stocks in the region (with the exception of commercial farms) will probably be exhausted, and when the regional transportation system will be challenged to handle exceptional loads of food aid and commercial food arrivals. In some countries, such as Zimbabwe, where donor food may not arrive until late July, the critical period could begin as early as June/July when current expected imports by the government will have been consumed. The drought offers an opportunity to promote new agricultural strategies, such as re-introduction of sorghum and millet, and support of pilot famine mitigation projects in the area of livestock preservation and water conservation and management.

D. RECOMMENDATIONS:

- Donors should move quickly to pledge food either on concessional or commercial terms, through bilateral or multilateral programs, designed to assist the most vulnerable groups.
- The widespread nature of the drought means that donors

should give priority to ensuring that cereal requirements are met in the region and, due to the added impact on vulnerable groups, should also urgently contribute supplementary foods (pulses, oil) for supplementary feeding programs.

- Donors should encourage governments to minimize the number of food distribution programs and, to the extent possible, use existing mechanisms and the market to facilitate distribution. The drought presents opportunities for advancing marketing reforms: for example, pushing for the decontrol of maize movement in the country.
- SADCC countries should be urged to alter their pricing policies with a view to limiting cross border leakage of relief food.
- Donors should encourage activities such as food for work, but should be cautious about governments overextending their commitments to these programs where management expertise is weak or unavailable to ensure good accounting and program implementation. In such cases, rather than expand food for work, free distributions may actually be more effective.
- Donors should encourage continuous monitoring of market prices of key commodities (corn, corn meal, potatoes, cassava, livestock, stock feed) to monitor drought stress and assist in targeting.
- Donors should be prepared to assist governments and NGOs with technical assistance on targeting, monitoring and accountability systems for relief commodities.
- Bilateral donors should also consider undertaking vigorous steps to assist with accurate accounting and monitoring of their commodities, such as hiring expert accounting firms within the region.
- The drought provides an opportunity to encourage crop diversification, according to agroecological conditions. For this to succeed, the proper combination of input availability, institutional infrastructure and pricing policies should be implemented.

IV. LOGISTICS, TRANSPORTATION AND STORAGE.

A. BACKGROUND.

The logistics of moving basic grains into the Southern Africa region over the next 12-15 months is both a challenge and potential nightmare as nearly every national railroad system will be tested to the limits of its capacity, managerial ability, and maintenance performance.

While the scope of work of the OFDA team did not include an in-depth analysis of food logistics, the importance of logistics in the regional context of the drought makes it imperative that the issue be at least summarized with general recommendations. Several completed and ongoing studies by USAID and WFP examine in depth the many organizational and technical issues involved in a successful transportation operation over the next year.

B. FINDINGS.

1. Ports.

Nine major ports in the region (5 of which are in South Africa) will be used to offload the estimated 10 million MT of commercial and relief corn for the drought in the coming year (let alone the supplementary foods, and non-drought related imports). Rated capacities for all ports are sufficient to handle the additional imports into the region, although actual efficiency rates are less than required in most of the non-South Africa ports (see attached REDSO/ESA/RFFPO report). TRANSNET, which incorporates PORTNET and SPOORNET, believes that with minor upgrades of equipment at certain facilities, the five major ports of South Africa can handle the proposed tonnages. Some initial work has already been done by SPOORNET and PORTNET to allocate tonnages for South Africa cross-border deliveries by port and country as follows:

**TABLE 2: SOUTH AFRICAN PORTS - SOUTH AFRICA AND CROSS BORDER
 TONNAGE ALLOCATIONS BY PORT**

PORT	FINAL DESTINATION	ALLOCATED TONNAGE
CAPE TOWN	R.S.A.	475,000
	ZAMBIA	700,000
PORT ELIZABETH	ZIMBABWE	1,200,000
EAST LONDON	R.S.A.	330,000
	ZIMBABWE	700,000
	BOTSWANA	80,000 1/
DURBAN	R.S.A.	3,600,000
	MALAWI	800,000
WALVIS BAY	NAMIBIA	146,000
	ZAMBIA	2/
	ANGOLA	3/

 (Source: SPOORNET)

- 1/ Wheat- Botswana's corn requirements are in R.S.A.
- 2/ USAID/Zambia estimates 150,000 MT from Walvis Bay.
- 3/ SPOORNET has not included the approximately 9 - 11,000 MT of commodities for Kuando Kubango, Angola that would also arrive in Walvis Bay.

According to the SPOORNET allocations, South Africa's ports can handle approximately 3.6 million MT, or nearly the total requirements of corn for Zambia, Zimbabwe, Malawi, and Namibia over the next 12 months, in addition to their own corn imports which include Botswana, Lesotho, and Swaziland. However, the ports of Beira, Maputo, and Nacala in Mozambique, and Dar es Salaam in Tanzania will be used heavily and may absorb at least half of the total inland country requirements, leaving excess capacity in South Africa for its own imports or diversions. To meet the targeted import levels in Mozambique and Dar es Salaam, upgrades of port facilities will be required (e.g. bagging machines, vacuators) and donors must be convinced that the ports in Mozambique will improve their security. Theft from Mozambican ports has been so high in the recent past that donors have refused to use the port of Maputo.

To avoid port congestion, it will be necessary that ship arrivals are carefully coordinated and bills of lading written for multiple ports in order that ships can be diverted, if necessary, to an alternative, less congested port. The team notes that diversions will also impact on the cost of internal

transportation, particularly if the diversion is from Dar es Salaam, Tanzania or a Mozambican port to a more distant and costly South African port.

2. Railroads.

On paper the railroad network of Southern Africa can handle the food import tonnages required this year. However, past performance of some railroads suggests that one should not be overly optimistic about actual performance, especially under emergency circumstances when allowance for breakdowns is minimal. South Africa, with an underutilized capacity due to the fall in maize exports, can be expected to absorb the increase from the South African ports without difficulty. SPOORNET is already preparing for the increased tonnages of grain by taking old railcars out of mothballs and performing other upgrades in equipment where necessary.

Once out of South Africa, rail bottlenecks are likely to occur at the main transit points of Beitbridge (Zimbabwe) and Plumtree (Botswana), unless there are concerted efforts by national railroads to improve efficiency. Some of the problems confronting the national railroads include: antiquated switching systems, sidings which will not accommodate extra long trains, difficult grades which cause derailments, lack of locomotives and railcars, poor and sometimes incompatible communications systems, long turn-around time for railcars at points of destination, and poor management. Experts working on the problem believe that with effective, targeted interventions in the area of management and physical upgrade, the regional railroad network will be able to handle the tonnages anticipated this year.

At the same time, "corridor" groups comprised of users and operators are working to plan and coordinate rail movements along the major railines of the region. Corridor management has been proposed as follows: the Northern Corridor from Dar es Salaam to be coordinated by the Deputy General Manager of Tazara Railroad; the Eastern Corridor Group consisting of the Mozambique ports, including Beira, Maputo, and Nacala to be coordinated by the Beira Corridor Group (BCG), the Mozambican Railroad (CFM), and the Zimbabwean Railroad (NRZ); the Southern Corridor from South African ports to be coordinated by SPOORNET and PORTNET in Johannesburg; and the Western Corridor Group to be coordinated by representatives of Namibia and Zambia. Unfortunately, SADCC has recently decided that the Northern and Eastern Corridors will be managed by the respective port authorities, which calls into

question whether the new efficiency levels can be reached on the corridors.

Security along the Beira and Tete corridors will be essential to ensuring safe transit of cargoes through Mozambique for the inland countries. Although security seems to be good at the moment, past experience has shown that unless food distributions along the corridors in Mozambique are adequate, even with the presence of Zimbabwean troops, convoys and railcars are subjected to attacks. In this regard, negotiation of corridors of tranquility will be of fundamental importance to the success of cross-border flows through Mozambique.

The team cautions that despite all efforts to coordinate ship arrivals, offloading, and prioritizing of cargoes onto rails, there is a strong possibility that there will be transportation problems beginning in the summer and continuing into the fall. Delays could result from port congestion due to slippage in ship arrivals, slowness of unloading at end destinations, and consequent slow turn-around time of railcars. Major breakdowns and accidents are also unpredictable disrupting factors. It is optimistic to think that the railroads will be able to sustain peak performance for the duration of the drought relief program (12-15 months).

3. Roads.

Road transport will be needed in the Southern Africa relief program to (a) relieve bottlenecks by offloading rail cargo onto trucks; (b) move food to areas which do not have to be served by rail; (c) supplement what is moving by rail to ensure that food arrives on schedule; and (d) to distribute food internally. There are numerous private trucking companies in the region which can be used for both long haul and internal distribution of relief commodities. However, there is concern for security of trucks in Mozambique and for serious deterioration of the road from Walvis Bay to Zambia due to intensive use. Most analysts believe that there will be a severe shortage of trucks especially for internal distributions in most countries and that transportation rates will soar. Already, in Zimbabwe, rural areas are experiencing shortages of corn due to a lack of short-haul transport. In Angola, there will be substantial transportation needs for the ongoing relief programs for war displaced and demobilized soldiers. It is uncertain what effect demands for transportation elsewhere in the region will have on truck availability in Angola itself.

C. CONCLUSIONS.

Despite years of donor support for the SADCC regional transportation system, the region will be relying most heavily on South Africa this year to offload and transport cargo into the SADCC region. South African ports and rails are equipped, or will be equipped, to handle the added load. However, serious bottlenecks can be expected at the choke points of Plumtree and Beitbridge. The Beira Corridor may be able to handle the added tonnages required for Zimbabwe, but security remains the critical determining factor. Lack of transport will also seriously hinder the movement of relief supplies by road from both South Africa and from Walvis Bay and Beira. Shortages of trucks for internal distributions may cause food to back up at major depots in the region.

Coordination between countries of the region is essential to the success of the drought response. All countries will be using the same rail lines and to some extent will be bidding for the same trucks. As the impact of the drought becomes more and more serious, and governments in the region feel increasing pressure to keep stores and depots fully stocked, it will be even more critical that countries be sympathetic to the needs of their neighbors in scheduling cargoes. If not, tensions will rise between nations of the region. The emergency revolving fund mentioned earlier in this report could help defuse such situations.

D. RECOMMENDATIONS:

1. Ports.

- To avoid port congestion, countries in the region must be urged to collaborate in the scheduling of cargo.
- Contracts for commercial purchases and bills of lading for food aid deliveries must allow for flexible ports of delivery, depending on port congestion. Also, if donors agree to support an emergency food reserve, flexible bills of lading will be important.
- Donors should discuss with SADCC countries the possibility of loaning stocks of relief food between countries to avoid any pile-ups of non-commercial food in the ports.

2. Railroads.

- Donors should encourage SADCC to use the corridor groups as the focal point for coordination of transportation.
- Donors should plan ahead for use of empty silos in South Africa in case of cargo congestion at end destinations. South Africa has an estimated 14 million MT of storage space available for maize. It is recommended that storage closest to border points be used first.
- Even with good rail management by the Beira Corridor Group, unless the problem of security is resolved, the corridor will be unreliable. At present, tonnages are moving successfully by both road and rail from Beira, but a guarantee should be sought from RENAMO and FRELIMO that their forces will be restrained from attacking food passing though to Zimbabwe. Additionally, an extra effort must be made to deliver food to populations living along the corridor in Mozambique.
- Upgrades must be effected, especially on the Botswana railroad, which is a major transit point for cargo moving to Zimbabwe and Zambia. Upgrades of management, switching and signaling systems are the minimum required.

3. Roads.

- Donors and governments must plan now for some food tonnages to be moved by road. In certain areas, governments should consider the need for security guards on trucks and road improvements (which could be done with food for work projects).
- Purchases of trucks may be required. Donors should work with national transport authorities to determine the trucks requirements for the programs. The Overseas Development Agency (U.K.-ODA) has 1,000 7-ton trucks on the high seas destined for a commodity import program in Zimbabwe. The Government of Zimbabwe has indicated these trucks could be purchased duty free by agencies working in relief.

V. HEALTH.**A. BACKGROUND.**

The extent and size of the drought have potentially far reaching health impacts, and failure of the relief program to provide basic food, water and health care could result in widespread loss of life. There is a need to act quickly.

It is important to note that death from starvation, or illness related to severe undernutrition, represent advanced consequences of a drought and imply that drought relief efforts have failed or come too late. Before this stage is reached, events take place, such as large population displacement related to food and water shortage, that increase the risk of disease outbreaks because of crowding, poor sanitation, and compromised water supply. These factors contribute to the development of undernutrition, especially among infants and younger children.

In the medium to long term, insufficient food supplies and the economic impacts of the drought on small farmers and poor urban dwellers, can result in the general deterioration of health and nutritional status for the more vulnerable sub-population.

B. FINDINGS.**1. Managing the Health Effects of Drought.**

To prevent negative health consequences of a drought, including starvation, it is imperative that immediate steps be taken to implement mitigation activities such as provision of food aid and water. Once populations are displaced and disease breaks out, hunger and starvation often are inevitable. The catch-up task to care for health-related consequence is enormous and often impossible. Given the current information of the state of the drought and projections of need, if relief efforts can be prompt and responsive, it is still possible to avert a large-scale famine. If not, the magnitude and severity of this drought will result in large-scale loss of life. The general health situation is complicated in the Southern Africa region by the prevalence of AIDS which can be expected to be accelerated if large-scale population movements take place as a result of the drought.

It is important to emphasize that in the midst of an emergency, existing health programs such as the Expanded Program

of Immunization (EPI) should not be neglected.

2. Nutritional Surveillance.

Nutritional status based on growth measurements of under 5 year old children is a useful indicator in determining health impacts of drought. This age group is the most vulnerable group for undernutrition and a sensitive indicator for the population as a whole. Following are some techniques which can be used to detect the nutritional impacts of drought:

A. Growth monitoring (measuring weight for age) or surveillance (measuring height for age) of children is a common practice in most parts of the world. The resulting summary statistics of prevalence of low weight-for-age are helpful information in detecting changes in nutritional status. Because the prevalence of low weight-for-age can vary in various parts of the world, the use of this information always needs to be compared with earlier prevalence of same age children for the same communities.

B. A rapid nutritional survey is a commonly used procedure in time of disaster to characterize the current health nutrition status for the affected population. The most commonly used indicator for such a survey is weight-for-height, or wasting. This is the indicator of choice because it is responsive to acute changes - within days to weeks. Major causes of wasting for young children are poor food intake and/or severe and/or recurrent disease, especially diarrheal disease. In general, the average is around 2 to 3 percent for populations not under stress. Therefore, it is safe to assume that if the baseline level of wasting is below 5 percent, the population is not yet under great stress. However, prevalence of above 5 percent are of great concern and if the prevalence is above 10 percent, a very serious level of undernutrition exists. Nightblindness, or Vitamin A deficiency, is also a frequent result of undernutrition in children.

3. Regional Preparedness for Health Impacts.

The countries of the region are in various states of preparedness for the health impacts of the drought. Based on field visits, and discussions with health personnel in each country visited, the health advisors from the Centers for Disease Control in Atlanta (CDC) established three levels of risk

profiles (low, moderate, high) with time limits within which appropriate interventions must take place to prevent a country from moving to the next higher stage of risk. Indicators that were examined included: a) adequacy of primary health care, including EPI; (b) baseline health nutrition status; (c) current indicators of potential risks to health (population displacement, lack of water; and (d) adequacy of nutritional surveillance and ability to target supplementary feeding.

TABLE 3: RISK PROFILES FOR SOUTHERN AFRICA - HEALTH

Country	Risk Status	Time 1/
Angola	Low risk	5-8 months
Botswana	Low Risk	5-8 months
Lesotho	Moderate Risk	5-8 months
Malawi	Moderate Risk	3-5 months
Mozambique	High risk	0-3 months
Namibia	Moderate risk	5-8 months
South Africa	Low risk	5-8 months
Swaziland	Low Risk	5-8 months
Zambia	Moderate Risk	3-5 months
Zimbabwe	High Risk	0-3 months

 1/ Time begins April, 1992.

C. CONCLUSIONS.

The region faces varying influences on health as a result of the drought. In all cases, disease and nutritional surveillance of the most vulnerable groups is important as an indicator of drought impacts. It is likely that, if and when people move in search of food and water, the crowding that will result will set the stage for an increase in infectious disease.

D. RECOMMENDATIONS:

- Donors should target, on a priority basis, those countries identified as high risk for emergency interventions.
- The availability and distribution of medical supplies must be established and maintained, especially in those high-risk countries. Vitamin A distributions are an effective and low-cost intervention to prevent nightblindness and should be supported by donors.

- Donors should support NGOs working in emergency health response.
- To improve targeting of emergency responses and to measure the impact of the drought, nutritional surveillance programs should be supported. UNICEF is taking the lead in many countries to assist this process and would be an appropriate channel for donor funds.
- Donors should examine ongoing development programs in the area of health and nutrition to reprogram or redirect activities to respond to the drought.

VI. WATER AND SANITATION.

A. BACKGROUND.

The almost total failure of the rains since the beginning of January, 1992 has had a major impact on water supplies throughout Southern Africa. In many areas, the severity of the drought this year is a culmination of several years of below average rainfall and drought in many areas. The effects are already evident: river flows are slowing and even drying up, water levels in reservoirs and behind dams are dangerously low, and ground water tables are falling, resulting in drying up of boreholes and traditional hand-dug wells. With the rainy season now over, water shortages will increase and become more and more acute until the next rains, which should come in October/November, 1992. Provision of safe water should be a priority area for intervention by the donor community in cooperation with the World Bank and other multilateral agencies.

B. FINDINGS.

1. Impact on Rivers.

Rivers in Mozambique have so little flow that sea water has moved many miles upstream. River water at the intake for the Beira city water system, forty miles from the sea, has become saline. Water in the Limpopo River at Xai has become too saline and is causing long-term damage to irrigation systems and soils.

2. Impact on Urban Water Supply.

Water levels in reservoirs that serve as sources of supply for many municipal water systems are also dangerously low. Bulawayo and Mutare, Zimbabwe; Maseru, Lesotho; Chimoio and Quelimane City, Mozambique and other cities face the real possibility of having systems totally without water. Bulawayo has developed an evacuation plan to be activated in the event that water runs out.

3. Impact on Rural Water Supply.

The small dams that provide water to thousands of people and millions of cattle are also drying up very rapidly. As some of the reservoirs dry up, grass for grazing livestock around the remaining reservoirs is quickly eaten down to the roots leaving animals without food as well. Millions of cattle are expected to be at risk as the drought progresses. To traditional ranchers, cattle are a source of wealth and savings and many are, therefore, reluctant to sell them under any circumstances.

4. Erosion.

Dry land without vegetative cover is, of course, extremely susceptible to erosion by wind and by the next rains when they come. Because eroded land holds less soil moisture and grows less vegetation, it continues to erode more. Drought and too many cattle are likely to cause long-term damage to the land as well.

5. Impact on Drinking Water.

Areas that derive drinking water from spring capture systems are already experiencing reduced flows. This is especially true in Lesotho and Swaziland, but also for the more hilly areas of other countries in the region.

Water tables are also dropping, especially where the level is not deep. Thirty to seventy percent dry wells are reported by UNICEF in some areas of Mozambique. There are also reports in Mozambique of people dying of thirst after leaving villages in which all wells have gone dry.

Deep water tables are generally less impacted by the drought, but many deep boreholes in the region are also drying up, causing women to wait 6-8 hours for a bucket of water. Some boreholes have completely dried up. This causes especially severe

hardship because most areas are already suffering from high well breakdown rates.

There is almost no systematic data on the impact of the drought on water levels and flow rates. Without this it will be very difficult to target resources to areas with the greatest need.

6. Impact on Sanitation.

The impact on sanitation will be less severe than on water supply but still may have important implications. The following should be considered:

(a) Families with indoor plumbing may be unable to flush toilets as frequently as usual (or at all) and may not have access to dry toilets (pit latrines).

(b) Sewer systems may have difficulty maintaining enough flow to prevent solid materials from accumulating in sewer pipes and within treatment plants. As a worst case, methane gas generated from material in clogged sewer pipes could be hazardous.

(c) Persons using pit latrines should be unaffected, except for those using water to wash after defecation.

7. Impact on Power Generation.

The drought has lowered the water level in many reservoirs and is beginning to affect the generation of hydro-power. In order to keep industry and basic infrastructure operating, countries will have to import power and use vital foreign exchange for its purchase. Zimbabwe is already having to import power to compensate for lost hydro-power generation, while Zambia has had to reduce export of power to conserve limited resources.

C. CONCLUSIONS.

As improved sources (wells, boreholes, spring captures, piped systems) dry up, several things may be expected to happen:

(1) as a worst case, people will begin migrating to areas where there are water supplies;

(2) people will start drawing water from less desirable water sources within walking distance;

(3) people will begin getting by with less water because of the extra effort required in carrying it over greater distances;

(4) less critical uses of water will be sacrificed first: gardening, followed by bathing, can be expected to be reduced;

(5) diarrheal and other water-borne diseases can be expected to increase because the alternative sources are not as well protected from pollution; and,

(6) scabies can be expected to increase due to the reduced frequency of bathing.

The relative impact of the drought on water supply and sanitation can be compared among the affected countries using a qualitative scaling procedure, as reliable quantitative data is not yet available. Two factors are considered in the analysis: (a) the level of preparedness of national structures to cope with consequences of the drought, and (b) the perceived risk to populations, based on both the total number affected and the severity of the effect. Using a five-point scale, where "1" indicates maximum preparedness and minimum risk and "5" indicates minimum preparedness and maximum risk, the countries have been ranked as follows:

TABLE 4. RISK PROFILE FOR SOUTHERN AFRICA - WATER AND SANITATION

COUNTRY	PREPAREDNESS	RISK
Angola	4.5	1.5
Botswana	2	1.5
Lesotho	3	3
Malawi	3	3.5
Namibia	2	3
Mozambique	3	4.5
RSA	1.5	3
Swaziland	2.5	3
Zambia	4.5	2
Zimbabwe	4.5	4.5

D. RECOMMENDATIONS:

The impact of the drought and the appropriate response vary from country to country throughout the region. There are, however, general recommendations that can be made that apply to many or all countries:

- Obtain "new" inexpensive water supplies by conservation. Strict rationing should be implemented for all water systems for which the source of supply is threatened by the drought. This might be implemented through a combination of pricing, public awareness and reduced hours of supply.
- Obtain additional water through low-cost interventions such as repair of existing water systems (replacement of pumps and pipes) and from activation of unused boreholes.
- Seize the opportunity of the drought to dig new wells. The best time to dig new wells is when the water table is at an all time low. This is due to the difficulty of digging below the water table. Wells dug during a drought period are unlikely ever to go dry. This is also an ideal time to deepen existing wells. Well digging is labor intensive and ideal for food for work programs.
- Seize the time of increased public awareness of the water problems to expand a drilling or other water supply program.
- In extreme cases, water may have to be transported, especially to installations that need water to function (i.e., hospitals). Position water tanks or bladders at central locations in communities and refill them on a regular basis by tanker. Dedicated water trucks should only be purchased for carrying water over very long distances. Use should first be made of existing trucks (government, military, leased) fitted with water tanks or bladders (available with necessary harnesses from South Africa). A next best option is a water trailer that can be pulled by a truck or tractor.
- Monitoring of groundwater levels, reservoir levels and spring capture system flow rates should be started in all areas impacted by the drought. This will permit targeting of scarce resources to the most severe areas on a timely basis.
- Donors should examine existing development projects in the

area of water and sanitation and reprogram or redirect funds to respond to the drought.

- Donors should encourage governments to adopt power conservation programs as a first step towards compensating for the lost hydro-power generating capacity.

VII. LIVESTOCK.

A. BACKGROUND.

Livestock is a basic source of wealth for both the commercial and communal farmer in Southern Africa. In countries such as Zimbabwe and Swaziland, livestock numbers exceed the carrying capacity of the land, but farmers are reluctant to sell off animals since they represent the family's wealth. Despite the huge numbers of livestock in the region, no country meets their EC export quota for meat.

B. FINDINGS.

1. The Impact of Drought on Livestock Numbers.

One of the most serious impacts of the drought for both the small and large commercial farmers in the region, is the risk of livestock deaths due to lack of food and water. By some estimates most small farmers will lose almost all of their animals. Some would argue that ecologically speaking the reduction of livestock numbers should be seen as an opportunity to implement better range and herd management practices in many countries. However, whatever the longer term benefit to the environment, the short-term economic effect on the small farmer will be profound.

2. The Impact of Livestock Losses on Farmers.

Throughout the region, farmers are trying desperately to sell livestock before their condition deteriorates and they have no value. As a result, prices of animals are falling rapidly and buyers are selecting only those which are still in good health. As farmers sell off their animals, they lose not only their capital investment and on-farm source of milk for children, but also their source of draft labor for the next planting season. There is also concern that there will be insufficient quality breeding stock to rebuild herds after the drought. The resulting

impoverishment of the small farmer has long-term implications for agricultural production and food security in rural areas of Southern Africa. Commercial farmers are less affected as many of them have stored sufficient grain on farm to feed their animals. They may, however, be affected by severe water shortages and have to thin their herds as well.

3. Preservation of Livestock.

Strategies for preserving livestock are not being looked at in any systematic fashion within the region, but the World Bank has addressed the issue as part of its recovery program for Zimbabwe.

C. CONCLUSIONS

The impact of livestock losses throughout the region will have a short-term effect on the ability of farmers to plow land for the next agricultural season. Likewise, the death of livestock from starvation or lack of water will represent a nearly total loss of capital for the small communal farmer.

D. RECOMMENDATIONS:

- Because of the severe long-term impact of livestock losses for the region, donors should encourage pilot livestock preservation programs that will set aside good breeding stock for the recovery of both the commercial and communal farmers.
- Donors should also encourage pilot livestock offtake programs designed to permit farmers to sell livestock before it dies. Drying meat for use as "biltong" (dried meat) in human supplementary feeding programs, such as school feeding, is one possible activity in this area.

VIII. REFUGEES.

A. BACKGROUND.

Mozambique is the principal refugee-generating country in the region. There are nearly one million Mozambicans in Malawi; over 100,000 are officially registered in Zimbabwe and perhaps 150,000 are unregistered. There are some 250,000 Mozambicans in South Africa, where their situation is both precarious and

ambiguous owing to South Africa's refusal to recognize them as refugees or permit them to receive UNHCR protection and assistance. Smaller populations of Mozambican refugees, registered and unregistered, live in Swaziland, Zambia, and Tanzania. Nearly half of the 100,000 Angolan refugees in Zambia are spontaneously settled in the country's drought-affected western region.

The World Food Program has in the past counted on local purchases and on foodswaps in the region to keep the refugee food pipelines full. Zimbabwe has been the major source of maize as well as seeds. WFP had also planned to purchase 30-40,000 MT of maize from Malawi this year. However, none of the regional sources of food for refugees will be available this year. Both the cost and lead times for refugee food deliveries will increase for the remainder of the year.

B. FINDINGS.

1. Impact of Drought on Refugee Flows.

The seriousness of the drought in Mozambique is likely to generate even more refugees. Unless corridors of tranquility can be opened to deliver reliably food to persons in both RENAMO- and FRELIMO-held areas of Mozambique, the outflow of refugees will continue to increase.

There are already indications that the drought in Mozambique is forcing civilians to flee in a desperate search for food and water. More than 5,000 Mozambicans enter Malawi every month, and up to 3,000 per month are entering Zimbabwe.

In Zimbabwe, the UNHCR anticipates as many as 200,000 refugees could cross the border in the next year, and is already considering the need to open a new camp. The numbers are large enough that UNHCR and the Commission for Refugees are unable to ensure that all refugees are registered and encamped. Many Mozambicans are squatting for days near the border. During this time, many are without a reliable source of food and water.

According to residents in the areas, the Mozambicans have provided extremely cheap labor. Now, however, the combinations of their large numbers and their desperation for food could become dangerous as maize continues to be scarce throughout the region. Crime is reportedly on the rise and competition for

maize could result in violence.

In Swaziland, at the time of the team's visit, there had been no additional significant inflows of refugees. A trip to the border revealed, however, a healthy trade in maize going on as relief grain from Mozambique is being shipped across the border for sale to refugees in maize-starved Swaziland.

Zambia and Tanzania have not reported increased refugee flows. Sources in South Africa report that the Mozambican population in Gazankulu and Kangwane continues to increase.

2. Impact of Drought on Refugee Populations.

Refugees, particularly those who were self-reliant, are facing the same losses of crops and employment as are host country nationals throughout the region. Refugee farmers at Ukwimi settlement in Zambia, previously self-sufficient, have suffered devastating crop losses and will require assistance this year. Previously self-settled refugees in Zimbabwe, Malawi, Swaziland, and South Africa, who worked as day laborers on farms, have lost their jobs and are now coming forward to register for assistance.

Refugee camps, like the areas around them, are suffering increasingly from lack of water. In Zimbabwe, UNHCR experts have already identified a need for \$750,000 in water system upgrades at two camps. In Malawi, similar projects valued at \$800,000 have been identified.

Health concerns are mounting as the drought reduces safe water supplies and creates an increasing level of malnutrition, especially in vulnerable groups such as children under five and pregnant or lactating women.

Food is scarce for refugees throughout the region. In Malawi, the food pipeline could run dry in July. Refugee maize rations have already been cut from 450 to 400 grams per day. Further cuts, to as little as 300 grams per day, are already being contemplated. UNHCR officials feel that there could be a terrible disaster in Malawi if food does not arrive soon.

C. CONCLUSIONS.

Unless sufficient food is distributed to drought-stricken populations in Mozambique, significant refugee flows will

continue into neighboring countries, which themselves are without maize. The resulting tensions could create significant unrest between peoples, even though many of the refugees are from the same ethnic groups as those found in the neighboring countries to which they flee.

Water, health, and sanitation projects must be implemented, especially in densely populated refugee settlements, to avert possible epidemics.

Host country populations must also receive adequate food and related assistance in order to prevent animosity toward refugees and hostilities between the two groups.

D. RECOMMENDATIONS.

- Donors should closely monitor events in Mozambique for indications of additional refugee movement. Donors and international organizations should also monitor the regions border areas to assure that newly arriving refugees receive humane treatment, in keeping with international law.
- To prevent further outflows of refugees from Mozambique, donors should make provision for sufficient food and water to populations in Mozambique priority. This includes pressing RENAMO and FRELIMO to permit cross-lines feeding operations and the creation of corridors of tranquility.
- Donors should commit additional resources now to refugee programs in Zimbabwe and Malawi to respond to the increasing numbers of refugees. These resources should be available for water, health, and sanitation projects as well as food needs.
- Donors should press an increasingly responsive South African government to recognize Mozambicans as refugees and to permit UNHCR to act in their behalf.
- WFP and FAO should act now to assure that sufficient supplies of seeds are available for the 1992 planting season. Drought resistant crops should be promoted.
- UNHCR should participate with WFP, host county representatives, and SPOORNET in regional planning for food distribution.

IX. ROLE OF NON-GOVERNMENTAL ORGANIZATIONS (NGOs).

A. BACKGROUND.

NGOs have the unique advantage of having close, hands-on contact with affected populations. Their political impartiality, knowledge of the local environment, language and cultural differences of affected people resulting from their own grass-roots community development projects, allow them to quickly identify problem areas and to provide assistance to those in isolated areas.

While NGOs' capacity to deliver services is often challenged by the lack of resources, their flexibility and commitment, together with appropriate skills, enhance their effectiveness. Particularly in a disaster situation, NGOs are effective vehicles for raising funds for relief programs.

B. FINDINGS.

1. Role of NGOs in Drought Response in Southern Africa.

NGOs recognize the evident differences between the Horn of Africa and Southern Africa - the basic difference between chronic food deficit countries with bankrupt governments and normally food secure countries with fairly robust economies in many cases. They further recognize that the role of NGOs in an operation of this size will not be the same as in the Horn or the Sahel; NGOs will play a smaller, more focused, role, concentrating on their areas of operation, or focussing on the most affected areas that require immediate attention. Even on this smaller scale, NGOs will have a role to play and can make a significant impact in alleviating suffering.

2. NGOs Anxious to Mobilize but Need Direction.

In each of the countries visited, the Team discussed the current programs of the NGOs, their capabilities, their relationships with United Nations organizations and governmental agencies, their relationships with other indigenous and expatriate NGOs, their geographic and sectoral areas of concern and the location of affected populations. Most NGOs expressed a sense of frustration with the apparent lack of movement and communications with government agencies responsible for

responding to food and non-food needs, such as water and sanitation. Despite the fact that Drought Relief Task Forces have been designated to function at high governmental levels and are coordinating with U.N. organizations and donors to resolve the macro issues of grain and commodity acquisition and transportation, in most instances NGOs are still searching for contacts and trying to determine the role that they will be expected to play in relief operations. These groups have significant investments in their regular programs and are willing to broaden their scope, increase their staff and purchase or lease equipment to engage in humanitarian relief operations to meet emergency needs of the population they serve. They recognize that development programs cannot continue without paying attention to the suffering and deprivation that these populations will experience over the coming months.

3. Short-term Emergency Management Training.

Southern Africa has not experienced a severe drought in many decades. Consequently, most NGOs in the region have little or no experience in managing relief operations. In several countries of the region, NGOs are led by individuals who have had long and intensive experience in drought relief response. Staff of Save the Children Federation/USA, Save the Children/UK and the Federation of Red Cross and Red Crescent societies in Zimbabwe have directed or participated in extraordinary relief programs in the Horn of Africa and have provided services skillfully and impartially to the benefit of countless of victims.

C. CONCLUSIONS.

Non-governmental organizations which serve to encourage local linkages and community-based solutions can and should have a significant role to play in providing a competent and appropriate response to the emerging food and non-food problems in Southern Africa. These groups are at varying levels of readiness to engage in disaster relief efforts and/or to develop interventions or steps to mitigate the effects of the disaster. Given that most governments will be stretched to the limits of their managerial ability in trying to coordinate massive movements into their countries, NGOs can play an important supplementary role in ensuring that the most vulnerable groups are not forgotten.

D. RECOMMENDATIONS:

- Donors should encourage governments to manage and implement their own drought response programs but should emphasize the positive role that NGOs can play in mobilizing resources and assisting with the needs of the most vulnerable groups.
- Donors should support NGO efforts to gear up for the emergency response by funding NGO proposals for short-term training programs for NGO staffs and their government counterparts in the region who have no experience in emergency program management. Target countries are: Zimbabwe, Zambia, Malawi, and Swaziland.
- Donors should support NGO programs aimed at alleviating suffering among the most severely affected groups. This means providing operating funds for NGO supplementary feeding programs, providing funds for emergency water interventions, and ensuring that these interventions fall into the overall plan of the host government.
- Donors should encourage NGOs to form coordinating committees (if they do not already exist) to provide a forum for the identification of needs, for coordination of interventions, for information exchange, and for interaction with the donors and host governments.

V. DONOR COORDINATION.**A. BACKGROUND**

Donor coordination is important in normal times for the exchange of information and planning of development programs, and for discussions on large multilateral programs such as the structural adjustment programs. In a relief operation, coordination is even more important to ensure that commodities are scheduled in a timely but not overlapping fashion and that the most urgent needs of the population are met systematically.

Donors are involved in a variety of developmental sectors in the region, including health, water, agriculture. Given the need for additional donor involvement in these sectors due to the drought, coordination will be essential.

B. FINDINGS.

1. Current Coordination.

The teams found that donor coordination varies from country to country depending on the size and level of involvement of donors in development or (as in the case of Mozambique) ongoing relief programs. In Mozambique, where there is an ongoing emergency, donors coordinate closely on relief matters. In Zimbabwe, UNDP hosts a weekly meeting of donors and U.N. agencies to review the drought situation. In other countries, meetings are held on an ad-hoc basis, or not at all.

2. New Coordination.

The visits of the WFP/FAO and OFDA assessment teams to the region, together with the World Bank Drought Mission to Zimbabwe, stimulated donor meetings in every country and began to raise awareness among those donors which have not been tracking the development of the drought. The forthcoming donor meeting hosted by the U.N. (and SADCC) in early June will be important in stimulating further donor response and involvement in the drought. More importantly, donors should examine together existing programs to determine which donor is better positioned to respond in certain sectors.

3. The Role of the World Bank and IMF.

In addition to the World Bank and IMF structural adjustment programs, many countries in the region have World Bank projects that are eligible for disbursement. Given the severity of the drought, the Bank is examining its portfolio region-wide and will try to bring forward resources from the loans that are in sectors affected by the drought. Also, the Bank has negotiated a fast-disbursing loan for Zimbabwe and an add-on to an existing fast-disbursing loan to Zambia for drought relief.

4. Traditional Relationships.

Germany, Great Britain and Portugal have traditional ties to the countries in Southern Africa from colonial days. Sweden has its largest development program in the region. The U.S. has provided significant resources to the emergencies in Mozambique and Angola and has development programs in all of the affected countries. Representatives from the European Community have stressed their desire to tailor their response to the drought in

concert with their development programs.

C. CONCLUSIONS.

The donors in the region have not, in many cases, had much need to coordinate extensively. The U.N. is best placed in most countries to take the lead in coordination.

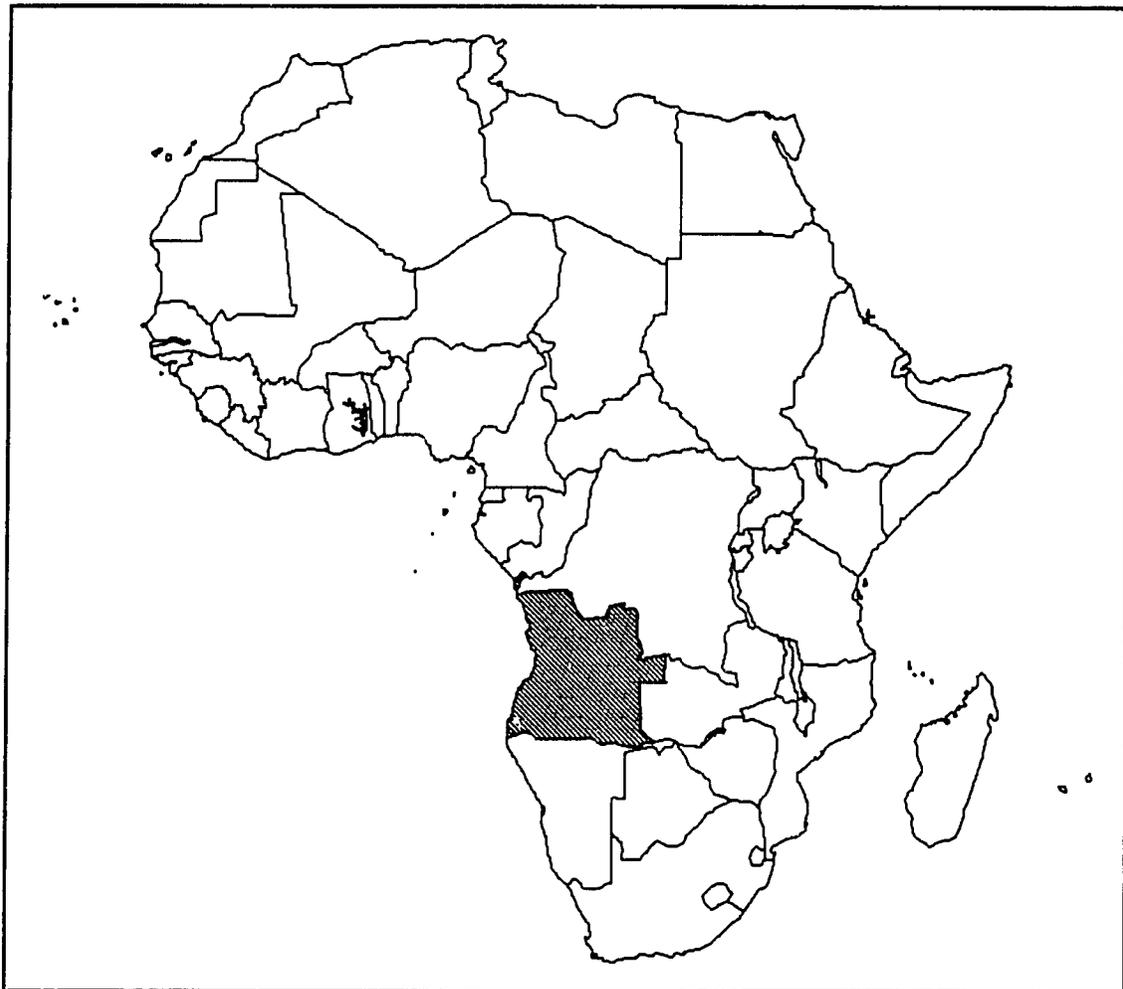
D. RECOMMENDATIONS:

- Donors should draw on comparative advantages in technical sectors to provide primary responses.
- Donor should meet regularly in each affected country to discuss pledges and commitments of food aid and other relief commodities.
- The U.N. should be encouraged to stimulate donor coordination and to hold regular coordinating meetings in each country with donors and NGO representatives.
- The U.N. should take the lead in the installation of computer bulletin boards between and within countries to assist in the timely sharing of information.
- A systematic sharing of information between field offices and donor headquarters should be established.
- Donors may wish to use the U.N. meeting in Geneva as an opportunity to establish sector-specific working groups to better coordinate the response to the drought.
- Bilateral donors should coordinate food and non-food interventions with the significant resources available to affected countries from multilateral institutions to ensure the most effective use of donors' resources.
- Donors should consider whether a U.N. unit should be established in the region with responsibility for coordinating not only information on ship scheduling and food movements, but also for planning and implementing (with host governments, donors, and NGOs), ongoing assessments of the drought and its impacts. Donors should further consider whether such a unit should be headed by a senior U.N. official with the standing of a Special Representative of the Secretary General.



Office of U.S. Foreign Disaster Assistance
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Southern Africa Drought Assessment Country Report



ANGOLA

ANGOLA

NOTE: This is an abbreviated section due to the narrow scope of the drought and the ongoing relief program for the war and drought affected in Angola.

I. BACKGROUND.

Angola is completing its first year of peace in over 30 years. A 14-year struggle for independence from Portugal was followed by a 16-year civil war. The military struggle has now been replaced by a political campaign, which will culminate in national elections on September 29-30, 1992.

In the latter part of 1990, there was strong evidence of an impending drought in the southern tier of provinces, in both government- and UNITA-held areas. In response to this need, the United Nations took the initiative to organize the Special Relief Program for Angola (SRPA). In 1991 with relief requirements continuing, the U.N. initiated SRPA II, which would work in all provinces of the country. Despite a limited donor response a number of PVO's are continuing, and indeed expanding, their activities in the country under the auspices of the U.N.

Angola has not entirely escaped the Southern Africa drought, although it has not been affected to the extent of some of its neighbors. The drought is restricted to the provinces of Kuando Kubango and Cunene. Kuando Kubango lies in the extreme southeast corner of the country, adjacent to Zambia and the Caprivi Strip of Namibia. UNITA says that presently there are about 540,000 persons living there. Logistics in the region are difficult; it is one of the few places in Africa where airlifts, at \$ 300 per metric ton, can be more cost-effective than transportation by truck. Cunene is semi-desert and is in the southwest part of the country, adjacent to the drought stricken area of Namibia. Displaced and war affected persons are already targeted for relief food under SRPA II.

II. FOOD AND AGRICULTURE.

A. BACKGROUND.

With the first year of peace and a wide-scale distribution of seeds and tools under the SRPA and other programs, the FAO is estimating a 15 percent increase in food production in the country generally. The only significant exceptions are the provinces of Kuando Kubango and Cunene. Prior to the visit of the OFDA assessment team, the United Nations and CARE conducted an assessment in the same area.

B. FINDINGS.

Kuando Kubango is over-populated compared to the productive capacity of the land, and cannot be supplied by the little food produced under drought conditions.

The lack of roads makes airlift from Namibia or Menongue, Angola cheaper than transport by truck. To supply Kuando Kubango by air costs approximately \$300 per metric ton over and above the ground transport to the airlift departure point.

The lack of roads in Kuando Kubango makes 4X4 and 6X6 trucks the only feasible transport within the region. There is not, however, sufficient ground transport available in Kuando Kubango province to move the quantities of food required for 540,000 people from the airstrips to the distribution points, even if the funds and political will to make such an operation feasible were present.

The underutilized port of Walvis Bay has been used as the port of entry for relief goods destined for Kuando Kubango. With large quantities of grain being offloaded at Walvis Bay for the drought relief needs of Namibia and Zambia in 1992-3 (Zambia expects to import 150,000 MT corn and Namibia approximately 125,000 MT of mixed cereals), food destined for Angola may be delayed on the docks and there could be congestion on the rails to Grootfontein.

C. CONCLUSIONS.

There are basically three options to consider in formulating a drought response in Kuando Kubango: a) move the temporary residents back to their places of origin, where food can be made available at a reasonable cost; b) fly in the tremendous tonnages required at enormous cost; c) position food in the major population centers around the edges of Kuando Kubango, which can be reached by road at a reasonable cost, and then airlift only enough food into the major centers of Kuando Kubango to supply the population of native Kuando Kubango residents.

D. RECOMMENDATIONS.

- Donors should endorse the U.N. recommended six-month operation to airlift 9,600 MT corn, 960 MT beans and 480 MT oil into Kuando Kubango, using CARE, which presently has the people and vehicles on site to implement this operation.
- Donors should be sure that food scheduled for arrival at Walvis Bay for Kuando Kubango is coordinated with the WFP Southern Africa drought logistics center in Harare.

II. WATER.

A. BACKGROUND.

Water is in short supply in southeast Angola even in normal times. As a consequence, most of the population lives along or near the rivers, drawing drinking and washing water from the same source.

A project to drill and develop twenty wells in the area was undertaken by the International Medical Corps (IMC) beginning in September 1991. The project purchased a truck mounted Atlas Copco Aquadrill 500. This rig utilizes an ODEX system composed of an eccentric reamer bit and pneumatic hammer which allows the overburden to be cased as drilling progresses to prevent caving of the walls of the hole.

B. FINDINGS.

1. Kuando Kubango Rural Water Supply.

The drilling system proved to be incapable of drilling in the difficult soil formation encountered in the area. The casing was unable to withstand the forces of the pneumatic hammer used to sink it as the drilling progressed. The fine sand and silt in the formation repeatedly jammed the drill bit. Under these conditions the equipment was unable to drill to the 50-60 meter depth required to meet the design yield. It has been recommended by consultants that the project purchase a cable tool rig to replace the Aquadrill 500.

2. Rural Latrine Construction

Visual inspection of housing areas near Likuwa shows the large majority of the dwellings including those of recent migrants have a latrine. Housing and latrines are built with the assistance of the military authorities in the area. They are built almost entirely with local materials. Pits must be reinforced with logs due to the extremely sandy soil. A few have walls made of mud bricks but the majority have walls constructed from grass and reed mats but have no roof.

C. CONCLUSIONS.

Drinking water supplies are likely to become inadequate in villages to which the population which is now in southeast Kuando Kubango is expected to move.

The Aquadrill 500 rig is inadequate to drill in the Kalahari sands found in the southeast Kuando Kubango area.

D. RECOMMENDATIONS.

- Provision should be made to provide safe, adequate drinking water supply in areas expecting immigration. This is especially critical in light of the ongoing shigella epidemic. Donors should consider funding UNICEF/SRPA-2 Project Profile 03, Emergency Water Supply (MM112-06/W01) which has been developed to address this concern.
- Future well development in the Kalahari sands area should use a cable tool rig in place of the Aquadrill 500. The Aquadrill should be used elsewhere in the region where the formation permits. Wells should be large enough in diameter to allow placement of an adequate gravel pack. Extra care and expense should go into assuring that the size and uniformity of the gravel pack are adequate to prevent movement of fine sand from the formation into the well.

III. HEALTH.**A. BACKGROUND.**

The health care system in Angola is in crisis. Due to years of internal conflict, the central infrastructure of the health care system has been destroyed. Malaria, diarrheal diseases, bronchitis, measles and other types of common preventable diseases are major health problems. Infant mortality rates are estimated at approximately 290 per 1000, the highest in the world. There is no nutritional surveillance system and malnutrition among infants and children is reported to be a significant problem.

B. FINDINGS.

1. Incidence of Disease in Kuando Kubango.

The team's field visit to Likuwa and the hospital serving that area of Kuando Kubango Province found reports of increases in the number of cases of malaria in bronchitis and diarrheal diseases among children and adults. These reports indicated that many of these new cases are among new populations coming in from areas 8-10 hours away, probably from Zambia. Reports indicated that more than 1,200 children have arrived since February of this year. Hospital staff reported as many as 4-5 people die every week, mostly from malaria and diarrheal diseases. Staff also reported that most households were out of food, and that without relief efforts the hospital would be unable to feed the patients. Drugs and medical supplies are in short stock and sanitation is a major problem.

2. Epidemic of Shigellosis.

A special concern is a current epidemic of shigellosis. Data compiled by the International Medical Corps (IMC) at the time of the team's visit (April 16), indicated that 1,027 cases and 74 deaths have been recorded since January 1992.

C. CONCLUSION.

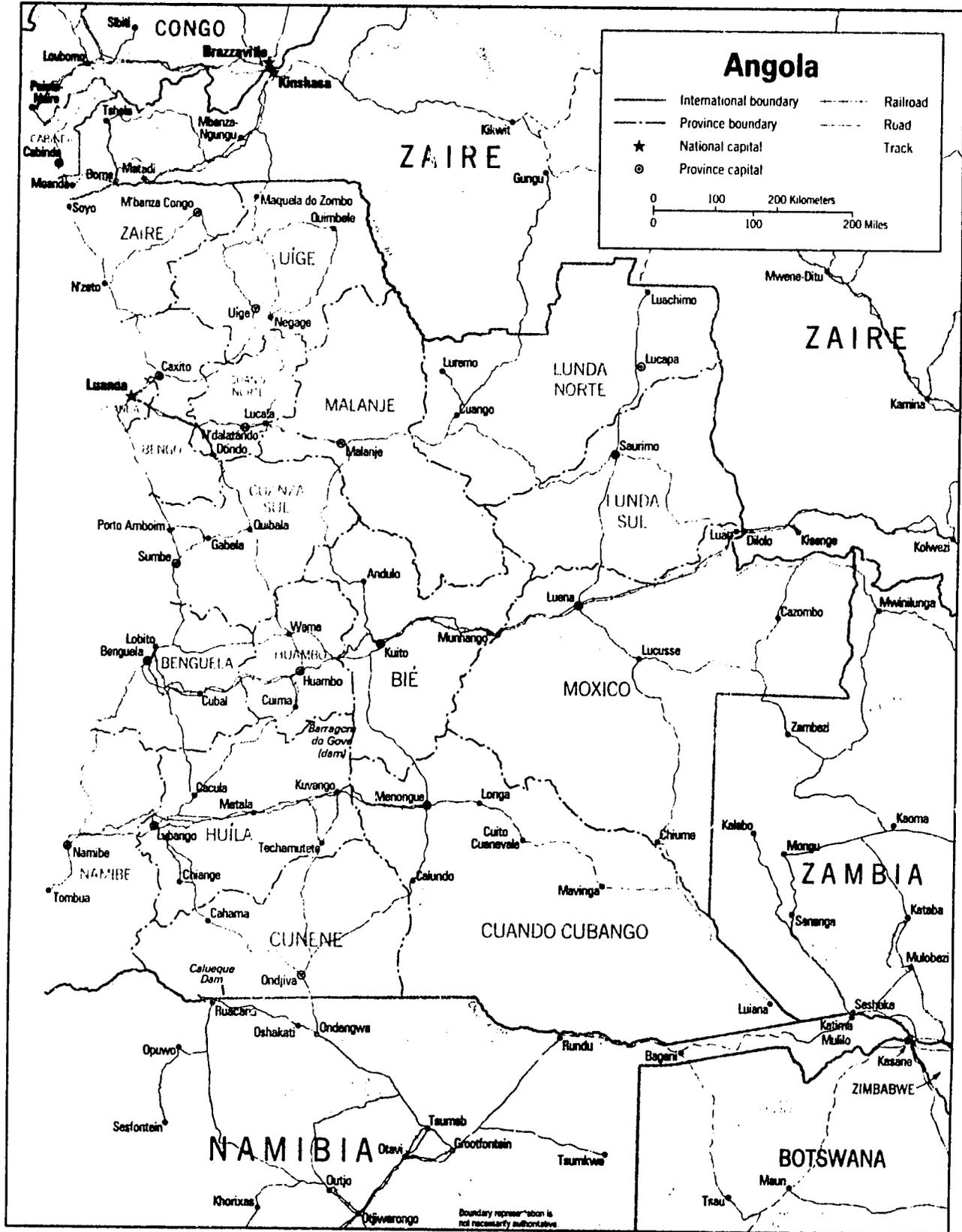
There is a total breakdown of the health structures in Angola resulting in increases in the number of diarrheal diseases and bronchitis cases, as well as increases in malaria mortality.

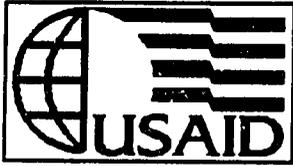
D. RECOMMENDATIONS:

- Donors should support emergency interventions aimed to ensure availability of food and safe water through October 1992.
- Donors should support provision of emergency medical supplies to Kuando Kubango through UNICEF and the NGOs.
- Donors should support emergency interventions to prevent further spread of shigellosis. This includes dealing with the epidemic on the Zambia side of the border.

ANGOLA CONTACTS

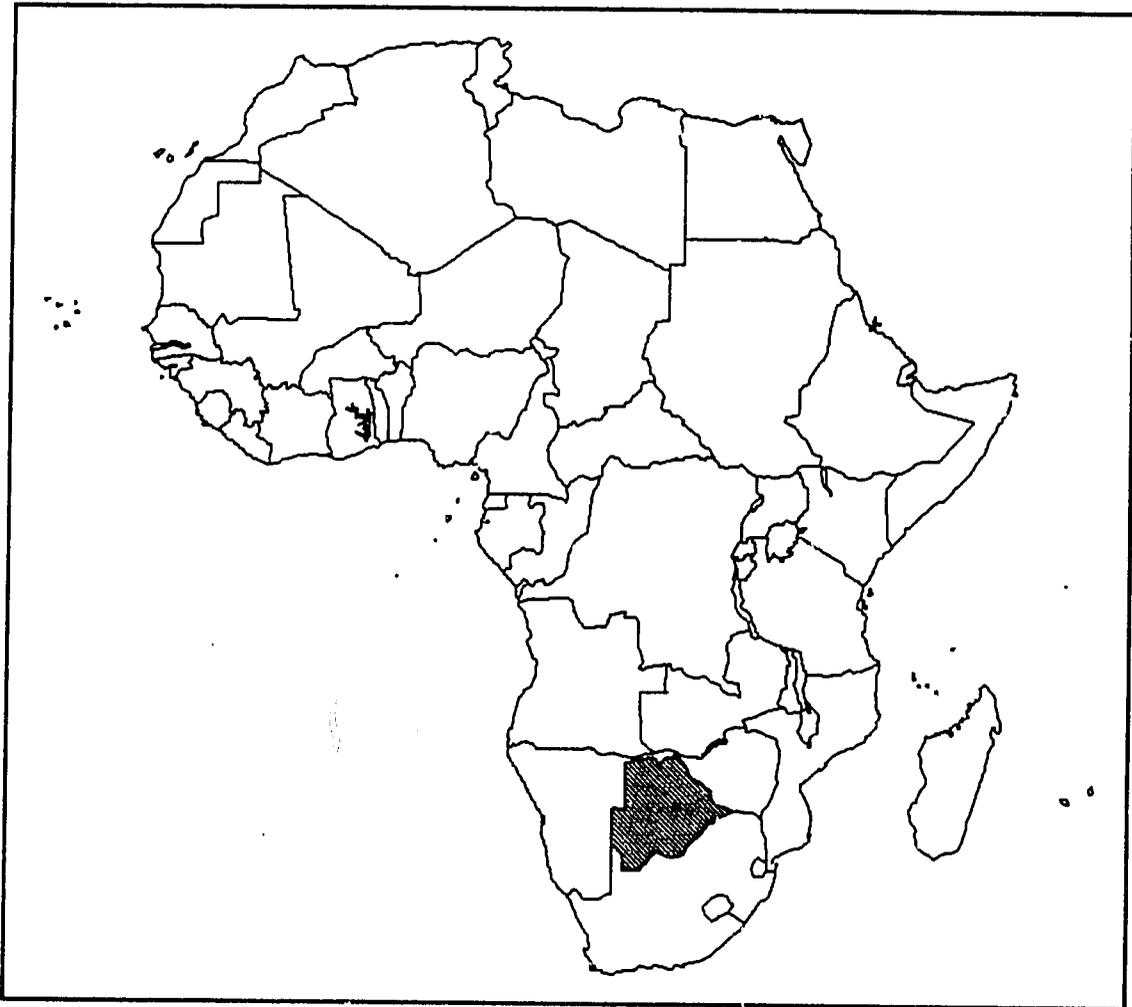
Jeff Millington	USLO
Dwight Swartzendruber	OFDA Emergency Coordinator
Ramiro Lopes Da Silva	WFP
Lynn Austin	FAO
Dawit Georgis	UNDP Special Representative
Fred Spielberg	Information Officer, UNDP
Geoff Wiffen	NGO Liaison Officer, UNDP
Representative	WHO
Lorna Snipes	Registered Nurse, IMC, Likuwa
Chief Nurse	Likuwa General Hospital
IN NAMIBIA FOR ANGOLA	
Kathleen Bowling	International Medical Corps
John Rainey	International Medical Corps
George Elson	CARE - Likuwa, Kuando Kubango
Carl Troy	U.S. Embassy, Windhoek
Howard Jeter	Counselor, U.S. Embassy, Windhoek





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Southern Africa Drought Assessment Country Report



BOTSWANA

BOTSWANA**I. BACKGROUND.**

Botswana will play a crucial role in meeting the food needs of the countries in the region due to its function as a transit point for grain between South Africa and Zimbabwe, Zambia and Malawi. In March and early April, the railroad was unable to keep up with the increased traffic of food transiting the country.

One of the reasons for concern about the Botswana rail system, is the failure to upgrade the system over the years. While efforts have been made to upgrade other regional transportation systems under the auspices of SADCC, Botswana Rail has not received the attention and technical inputs to upgrade its capacity. The Botswana rail system, nevertheless will be crucial for meeting regional food transit requirements.

While there are definite constraints for the short-term (such as having only 14 sidings), which limit the number of trains in the country at any one time, improvements in efficiency could be possible through improvements of the rail communications systems. A recent analysis of the causes of tie-ups in the railroad was done by USAID/SARP. This report contains excellent recommendations for improving the efficiency of Botswana Rail.

II. FOOD AND AGRICULTURE.**A. BACKGROUND.**

Botswana is a drought-prone country. The previous drought lasted from 1982-88. Botswana has learned to cope with drought both at the national level and the household level.

B. FINDINGS.**1. Meeting the Food Gap.**

With a population of 1.3 million, foreign exchange reserves equivalent to a year's imports, and trading arrangements with South Africa, Botswana is in a much better position than its landlocked neighbors to cope with the drought-induced food production shortfall. The Ministry of Agriculture has estimated an overall cereal production level of 20,000 metric tons (MT), with stocks of 63,000 MT. Consumption requirements are estimated at 231,500 MT for the next year, requiring an import level of 224,900 MT (included in this import level are stock rebuilding requirements of 69,700 MT).

Botswana's maize imports will be handled by South Africa as part of South Africa's overall maize imports. The Government of Botswana is looking into commercial purchases of 44,100 MT of sorghum. Price and quality will be determining factors in the choice of the country from which the sorghum will be imported.

The Government of Botswana (GOB) has prepared a draft Aide Memoire (which was shared with the team) on the food situation. Donors will be asked to assist by providing 11,000 MT of sorghum, 1,400 MT of beans/pulses, 1,600 MT of soybeans and 400 MT of vegetable oils. These commodities are requested primarily to extend the supplementary feeding program to all children under the age of five.

2. Internal Food Supply Management

Food which is imported will be distributed through commercial channels with a full pass through of the costs of this food. Drought relief will be through a labor based relief program (public works) which will primarily be a cash for work program, which the government plans to make self-targeting through its determination of the wage rate. In addition, supplementary food will be distributed to vulnerable groups and all primary school children.

C. CONCLUSIONS.

The Government's approach to meeting food needs during this drought is to provide a wide, intensive, rural public works program and supplementary feeding for all children under-five. In addition, there will be no restrictions on imports of grain by the private sector traders and millers, and all costs will be passed on to consumers through commercial sales.

D. RECOMMENDATIONS:

- Donors should assist in meeting supplementary food needs for vulnerable groups.
- Technical assistance should be provided for organizing and supervising labor based relief programs.

III. WATER.

A. BACKGROUND.

During the 1987 drought, the Government set up emergency water supply programs in eighty-two villages. This along with previous experiences have enabled central authorities to engage in an organized planning process for drought response in 1992.

This process incorporates a strategy already in Botswana's national development plan.

B. FINDINGS.

1. Quantitative Estimates of the Drought's Impact on Water Availabilities.

Quantitative estimates of the impact of the drought have not yet been developed (e.g., affected population, financial requirements). Most of the villages and seventy percent of the total population rely on ground water. The Okavango River is currently flowing about twenty percent above normal, but since rainfall in the Delta has been low, potential recharge is expected to be nullified.

The most severe impacts may be seen on village water supplies in the river valleys on the edge of the Kalahari, an area with chronic problems not associated with this drought. Maun (population 15,000) is one such center, chronically affected by not only seasonal shortages, but also saline ground water.

From ground water monitoring data, however, it appears that no significant countrywide effects on ground water levels have yet been experienced from the current drought. Slow recharge rates in most cases, cause average time lags of two to three years before ground water levels are affected. Areas dependent on annual recharge, however, such as Molepolole (population 37,000) are currently impacted. Two other villages in the southeast (Moshupa and Mochudi, population of 37,000 together) are also affected, with plans for transporting 250 cubic meters of water per day to Moshupa. Restrictions on watering of lawns, washing cars, and hose connections have been instituted.

2. Measures being considered by the Government to Deal with the Impact of the Drought.

In the water sector, the Government is considering the following measures to deal with the effects of the drought:

- accelerating the implementation of water projects;
- where feasible, utilizing labor-intensive construction techniques to generate local employment, thereby enhancing local purchasing power;
- channeling financing to the district level, so that emergency measures reflect local decisions;
- streamlining tender procedures for private sector contracting by establishing uniform procurement rates;
- targeting projects that serve the greatest population and exhibit low per-capita costs;
- maintaining subsidies where necessary to expedite

implementation;
 -- continuing the provision of safe drinking water in areas with existing schemes, without concern for cost recovery;
 -- if necessary, bowsering water at zero cost to the beneficiaries; and,
 -- if capacity allows, providing one extra borehole per village as a safety margin.

A significant constraint to implementing of these measures in the water sector, however, is the shortage of trained personnel, primarily at the lowest level of technical, management and supervisory skills.

C. CONCLUSIONS.

Although the national declaration of drought occurred relatively late (29 March), coping mechanisms in the water supply sector are rapidly being mobilized at the central level to complement those in operation at the local level. Financial resources appear adequate to meet the additional requirements. Shortage of trained technical people could affect implementation of the Government's response in the water sector.

D. RECOMMENDATION:

-- Technical assistance should be provided to assist the government to implement its response to the drought.

IV. HEALTH.

A. BACKGROUND

The population growth rate is 3.4 percent with approximately 50 percent of the population aged 15 years or less. The infant mortality rate (IMR) for the period 1983 to 1988 was 37 per 1000 live births. There is no significant difference between the urban and rural IMR. There is a clear difference in infant mortality by educational status. The childhood mortality rate is 16 per 1000 live births.

The national nutritional status, using weight-for-age, has showed no significant changes since 1989; the 1990 under-five prevalence for weight-for-age under the 80 percent standard was 15 percent. The major causes of outpatient morbidity, 1988, for all age groups were respiratory infections (29.7 percent), symptoms, signs and ill-defined conditions (9.5 percent), diseases of the digestive system (6.9 percent), skin infections (6.4 percent), accidents, injury and poisoning (4.8 percent). In Botswana only mild to moderate malnutrition is seen.

Micronutrient deficiencies are not a major health problem, with some iodine deficiency in the Kalahari.

FINDINGS

1. Health Effects of the Drought.

There is no quantitative data available that indicates there has been a direct health impact from the drought. There have been no reported increases in communicable diseases, skin diseases or immunization preventable diseases.

2. Current Surveillance System.

Information collected under the monthly nutritional surveillance system includes the weight of the under-five, the number of underweight, and the number that fail to grow. Any child that is below the 80 percent standard weight-for-age is put into the supplementary feeding program. Children under the 60 percent standard weight-for-age are hospitalized for direct feeding. At the health outpost level, the clinic data is used for screening and referral. The number of health clinics reporting surveillance data has been variable, between 70-90 percent. The mobile stops have the lowest coverage with problems including the loss of reports and non-reporting when mobile clinics are not conducted due to transport constraints. The information is reported to the district drought committee to determine allocation of resources and any intervention programs that are necessary.

The other surveillance system is the early warning system of which the Ministry of Health and the Nutrition Unit are members and participate in the nationwide tour that is done as a part of the review. It includes a qualitative and quantitative review of the nutritional status of each district, which is summarized in a report that is submitted to the Interministerial Drought Committee for action by the GOB.

3. Current Supplemental Feeding Programs.

Botswana has permanent supplemental feeding programs (SFP) for primary school children and medically selected vulnerable groups. The latter include children under five who are below the 80 percent standard weight-for-age, pregnant and lactating women where it is medically indicated, and outpatients with tuberculosis. The primary school program provides a cooked lunch for the school week and take home rations for weekends and school holidays.

As a result of the declaration of a drought, the definition of vulnerable groups has been extended to cover all children aged under five who will be eligible for the SFP. Weaning food is

being introduced as part of the SFP for children aged under three; it will provide 40 percent of the recommended energy intake, one third of the recommended daily allowance, and half the protein requirements.

C. CONCLUSIONS.

Botswana, with its expertise in dealing with the 1982-1988 drought, and its established SFP, including the primary school feeding and the destitute program is well prepared to prevent any adverse health outcomes as a result of the drought. In fact, the nutritional status of the under fives improved during the last drought as a result of the targeted feeding programs. Botswana also has adequate resources to procure additional pharmaceutical and vaccines that may be necessary as a result of the drought.

D. RECOMMENDATION:

-- Donors should support the supplemental feeding program as a means of averting adverse impacts of the drought on the health situation in the country.

V. ROLE OF NGOS.

A. BACKGROUND.

The Government of Botswana has relied very little on the services of NGOs during the past drought relief and recovery efforts. Although Botswana is drought-prone, the Permanent Secretary for Finance spoke confidently of drought-proofing rural areas in the future.

B. FINDINGS.

In response to the current drought, the government will only be administering food to those populations described above as vulnerable groups. It will provide labor-intensive work programs in rural areas and public works programs in the urban and peri-urban areas as prescribed under its National Developmental Plan activities. It sees no role for the NGOs in these projects.

The GOB has insisted that NGOs confine project areas to those as defined by Village Development Committees. World Vision International, for example has 17 such projects under its Children's Sponsorship Program, including nursery schools, pit latrines, poultry, and household gardens. The Botswana Red Cross, which collaborated with the Government in past relief projects, will again work with the government on this emergency. The Lutheran World Federation is providing some technical assistance in engineering. There are Peace Corps volunteers carrying out village level projects.

C. CONCLUSION.

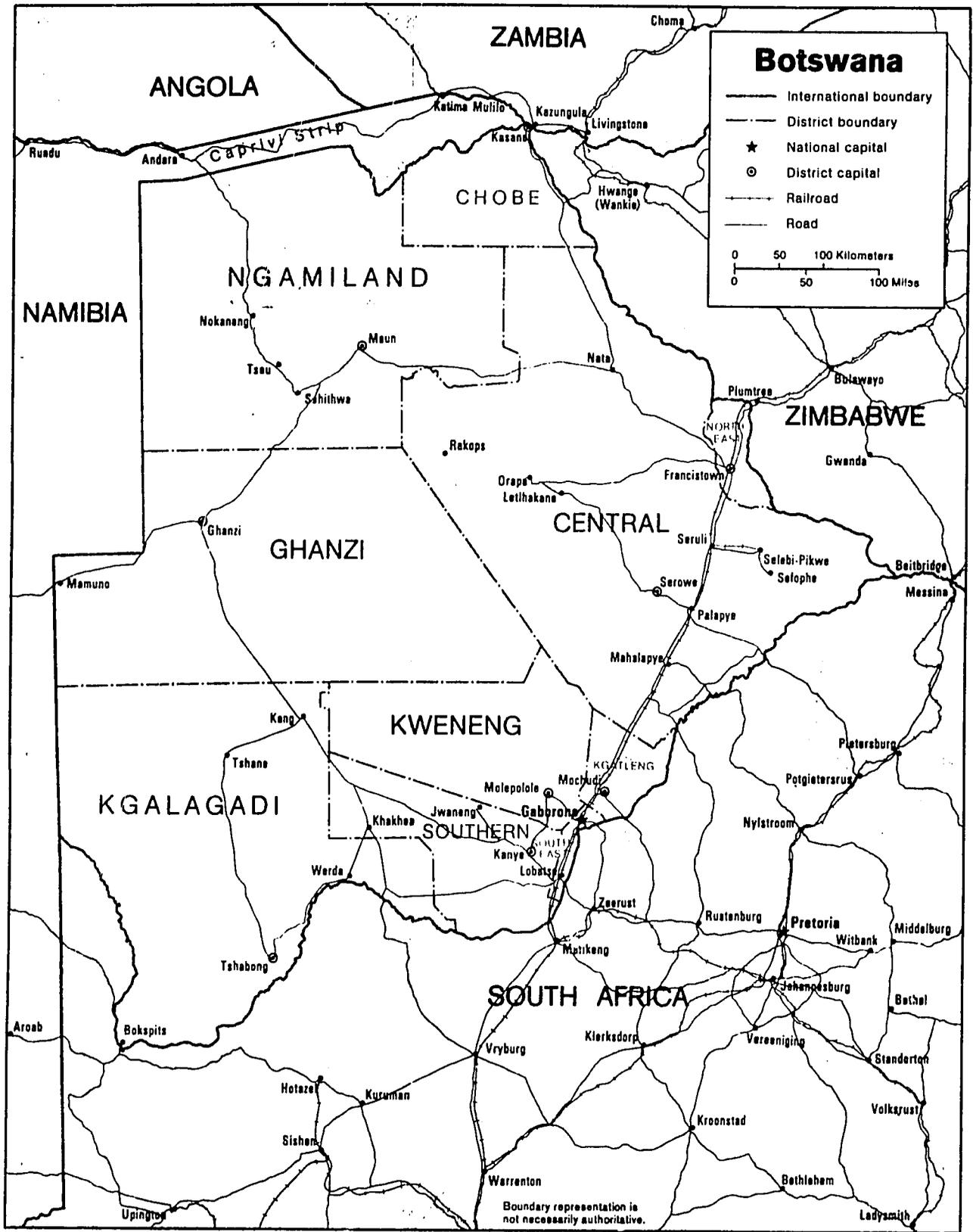
The GOB seems confident that the drought relief response plan is progressing and is committed to a greater emphasis on self-reliance for at risk people. The role of the NGOs may be to enhance that effort through their own village level projects.

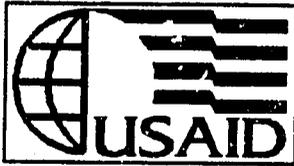
D. RECOMMENDATION:

- NGOs can assist government's efforts through technical assistance in organizing and supervising of activities in the water sector and the labor based relief program.

BOTSWANA CONTACTS

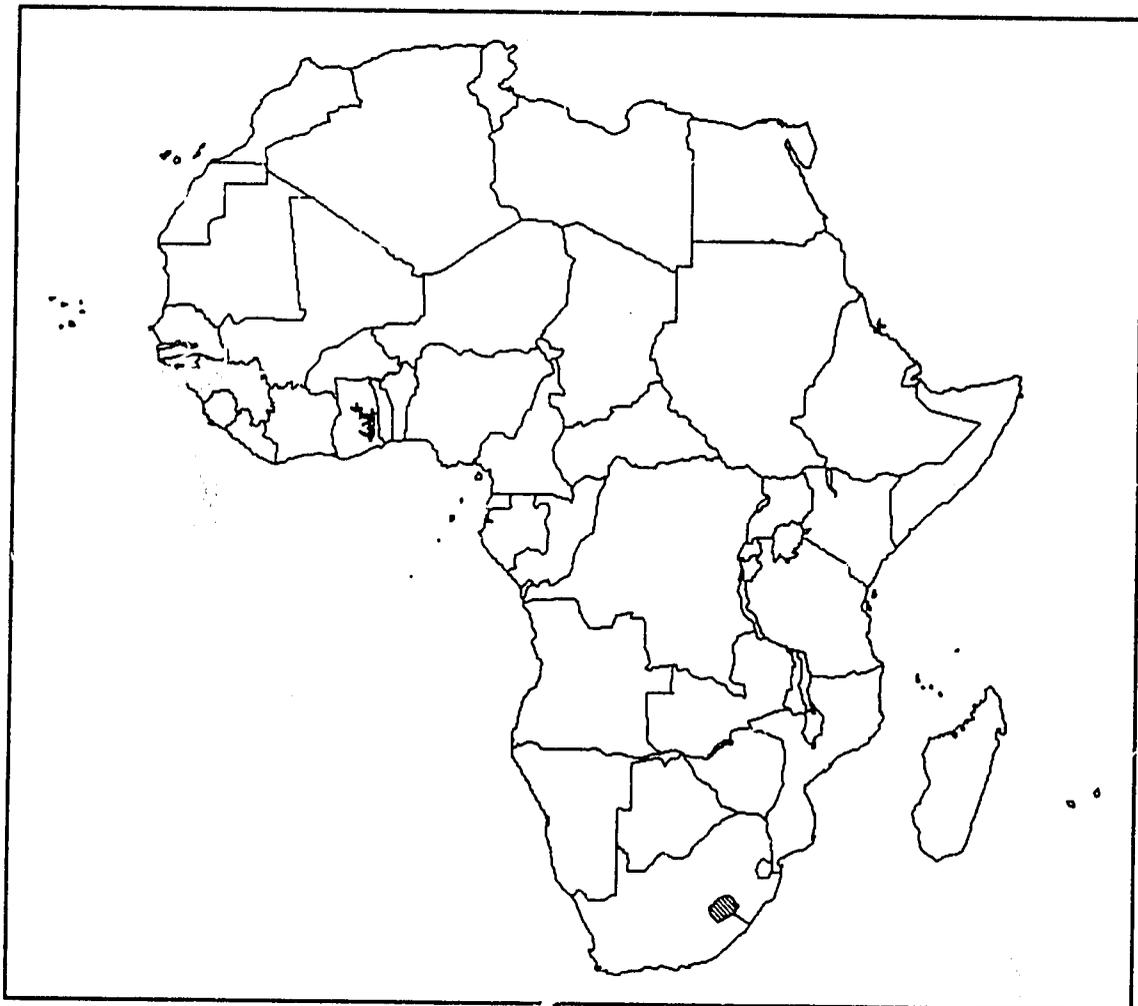
H. Handler	Director, USAID/Gaberone
D. Passage	U.S. Ambassador
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Office of U. S. Foreign Disaster Assistance
Bureau for Food and Humanitarian Assistance
Agency for International Development

Southern Africa Drought Assessment Country Report



LESOTHO

LESOTHO**I. INTRODUCTION.**

Lesotho is a small mountainous country located within the geographic boundaries of the Republic of South Africa (RSA). Most of the arable land, and therefore the population, is concentrated in the lowland and foothill areas in the western part of the country. The dramatic political, social and economic changes occurring in South Africa have significant repercussions for Lesotho.

Lesotho is suffering from a second year of drought. In 1991, 40 percent of the harvest was ruined by drought and this year 65 percent was decimated. Estimates are that 300,000 to 500,000 people will be affected by the drought. The Government of Lesotho (GOL) declared a national disaster on March 27, 1992 and appealed to foreign donors for emergency food aid. The GOL announced a nearly \$10 million drought relief program, a significant amount considering the restrictions of the IMF adjustment program and the small size of Lesotho's economy. The GOL and donors are concerned that a significant increase in the cost of imported commercial maize will present a financial burden for the GOL which could derail the structural adjustment program.

The recession in RSA has caused unemployment and loss of remittances for the Basotho mine workers - remittances from the Basotho working in RSA on average accounts for 52 percent of the GOL's national income. Estimates are that 8,000 miners have been let go in the past twelve months, but an estimated 100,000 remain employed in the mining sector. Returning miners find no work in Lesotho and their presence is causing an increase in social unrest. Unemployment in Lesotho ranges from 40 to 50 percent. Half of Lesotho's 1.8 million people live below the poverty line.

The most vulnerable people and therefore those which could suffer most from the current drought are the female-headed households and the unemployed. Also, the direct impact of the drought on farming households is estimated to be in the region of 80,000 households that own land or a combined total of close to 130,000 with both land and livestock (1986 census).

The country is governed by a Military Council and a Council of Ministers. Local communities are under the jurisdiction of hereditary chiefs. Elections for a civilian government are scheduled for late in 1992.

II. FOOD AND AGRICULTURE.

A. BACKGROUND.

This is the second year of drought for Lesotho. Last year's harvest was 60 percent of normal leaving little, if any, reserves at the household level going into this year's drought. According to the World Food Program, Lesotho's import requirement for 1992/1993 is estimated at 297,000 MT.

B. FINDINGS

1. The Cropping Season.

The 1991/2 cropping season started off well with very good rains through early December. Planting was extensive, covering larger acreage than normal. However, the rains ended abruptly in early December just when the crops were reaching the critical tasseling and grain filling stages of development, and a long hot spell, recording the highest mean temperatures of the last thirty years, set in. As a result, maize crops wilted and died. Maize production was 16 percent of the national requirement. Sorghum performed better under the stressful conditions, but suffered as well. In an immediate response to the drought, the Ministry of Agriculture advised farmers to cut the stalks and leaves of the dead maize to try to minimize losses.

2. Crop Production Forecasts.

The 1991/2 cropping season began well and farmers were encouraged to increase areas under cultivation. At the beginning of the season, estimated yields were 155,000 MT for maize and 16,566 MT for sorghum. However, the dry, hot spell in January and February caused massive crop failures throughout the country, particularly in the southwest and in the major maize producing areas of Berea and Leribe. The most recent production forecast (early April) for the 1991/2 cropping season projects a level of 38,000 MT for maize, 18,000 MT for wheat and 8,263 MT for sorghum. Overall, production of maize is less than 35 percent of average and production of sorghum is significantly lower. In similar climatic zones sorghum fared better than maize under drought conditions. The country will be forced to import almost 90 percent of its food requirements.

3. Food Import Requirements.

The FAO/WFP report estimated cereal requirements for Lesotho for 1992/3 at 410,000 MT. With local cereal production estimated to be only 81,000 MT combined with 32,000 MT in stocks, 297,000

MT will have to be imported. Of this, commercial imports are expected to be 222,000 MT. WFP is appealing for 75,000 MT of relief food aid for distribution through vulnerable group feeding programs and food for work for a target population of 170,000 persons.

Normally Lesotho could rely on maize produced in South Africa to fill any import requirements. This year with South Africa also hit hard by drought, imports will have to come from outside of the region. The South Africa Maize Board has figured Lesotho's commercial import needs in their plans for this next year.

TABLE 1: FOOD NEEDS ASSESSMENT (JULY 92 - JULY 93)
 (MT)

Total Consumption Needs	410,000
Domestic Production	81,000
Stocks (7/1/92)	32,000
Gap	297,000
Estimated Commercial Imports	222,000
Estimated Food Aid Needs	75,000

 (Source: WFP/FAO, April 15, 1992)

4. Impact of the Drought on Vulnerable Groups.

This is the second year of drought in Lesotho which means that food and income reserves have already been drawn upon before the current production year began.

This year, once again, most small farmers have lost all their corn crops. The impact of the drought on livestock is not yet visible, but with the poor grazing conditions and lack of fodder, significant losses are expected. The combined effects of harvest and animal losses will impoverish the small farmers who are borrowers from credit institutions. Farmers will have to sell their livestock to offset crop losses and do it before animals die on the hoof. As in other countries in the region, the loss of animals will affect draught power for next year's planting.

Donors and the GOL are concerned that if the higher costs of imported corn are passed on to the consumers, many will be unable to buy sufficient food, and even more people will require emergency food distributions.

USAID/Lesotho has initiated a poverty mapping exercise which

will assist in establishing a distribution plan for the vulnerable groups and form the basis for the WFP targeted emergency assistance program.

5. Existing Food Aid Programs.

There are already on-going food aid programs in Lesotho which should be used to channel additional food to needy people this year.

a. WFP Food for Work.

WFP has an ongoing food for work (FFW) program. The FFW program concentrates on building rural roads, reforestation and soil and water conservation activities. The FFW activities provide rations for approximately 6,000 workers per month, assisting roughly 25-30,000 people, based on an average family size of five. The USG is currently contributing 1,220 MT Title II cornmeal and 894 MT Title II vegoil to WFP.

b. WFP School Feeding Program.

The School Feeding Program is in a transition phase. The transition will develop self-reliance programs which promote school and small home gardens. The Peace Corps has approximately 30 volunteers assigned to this activity and may want to expand this program because of the drought.

The school feeding program had serious problems with food supply shortages (sometimes as little as 60 percent of the required amount in any one year) and a growing problem with transport. Nevertheless, it has contributed significantly to the nutritional well-being of school children.

c. European Community Monetization Program.

The European Community (EC) has an ongoing monetization program in Lesotho, providing approximately 8,000 MT of wheat per year. The local currency generated from the sales are used to support the internal transport, storage and handling of the WFP programs. In response to the drought, the EC has agreed to provide an additional 4,000 MT of wheat for Lesotho in 1992. Since the wheat, which was to have been provided in 1991, will only be arriving shortly, the EC will be providing approximately 20,000 MT of wheat in 1992.

6. Coordination of Food Aid Programs.

The GOL has set up a Food Management Unit (FMU), which is located in the Ministry of Agriculture, and is responsible for managing and coordinating all donor food aid programs in Lesotho. The FMU is already providing quarterly reports on the

WFP-supported food programs. However, FMU's capacity is limited and it may need some additional technical assistance.

7. Food Aid Programs to Address the Drought.

The local WFP office is working with the GOL to design an emergency food aid program targeted towards families most seriously affected by the drought. In addition to expanding some of their food for work (FFW) programs, they are also considering a targeted feeding program.

Under FFW, the GOL and WFP believe that an expansion of activities is possible from the current 6,000 to up to 35,000 individuals. Food distributions under the program would be 2.5 kg per day per person based on an average family size of five persons and taking into consideration Lesotho's cold climate, which requires a higher caloric intake. In addition, a small ration of pulses and vegoil would be supplied.

The vulnerable group feeding program would be undertaken in seven to nine of the 19 health service areas of the country and would serve approximately 120,000 people for one year. The areas targeted would be based on the results of the USAID-funded survey mentioned above. WFP proposes that the program be administered through hospitals, clinics, NGOs, and the Red Cross. Most of the hospitals and clinics belong to the Private Health Association of Lesotho (PHAL), which is a church based group. The EC is funding a rapid assessment study of the capacity and interest of various NGOs to manage a drought relief program, including targeting feeding. A total of 6,600 MT of cornmeal is needed plus vegoil and possibly some milk powder.

B. CONCLUSIONS.

Lesotho is experiencing a drought of significant proportions, beyond the capability of the government to provide fully for the numbers affected, and will require significant increases in the numbers of people benefitting from emergency food aid programs.

C. RECOMMENDATIONS:

- Donors should move quickly to support the WFP emergency food for work and vulnerable groups feeding programs.
- Donors should continue to support efforts at improving nutritional surveillance and monitoring of indicators (e.g. market prices of basic grains, alternative foods, livestock) to improve targeting of food aid interventions.
- Donors should consider the funding of a food logistics

expert in the FMU to help with the transport, storage and distribution of food aid commodities.

- The GOL and donors should consider providing the most needy farmers with seeds and possibly fertilizer for the coming season. One avenue that should be explored is the utilization of counterpart funds to offset the cost of such a program.
- Donors should explore the possibility of using local currencies generated in monetization programs to pay the additional ITSH costs of any expansion of WFP activities. Local currency should also be used to support NGO activities which are targeted towards drought relief activities. Some funds could also be used to purchase foods locally or provide seeds.

III. WATER.

A. BACKGROUND.

1. Urban Water Supply

Urban water supply is the responsibility of the Water and Sewerage Branch in the Ministry of Water, Energy and Mining. The Water and Sewerage Branch has constructed thirteen piped drinking water supply systems for Maseru and the ten district capital cities.

2. Rural Water Supply

Rural drinking water supply is the responsibility of the Village Water Supply Section (VWSS) in the Ministry of Interior. The section's goal is to provide 30 liters per person per day at a distance not to exceed 150 meters from each household. For spring capture systems, the number of users per collection point is not to exceed 150. Boreholes are designed for a maximum of 75-100 users.

3. Urban Sanitation.

Urban sewerage development is the responsibility of the Water and Sewerage Board of the Ministry of Interior. Sewerage systems exist only in the towns and cover only a small portion of the urban population. On site sanitation in urban areas is being implemented by the Urban Sanitation Improvement Team (USIT) also within the Ministry of Interior.

4. Rural Sanitation

Rural sanitation is the responsibility of the National Rural

Sanitation Program under the Ministry of Health. The program encourages construction of ventilated improved pit (VIP) latrines throughout the rural areas of the country. Coverage (1990) ranges from 65 percent of households in the lowland areas to less than 10 percent in more remote mountain areas.

5. Soil Conservation.

Cattle and goats are found in numbers generally thought to be up to 40 percent above the carrying capacity of the land. Much of the land is very hilly with steep slopes quite common. Rainstorms are generally violent with heavy, highly erosive rainfall common throughout the rainy season. Sheet and gully erosion are serious problems with deeply incised gullies dominating much of the landscape.

B. FINDINGS.

1. Urban Water Supply.

The Water and Sewerage Branch indicates that they are facing critical shortages of water in eight out of their thirteen piped water systems and are already imposing rationing to conserve water. The situation in Maseru is especially critical. Existing water in the city's reservoir is sufficient to last only 70 to 80 days and the river is almost dry. Ground water resources in the Maseru area are very poor. The branch intends to impose water rationing in Maseru if significant rainfall is not received.

2. Rural Water Supply.

Rural water supply is approximately 70 percent from spring capture systems and 30 percent from boreholes. Spring captures have been funded by the British, Swiss, German, American and Irish governments, CARE and others. Boreholes fitted with Mono or Moyno hand pumps have been largely supported by the U.N. Capital Development Fund (UNCDF). Boreholes are drilled on a tender basis by private drilling companies. The Ministry estimates that just over 50 percent of the rural households have access to improved water supply.

3. Rural Water Supply Maintenance.

Operation and maintenance are largely the responsibility of district level staff. Village residents are responsible for notifying the district teams of breakdowns. The district aims to complete repairs within two weeks of notification, but response time averages approximately 3 weeks. Based upon notifications by village residents, it is estimated that 30 percent of the rural water systems are in need of repairs at any given time. Lack of timely notification by rural water system users is identified by

VWSS as a serious constraint to timely maintenance of the systems.

4. Impact of Drought on Water Supply.

Seasonal reduction in the flow of springs is expected in the dry season in all years. VWSS, therefore, monitors spring yield for three years from springs considered for development for drinking water supply. Peace Corps volunteers are, however, already reporting dry springs and boreholes during what would normally be the end of the rainy season when water levels should be high. Reduced flow is causing problems in the district capital of Thaba Tseka. Last year was also a dry year in many of the same areas impacted by this years drought.

The Ministry of Health as well as rural residents interviewed by this assessment team are reporting a very large increase in the incidence of scabies, due to reduced quantities of water available for bathing. The Ministry of Health is expecting an increase in typhoid and diarrheal diseases as people revert to traditional, unprotected water sources as improved sources dry up. There does not appear to be evidence of increased incidence of these diseases at this time.

The Ministry has not developed an emergency response plan in case of water shortages caused by the drought. The Ministry does believe it would be possible, however, to move staff from lesser affected districts to hard hit districts to implement an emergency drought program.

5. Sanitation.

The drought may effect some of the urban sewerage systems if low flow conditions in those systems lead to deposition of material in the sewerage pipes. The drought is not expected to have a large impact on the urban latrine or rural sanitation programs in the country unless manpower is diverted away from latrine construction activities.

6. Soil and Water Conservation.

Food for work in soil and water conservation activities were begun under Catholic Relief Services (CRS) but have been reduced to only 30 participants since the discontinuation by CRS of its food for work activities.

The extremely dry conditions, especially in the Mafateng, Mohale's Hoak and Quthing areas, have had a severe negative impact on agricultural and grazing lands. Reduced soil moisture has made the land surface much more vulnerable to wind erosion and to water erosion when the next rains arrive in the spring. Overgrazing, combined with this years reduced vegetative cover,

will compound this effect. Land devastation by livestock is likely to be especially acute around the few surface water sources that do not dry up completely.

C. CONCLUSIONS.

Because of the drought residents of Lesotho will face severe water shortages in the coming months. Food for work programs in the areas of soil and water conservation will assist in alleviating both the water shortage and the unemployment rate in the country.

D. RECOMMENDATIONS:

- Water rationing should be introduced in urban areas at the earliest possible date along with strict enforcement in all threatened areas.
- Counterpart funds from the sale of donated food should be made available for emergency groundwater exploration and/or borehole drilling programs in areas hard hit by the drought.
- Possibilities for bringing water from Ladybrand, RSA for Maseru should be explored in anticipation that both surface and groundwater resources will be exhausted in the near future.
- The Village Water Supply Section should develop a response plan in case certain areas require emergency assistance due to the drought. Monitoring ground water levels in boreholes and flow from springs used in the network systems should be started immediately.
- To prevent epidemics, counterpart funds from the sale of donated food should be made available for local purchase of drugs in treating typhoid or diarrheal diseases.
- Soil and water conservation activities should be greatly expanded on a food for work basis. These activities should include development of additional surface water supplies, prevention and repair of gullies (gully plugs) and tree planting.
- The numbers of cattle and goats should be reduced to sustainable levels through an organized government-led offtake program.

IV. HEALTH.

A. BACKGROUND.

There are two main health care providers in Lesotho. The Ministry of Health and the Private Health Association of Lesotho. Health coverage in the country is mainly through a system of hospitals and health centers. Several other groups provide for additional health assistance such as the Lesotho Flying Doctor Service and the Lesotho Red Cross.

Health Programs have focused on training community health workers, accelerating child immunization, supporting pre and post-natal services and family planning services for women. Programs have also focussed on improving the diagnosis and treatment of TB, regularizing the treatment of diarrhoeal diseases and Acute Respiratory Infections (ARI's). Other activities are combatting malnutrition, supporting a rural sanitation program and educating people on the threat of AIDS.

The majority of people living in lowland Lesotho now have access to latrines (65 percent) and improved water supplies (60-80 percent). However, the mountain areas are still very poorly served. Urbanization in Lesotho has continued since 1986 and has led to growing peri-urban areas that are often overcrowded and without adequate sanitation and water facilities. On average about a quarter of these households are headed by females.

B. FINDINGS.

1. General Health Conditions.

There is no reliable up-to-date data on infant or child mortality rates for Lesotho. The main diseases that contribute to infant mortality are nutritional deficiency, gastroenteritis, acute respiratory infections and perinatal complications. Diarrhoeal diseases are highly seasonal but considerable success has been achieved in the use of oral rehydration therapy programs. During the past four years, immunization has had a dramatic effect on the incidence of immunizable disease with reductions in mortality from diphtheria, tetanus, polio and measles. The maternal mortality rate has dropped over the past decade to 220 per 100,000 live births. The prevalence of Sexually Transmitted Diseases (STD's) seems to be rising.

2. Availability of Medical Supplies.

There appears to be no problems with the procurement and distribution of medical supplies.

3. Impacts on Nutrition.

At the present time there is little or no evidence that increases in malnutrition have occurred due to the drought.

4. Existing Health Care Delivery Systems

There are a variety of special programs on primary health care including:

- a. the expanded program on immunization has had a high degree of success in controlling the major immunizable diseases but the slight drop in levels of immunization in the past year is of concern, especially because of the potential health impact of the drought.
 - b. the Control of Diarrhoeal Diseases Program is part of the Combating Childhood Communicable Diseases (CCCD) Project, designed to train health center staff, village health workers and parents in the recognition of dehydration and the control of diarrhoea by using oral rehydration therapy.
5. Child Nutrition and Household Food Security Project.

An integrated approach to tackle the problems of child nutrition has been started through the Child Nutrition and Household Food Security Project. The Program has a multi-sectoral approach and includes non-governmental organizations.

The program's aims are to reduce the prevalence of malnutrition in children under two years of age from 30 percent to 15 percent and to reduce the hospitalization rate by 50 percent. The program concentrates on two of the areas where the worst malnutrition occurs, Qach'a Nek and Quthing. It plans to achieve its objective by educating health personnel, extension agents, Village Health Workers (VHW), Traditional Birth Attendants (TBA) and parents in the basics of good nutrition. In addition, growth monitoring is encouraged and VHW/TBA's are issued scales and growth monitoring charts. Counselling will be provided in places where children do not thrive. Problems have arisen in regard to child malnutrition, especially when children are not fed often enough or are fed on thin porridge that fail to offer enough nutrients. It is hoped education and counselling will counteract these tendencies.

In terms of food security, women who do not have enough food for their children are encouraged to join food for work schemes. Advice and help are also given to groups of women trying to start income generating activities or communal gardens. In addition, the program works closely with the Government and various donors including UNICEF, to provide hammermills so that women need not spend so much time grinding grain and meal can be more readily available in the house. The development of Nutrition Committees from the village and up, helps to monitor progress.

The program has already done extensive training of health

personnel and is moving onto training the VHW/TBA's. However the program has encountered some constraints. These include the need for better coordination between the various agencies involved, lack of government personnel, especially a Nutritionist Program Officer, and sometimes lack of distribution of scales and charts due to lack of motivation or time at HSA and Health Center Levels. Because the program has only just become fully operational at community level, it is too early to assess the impact on the nutritional status of children.

b. School Lunch Program

Limited information is available on the nutritional status of school children. The only program which caters to this age group is the school lunches program which was initiated in 1960. The scheme increased from feeding children in two schools in 1960 to feeding children in over 1100 schools in 1988. The World Food Program provides food which is distributed by Save the Children Fund (UK).

An evaluation of the school feeding program was conducted and an assessment was made to determine the effect of the program on nutritional status. It was found that compared to non-participating schools, far fewer children suffered from severe stunting in the participating schools in the mountain and rural lowlands and fewer children were underweight in the foothill and rural lowland schools. The program did not seem to have an effect on emaciation (low weight for height).

6. Baseline Information - Health.

The general health status of Basotho children and the general population is not easy to assess due to lack of data. It is possible that some sick children are untreated or are treated traditionally and therefore are never reported. Health surveys, which may give a better picture, are rare and often study only one aspect of health. However, hospital data do give some idea of the prevalence of different types of the more serious causes of disease.

In 1988, two of the ten most common causes for child admission as inpatients were diarrhea and pneumonia. It is interesting to note that, as the child grows older, the cause of morbidity changes. Babies are particularly vulnerable to diarrhea, pneumonia and malnutrition. Because their movement is restricted they are less likely to suffer injuries and research shows that they are more likely to be washed regularly. As children grow older they are more likely to suffer accidental injury and be susceptible to water-washed diseases and skin conditions such as bacterial skin sepsis, scabies and cutaneous fungal infections, and eye diseases, such as trachoma.

7. Baseline Information - Nutrition.

Reliable data on the nutritional status of the Lesotho population is not available. Systems are in place to collect growth monitoring information but additional staff training and quality controls are needed.

However, a review of the Annual Child Welfare Summary Reports issued by the Health Statistics Unit in the Ministry of Health shows an overall improvement in the nutritional status of the children aged under five years in the years (1984 to 1990). The reports indicate that since 1984, the percentage of children weighing below 80 percent of the standard weight-for-age (under weights) has dropped from 18.2 percent to 12.7 percent. This report was footnoted with an important disclaimer: A large number of the pre-school children seem to be no longer attending clinics for growth monitoring and primary health care services.

8. Recent Nutrition Status and Evidence of Changes Related to Drought.

a. Population Changes:

Laid off workers from South African mines and commercial farms are returning to Lesotho. This is becoming an increasing concern due to increased demands on the health care system. Concerns were expressed about typhoid, which is endemic in Lesotho, as well as all types of STD's, including AIDS.

b. Clinical Observations:

Lowlands appeared to be extremely dry and dusty. Several people complained about skin diseases and not being able to afford health care.

c. Recent Nutrition Surveys:

Baseline data, such as it is, is available from 1990. Surveys are being planned but it appears that the current planned survey is too complex and would take a very long time to be analyzed.

9. Most Vulnerable of Populations.

The Ministry of Health, working with other organizations in the country, has identified the most vulnerable groups as pregnant women, lactating mothers, and children under five.

10. Nutrition Monitoring System.

At the present time, there is no system in place specifically to follow-up on the drought. However, a proposal has been developed to address drought issues and a growth monitoring system is in place. This system needs to be strengthened to provide helpful data in impact analysis.

C. CONCLUSIONS.

Lesotho should be a low risk country for major health consequences due to the drought. However, unless planned interventions are exercised, that category will change quickly and there could be severe malnutrition and needless death. Of immediate concern is the need to finalize a plan to assist vulnerable populations.

D. RECOMMENDATIONS:

- Donors should ensure that the plan to target vulnerable groups for food and water is implemented.
- Donors should ensure that appropriate medical supplies are procured and distributed to needed populations.
- Donors should support UNICEF's efforts in conducting a regional nutritional survey to obtain better baseline information on nutritional status of infants and children.

V. ROLE OF NGOS.

The Lesotho Council of NGOs launched an NGO Disaster and Humanitarian Relief Commission on April 15, 1992. Donors believe that NGOs will be particularly useful in identifying the most vulnerable households at the village level, and in assuring that assistance reaches them. The EC is funding a study of the capacity of various NGOs to manage drought relief programs.

VI. DONOR COORDINATION.

A. BACKGROUND.

Donors are expected to contribute to the drought relief program both within the proposed WFP program and in other programs requested by the GOL. Within the WFP program donors will be requested to supply pulses, vegetable oil and possibly other commodities to round out the rations. In addition, there is a need for about 8,000 MT of wheat to be monetized for the operation of the WFP program. Local currency generations will be used for tools for food for work and for the transport of food to rural areas. Preliminary indications are that the EC will supply this wheat as part of their response to the drought.

Beyond the WFP program there are several other programs which donors will be asked to respond. The GOL operates a mountain emergency food program to transport food into Lesotho's remote and vulnerable mountain regions for subsidized sales. Also, the Ministry of Agriculture has made a proposal for a crash program to produce winter wheat, involving loan forgiveness and direct grants to farmers. Finally, the GOL may propose additional feeding programs and or subsidized sales of food.

B. FINDINGS.

1. Technical UN/Donor Working Group.

A technical working group of representatives of USAID, FAO, WFP, and the EC has been established. This group will address and recommend approaches to targeting assistance and identifying NGOs for participation on assistance activities. It will also establish an information system on donor assistance and attempt to ascertain effects of the drought on the economy and on food prices the in mountain villages.

2. Expanded UN/Donor Working Group.

A larger group of donors, including the technical working group and representatives of UNDP, WHO, UNICEF, Ireland, Britian, Germany and South Africa are developing responses to the issues of food distribution and targeting and ration size. The group will also address the limited GOL capacity to respond to the drought, plans to assist those residents in mcuntain areas that will face higher food prices. The issue of political instability in November as the elections coincide with the time food shortages are expected to be at their lowest will also be addressed.

3. Government Task Force.

Donors are prepared to approach the Chairman of the Military Council to encourage the appointment of a task force to coordinate donor and government drought assistance.

4. USAID/Lesotho Actions.

USAID/Lesotho has initiated programs to identify the groups most affected groups by the drought. The first step was to have Peace Corps volunteers make surveys throughout the country to determine the impact of the drought at the household level. In addition, USAID has recently contracted a local consulting firm to conduct a more systematic survey of 213 villages to complement the poverty mapping exercise supported by USAID in 1991. All of this information will be useful in assisting the GOL and donors in establishing suitable selection criteria for identifying the most vulnerable group to target free distribution programs.

5. The World Bank.

The World Bank is considering amending an existing loan to Lesotho which could provide Lesotho with up to \$5.0 million for use in drought-related programs.

C. CONCLUSIONS.

The level of coordination and preparedness of the bilateral and multilateral donors in response to the drought is quite impressive. Given the limited capacity of the GOL to respond to the needs created by the drought along with the already difficult economic and political changes, donor assistance will be critical to ensuring the stability and welfare of the country.

D. RECOMMENDATIONS:

- Donors should respond quickly to the WFP emergency food for work and vulnerable groups feeding programs.
- Donors should continue efforts at monitoring the status of the most vulnerable groups to assist with the targeting of relief commodities.
- Donors should ensure that the plan to target vulnerable groups for food and water is implemented.

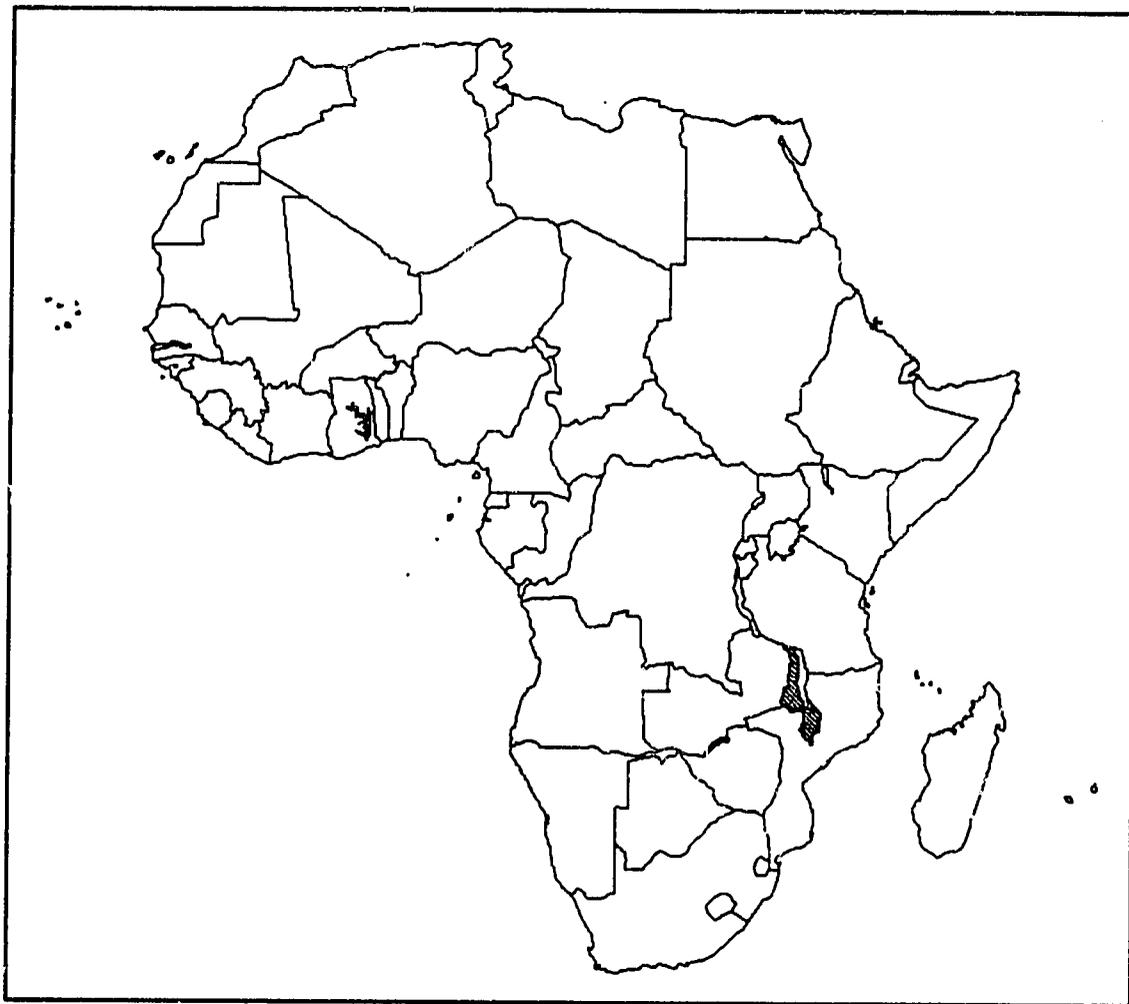
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Office of U. S. Foreign Disaster Assistance
Bureau for Food and Humanitarian Assistance
Agency for International Development

Southern Africa Drought Assessment Country Report



MALAWI

MALAWI**I. BACKGROUND.**

Malawi, like other countries in Southern Africa, is facing a severe drought, probably the worst of this century. In addition to the drought, Malawi is home to 1 million Mozambican refugees which are located in the worst of the drought affected areas. Being landlocked, Malawi is furthest away from the South African ports and will also need to use the ports of Dares Salaam and Beira to import its food.

II. FOOD AND AGRICULTURE.**A. BACKGROUND.**

It was clear to the assessment team that Malawi is facing a major food crisis as a result of the drought that devastated maize production, particularly in the southern and south-central parts of the country.

B. FINDINGS.**1. Magnitude of the Food Gap.**

The FAO/WFP Mission confirmed that upwards of 800,000 metric tons (MT) of maize production will be lost due to drought, and that large quantities of imports will be necessary to keep the food crisis from turning into an economic, political, and social catastrophe. The FAO/WFP Mission also recommended that a sizeable portion--perhaps even half--of the projected imports should be used for direct (free) distribution programs to households which will have little or no maize harvest, and which will have limited alternative access to food. As an indication of the full measure of the need for relief food, 40 percent (4.0 million) of Malawi's population are smallholders whose farms are too small to achieve household caloric self-sufficiency in normal years; 18 percent (1.8 million) have holdings so small that they were classified as the "core poor" by the World Bank's "Malawi Food Security Report" of 1990.

2. Meeting the Food Gap.

The Government of Malawi (GOM) has been slow to respond to the food gap because of the existing food reserve and the belief that donors would unilaterally react. Nearly half of the food imports will need to be through commercial channels, but to date there has been little known purchases of maize through these channels. The U.S. has provided concessional food through the

Section 416 and P.L.480 programs. A P.L. 480 Title I program for F.Y. '93 is also being negotiated at the present time.

3. Internal Food Supply Management.

The GOM has enlisted WFP and the in-country NGO community to organize a direct free distribution program in response to the drought induced food crisis. A task force under the direction of WFP has prepared a draft outline of a "master distribution plan" for both relief and market food. The outline is quite impressive, and bodes well for the prospective implementation of a successful food response to the drought emergency.

A key feature of the master distribution plan as outlined is that it deals not only with the direct free distribution component (including supplementary feeding of vulnerable groups) of the food response to the drought, but also with marketing. The plan calls for close coordination of the direct free distribution activities with the marketing of food, recognizing that maize and other food supplies should be dispersed widely and made available in markets throughout the country to the maximum possible, particularly in rural areas, to respond to whatever effective demand exists. The drafters seem clearly to realize the danger that food shortages in markets will put upward pressure on prices and reduce purchasing power further, thereby forcing more households into the ranks of direct free distribution candidates. Several difficult issues remain to be resolved, however, such as maize pricing and the role of the private sector in the marketing of imported grain.

3. Famine Mitigation Activities.

Small farmers and rural families (including those in refugee camps) are taking advantage of their access to other foods and are planting sweet potatoes, cassava, beans, okra, pumpkins, potatoes, cabbage, rape greens, and others. Some people have been reported to be eating wild foods, but some of this is regularly done by tradition. To promote greater self-reliance, small-scale projects in home gardening, and the expanded use of limited plantings of sorghum and millet, were also observed. NGOs which have worked in such areas are IRC, ADRA, Christian Service Committee, Wildlife Society, and the Rockefeller Foundation.

C. CONCLUSIONS.

The problem of acute food insecurity and its disastrous consequences for nutrition, health, and welfare at the household level, is potentially severe in Malawi, given the fact that the level of these physical quality of life indicators is low even in normal times for the country as a whole, and particularly for its

poor majority. However, a drought in Malawi should not have the same effects as one in the Horn of Africa. The country and its people, especially in rural areas, have resources they can tap to help cope with the drought. Similarly, there seems to be a trend among farmers in the areas hardest hit by drought to plant cassavas, yams, and other semi-arid quick-yielding crops, as a survival technique. There are also indications that households, which no longer have work to do in their fields, are aggressively seeking out other productive activities and income sources, such as handicrafts and petty commerce. Drought relief planners in Malawi seem to be coming to the realization that it is important to factor such coping mechanisms into the relief effort by ensuring that the food "ration" targets in the direct free distribution programs are not unreasonably high.

D. RECOMMENDATIONS:

- Donors need to ensure that food assistance is provided and is channelled to both the commercial and free (of charge) distribution programs.
- Donors should assist in the implementation of the WFP designed "master distribution plan."
- Donors should support NGO activities in the area of famine mitigation.

III. WATER.

A. BACKGROUND.

The joint GOM-donor-NGO water task force estimates that approximately 2 million Malawians will be severely affected by lack of water during the current drought. Rural groundwater supplies have been most severely affected.

B. FINDINGS.

1. Assessing Water Availability.

Although statistically reliable data are not available, a recent survey in one refugee camp (Mwanza district) indicated average daily per capita consumption rates of five to eight liters, down from a normal 25 liters (wet season) and 10 to 15 liters (dry season). In general, the non-refugee population does not enjoy more beneficial water supply conditions than those in this camp. Reconnaissance estimates are that 50 percent (about 2,000) of the country's shallow wells may be put out of service. Some 40 percent (about 3,500) of existing boreholes are unproductive and in need of rehabilitation, many because of

inoperative pumps. Though pump problems are not in all cases related to the drought, enhanced serviceability of boreholes will be important to supplementing reduced yields from currently productive ones. Surface flow measurements indicate that perhaps more than 30 percent of gravity piped systems will also be shut down, as opposed to over 15 percent of last year. Urban supplies are less critical, but conservation may be required nonetheless. No cutbacks in allocation to irrigated schemes have yet been noted and so the potential secondary effects of mass unemployment therefore have not occurred to date as have taken place in Zimbabwe. Levels of Lake Malawi are approaching lows recorded in 1983-84.

2. Institutional Response to the Drought.

The water task force of the drought response technical committee has collaborated in an intensive effort to identify the dimensions of the problem and to set priorities and action targets. Although the estimates may be conservative and more work is required, a reasonable and logical response process is in place. The immediate program calls for an investment of \$13 million for new borehole handpump development (60 percent), borehole rehabilitation (30 percent), gravity piped systems upgrading (6 percent), and shallow well construction (4 percent). This investment would enable the GOM to reach its design specifications for rural service levels for the severely affected population of two million. To target the most severely affected areas (primarily in the south), the IBRD has proposed a reprogramming of funds under an existing project for the rehabilitation of some 1,050 boreholes in the north and central regions. Although it has no direct implementation capability, UNICEF will apply a supplementary appropriation of \$1.5 million to new borehole development in Mangochi and Nsanje districts, and for water supply in refugee areas through Save the Children/UK and other NGOs. Technical capabilities and operational infrastructure reside with certain NGOs that have been active in the water section in Malawi, but financing has been limited.

Government has recognized that the proposed investment program is beyond its implementation capacity. The capital stock of the Ministry of Works is aging, and its personnel resources, especially at the technical middle-level, are dwindling. Moreover, the GOM understands that significant donor responses to the drought will incur lag times of several months. In order to mount an immediate reaction, strong consideration is being given to setting up, within the Ministry of Works, a humanitarian relief advisory committee, which could fast-track limited funds and provide no-cost technical assistance. GOM would like to use such funding for an NGO-implemented pilot project for the development of 10-15 boreholes in one location.

C. CONCLUSION.

While the water situation is serious, prompt action by both the government, the donors and the NGO community will avert a major catastrophe in Malawi, even though this may stretch the institutional capacity of the Government.

D. RECOMMENDATIONS:

- Donors should encourage close cooperation between the Government and NGOs in implementing the planned response to meeting the water needs as a result of the drought.
- The flow of refugees should be closely monitored because of its potential impact on water requirements for the refugee population and that of Malawian population.

IV. HEALTH.

A. BACKGROUND.

Chronic malnutrition exists in Malawi even without a drought. Due to the high population density and poor infrastructure in the country, access to primary health care is less than adequate. These factors could exacerbate the health effects of the drought.

B. FINDINGS.

1. Existing Sources of Information on Nutritional Status.

The Ministry of Agriculture has a food and nutrition information system, which could be a source of information on the nutritional status of children in the general population. This could be augmented by community based monitoring of the nutritional status of children using weight for height.

UNICEF is planning to fund a rapid nutritional assessment team based in Zomba. This team will collect anthropometric data, morbidity/mortality data on a bi-weekly basis in the most severe drought affected areas.

2. Health Effects of the Drought.

As an adequate nutritional surveillance system is not yet in place, reports on the health effects of the drought are qualitative and depend on individual reporting. For example, the International Rescue Committee (IRC) reports unseasonal increases in measles, kwashiorkor, and marasmus in the least 3-4 weeks in

Dedza, while the Blantyre and Chikwawa districts (where the drought has been severe) have not seen any unseasonal increases in either diseases or malnutrition-related problems. However, the perception of health workers in the areas visited is that there is very little food, and a major nutritional crisis could be imminent in the next 1-6 months if food and water are not made available to the affected populations.

3. Supplementary Feeding Programs.

The WFP currently provides annual supplementary feeding for approximately 80,000 children under five years of age, 37,000 pregnant women, 37,000 lactating women, and 2,100 children in the nutritional rehabilitation units. Children aged 3-59 months at less than 80 percent weight-for-age are eligible for this program. This program will be augmented to take into account increases in the vulnerable group population as a result of the drought.

C. CONCLUSIONS.

Strategies for dealing with the health consequences of the drought have not yet been developed. Increasing pressure on scarce water resources will also increase the risk of epidemics, e.g., measles, conjunctivitis, skin diseases, cholera, and typhoid. Increased emphasis on basic hygiene and designation of water sources for drinking and food will be needed, including a sensitive surveillance system. While supplemental feeding is necessary, an emphasis should be put on providing drought relief food for the affected population; otherwise supplemental food will end up being shared by the whole family rather than being used for the vulnerable individuals.

D. RECOMMENDATIONS:

- Donors should support the Cornell University rapid nutritional assessment survey.
- Donors should support supplementary food distribution in areas where emergency food distribution is also taking place.
- Donors should encourage the NGOs to assist in delivery of emergency and supplementary food distribution.

V. ROLE OF NGOS.

A. BACKGROUND.

In Malawi, NGOs are represented by the Council on NGOs (previously the Council for Social Welfare). Some 38-40 NGOs are registered with the Ministry of Justice--both international and indigenous.

B. FINDINGS.

1. The Role of the NGOs in Responding to the Drought.

The GOM has established a drought monitoring committee, which is the policy making body, under which a drought response technical committee (composed of GOM, donors and NGOs) is responsible for planning the implementation of the relief effort. This committee has four separate subcommittees responsible for developing action plans in the areas of: health, water and nutrition; monitoring and assessment; sourcing and procurement; and transportation and logistics.

The NGOs will probably be relied upon to the maximum extent to conduct ground operations, as most of them have the grassroots capacity to reach the most vulnerable people. Existing organizations will need to up-size projects and strengthen structures to meet needs.

NGOs are assessing the needs of their service areas, and, to some extent, are being assisted by the Center for Social Research of the University of Malawi in identifying geographic areas at greatest risk. NGOs have essentially decided to focus on the specific geographic areas and sections in which they are already active areas of service--in food distribution water and sanitation.

C. CONCLUSIONS.

The Malawi Red Cross with a staff of 8 Federation delegates, 262 full time staff, and more than 2,000 volunteers is probably the largest and most capable NGO involved in food distribution. It has the physical facilities, structures, and staff to carry out food distribution operations based on its experience in the Mozambican refugee camps since 1986 and its track record in responding to natural disasters (both food and non-food). Oxfam/UK has already indicated its intent to work through the Malawi Red Cross for food distribution.

ADRA, the Salvation Army, Caritas and LWF have also experienced interest in food distribution. The major concerns of these groups are where will they get the food, logistics, funding, and obtaining more trucks.

Groups interested in water and sanitation are Concern Universal, SCF/UK, Africare, World Vision International, Christian Service Council, and to a limited extent African and Emanuel International.

D. RECOMMENDATIONS.

- Donors should support NGO activities in both emergency and supplementary food distribution.
- Donors should assist the Malawi Red Cross, and the Federation which supports it, as it plays a central role in the GOM's food distribution plans
- Donors should support NGO's and U.N. agencies which have past experience in health care and water activities in Malawi

VI. REFUGEES.

A. BACKGROUND.

The drought throughout the whole Southern Africa region will have potentially devastating effects on refugee populations in these countries. Refugees are already in an extremely vulnerable position, dependent upon the good will of host governments and indigenous populations, and on the adequate functioning of transportation systems to bring them the food provided by the donor community. The nearly 1 million Mozambican refugees in Malawi find themselves at the end of the food queue, in a country which is itself last on the transportation chain.

Refugees in Malawi have no fall-back position or additional resources they can tap to cope with the drought until the situation improves. The majority of refugees already live in very densely populated camps with little or no space beyond that needed for a small hut and sanitary facilities. They are almost entirely dependent upon donated food.

B. FINDINGS.

1. Drought Effects on Refugees in Malawi.

Food requests by the Government of Malawi do not take refugee needs into account. The 800,000 MT of maize requested by the Malawi Government does not include the 180,000 MT that will be needed over the next year to feed adequately the nearly 1 million Mozambican refugees in this small country. These refugees have no national advocate for their needs in this crisis. Malawi, already weary of hosting refugees in times of relative plenty, will now face even greater pressure to take care of their own first, before considering the needs of the refugees. Disparities in the food supplies received by refugees and the local population, to the advantage of either group, have the potential for generating significant social unrest and conflict.

The drought affects not only the food situation but refugees' health as well. Vitamin A deficiency has already been noticed in some of the refugee camps. Lack of water also leads to a decrease in standards of sanitation and hygiene with a concomitant rise in skin diseases and diarrhea, which could happen in refugee camps in Malawi.

In the near term, at least, the refugee population in Malawi will continue to go up rather than down, as more than 5,000 Mozambicans are now reported to be entering Malawi due to the drought. The majority of the new arrivals come to the southern region, the area already hardest hit by the drought and lack of food.

C. CONCLUSION.

The food supply for refugees in Malawi is sufficient to last only until the end of June. If more donor food has not arrived by this time, refugees throughout the country could face a food emergency with disastrous consequences for their nutrition, health and welfare. With food on hand already at very low levels, the Malawi Government will not look favorably on requests to divert food from the Malawi population to feed refugees, who are frequently perceived already to be at an advantage over the local population because of their regular supply of food.

D. RECOMMENDATIONS:

- Donors should continue to monitor the food pipeline for refugees in Malawi and should ensure that it is full.
- Donors should provide food for the Malawian population so that it will not detract from refugee food needs.

- Donors should assist in the monitoring of the food, health and water availability/status for refugees and take necessary prompt action when required to ameliorate the situation.
- Donors should support UNHCR and NGOs working with the refugees in providing Vitamin A to respond to this identified need.

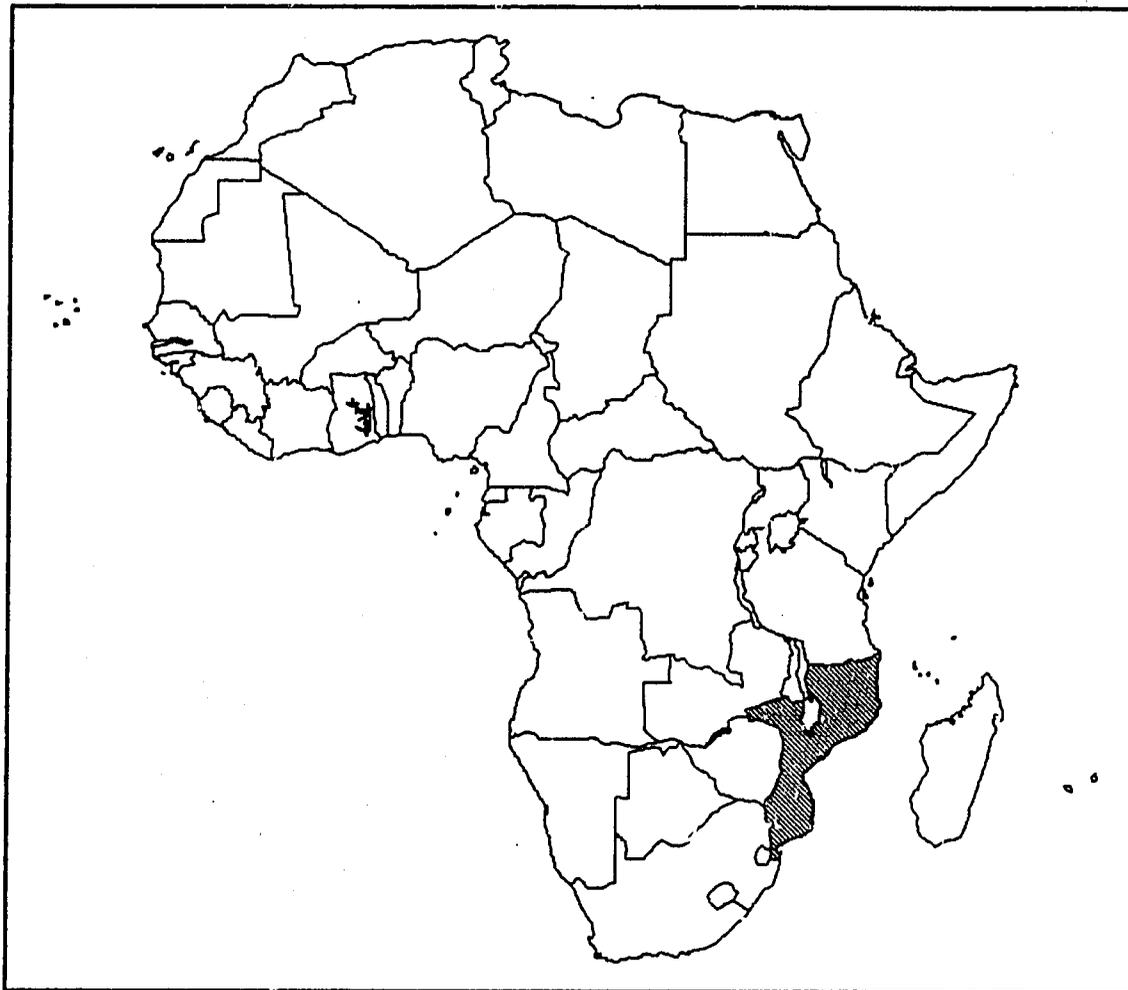
MALAWI CONTACTS

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Office of U. S. Foreign Disaster Assistance
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Southern Africa Drought Assessment Country Report



MOZAMBIQUE

MOZAMBIQUE

I. BACKGROUND.

Mozambique is embroiled in a long civil war that has created a tragic humanitarian emergency. Over 1.5 million people have fled to neighboring countries, mostly to Malawi. Even without the impact of drought, Mozambique requires nearly 300,000 MT of emergency relief food per year for over 1.8 million displaced and war affected persons, and relies on concessional maize imports for most of its commercial cereal requirements. Access to affected populations is difficult. Due to poor infrastructure and isolation caused by war, many populations must be served by airlifts. Humanitarian assistance has been reaching civilians in RENAMO-held areas only under the auspices of the International Committee of the Red Cross (ICRC).

Since 1987 the government of the Republic of Mozambique (GRM) has been pursuing reforms of its economic policies to restore growth to its economy. The thrust of this adjustment effort has been to liberalize the economy and provide an environment conducive to and supportive of private sector-led growth.

The effort has been supported by the World Bank, IMF, and the bilateral donor community. Financial support for this program over the 1987-1991 period totalled \$3.2 billion in grants and loans, the rescheduling of over \$2.8 of debt, and the cancellation of almost \$100 million of debt.

On-time and adequate distribution of food is extremely important, particularly along the Beira Corridor, to ensure that food passes through safely to Zimbabwe and Zambia. Past experience has shown that inadequate deliveries by the Departamento de Prevensia e Combate as Calamidades Naturais (DPCCN) to Mozambican populations along the corridor invited attacks by both FRELIMO and RENAMO troops on transit convoys. A more delicate issue related to security is who will feed the armies. It is certain that if they do not receive rations from their own supply sources, they will take from the civilian population.

The Drought Assessment Team visited affected areas in Manica, Sofala and Gaza provinces and met with numerous NGOs, international organizations, and GOM officials. It is clear that the drought in Mozambique is severe and that massive starvation will result if the international community does not move quickly to support the GOM's request for assistance.

II. FOOD AND AGRICULTURE.

A. FINDINGS.

1. Extent of the Drought.

Widespread and prolonged drought in southern and central Mozambique has had a serious negative impact on agricultural production, resulting in crop failures up to 100 percent in most of the traditional maize growing areas in Manica Province (Chimoio, Manica and Gondola). In Manica, Sofala, and southern Tete Provinces the impact of this year's drought is particularly severe as this is the second consecutive year of little or no harvest. No household stocks remain in these areas. In addition, the lowland areas of Zambezia Province have been affected.

2. Coping Strategies.

The difficulties in food production and gathering created by the prolonged civil war have strengthened coping strategies among the people of Mozambique; Mozambicans will thus cope with the ravages of drought better than other peoples in the region. Most rural households have no food security even in "normal" times and live continually in fear of RENAMO attacks. In response to the drought, farmers are planting sweet potatoes and cassava and are collecting wild leaves where they can. Moreover, the crop of cashews, which grow quite well in drought conditions, has been good so, for those farmers with diversified agricultural holdings, some income will be available to purchase maize. However, the extent of the drought and the numbers of people affected are of great concern. Coping strategies can rapidly break down as entire extended families are affected by food shortages and as the financial burden on the government (and donors who finance the reform package) increases with more concessional food imports and consumer subsidies.

2. Crop Production 1991/2.

Although good rains in late 1991 raised hopes for a good harvest, February rainfall was below normal in all parts of the country. Preliminary estimates for maize production (2/92) indicate there will be a harvest of only 250,000 MT compared to 327,000 MT last year, a 23 percent decline.

TABLE I: Production Estimates (Preliminary 2/92)

	90/91	91/92	% Change
Maize	327,000	252,000	-23
Sorghum/Millet	155,000	111,000	-28
Paddy Rice	56,000	42,000	-25
Beans	78,000	58,000	-26
Groundnuts	65,000	68,000	+ 5
Cassava	3,690,000	3,430,000	- 7

(Source: USAID/Maputo)

In its December appeal for food aid for the 1992/93 Marketing and Relief Cycle (May 1, 1992 through April 30, 1993), the GRM estimated that 1,830,000 displaced and/or affected persons would require relief food assistance. As a result of the drought, the GRM and donors estimate that an additional 1 million persons will need relief food assistance. This estimate is calculated by assuming there will be a 100 percent increase in the number of persons requiring relief food assistance in the five provinces south of the Zambezi River, and a twenty-five percent increase in the number of persons requiring relief food in the five provinces north of the Zambezi River where the drought has been less severe. Thus, the total number of persons requiring food relief assistance, who are either displaced or severely affected by the drought conditions and/or insurgency, is 2,827,200 persons, a 54 percent increase.

There have been some surpluses produced in Angoi in Tete Province in northern Mozambique. This area traditionally produces surpluses but, due to the inaccessibility of the area, is often unable to market that surplus. The U.N. is undertaking an ambitious effort with the EC this year to try to remove the estimated 7,000 MT surplus and redistribute it as relief food.

3. Long-Term Impacts of Drought.

River flows have dropped drastically and sea water is backing up into the rivers and irrigation ditches. This general salinization of coastal agricultural zones will have a long-term impact on production in those areas.

The effects of the drought on domestic production will cause farmers, who normally provide for themselves, to enter the domestic market. This will further cause the supply of locally produced commodities to the commercial markets to be reduced by up to 50 percent nation-wide, thereby raising the number of persons dependent on the imported food commercial markets.

Drying up of wells and boreholes throughout the country is causing distress migration of populations both within government held areas and from RENAMO held areas to government zones. As these populations tend to bunch along the Beira corridor or in peri-urban zones, or even move to neighboring Zimbabwe, Malawi and Swaziland, it can be assumed that less agricultural land may be farmed on an aggregate country-wide basis this coming year. Lack of seeds and tools are also constraints to small farmer production next year.

4. Food Aid Requirements, 1992/93 Market Cycle (5/92 - 4/93)

TABLE 2: Relief Needs (for Free Distribution)

Item/Commodity	Corn	Pulses	Vegoil	Total
Dec. Appeal	254,250	30,500	8,900	294,550
Est. Increase	106,294	10,777	1,421	119,487
Revised Total	361,174	41,277	10,321	414,037
% Increase	42.1	35.3	15.9	40.5

 (Source: USAID/Maputo)

Note: The December Appeal of the GRM estimated that 1,830,000 persons would require relief food. Because of the drought and insurgency, the revised estimate (3/92) is that 2,827,200 persons will be totally dependent on relief food. The above tonnages are based on a ration level of 350 grams of maize/person/day, 40 grams of pulses/person/day, 10 grams of vegoil/person/day.
 (Source: USAID/Maputo)

TABLE 3: Population Requiring Relief Food, by Province
 (Revised, 3/92)

Province	Total Population	Estimated Population Requiring Relief Food	Per Cent of Total Population
Cabo Delgado	1,269,027	140,000	11
Niassa	694,747	149,250	21
Nampula	3,157,910	326,250	10
Zambezia	3,334,423	621,875	19
Tete	1,122,428	150,625	13
Manica	836,778	211,000	25
Sofala	1,410,063	326,000	23
Inhambane	1,389,950	271,400	20
Gaza	1,329,457	272,800	21
Maputo	1,792,068	358,000	20
TOTAL	16,336,851	2,827,200	17

 (Source: USAID/Maputo)

TABLE 4: Commercial Market Needs:

Item/Commodity	Corn	Pulses	Vegoil	Total
Dec. Appeal	596,000	73,000	10,000	679,000
Est. Increase	394,400	7,600	5,900	407,900
Revised Total	990,400	80,600	15,900	1,086,900
% Increase	66.2	10.4	59.0	60.0

 (Source: USAID/Maputo)

TABLE 5: Estimated No. Persons Dependent on Commercial Markets

Urban/Cities:	4,147,000
Urban/District Capitals:	690,000
Rural Areas:	1,037,000
TOTAL:	5,900,000
Total as a % of Nat. Pop.:	36%

 (Source: USAID/Maputo)

5. Logistics.

Last year 500,000 MT of cereals were imported to and distributed within Mozambique. The drought has doubled the food import requirements to 1.2 million MT. Along with management and implementation problems, the issue of the ability of the Mozambique authorities to handle the needed food commodities must be addressed.

Internal distribution of commodities will also be problematic. The majority of food commodities for free distribution are channeled through DPCCN, which is receiving technical assistance from CARE International. The Logistical Support Unit (LSU) of DPCCN had approximately 270 operational vehicles in 1990, and was only able to deliver approximately 140,000 MT of food commodities. Delivering food to an additional 1 million beneficiaries will be an immense challenge. DPCCN is being encourage^d to work more intensively with private truckers to expand and improve the distribution network, but it remains to be seen how effectively it can mobilize and manage these resources.

Unfortunately, the drought comes at a time when CARE, which has provided technical support for the Unit for many years, is beginning to withdraw support and is attempting to change the role and function of DPCCN in the management of relief programs from operations to coordination. The donors have supported this move, but coming at this particular time, the transition may

cause disruptions in food deliveries.

Security issues remain the most important impediment to moving any relief commodities in Mozambique. The DPCCN trucking fleet transports commodities by convoys, frequently with a military escort. In addition to recent RENAMO attacks on convoys, there are reports that GRM military has begun attacking convoys as well.

The ports of Mozambique are able, in principle, to handle the additional amounts of food aid being considered, although additional bagging machines and vacuators may be required in Beira. However, port losses, especially at Maputo, remain extremely high, and have been a deterrent to donor food shipments. Despite the potential to handle all the incoming cargo, the Mozambican logistics system will be heavily stressed this year, and it is likely that the quantities of food required will not be moved.

Airlifts are continuing to a number of inaccessible areas of Niassa, Sofala, and Zambezia Provinces and can be expected to continue through the drought period unless relief corridors are opened. The greatest constraint to the airlifts is the tax charged by the GRM on the relief supplies moved.

Storage of incoming food should be manageable as DPCCN has approximately 125,000 MT of storage capacity.

C. RECOMMENDATIONS.

- Donors should move quickly to increase their food pledges to Mozambique and to call forward NGO program tonnages for FY 92.
- Donors should be prepared to assist in improving the transport and distribution of commodities. This may involve upgrading some port facilities, being more active in mobilizing transportation assets, and pressuring the GRM to improve accountability of relief distributions.
- Donors should seek to cooperate closely in the provision of food, and funds for internal transport, shipping, and handling (ITSH). Some countries can more easily supply corn and others the cash for ITSH costs.
- Donors should strenuously pursue every avenue to engage RENAMO in discussions on corridors of tranquility to enable relief food to pass into their areas. In the event corridors are negotiated, discussions between the ICRC and other non-governmental organizations should ensue immediately to plan how relief supplies will be moved.

- The ICRC should be supported in their current efforts to evaluate drought requirements in RENAMO areas and provide assistance.
- The Beira Corridor Group is well placed to coordinate food scheduling and transport along the Beira corridor to Zimbabwe and Zambia. Donors should support the use of corridor groups as focal points for transport coordination.
- Careful study of the effects on increased arrivals at Maputo port should be evaluated in view of the high losses normally incurred there.
- Donors should form a common front to get the GRM to waive taxes and levies on emergency relief items.
- Donors should support the provision of agricultural inputs for the next growing season.
- In addition to relief food commodities, donors should provide food commodities to support the market sector. Failure to do so will add to the number of people dependant on free food, as those who are above the dependency line lose their ability to purchase food.
- The capacity of the private sector to transport food must be explored to supplement the efforts of DPCCN, which will be greatly overtaxed in its ability to transport food.

III. WATER.

A. BACKGROUND.

1. Urban Water Supply.

The Department of Water Affairs under the National Directorate of Water is responsible for piped water supply systems in Maputo and twelve provincial capitals (peri-urban areas). Maputo and eight provincial capitals are served from surface supplies (reservoirs and rivers), while four are served by ground water sources. All systems are at least thirty years old. Water is supplied to Maputo and peri-urban areas through a combination of house connections and standposts. The systems are designed to provide 20 liters per capita per day with a maximum of 500 persons per standpost, and maximum walking distance to carry water of 500 meters.

2. Rural Water Supply.

Potable water for rural areas is the responsibility of the National Programme for Rural Water (PRONAR). Approximately 75

percent of the PRONAR budget comes from external assistance, with UNICEF providing the largest portion (45.4 percent). Rural coverage of potable water has grown from six percent in 1980 to nearly 30 percent in 1992. The wells are sited at 500 persons per well and within a maximum walking distance of 500 meters. Wells are expected to provide at least 20 liters per capita per day. Geophysical capacity seems adequate with a reported drilling failure rate of just five percent.

3. Sanitation.

The predominant form of improved sanitation in Mozambique is the pit latrine. Exceptions to this are the sewerage systems in Maputo and Beira. Maputo sewage is treated in a lagoon system. The bulk of Beira sewerage is discharged to the sea without treatment.

B. FINDINGS.

1. Urban Water Supply.

Urban growth was estimated at 4.5 percent per annum before 1985 and eight to 13 percent since that time. Increased population and age have strained all water systems. Many standposts now provide water to 1,500 or more persons. Thirty standposts in Maputo now provide water to 500,000 people. Water coverage in urban areas has officially dropped from 48 percent in 1980 to 25 percent in 1990. Water is now being sold in the capital for 50 meticaís per bucket. This is approximately 60 times the official rate paid by small volume users. Current revenues from the systems pay for operational expenses but not maintenance.

2. Impact of Drought on Urban Water Supply.

Urban migration due to drought and war are straining peri-urban water supply systems at the same time that the systems themselves are being strained by age, lack of maintenance and in some cases, impending shortage of supply. Three systems are currently threatened by the drought and may be out of water within a few months. Reservoir levels in Chimoio and Quelimane City are already very low. The Beira system provides treated river water. It is threatened by salinity caused by inflow of sea water to the intake 60 kilometers upstream from the city. The water department is considering building a small dam across the river below the Beira water system intake to reduce the flow of salt water upstream (sand bags were mentioned as an emergency measure).

3. Rural Water Supply.

PRONAR has an estimated capacity of 1,250 wells per year

(including hand dug, hand drilled and machine drilled). Nearly 75 percent of all wells are hand dug. Maximum production was 1,066 wells in 1989. Current funding will allow production of 850 wells this year. The handpump program is in transition. Locally made Mark II pumps have proven difficult to maintain by village teams. The program is now changing to Afridev (imported from India) and deepwell Volanta (imported from Holland).

AFRICARE has implemented a water supply project in Sofala Province since 1987 in cooperation with PRONAR. The program is funded by USAID/Maputo.

PRONAR, with UNICEF assistance, has developed a project proposal for emergency drought relief in the hardest hit areas. This proposal concentrates on drilled wells because the most severely affected areas have ground water levels which are too deep to install hand dug wells. A four year proposal has also been developed for Inhambane province.

Hand dug wells that are lined with concrete rings can be deepened by digging out below the rings and adding more rings of the same diameter at the top as the existing rings slide down. Wells that are lined with materials other than concrete rings can be deepened by inserting smaller diameter concrete rings inside the existing lining where possible. Unlined wells should be deepened and lined with concrete rings.

Handpumps should be installed by the government at a later date with the participation of the users. Experience shows that long-term maintenance of hand pumps is extremely difficult without extensive participation, as well as training, of the users at the time of installation.

4. Impact of Drought on Rural Water Supply.

There are reports of 30 percent to 75 percent dry wells in some areas of Gaza, Manica, Sofala and Inhambane provinces. There are also reports of persons dying of thirst while fleeing war and drought. As wells dry, less protected backup sources will be used. Potential of exposure to waterborne diseases (including cholera) and to bilharzia will increase as people are forced to resort to poorer quality water.

5. Sanitation

In 1990 it was estimated by PRONAR/UNICEF that 20 percent of rural households had access to pit latrines. Urban coverage figures were unavailable. As the drought intensifies and protected water sources become dry, it can be expected that the present inadequate sanitation facilities will lead to increased incidence of diarrheal diseases. Alternative fall-back water sources (e.g. streams, ponds, dams) are easily polluted by

defecation in or near them.

C. CONCLUSIONS.

Mozambique is facing water shortages that are life threatening in the short term. Population movements can be expected to increase in the coming months if water (and food) are not provided to people where they live in rural areas. The falling water tables provide a rare opportunity not only to deepen existing wells, but also to make them drought-proof whenever the water tables again drops. Hand dug wells provide an opportunity for food for work programs, but, in the event that water tables are especially deep, the urgency of providing water may make drilling boreholes a necessity. Sanitation could become a serious problem, especially in areas where displaced people are gathered in large numbers.

D. RECOMMENDATIONS:

1. Urban Water Supply.

- Geophysical exploration followed by drilling (by GEOMOC, the state water well drilling company) or digging (by the provincial EPAR, the rural water workshop) should be started immediately near Quelimane City to provide water to the city until rain refills the reservoir. Ground water near Chimoio is more problematic and will require extensive exploration.
- A feasibility study should be undertaken immediately, with damming to begin immediately if determined to be feasible, to stem the salinization of water sources along coastal areas. External donor assistance may be required.

2. Rural Water Supply.

- Donors should seriously consider proposals that would fund well drilling and digging up to PRONAR's existing capacity of 1,250 wells annually.
- Donors should consider funding projects that will deepen existing hand dug wells.
- Extensive well digging should be undertaken on a food for work basis in areas where well water table depths permit. All wells should be lined with concrete rings made on site or close by. This is an ideal food for work activity because it is labor intensive, provides both short-term and long-range benefits, and does not require expensive equipment or skills that are difficult to learn. Hand dug wells are also preferable where water table depths allow, because water can be withdrawn with a rope and bucket during times when the handpump is broken. This is not possible with drilled wells.

- Emphasis should be given to digging and lining of wells rather than to handpump installation, although the latter may be necessary on an emergency basis.
- Drilling of boreholes and installation of handpumps may be required in areas where the water table is excessively deep.
- Food for work well digging teams should be put to work digging pit latrines for private homes during times that delivery of materials causes delays in well production. Designs using locally available materials and building techniques should be used.
- Donors should be prepared to provide emergency supplies such as jerry cans and buckets, to assist the dispossessed new arrivals from RENAMO areas. In areas where there are hand dug wells, ropes will also have to be provided.

IV. HEALTH.

A. BACKGROUND.

Unlike most other countries in the region, Mozambique suffered from sustained civil war and a severe drought and famine in 1983-1984. These events led to a long-term emergency food and health aid program from the international community. The current severe drought certainly has added greater burden to an already overburdened health care system. Due to population migration, food and water shortages, as well as the serious consequences of war, the health care system is in a crisis. Even though this additional burden represents a smaller incremental increase in comparison with other countries in the region affected by the drought, it presents a different set of problems. On one hand, Mozambique has more experience and systems to cope with disastrous conditions. On the other hand, the population is in a highly vulnerable health and nutritional status and cannot withstand another major stress such as drought.

B. FINDINGS.

1. General Health Conditions.

Health and nutrition conditions in Mozambique are the worst in the region as a result of the civil war; infant mortality is estimated at 100 per 1000 live births with malnutrition and malaria being the leading causes of death of younger children, according to Ministry of Health officials. Measle outbreaks occur every other year, and cholera is a yearly occurrence in the urban areas such as Maputo, Xai Xai, and Biera. This year, cholera has spread more quickly in these areas. Due to the compromised water supply as well as overcrowding conditions, the

extensive spread of cholera is greater in the urban and peri-urban areas than in previous years.

2. Health Care Delivery Systems.

Until recently, the government provided all health service free of charge. However, at the present time the government is only able to provide health coverage to approximately 30 percent of the population because of civil war and economic hardship. Within the health care system, the most pressing problems are inadequately trained personnel, lack of medical supplies and unsanitary conditions.

3. Existing Nutrition Programs.

Most hospital and health centers in areas of easy access have therapeutic feeding and supplemental feeding programs for those children with evidence of significant malnutrition. Without doubt, these clinical programs are needed, since the supply of food and nutritional products to sustain these programs has not been constant. The drought will lead to a dramatic increase in the need for supplies.

4. Baseline Information on Nutrition Status.

a. Existing Monitoring Systems:

Due to previous famine and long-term relief efforts related to the civil war, there are a number of nutritional monitoring activities already in existence. The main surveillance system is a "growth faltering" program based on most government clinics. The system reports on the prevalence of younger children who failed to gain weight in a one to three month period. A large number of children are monitored by this system. The main drawback of the system is that the data has a six to twelve month lagging period, which makes it difficult to monitor acute changes. In addition, multiple nutrition surveys have been conducted in all regions by NGOs and MOH. Even though some of these surveys were relatively small, the sheer number of surveys do help in providing an adequate picture of the general nutrition status.

b. Baseline Nutrition Status:

The Growth Faltering Program has been able to detect seasonal changes related to harvest. These changes are monitored by a surveillance system sensitive to changes in food supply. Compared to previous years, there was some decline in the prevalence of growth faltering in 1990, suggesting an improvement of nutrition status.

The 1991 prevalence is comparable to that of 1990. Most of the nutrition surveys in the past few years found the prevalence of acute malnutrition (defined as weight-for-height less than the third percentile or less than two standard deviations of the growth reference) were near five percent for children still residing in their home communities. In general, the expected prevalence of low weight-for-height or wasting in a population not under stress is approximately two percent to four percent. Therefore, the wasting prevalence of five percent observed for resident children is close to the expected or baseline level.

5. Recent Nutrition Status and Evidence of Changes Related to Drought.

a. Population Migration.

In the past two to three years, Mozambique has been experiencing significant population migration related to war. In recent months, there is an increasing trend of migration within the drought affected areas. This can be regarded as a sign of severe food and water shortage in the rural area. Interviews of several displaced persons in two new camps along the Biera Corridor (Tica and Nhamatanda) indicated that lack of food was the primary reason for relocation. Regard for personal safety was the next major reason. This evidence of population shift can be understood as a sign of significant hunger and early famine.

b. Clinical Observations:

A site visit to a local hospital near Namatanda found that a majority of pediatric admissions have been due to severe malnutrition. About half the cases were marasmus and about half were kwashiorkor (with edema). The doctor-in-charge indicated that diarrheal disease played an important role in many of these malnourished children. Severe malnutrition has always been a major part of pediatric admissions. However, the onset of the drought has led to a case load that has been increasing in relation to the rising number of displaced persons moving into the community. Severe malnutrition occurs among both the displaced and non-displaced children.

c. Recent Nutrition Surveys.

A number of nutrition surveys were conducted in the past six months. In general, most of the surveys of resident children indicated a prevalence of low weight-

for-height in the range of four to six percent. However, of those surveys of children who were displaced, the prevalence was significantly higher: ranging from five to twelve percent. A well done survey for Manica province in October of 1991 found the overall prevalence of wasting of five percent for children under five and a prevalence near 10 percent among one to two year olds.

These findings together indicate that: 1) poor food supply is a major factor of the population migrating; 2) many displaced children were in marginal status and have become malnourished; 3) nutrition status of non-displaced children, even though better than those displaced, is also marginal with little reserve to withstand food shortage.

d. Most Vulnerable Population.

Among those most vulnerable populations in Mozambique and therefore those most likely to suffer even more because of the drought are those already displaced by the war who lack jobs and land, those living in communities with compromised water supply and those living in RENAMO-controlled or frequently attacked areas.

C. CONCLUSIONS.

The deteriorating nutritional status of displaced children and frequent observations of protein caloric malnutrition among resident children indicate that there is little or no margin of reserve among the rural population to withstand further stress related to drought. Without prompt food relief, a full-scale famine with malnutrition rates double or triple the current level can occur as soon as zero to three months. This can be further compounded by an outbreak of diarrheal disease due to restricted water sources, poor sanitation, and crowding related to population displacement. The growth faltering program is unlikely to be very helpful for the monitoring of acute changes in the next few months. The ability of both NGOs and MOH clinics to perform rapid nutrition surveys will be the only mechanisms to monitor potential changes. Repeated surveys of the same sampling frame every three months is indicated given the gravity of the current nutrition conditions, severity of the drought and the current health care system capacity.

To prevent further deterioration of health and nutrition conditions, or to prevent the full-blown famine, prompt food distribution and water security are the only solutions. Because the baseline status of Mozambique is the worst in the region, and health service systems are the least adequate, Mozambique should

be considered as a high risk country in terms of health outcomes related to drought.

D. RECOMMENDATIONS:

- Donors should assist in the provision of adequate medical provisions (supply and training) for the case management of cholera outbreaks as well as other diarrhea disease outbreaks, either through NGOs or UNICEF.
- Donors should support government and nongovernmental emergency programs to secure and improve water supplies, both in terms of quality and quantity.
- Donors should support therapeutic and supplemental feeding programs for severely malnourished children by providing supplementary foods and operating costs.
- Donors should support local efforts in monitoring nutrition status via repeated surveys.
- Donors should make security for health care providers and medicines a high priority.

V. THE ROLE OF NGOS.

A. BACKGROUND.

The GRM infrastructure for providing relief throughout the country is extremely limited due to lack of resources and manpower. The role of NGOs in delivering relief to needy populations in Mozambique is critical to the success of relief operations. There is an extensive network of NGOs working in all accessible regions of the country and in all sectors (food, water, health). NGOs work closely with government structures to plan and implement their programs and generally receive high praise from their government counterparts.

B. FINDINGS.

1. Need for NGOs.

Government infrastructure and capacity is too limited to implement the large-scale relief programs that are needed in all sectors in Mozambique.

2. NGOs Involved in Food Programs.

NGOs are already involved in food distribution programs in Mozambique and may expand their efforts to respond to the drought. A list of NGOs working in food distribution programs follows:

CARE	MSF/F	Christian Council of Churches
ADRA	MSF/B	German Agro Action
CARITAS	MSF/Port.	Action Aid
WFP	LWF	World Vision
GTZ	SCF/Sweden	FHI

3. NGOs involved in Non-Food Programs.

Many of the same NGOs who work in the food sector also work in the non-food sector. NGOs are engaged in seeds and tools programs, health activities, water programs, as well as community development, and education.

4. The International Committee of the Red Cross.

The ICRC traditionally works in areas where others cannot. In Mozambique, they have been the only group allowed to work in RENAMO-held areas and have been instrumental in delivering life-saving relief supplies to populations in those areas. As the seriousness of the drought in those areas has become known, the donors have pressed harder for corridors of tranquility to increase the relief supplies flowing to the most drought-affected populations. The ICRC would not be expected to continue its level of assistance in RENAMO areas if such corridors were opened - NGOs would have to take over.

C. CONCLUSIONS.

The Mozambique relief program depends to a great extent on the effectiveness of NGOs. If corridors of tranquility are opened in RENAMO areas, NGOs will have to be mobilized to take over from ICRC relief operations.

D. RECOMMENDATION:

-- Donors should continue to support NGOs in the implementation of food and non-food relief programs in all of Mozambique.

VI. DONOR COORDINATION.

A. BACKGROUND.

Coordination among donors in Mozambique is good given the long experience of donors in provision of relief to Mozambique and in working together with the GRM on economic reform issues.

B. FINDINGS.

Increased donor assistance will be needed to stave off a famine in Mozambique this year.

Donors will need to monitor the transit cargo destined to

Zimbabwe and Malawi through Mozambique ports, and will have to be linked by communications network with other countries in the region.

Donors are concerned that unless the GRM waives taxes and duties on relief commodities, donors and NGOs will be discouraged from undertaking a sizeable drought response. Airport taxes, duties on imports for relief programs, and taxes assessed per kilometer on trucked relief commodities are examples of the problem.

Donors are also concerned about the level of corruption and mismanagement in the handling of the ongoing relief programs by the GRM, and question whether additional resources can be handled with proper accountability.

B. CONCLUSIONS.

Donors must act quickly to expand relief activities to save the lives of a great number of people. Taxes and bureaucratic hurdles make the provision of aid more difficult in an already difficult environment. The additional relief food that must be brought into the country will place an enormous strain on the management and logistics system. It is clear that to avert large loss of life, corridors must be opened into RENAMO areas.

C. RECOMMENDATIONS:

- Donors should redouble efforts to press for corridors into RENAMO areas.
- Donors should press the GRM to lift the taxes and duties on all humanitarian relief supplies and operations.
- Donors should insist on improved accountability of relief distributions and improved security at ports.

MOZAMBIQUE CONTACTS

****The team was accompanied throughout its visit by USAID/Maputo Food for Peace Officer, Buddy Dodson, to whom the team expresses special thanks and appreciation.**

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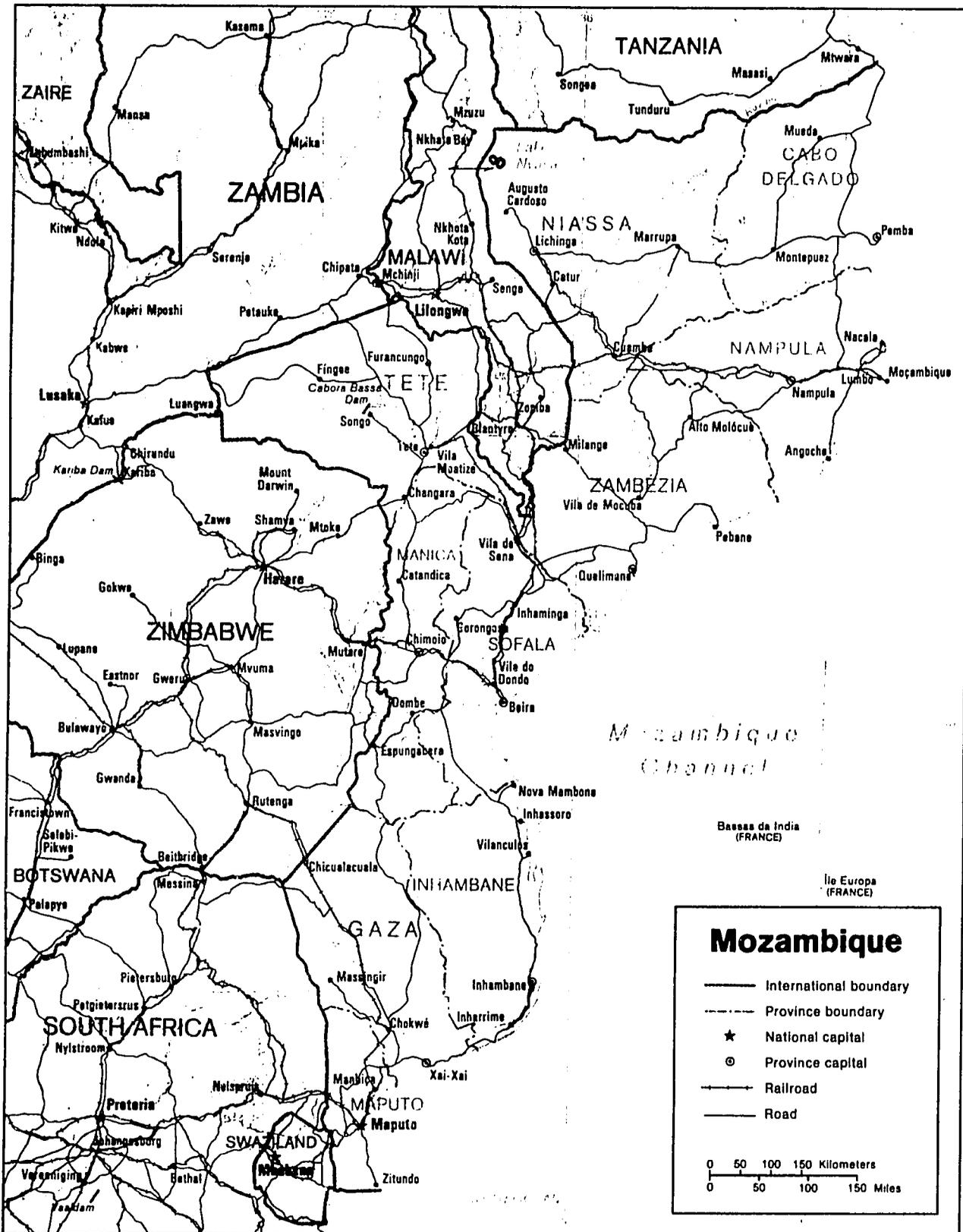
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Jack Miller	Deputy Director, USAID
Ambassador Friedman	U.S. Ambassador
Mary Pat Selvaggio	USAID
Ambassador	Denmark
Harlan Hale	CARE
Oldemiro Baloc	Vice Minister of Cooperation
Alex Minkus	Head, World Relief
Mr. Greg Keost	UNICEF

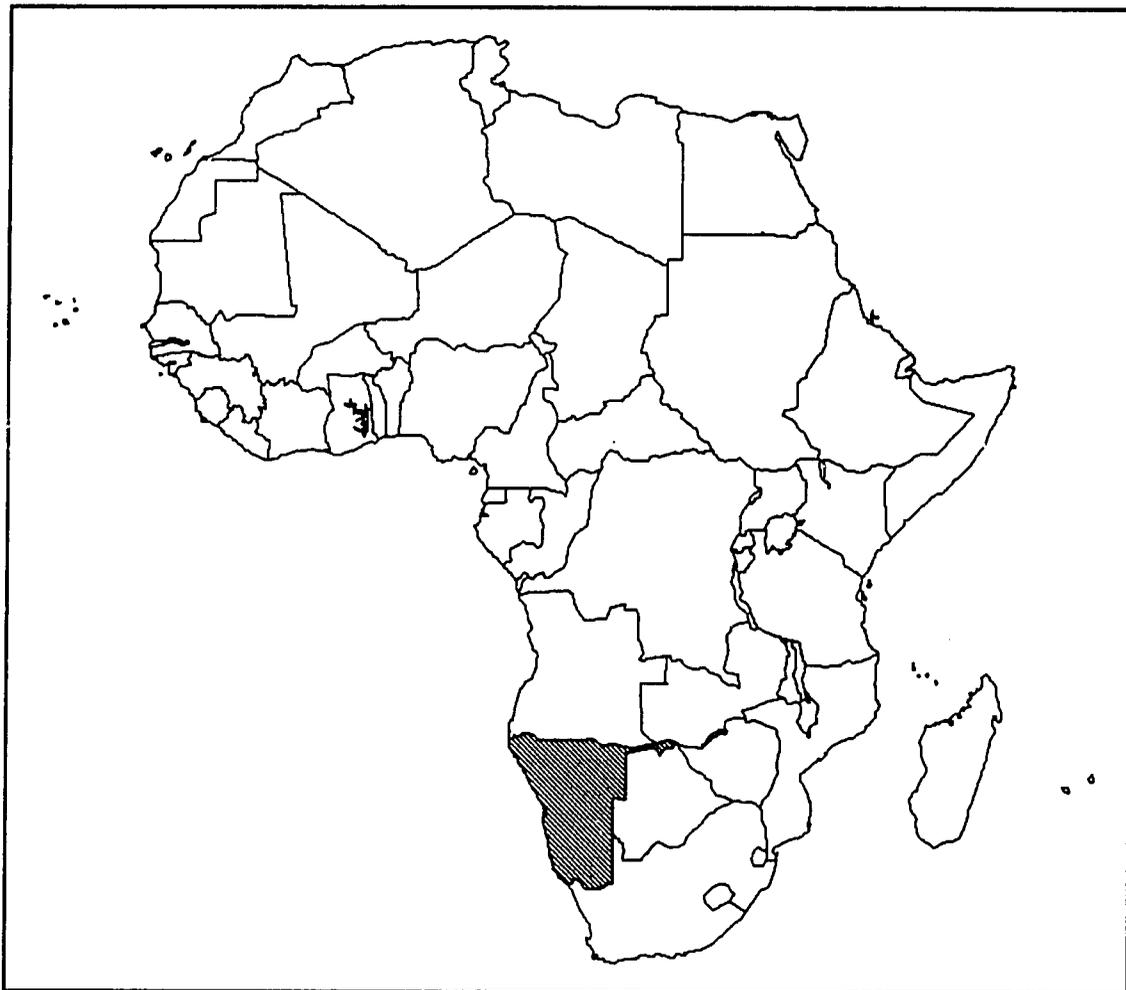
Mr. Vincent Macomo	UNICEF
Dr. Kate Cita	UNICEF
Mr. Bruce Cogil	UNICEF
Dr. Barreto	Epidemiologist
Mark Latham	World Food Program Country Director
Dr. Chomera	Deputy Director of Health Services
Ms. Terry Andrews	World Vision
Mr. Wilson	Child Nutrition Council
Dr. Kabomba	WHO Representative
Alvarinho	Chief of Urban Water and Sanitation
Ralph Coleman	Country Representative, Africare
Kevin Lowther	Regional Director Southern Africa, Africare
Mustapha Nossein	Acting Director, FAO





Office of U. S. Foreign Disaster Assistance
Bureau for Food and Humanitarian Assistance
Agency for International Development

Southern Africa Drought Assessment Country Report



NAMIBIA

NAMIBIA**I. BACKGROUND.**

Namibia faces many of the difficulties of a newly independent nation including high expectations of the government by the populace. Unemployment is already high and returning demobilized soldiers and exiles will add to the problems.

The Government of Namibia (GON) had a budget surplus of \$8 million and \$77 million in 1989 and 1990 respectively. In 1991, the budget showed a \$34 million deficit.

The drought facing Namibia this year is the worst in 50 years. While accustomed to droughts and pockets of food shortage, the drought this year is generalized and will affect both rural and urban populations whose basic staple is maize. The Government of Namibia declared a state of emergency on April 2, 1992.

In previous years, Namibia has depended on imports from South Africa to make up food deficits. This year, with South Africa itself importing most of its maize requirements, Namibia will have to bear the costs of imported corn from the world market with the consequent stress on its deficit budget.

Namibia enjoys access to Walvis Bay, and therefore does not face the same port and offtake problems as other countries in the region. Internal transportation of both commercial and relief commodities will be the greatest constraint for Namibia as neither the government, the World Food Program nor the NGOs have experience in moving large quantities of food on a regular basis.

Plans to use the port of Walvis Bay as the entry point for a substantial amount of food needed by Zambia (up to 150,000 by some estimates) raises concern that transiting truck convoys will damage Namibian roads.

The OFDA assessment team visited the Ovambo and Kavango regions in the North and Mariental and Mamaland regions in the Mid-South.

II. FOOD AND AGRICULTURE.**A. BACKGROUND.**

Namibia normally experiences variable rainfall patterns and its population is used to coping with drought. The drought this year, however, is the worst in 50 years and affects the entire country, including the normally well-watered peasant agriculture

zones of the far north. Present crop production forecasts are that the 1991/2 harvest may produce only 30 percent of the 1990/91 crop year. The most serious situation will probably be experienced in the second half of 1992 when food stocks will be depleted, surface waters will have dried up, grazing land will have been depleted and cattle will be dying. An estimated 650,000 people are affected by the drought, including 250,000 in vulnerable groups.

Crop production of all cereals (maize, millet/sorghum, and wheat) is forecasted at 33,000 MT this year, down from 114,000 MT in 1991. The country will have to import 123,000 MT of cereals this year, nearly twice last year's imports. It is further estimated that some 60,000 MT of the additional imports, or nearly half the amount, will have to be provided by the international community as food aid.

B. FINDINGS.

1. Extent of the Drought.

The drought has affected all of Namibia. Normally the first rains begin in November and harvest is collected in April - May. This year better than average rains were received from late October until the middle of January, giving great expectations for a good harvest, especially in central Ovamboland where almost half of the country's population makes a living from subsistence agriculture. With the good start of the rains, large areas were put under cultivation, thus also consuming much seed. However, expectations were ruined when a long, dry, hot spell started in the middle of January with only occasional and isolated showers being received thereafter. The results have been wilting fields, fast consumed grazing areas and, in particular, a serious shortage of potable water. While some rainfall in the end of March and early April could still bring some relief to water tables and grazing areas, the crop harvest will remain poor.

2. Crop Production Forecasts.

TABLE I: Gross Consumption Requirements

Maize	Millet/ Sorghum	Wheat	Total Cereals
000mt	000mt	000mt	000mt
61.3	67.0	35.8	164.1

(Source: Early Warning and Food Information Unit, 4/10/92)

TABLE 2: Comparison of Marketing Year Production Estimates

A. 1992/93 Marketing Year (1991/2 Cropping Season)

Region	Maize '000mt	Millet/ Sorghum '000mt	Wheat '000mt	Total Cereals '000mt
Ovambo	-0-	15.0	-0-	15.0
Kavango/ rainfed	-0-	1.2	-0-	1.2
Kavango/ irrigated	3.2	-0-	0.2	3.5
E. Caprivi	1.0	0.2	-0-	1.2
Commercial/ rainfed	5.2	-0-	-0-	5.2
Commercial/ irrigated	4.0	-0-	2.9	6.9
Totals	13.4	16.4	3.1	33.0

B. 1991/92 Marketing Year (1990/91 Cropping Season)

Region	Maize '000mt	Millet/ Sorghum '000mt	Wheat '000mt	Total Cereals '000mt
Ovambo	-0-	55.0	-0-	55.0
Kavango/ rainfed	2.9	2.4	-0-	5.3
Kavango/ irrigated	2.4	-0-	0.3	2.8
E. Caprivi	11.9	0.3	-0-	12.2
Commercial/ rainfed	30.7	-0-	-0-	30.7
Commercial/ irrigated	2.4	-0-	5.7	8.1
Totals	50.2	57.7	6.1	114.0

 (Source: Early Warning and Food Information Unit, 4/10/92.)

5. Household Food Security.

Household food security remains a problem for many Namibian families. Most of the country is marginal for rain-fed food crop production and, although prospects for food-crop self-sufficiency appear to be better than might be supposed, unless it becomes economic to stabilize crop yields with irrigation, both the nation and many households will remain vulnerable to seasonal climatic threat.

In the north, where most households produce rain-fed crops, production is often insufficient to meet annual household needs, especially in Ovambo and Caprivi. For farming families, a bad season means a decline in crop income and animal stock. At the national level, a poor season means increased food imports. Namibia has limited arable land for agricultural land and much of its territory is actually more suitable for ranching.

Many of households in the northern part of the country do not have income from other sources to purchase food to meet seasonal food stresses, which can be prolonged after drought years. In the south, where all non-meat needs must be purchased, even by rural households, incomes from all sources are often insufficient for adequate nutrition.

6. Economic Impact and Coping Strategies.

The impact of the drought is exacerbated by the general economic recession, which has resulted in the unemployment of thousands of people rendering them unable to support their families with cash to buy corn. With little work on the fields and with limited availability of food, people have also started moving to urban centers to stay with relatives and friends in a desperate search for work.

Pensions provide an important food security net. All women over the age of 60 and men over 65 with a Namibian identity card are entitled to a government pension. Given the age structure of the rural family this has become a major source of cash income for many families. Pensions are significant not only because they offset the decline in labor power associated with advancing years, but also because grandparents have become guardians of children whose mothers are working or seeking work elsewhere.

7. Most Affected Area: Ovambo Region.

Approximately 43 percent of the total population of Namibia lives in the Ovambo region. Household size in Ovambo ranges from five to 12 persons with a predominance of older women, young mothers, and children under 15. The availability of family labor is the primary determinant of the area cultivated. The

population in this area is the most vulnerable in the country. According to a recent survey, 63 percent of households had no pension or wage and 72 percent had no remittances. Nearly 45 percent had neither wages, pensions nor remittances. The average family had already sold one head of cattle as a means to survive the drought.

8. Most Affected Areas: Kavango Region.

The Kavango region enjoys heavier and more reliable rainfall than Ovambo land. The Kavango region also has access to the Okavango river which flows year around. In most years, the majority of Kavango farmers are self-sufficient, and up to a half may have surpluses to sell locally to millet-deficit farmers and urban households. The main traditional crop is pearl millet. Despite the plentiful water resources of the Okavango, there is little or no small-scale intensive irrigation of vegetables, maize, or millet. Fishing is a daily occupation and provides a protein supplement as well as some cash income. Farmers are likely to consume more fish now that they have no cereals to eat. Unlike farmers in the Ovambo region, Kavango farmers do not have a good grain storage system and millet is not normally stored from year to another. However, with its more favorable resource base, it is expected that even Kavango households with little or no cash reserves are less vulnerable to food stress than households in Ovambo.

9. Emergency Food Aid Mechanisms.

The only viable short-term mechanism for donors to provide food aid to Namibia is through the World Food Program (WFP). However, WFP has only been operational in Namibia since 1989 and there is still only a limited capacity for WFP, GCN institutions and NGOs to manage and distribute food aid. For example, even though a WFP-funded development program of about 12,000 MT was approved three years ago, only about 3,000 MT has been distributed. WFP works through the Council of Churches of Namibia (CCN) to manage the warehousing, internal transport and distribution of commodities. CCN is assisted in the management of the food program by a Dutch expatriate seconded from Lutheran World Federation (LWF). However, both WFP and CCN recognize that additional technical assistance in logistics and food management will be needed if an expansion of activities is contemplated. In this context targeting of limited resources to the most needy will be important.

10. Local Procurement of Supplementary Foods - Fish.

The Ministry of Fisheries in Namibia is seeking a buyer for approximately 100,000 MT of fish from its coastal waters. While the team did not investigate this extensively, it was learned that the fish could be caught, dried and packaged within three

months of an order being placed. Fish is high in protein and, because it is locally procured, would provide some stimulus to the economy of Namibia during a difficult time. If high protein food is required in the region, the local purchase of dried fish in Namibia may be a fast and cost-effective option to consider.

11. Logistics Constraints.

It is likely that Namibia will purchase its commercial imports of corn on the world market rather than from South Africa's imports, as it is cheaper for them to import directly through nearby Walvis Bay rather than through the more southern ports of South Africa. Walvis Bay should be able to handle Namibia's requirements with little difficulty, although the potential addition of over 100,000 MT for Zambia could cause problems and will probably require some port upgrades.

In discussions with TRANSNAMIB, a GON parastatal dealing with rail, road and air transport, the team was told that if all the trucks available were utilized to haul corn to Zambia, only about 10,000 MT per month could be handled (Zambia requires 2,000 MT per day). In addition, the road network through the Caprivi strip would be severely damaged by such a volume and there would be a problem with transport over one of the bridges at the border.

Although there is sufficient trucking and rail capacity to handle the level of commercial imports and possible donor imports anticipated, WFP has little or no capacity to manage the internal transport of any significant tonnages of food aid. At present, WFP/Rome arranges to have the school feeding food delivered at five extended delivery points on a through bill of lading. CCN which is charged with the transportation, handling, and storage of the food, lacks the capacity and experience to manage a larger program.

C. CONCLUSIONS.

It is unlikely that there will be a major famine in Namibia. The country is deficit in cereals in normal years. It can be expected that the Government will be prepared to ensure that food imports will continue, possibly supplemented by donor food aid. Food stocks, at a national level, are therefore not likely to be a problem. However, it is likely that a number of families will not have sufficient income to purchase enough food to meet their normal nutritional requirements and targeted feeding will be needed.

D. RECOMMENDATIONS:

-- Donors should consider supporting a six-month emergency food

aid intervention targeted towards the most vulnerable groups most seriously affected by the drought. WFP's estimate of 250,000 beneficiaries is a good approximation of the number of people most affected by the drought (about 17 percent of the total population). The team cautions against a much larger program than this because of the limited capacity of the existing WFP/CCN/GON structures for implementing and managing food programs.

- Donors should respond to the forthcoming U.N. appeal for an estimated 60,000 MT of corn for general and targeted feeding and approximately 2,000 MT of special supplementary foods. Wheat, if provided by donors, could be monetized to raise funds to support emergency food programs. Donors should also be prepared to provide supplementary foods in the form of milk or pulses.
- Donors should consider providing additional funding of technical assistance to WFP, selected NGOs, and other potential implementing partners, to strengthen the existing mechanisms and structures.
- In the area of targeting, the main potential food donors (USAID, WFP, EC) should work with the appropriate GON officials to come up with mutually acceptable criteria for targeting any emergency food aid interventions. Social workers and churches could assist in identifying vulnerable groups.
- Donors should consider supporting a food coupon program funded by a monetization program. Such a program would rely on the already developed commercial supply programs and would not disrupt normal commercial markets. The team believes it would be useful for WFP to undertake a short-term study to determine the feasibility of implementing such a program.
- Donors should look into the cost/usefulness/viability/need for fish in supplementary feeding programs either in Namibia or elsewhere in the region.
- Intensive vegetable gardening using hand-watered irrigation should be encouraged in the Kavango region. If necessary, vegetable seeds could be provided to needy farmers by the GON or donors.
- Should Zambia need to import food into the port of Walvis Bay and through Namibian roads, donors should reinforce the bridge into Zambia.

III. WATER AND SANITATION.

A. BACKGROUND.

Mean annual rainfall in the country ranges from less than 50 millimeters per year in the western region to more than 700 millimeters per year in north-eastern Caprivi. A critical feature of the rainfall pattern is the extreme annual variability. Deviation in rainfall may be as high as 80 percent of the total in the southwest to 20 percent in the wetter northeast.

B. FINDINGS.

1. Impact of the Drought.

Most parts of the northern region of the country experienced heavier than average rainfall during October, November and December, 1991, encouraging many to expect a very good agricultural year. Planting was accordingly very heavy during that period. Rainfall during January, February and March, however, was as little as 20 percent of normal for the period, and extreme air temperatures were experienced during January and February. These together led to very heavy crop losses.

2. Overall Water Development

Namibia has 126 bulk state water supply schemes throughout the country. These supply about 82 million cubic meters of water per year for domestic, irrigation and industrial purposes. Total investment in the water supply system is estimated at 1.5 billion Rand. Demand is expected to grow to 400 million cubic meters annually by the year 2005.

3. Urban Water Supply

Urban water supply is the responsibility of the Department of Water Affairs. Coverage in urban areas is estimated at nearly 100 percent. In 1969, Windhoek became the first city in the world to circulate purified sewage water. The reclamation works can supply as much as 1.5 million cubic meters of water to the city annually.

4. Rural Water Supply

The provision of drinking water in rural areas of Namibia is officially the responsibility of the Department of Rural Development, although in practice many of the functions are still carried out by the Department of Water Affairs. It is estimated that 30 percent of the rural population has access to clean water although it is not unusual for families to spend one to three hours per day carrying water. A 1990 UNICEF study estimated that the average daily dry season journey time to carry water in rural areas of Ovambo is one hour and 42 minutes. The department believes that access to safe water would eliminate up to 50

percent of common diseases.

The main objective of the Rural Water Supply program is the provision and maintenance of access to safe drinking water for an additional 18 percent of the rural population by 1996. Additional funding of \$5 million is sought for implementation of this goal.

5. Water in the Ovambo Region.

a. Pipeline.

The chief source of water for both rural and urban communities is the pipeline-canal system bringing water from the Cunene River in Angola. The river water is pumped across the border and treated at Eunda prior to distribution. The treated water passes through a pipe network covering much of the northwest and central part of the region. The treated water is used for all purposes (household, livestock, gardening, construction, etc.) by persons living near the pipeline.

b. Boreholes.

There is also an extensive network of boreholes, equipped largely with pumps powered by Lister diesel engines, in the eastern and western parts of the region. A significant percentage are either not in use or temporarily out of service due to breakdowns. Groundwater in the central part of the region is believed to be too saline at all depths for most purposes.

c. Shallow Wells.

Those not living near either the pipeline or a borehole dig shallow wells and draw water with a rope and bucket. Although the groundwater is generally too salty either for drinking or for livestock, a layer of fresh water derived from rainfall overlies the saline water below. In years of high rainfall, this layer is quite thick and may last the entire season. These wells are 'owned' by the individual or family who initiates the digging. The bottom portions of the wells are lined with logs. They take three to five weeks to dig depending on the number of diggers. High school students living in dormitories sometimes assist in the digging. Most are locked to restrict use to certain people and/or certain hours of the day.

d. Water Quality in Rural Water Systems

Persons living near the pipeline have adequate quality water limited in quantity only by the distance which it can be carried. The team was told that a few people walk up to three hours to the pipeline from areas where other sources of water are unavailable. The same is likely to apply to boreholes.

Those living away from the pipeline and getting water from shallow wells are experiencing great difficulty due to the shallowness of the fresh water layer this year. In all areas visited by the team, only one well was still yielding fresh water, and that was under severe use restrictions by the owner in order to conserve the water.

Grazing pressure is very heavy near the pipeline. Very large numbers of cattle, goats and donkeys are walked to the pipeline and watered. Unfenced areas along the pipeline are largely void of vegetation. Although the team did not visit any boreholes, it is reasonable to assume that the veld near those points is in similar, very poor, condition.

6. Kavango Region

a. Kavango River.

The main source of water in the region is the Kavango River which forms the northern border of the region and divides Namibia from Angola. Livestock are walked from grazing areas to the river, limiting land available for grazing within reasonable walking distance.

b. Boreholes

There is also a 10 kilometer grid of boreholes in the northern part of the region. Each is equipped with a pump, Lister diesel engine and storage tank with taps. The southern part of the region has very few boreholes and is therefore not used either for farming or for livestock production.

c. Water Quality Rural Water system

The river is currently higher than it has been in many years as the headwaters are in a region of Angola that has received very heavy rainfall this year. This should generally improve the water quality in the river, although the hospital reports that there is a diarrhea outbreak among those getting drinking water from the river. Neither typhoid nor cholera has been identified.

7. Southern Regions

The southern regions of the country are perennially dry. Government officials did not indicate that this year's drought would have a major impact on drinking water supply in these regions. Most drinking water is derived from deep boreholes which do not react immediately to reduced rainfall levels. A few people living near rivers take water directly from these sources. Most severely affected is water for livestock.

8. Rural Sanitation

Access to rural sanitation varies from region to region in the country. Overall access to adequate sanitation is estimated to be approximately ten percent.

C. CONCLUSIONS.

The Department of Water Affairs has a shortage of hydrogeological and geophysical expertise in their regional offices. This is a severe impediment to responding quickly to drought emergencies in the field. There is an immediate need for staff for the next year.

Several communal areas will be out of drinking water in the very near future due to dry wells or increasing salinity of the ground water (i.e. central Owambo region). In response, the Department of Water Affairs is planning an emergency drilling, water transport and pipeline extension program. Water tanks, water trucks, water trailers, 5000-7000 liter water bags and water piping will be needed immediately.

D. RECOMMENDATIONS:

- Donors should consider interventions in the water sector which are cost-effective and are locally available. The United Nations left Namibia a number of vehicles, many of which could be used to assist in the relief effort, especially in the water sector. For example, placing a water bladder on a flat bed truck is certainly less expensive than a new water truck and just as efficient.
- The capacity of the Namibia's private sector to drill wells should be to be explored.
- Any intervention in the water sector should be well coordinated among donors to ensure the most efficient use of donor resources in the relief effort.

IV. HEALTH.

A. BACKGROUND.

Health care in Namibia is provided through a network of public and private health facilities. District hospitals and local health clinics provide the majority of health care in the country. Reliable data on health service usage on a national basis is not available. During the assessment, the team had discussions and received updates from UNICEF, the Namibian Red Cross, the Head of Nutrition Unit of the Namibian Ministry of Health and the Lutheran World Federation. The team also visited rural health clinics in southern Namibia and met with clinic staff nurses and agricultural extension agents.

B. FINDINGS.

1. General Health Conditions.

Current estimates of under-five mortality rate in Namibia are between 91 to 100 per 1000 live births. Maternal mortality is estimated to be in the order of 300 per 100,000 deliveries. Child and maternal malnutrition result in high mortality rates as well as a high rate of low birth weight (LBW) among newborns. The evidence available from different studies identifies undernutrition as a serious problem in the country. On average, moderate undernutrition has been reported in 23 percent of the children and severe undernutrition in six percent of the children. Approximately one-third, or 110,000 children, below the age of five years are suffering from undernutrition at any one time. It is estimated from the various surveys that nine percent of the children are wasted (low weight for height) and 30 percent are stunted (low height for age). These averages mask the large differences between the severe forms of clinical malnutrition. Birth weight data from several hospitals show an average LBW of 12 percent.

2. Micronutrient Deficiencies.

There has been no systematic documentation of micronutrient deficiencies. Anemia especially during pregnancy has been observed mainly in the areas of the south. It is also a problem in the north related mainly to peak malaria periods. Signs of Vitamin A deficiency have been reported in health facilities in the north.

3. Morbidity.

High rates of malaria are reported in the northern part of the country. This poses an extra risk in pregnancy which can result in anemia. Some health workers also reported increased rates of premature deliveries during peak malaria season. Diarrhea and respiratory infections are major causes of morbidity in children. Tuberculosis is very common in children as well as adults. Most of the severe cases of malnutrition seen at facilities are due to diarrhea or respiratory infections, not the underlying malnutrition.

4. Access to Health Services.

Access to health services in some areas is constrained by the long distances between health posts as the population is sparsely distributed. The fact that health services have hitherto been health facility oriented has meant that some of the people have had limited access to health care.

5. Health and Nutritional Surveillance.

During the past year a uniform growth monitoring system has been put in place. This system, known as the Health Passport, should provide improved information on growth rates and malnutrition levels. It also provides for documentation of immunization and diarrhoeal treatments.

Women attend prenatal clinics on average three-to-four times during pregnancy and approximately 70 percent of deliveries take place in health facilities. The information on risk assessment during pregnancy is not fully utilized and health and nutrition education is still limited. Immunization coverage is good. Recent improvements in program support were evident during the team's field visits. Uniform growth monitoring programs for infants and children, improved level of immunization and enhanced diarrhoeal disease programs were good indicators of improvement.

6. Health Care Delivery Systems.

It was the team's impression that an already overburdened health care delivery system is being stressed due to drought-related increases in acute respiratory infections. Lapses in health care for the elderly due to lack of transport were noted.

7. Recent Nutrition Status and Evidence of Changes Related to Drought.

There is as yet no evidence of large population shifts due to drought. However, recent reports from the Red Cross indicate as many as 40,000 exiles returned to Namibia during the past year.

Based on visits to three rural health clinics no evidence of malnutrition due to the drought was noted. The documentation of clinic visits appeared to be good as far as growth monitoring. The immunization rates appeared good and the diarrheal disease interventions were being reported. The clinics were well stocked and clean. Nurses interviewed appeared knowledgeable and aware of health issues and barriers in the community. They were concerned about the potential impact of the drought but could not identify any health problems directly associated with the current situation.

No recent survey results were available, however, a baseline survey for eight districts has been planned by the Nutrition Division of the Ministry of Health.

8. Projection of the Impact of the Drought.

If adequate and timely distribution of food and water occur, most of Namibia should be at low risk (five-to-six month time

period) for significant changes in malnutrition due to the drought. However, the regions of Kaokoland, Owambo, Damaraland and Boesmanland should be considered at moderate to high risk and should receive the highest priority for interventions.

D. RECOMMENDATIONS:

- Donors should use existing health clinic networks to provide supplemental feeding for families of infants and children identified as malnourished and for lactating and pregnant women.
- Donors should strengthen growth monitoring systems for infants and children by providing technical assistance and training workshops to health clinic staff.

V. LIVESTOCK.

A. BACKGROUND

Livestock is an important part of the lives of all Namibians. As in many countries, livestock are not just a source of meat and milk products, but represent the wealth of the farmer. Farmers are reluctant to divest themselves of their animals unless there is severe stress on the family or the animals themselves.

Recent rains have alleviated the need for an abnormally high slaughter of livestock as was reported earlier this year.

B. FINDINGS.

1. The Effect of the Drought on Livestock.

The GON has stated that it will not provide any subsidies for animal feed as it had in response to past droughts. Despite this the WFP raised the issue of farmers unwillingness to reduce the size of their herds even though it would be less expensive to re-stock herds after the drought than it would be to keep herds at their present, unsustainable levels. For most communal farmers, livestock is their only source of income. In fact, livestock consisting mainly of goats and sheep in the communal areas, is bartered for food and other essentials by farmers.

2. Ovambo Region.

Grazing land is available in many areas of the Ovambo region but there is no water. In densely populated areas, the land has suffered decades of overstocking, particularly along the pipelines and canals. With pools dry, the cattle are now concentrating in the central parts of the region which may lead

to more intensive deforestation and overgrazing. Problems are heightened because the Ovambo, like the majority of Namibians, are reluctant to sell their livestock.

C. CONCLUSION.

Rural small-scale Namibian farmers are at risk of losing a significant portion of their livestock holding due to the drought. Programs to reduce the size of herds should be implemented immediately before many farmers lose a substantial amount of the value of their herds.

D. RECOMMENDATIONS:

- Donors should support the reduction in herd size as the most cost-effective method for farmers to survive the drought while maintaining some financial stability.
- Donors might consider working with GON authorities on appropriate offtake programs which would give herders cash for their animals before their condition becomes so bad that they cannot be marketed. By providing the cash to farmers, such programs will keep farmers in the marketplace and limit disruption of the economy.
- Donors should work with the GON to develop a program which preserve good breeding stock for recovery after the drought. Once grazing conditions improve, the GON and donors should assist farmers with re-stocking herds from this stock.
- Technical assistance should also be considered to improve the marketing of livestock for communal farmers.

VI. ROLE OF NGOS.

A. BACKGROUND.

Since 1989 food aid has been managed through the Council of Churches (CCN) in Namibia. CCN is represented on the National Council on Drought. A limited program was operated in 1990/ 1991 to deal with a smaller drought. Two hundred feeding points were established, though only 3,000 MT of relief food was distributed compared with the need to distribute 60,000 MT over the next 12 months.

B. FINDING.

Since the GON's capacity to implement targeted feeding programs for vulnerable groups is limited, WFP uses the Food Management Logistics Unit or the Council of Churches in Namibia (CCN) to distribute food. The Ministry of Health and Social

Services identifies those in need of food assistance and the CCN distributes the food. This system has worked well in the past and has the support of the major donors expected to be involved in the drought response.

C. CONCLUSION.

The CCN has proved to be an effective channel for relief assistance and should be utilized by the donor community as the major conduit for getting relief commodities to the most vulnerable groups in Namibia.

D. RECOMMENDATION:

- Donors should utilize the existing structure including the indigenous NGO the Namibian Council of Churches, to effectively and efficiently distribute humanitarian relief supplies.

VII. ROLE OF DONORS.

A. BACKGROUND.

Namibia has been an independent nation for only two years and its ability to respond to the drought is constrained by ministries with no experience in dealing with national emergencies. Also, the World Food Program has been operational in Namibia for only two years though the United Nations has an excellent reputation among the people of Namibia because of their efforts during the time of Namibia's independence.

B. FINDINGS.

1. Government of Namibia Response.

The President of Namibia officially launched an appeal for donor assistance on May 15, 1992.

A Cabinet Committee on Drought, chaired by the Prime Minister, and the Interministerial Task Force, headed by the Permanent Secretary of the Ministry of Agriculture are responsible for managing and coordinating the entire emergency operation. The Task Force is planning on holding regular meetings with donors and NGOs to brief them on the status of the emergency as well as needs and priorities.

The GON considers the shortage of water to be the most critical aspect of the drought. Ground water drilling and bulk water distribution are considered the most urgent responses.

2. GON Operational Plans.

GON operational plans to minimize consequences of the drought include drilling of boreholes, encouraging farmers to sell their livestock at auctions, creating new markets for livestock, and providing soft loans for farmers to rebuild their stocks after the drought.

3. Donor Response.

The only viable short term mechanism for donors to provide emergency food aid to Namibia is through WFP. WFP, however, has only been operational in Namibia since 1989 and there is still only limited capacity for WFP, GON institutions and NGOs to manage and distribute food aid on any scale.

C. CONCLUSIONS.

Donor assistance will be vital to the success of the drought relief program in Namibia. Assistance is needed with both relief commodities and the operations and management of relief programs.

D. RECOMMENDATIONS:

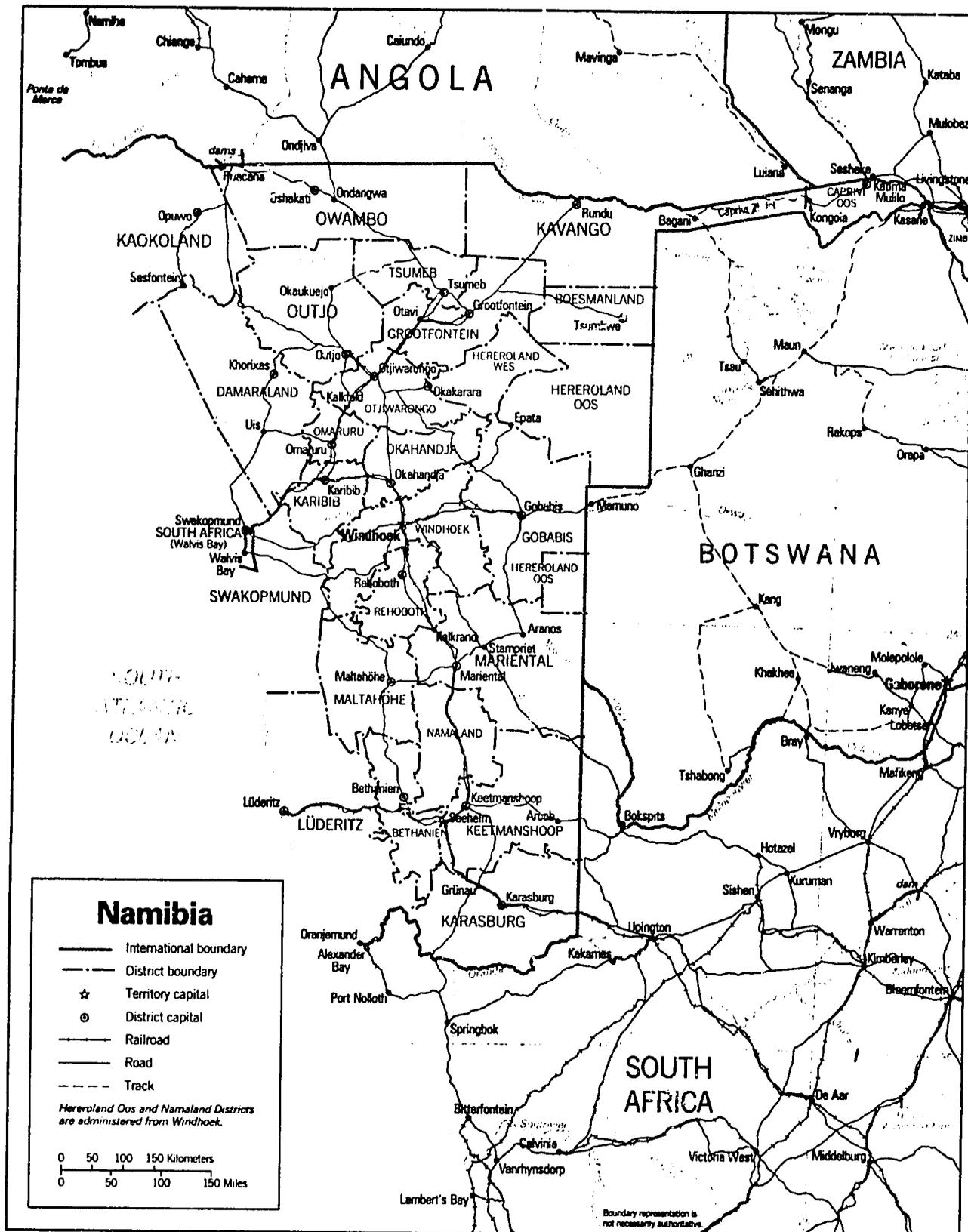
- Donors should channel relief food through existing mechanisms. Strengthening and expanding existing programs, such as WFP's Food for Work program, would be a cost-effective and efficient method of providing drought relief and would avoid setting up a welfare system and possible dependency on food aid.
- Donors should consider providing technical assistance to WFP, selected NGOs, (like the Namibian Council of Churches), and other potential implementing partners to strengthen the existing mechanisms and structures.
- It can be expected that the drought will have the greatest impact on the communal farmers who make up the majority of the population. Donors should focus their relief efforts on mitigating the impact of the drought on this and all vulnerable groups.

NAMIBIA CONTACTS

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Mr. Joe Dunn	Water Project Director
Mr. Erickson	Lutheran World Federation
Mr. Japeni Nujoma	Lutheran World Federation
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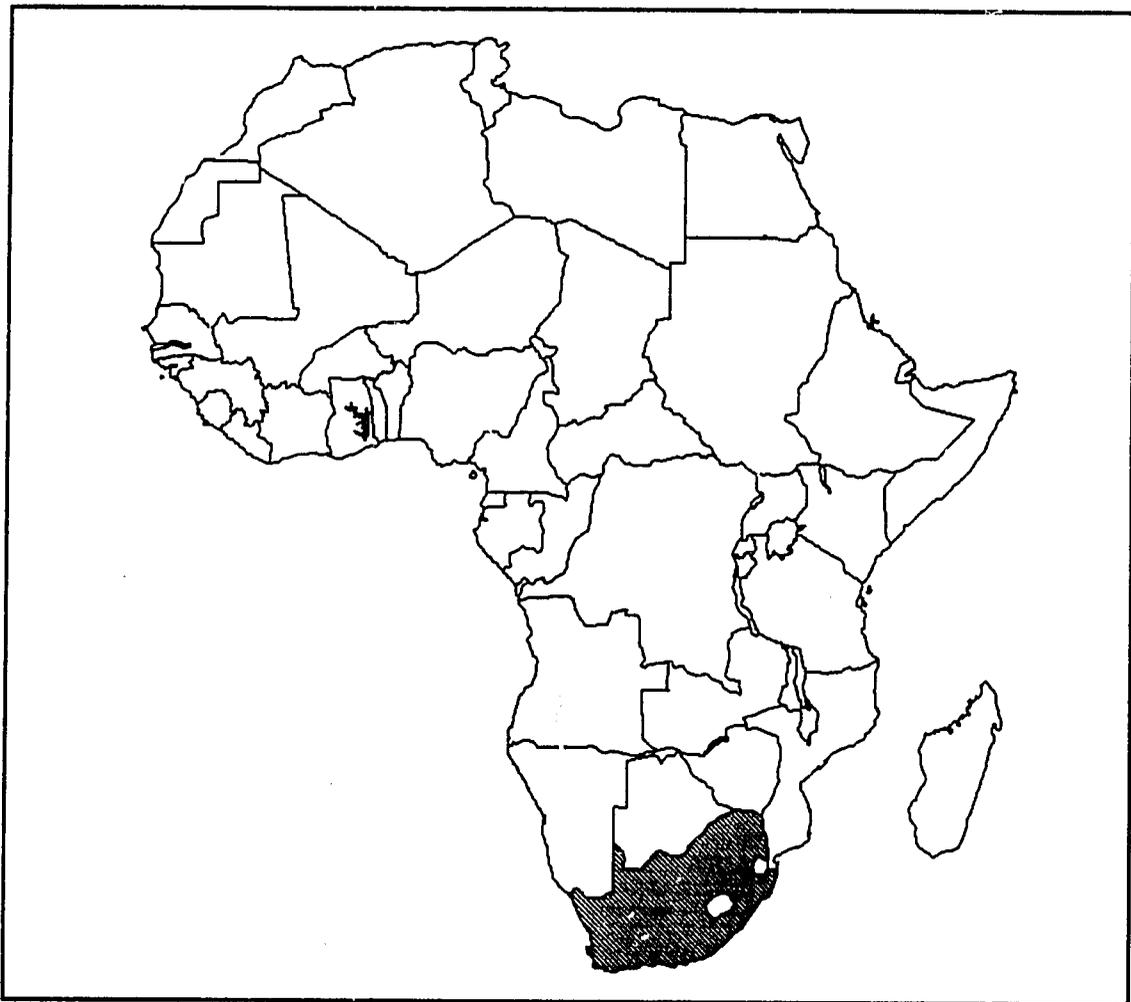
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European Economic Community





Office of U. S. Foreign Disaster Assistance
Bureau for Food and Humanitarian Assistance
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Southern Africa Drought Assessment Country Report



SOUTH AFRICA

SOUTH AFRICA

NOTE: This is an abbreviated country report section. The Government of the Republic of South Africa (SAG) will be providing most of the relief requirements of its population.

I. BACKGROUND.

South Africa is facing its worst drought of the century. In normal years, South Africa exports 2 million metric tons (MT) of maize to the region and the rest of the world. This year, 5.3 million metric tons of maize and other cereals will have to be imported due to the drought. The devastating drought in South Africa impacts significantly on other countries in the region, which normally purchase corn from the RSA to meet their own deficits.

The drought will worsen South Africa's overall economic situation at a time when the country is already suffering from a protracted recession. The drought will affect all South Africans from the wealthiest commercial farmers to the farm laborers and subsistence farmers. According to an indigenous NGO, Operation Hunger, a significant measure of the combined effect of this drought and recession on the poorest members of society can be seen by comparing it to the 1981 - 1983 drought. In 1981, 50 percent of rural blacks were totally dependent on income from commercial farm labor, mines and outside income; today close to 90 percent of rural blacks are dependent on these sources for income.

Although the SAG is expected to meet all of the food and most of the non-food needs of the South African population through its own resources, South Africa is an important country for the rest of the region because of its large and efficient port and railroad network. The successful movement of the estimated 10 million metric tons of food commodity imports into Southern Africa will rely heavily upon South Africa's infrastructure.

The team met with officials from PORTNET, SPOORNET and the Maize Board at their newly created drought operations center in Johannesburg and found them ready, willing, and able to assist with the challenge facing the region this year.

II. FOOD AND AGRICULTURE.

A. BACKGROUND.

South African agriculture is characterized by a combination of large-scale, mechanized, surplus-producing commercial, white

farms and communal, subsistence, black farms which depend on draft animals and manual labor.

B. FINDINGS

1. Impact of the Drought.

The assessment team visited the Orange Free State and Northern Transvaal to assess the effect of the drought on some of South Africa's most vulnerable people. The team found that food and non-food needs, which are critical in normal times, have been exacerbated by the drought. The devastating loss of crops is leading to the laying off of many farm workers and exacerbating the extreme poverty in the so-called homelands.

Estimates are that at least 100,000 commercial farm workers will be laid off because of the drought. Given the rather large size of families, close to 1 million will be directly affected.

2. Production Estimates and Import Requirements.

Production this year in South Africa is estimated at 2 million MT of corn, or 25 percent of the average annual harvest of 8 million MT.

Maize Board officials confirmed that the commercial food needs for Botswana, Lesotho, Swaziland, and Namibia are included in South Africa's imports. However, the Maize Board has advised Namibia that importing directly into Walvis Bay would save the GON a significant amount on transport costs.

The South African Maize Board estimates that 4.72 million metric tons of commercial maize imports are needed for the members of the South African Customs Union (SACU): 4.5 million MT for South Africa; 11,000 MT for Botswana; 80,000 MT to 100,000 MT for Lesotho; 60,000 to 70,000 for Namibia; and 40,000 for Swaziland. Additional imports of wheat, and millet/sorghum or the corn equivalent will also be needed.

C. CONCLUSIONS.

South Africa will be able to fill its cereal import needs and those of the entire SACU through commercial purchases.

The drought has exacerbated the needs in the so-called homelands and expanded the number of people living in squatter camps.

D. RECOMMENDATIONS:

-- While it is expected that the SAG will commit significant resources to address the needs in the so-called homelands,

there may be a need for donors to assist local NGOs and continue to provide funds.

- Donors should encourage Namibia to import its commercial corn, as well as all food aid, through Walvis Bay to save on transport costs and help to avoid potential congestion at other ports.

III. LOGISTICS AND STORAGE.

A. FINDINGS.

1. The Logistics Load.

Over 3.5 million MT of imported corn destined for inland countries will pass through South Africa's ports in the next 12-15 months, in addition to the 4.72 million MT for South Africa and the BLS states. SPOORNET officials estimate that 15,500 rail cars are needed to move those imports to South Africa, Zimbabwe, Zambia, and Malawi.

2. The South African Response.

Officials from the South African Maize Board and TRANSNET (SPOORNET and PORTNET) confirmed that significant resources are being committed to insure the timely transport of commercial and relief commodities through South African ports rail and road network. As an initial response, SPOORNET plans to refurbish 3,000 rail cars at a cost of 27 million Rand to support the regional transportation system. To expedite turn around time of railcars as well as transit time across the South African border, SPOORNET would prefer to run its locomotives through to destinations in neighboring countries and not just to borders.

The SPOORNET coordinated Johannesburg Operations Center will serve as a clearing house for food scheduling on the South African corridors. TRANSNET now have officials from WFP and SADDC countries represented in the center - thus far, representatives of Zimbabwe, Botswana, Zambia, Malawi. The Maize Board and SPOORNET will coordinate the operations of the grain storage facilities in South Africa.

TRANSNET will incur substantial costs in gearing up for the Southern Africa Drought program. It is unknown at this writing whether they will be able to absorb the financial burden or whether they will have to raise rail transport rates significantly to reflect actual costs. At the moment, their corn transport rates are much lower than rates for other commodities, representing a subsidy to the inland countries. This is an issue which will be of great importance for the rest of the region.

3. Trucking.

A vigorous private sector will supplement the train operation in the hauling of cereals throughout the region. It is not known to what extent the land transport system will be able to handle the tremendous quantities that need to be moved, and it is likely that there will be requests for trucks from both governments and NGOs.

B. CONCLUSIONS.

The South African Maize Board, SPOORNET and PORTNET are committed to providing logistical assistance to the countries in the region. Cooperation and coordination with both commercial and relief commodities must happen to ensure a successful operation.

The amount of food imports which must come into the region over the next 12 months will require unprecedented levels of cooperation and coordination among the nations of the Southern African region, especially in the planning stages.

C. RECOMMENDATIONS.

- Donors should encourage officials from the SADDC countries to work closely with the SAG, the Maize Board, PORTNET, AND SPOORNET.
- Commercial and relief imports utilizing South African facilities must be coordinated with the operations center to facilitate timely movement of commodities.

IV. WATER.

A. FINDINGS.

According to Operation Hunger, only 42 percent of the population living on the so-called homelands have access to potable water.

The team visited the Orange Free State and found some areas served by boreholes fitted with hand pumps, and by surface water supplies. While some squatter areas had water taps for individual plots, others had one tap to serve 250 families.

Many surface wells have dried up completely due to the falling water tables.

B. CONCLUSIONS.

The drought will lead to a significant increase in the number of disadvantaged families in South Africa. Providing

potable water along with food for these families will be critical in preventing a potentially disastrous situation.

C. RECOMMENDATION:

- Donors should support cable tool well-drilling operations in order to increase water supplies to the hardest hit areas. This is a simple and relatively inexpensive means of increasing wells in the affected areas.

V. HEALTH.

A. BACKGROUND.

Of all the countries visited by the OFDA team, South Africa is in the best position to clearly identify areas most adversely affected by the drought; and respond to problem areas and vulnerable groups. South Africa has a disease reporting system that is well organized and typical of reporting systems in most developed countries. Data is available by age group on the leading causes of death for Asians, Blacks, Coloureds, and Whites. Similar data is available through 1990 on disease morbidity and deaths due to internal causes.

B. FINDINGS.

1. Availability of Services.

There is a tremendous disparity of services available in the homeland areas compared to the rest of South Africa.

2. Morbidity and Mortality.

The greatest proportion of deaths occurring in the less than one year old age group falls under the subgroup perinatal conditions, and is in excess of 50 percent in all population groups. Infectious and respiratory disease occupy the second most important position in Asians, Blacks and Coloureds. In the White group, however, congenital conditions are the second most important, corresponding to the situation found in developed countries. As infectious and respiratory diseases are brought under control, congenital conditions form a greater proportion of the deaths.

In the Black and Coloured populations nutritional deficiencies are also an important cause of death being directly responsible for three percent and two percent of deaths, respectively.

As the perinatal causes of death decrease in the growing child, infectious and respiratory disease become more important.

External causes (accidents, poisoning and violence) also assume relatively greater importance.

Infectious diseases continue to contribute greatly to the health status in South Africa. The number of cases of tuberculosis, measles, malaria, and intestinal infections as well as pneumonia and bronchitis affect the Black and Coloured populations the most often. Malnutrition is also a significant problem in those populations but no current data was available at the time of the team's visit.

3. Nutrition and Health Impact of Drought.

The team heard anecdotal accounts of severe malnutrition but did not see any documentation to indicate that any increases were related to the current drought.

Discussions with one chief nurse in a rural area indicated that no new or increases in health problems were occurring due to the drought. She indicated that medicines were readily available and that immunization levels were good.

The team observed displaced farm workers being resettled in several locations, but food and water were available and although sanitation conditions were not the most desirable, efforts were in place to control sanitation issues.

Plans have been developed by the government to aid some farmers and their farm labourers through feeding assistance as well as other forms of help.

It appeared that programs like Operation Hunger were providing an important safety net for a large portion of the most vulnerable population.

C. CONCLUSIONS.

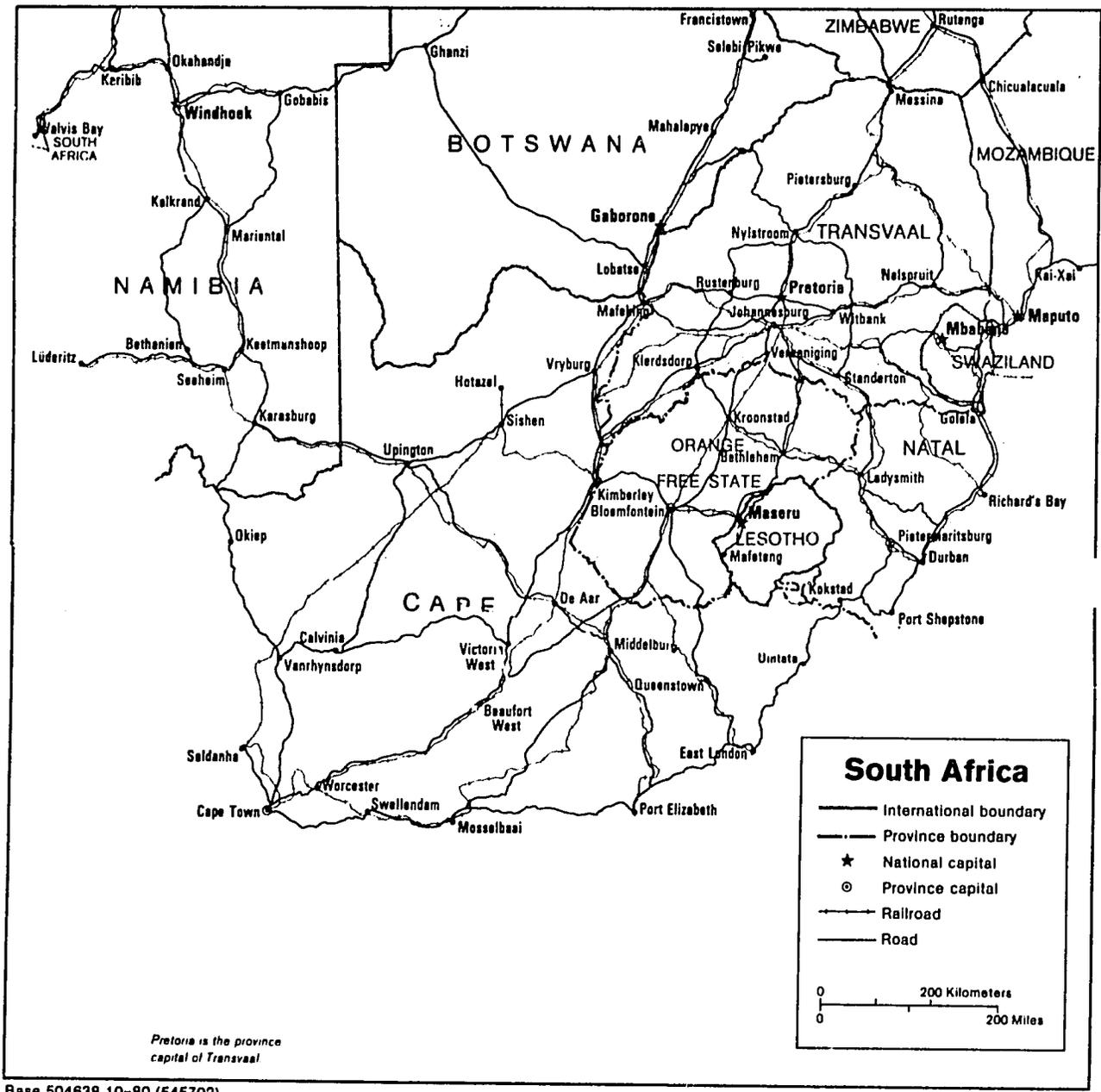
The SAG is in a position to monitor and respond to any medical or nutritional emergency which occurs.

D. RECOMMENDATION:

- Donors may be called upon to provide support to local NGOs, such as Operation Hunger, which are engaged in supplementary feeding programs and other non-food interventions (wells, seeds and tools, etc.) in the homeland areas. Given the additional impact the drought will have on these already impoverished populations, some support to Operation Hunger should be considered.

SOUTH AFRICA CONTACTS

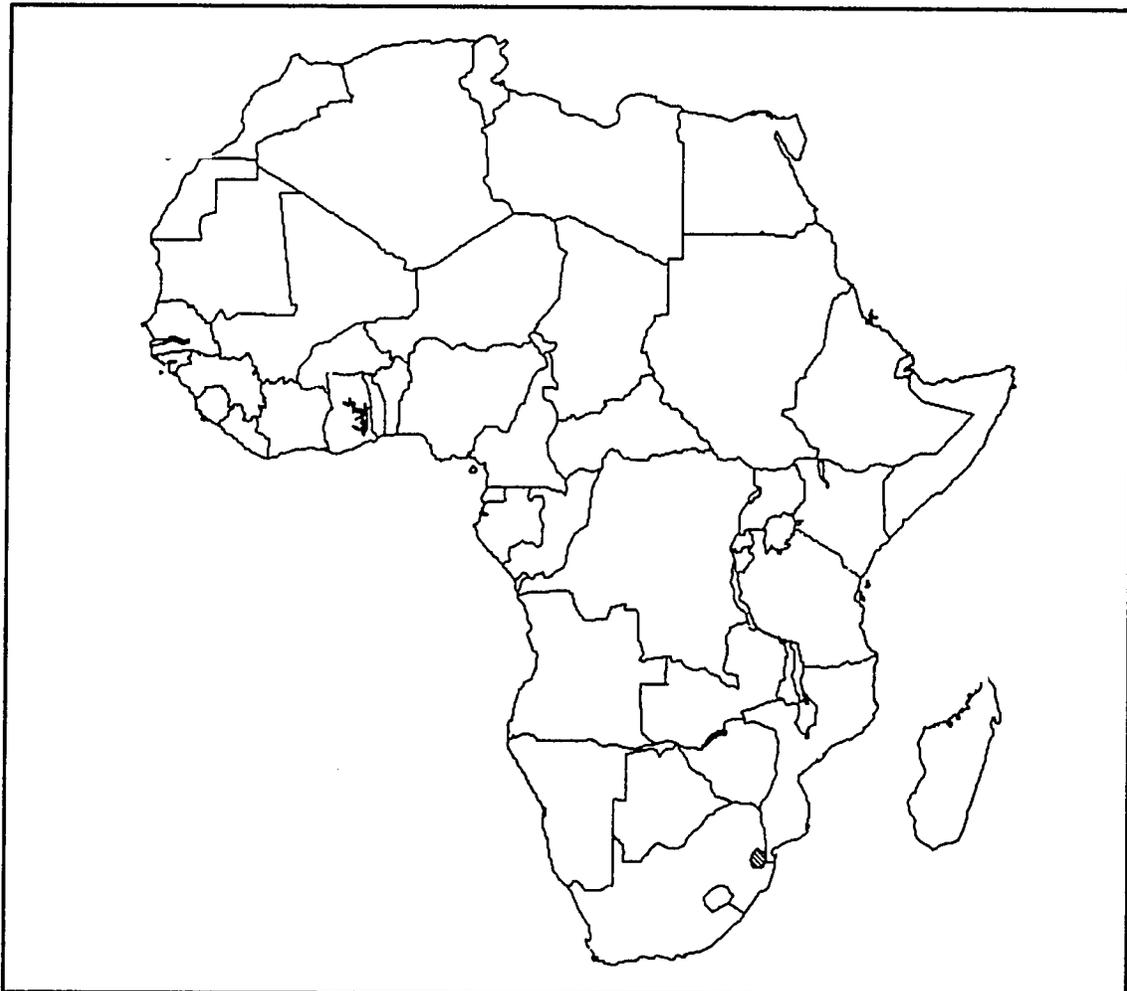
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Southern Africa Drought Assessment Country Report



SWAZILAND

SWAZILAND**I. BACKGROUND.**

Swaziland, with a population of approximately 750,000, can normally meet 75 percent of its maize requirements through domestic production. This year, many parts of the country have been devastated by the drought, especially the low veld areas, resulting in domestic production of only 25 percent of requirements. As part of the Southern Africa Customs Union, Swaziland will rely on the South African Maize Board for its commercial maize imports of 69,000 MT.

The Government of Swaziland (GOS) has established a National Disaster Task Force consisting of various GOS ministries, WFP, and NGOs to coordinate the drought response.

Swaziland also has a very vibrant private sector which should be looked to as a partner in providing drought relief.

II. FOOD AND AGRICULTURE.**A. BACKGROUND.**

In normal times, Swaziland produces nearly 75 percent of its domestic requirements of 165,000 MT of maize. This year, the drought has reduced crop production to zero in some parts of the country with the most affected areas being the low veld regions, bordering Mozambique and South Africa. The OFDA team made field trips to the northeast and southern low veld and confirmed 100 percent maize crops losses in many parts of those areas. The cotton crop which provides farmers with cash income, has also been severely affected.

B. FINDINGS.**1. Impact of the Drought on Agriculture.**

The southern region had hopes of a fair crop this year but three late season hail storms destroyed the entire harvest. Farmers are holding back any stocks they have in anticipation of the drought causing an increase in maize prices, perhaps making up for some of the lost quantity with higher revenues. At the time of the team's assessment, the price of a 70 kilo bag of maize had risen from a normal price of 35 Rand per bag to 60 Rand per bag.

Sugar cane, which provides a significant portion of

Swaziland's foreign exchange earnings is also severely stressed. At the time of the team's visit, sugar cane farms were continuing to water their plants, hoping to salvage some crop this year. The impact of drought on Swaziland's foreign exchange earnings from agriculture could deal a blow to the economy.

2. Maize Crop Production Estimates.

In normal years, Swaziland produces between 120,000 MT to 130,000 MT of maize. During the 1990/91 crop year, approximately 153,000 MT of maize was produced, a bumper harvest. Early forecasts in February 1992 indicated a maize harvest of approximately 69,000 MT but the lack of rain in February and early March, combined with some hail storms in the middle of March have caused the maize production forecast to be reduced even further. The revised forecast is likely to put this year's harvest at approximately 30,000 MT.

3. Food Needs.

TABLE 1: Estimated Supply/Demand for Maize

- Total Consumption Requirements:	165,000 MT
- Estimated National Stocks:	25,000 MT
- Estimated Commercial Imports:	30,000 MT
- Estimated Total Production:	30,000 MT
- Estimated Deficit:	80,000 MT
- WFP	41,000 MT /1
- Remaining Deficit	39,000 MT /2

(Source: GOS/WFP, April, 1992)

/1 WFP estimates that between 250,000-300,000 people - approximately 40 percent of the population - will require emergency food distributions over the next year, necessitating a free food/supplementary feeding program of approximately 41,000 MT.

/2 An additional 39,000 MT of program food aid will be required, to meet domestic consumption requirements, bringing the total food aid package to 60,000 MT.

4. Coping Mechanisms.

Swaziland has never experienced such a severe situation with regard to its maize production. Most subsistence farmers are not used to having to store food for emergencies and have no on-farm reserves to cushion the impact of the drought. With the loss of farm income, many citizens have indicated they will take children out of school to save money to buy maize (families are required to pay for books and school fees even at the elementary school level). Others are thinking about off-farm employment such as handicrafts. Some women's groups are making and selling huge

clay water storage jars in anticipation of an eventual door-to-door tankering operation in the most rural areas.

5. Constraints to a Successful Program.

The bulk of Swaziland's food imports come via South Africa. The Swaziland National Railroad can handle up to two trains a day from South Africa, or about 2,600 MT per day, and is taking steps locally to prepare to handle the additional tonnages this year. The estimated monthly requirement of maize for Swaziland is less than 10,000 MT.

The limiting factor on any relief effort will be internal storage facilities. It is estimated that there is only about 5,000 MT of grain storage space in Swaziland, although steps are also being taken now to identify silos where bulk grain could be stored.

Internal transportation could be a problem, but it is expected that South African truckers will be mobilized to deliver food in Swaziland. Also, with the decline of the cotton crop as a result of the drought, some truck capacity could be freed up to absorb the food tonnages.

There is very limited experience in managing food distribution programs in the country. WFP has been implementing feeding programs for Mozambican refugees for a number of years, but does not have a regular food program in place for Swaziland. NGOs are willing, but inexperienced.

Concern with the physical security of the maize once it arrives in Swaziland was raised as an issue by GOS authorities. The national police force will be mobilized to assist in these efforts.

6. Affected Population.

TABLE 2: Estimates of Vulnerable Population Affected by Drought

Area	Affected Population
Komati Valley	4,100
Egbeni	12,300
Egdvwini	8,900
Dvumbe	3,300
Hluti	13,400
Mpaka/Kalanga	36,900
Siphofaneni/Lubuli/Lavumisa	39,700
Ntfonjeni	27,900
Mhlangatne	6,300
Sihhoye	6,100
Siteke/Mambane	18,300
Grand Valley	4,000
Mafucula/Lomahasha	7,800
Upper Shewula	300
Croydon	14,100
Madulini	7,900
Mpompta	8,300
Kandinda	3,000
Mbelebeleni	13,300
Masipula	3,400
Kaphunga	4,900
Malindza	5,800
Totals	250,000

(Source: GOS/WFP)

C. CONCLUSIONS.

Swaziland appears to be in better financial condition than most of the other SADC countries affected by the drought (except Botswana) and its association with South Africa ensures that it will receive the commercial imports it requires.

Although Swaziland may be able to commercially import enough maize from the South African Maize Board to meet its commercial maize requirements, a number of subsistence farmers have been severely affected by the drought and will have little or no economic means to purchase sufficient food commodities to meet their family requirements. Thus, it is likely that many farmers, particularly in the low veld areas where drought conditions have had the most serious impact, will need to be provided with free food by the GOS and/or donors.

There could be difficulties in organizing the emergency food

distribution programs in Swaziland given the government's and NGOs' inexperience in handling such programs. WFP will be relied upon to give direction and guidance for the relief effort.

D. RECOMMENDATIONS.

- Donors should channel emergency food aid through WFP. Before food is committed, however, an operational plan and targeting criteria should be drawn up and mutually agreed upon by the government, WFP, donors, and NGOs.
- Donors should support the U.N. and GOS in developing and implementing an internal logistics plan for Swaziland, including the use of the private sector.
- Provision of seeds and tools for the coming season is vital if Swaziland is to quickly recover from this drought. Should it be found that many farmers are unable to purchase agriculture inputs because of a loss of revenue this season, a program should be devised to help those farmers get the necessary inputs.
- Swaziland should work with the South African Maize Board to identify storage facilities in South Africa which could be used to store imported maize.
- WFP food for work programs should be supported by donors as a portion of their relief program.
- The GOS should be encouraged to develop a program which would reduce the pressure on families to remove children from school in order to use that money to buy food.

III. WATER.

A. BACKGROUND.

Drinking water in Swaziland is derived from a variety of sources. All major towns have piped water supply systems. There are also a number of piped supply systems that provide drinking water in rural areas. In addition, many rural dwellers are supplied by wells equipped with handpumps. Some residents also depend upon rivers, streams, ponds, and reservoirs as sources of water (drinking, cooking, and washing). Approximately half the population has access to potable water in normal times.

B. FINDINGS.

1. Impact of Drought.

The government is expecting shortages of drinking water

supplies throughout the country with the low veld areas being the most severely affected. Although ground water levels are dropping, it is expected that those who depend on surface water supplies will be the most seriously impacted. Many springs along the Lobomba escarpment have dried up entirely or are experiencing greatly reduced flow. Urban areas which are expected to be the hardest hit include: Siteki, Lomahasha, Lubuli, Lavumisa, Piggs Peak, and Hliti. Rural water shortage areas include: Maphumangwane, Mambane, Siphofaneni, Groorydon, and all border posts.

A part of the team visited the Lomahasha area and saw first hand what some rural communities are experiencing. The team found the borehole of one community almost dry and learned that all the town residents, the school children, the health clinic, the agricultural post and large numbers of cattle were depending on one nearby reservoir for all water needs. Total rainfall in the area since October 1, 1991, has been 40 percent of that of the comparable period in the 1990-1991 rainfall season. There has been just 20 percent of the January - March 1991 rainfall. Unless there are unseasonal rains, it is unlikely that the water in this reservoir will last through the entire dry season.

2. Government Drought Response.

The Water and Sewerage Board and Rural Water Supply Board are both preparing emergency drought response plans to present to the government. For rural areas, the plan includes augmenting the existing drilling plan in food shortage areas. In urban areas, there are several interventions planned. A request will be made to revive old, inactive wells, which are under the control of the Department of Geology and Mines. These will be equipped with new, electric pumps where possible. There will also be a request to the government for purchase of twenty water trucks. These will be used to fill existing concrete reservoirs to maintain urban supplies.

3. Impact of Drought on Irrigation.

The chief water users in low veld areas are the large sugar cane producers. These estates irrigate extensively using predominantly spray irrigation. Due to shortage of supply, the government has reduced quantities of irrigation water available to cane irrigators by 50 percent. The drought assessment team noted, during field trips to the low veld areas, that most of the cane was being irrigated during the height of the afternoon heat.

4. Impact of Drought on Sanitation.

The Water Supply and Sewerage Board is responsible for the five large urban sewerage schemes that serve 30 percent of the urban population of the country. Figures for coverage of pit

latrines were not available for urban or rural areas, but visual inspection by the team showed that most homesteads have pit latrines.

As the drought intensifies and protected water sources become dry, it can be expected that existing sanitation facilities (pit latrines, toilets) will reduce the incidence of transmission of diarrheal diseases. Transmission may continue to occur in areas where alternative fall-back water sources (streams, ponds, reservoirs, etc.) become contaminated.

C. CONCLUSIONS.

The government response, in terms of increased drilling and reactivation of existing wells, is an adequate intervention to the extent that the additional supplies resulting from these interventions make up the actual shortfall in drinking water supplies.

Transport of water in trucks will almost certainly be required, not only for urban areas, but also for rural areas experiencing severe water shortages.

D. RECOMMENDATIONS:

- Donors should support the GOS efforts to increase water drilling and to deepen/repair existing wells. Donors should investigate whether NGOs have the ability to assist in this effort.
- Donors should evaluate the purchase of new water trucks keeping in mind the long terms needs of the government for transport of water by truck. If truck transport of water will be required only for the duration of this drought, the option of leasing trucks or of equipping existing government or military trucks with water tanks on an emergency basis is preferable.
- To the extent possible, sugar cane should be irrigated at night and during times of lower potential evaporation.
- Basic household and community water conservation programs should be encouraged by the GOS.

IV. HEALTH.

A. BACKGROUND.

Except for South Africa, Swaziland enjoys the highest living standard in the region, including health care service. Even though this advantageous position is helpful in weathering the

potential health consequences of drought, by no means can the potential for famine be taken less seriously.

B. FINDINGS.

1. General Health Conditions.

Swaziland has a relatively high fertility rate, a moderately high infant mortality rate, and good immunization coverage.

2. Health Care Delivery Systems.

The Government provides all primary health care through an extensive health center network. Loss of health care personnel to South Africa because of higher wages has put a strain on the system. There is no shortage of medicine or medical supplies. A site visit to rural health centers found them in good condition and well organized.

3. Existing Nutrition Programs.

Health centers no longer provide supplementary feeding because of the lack of need. Until last year, WFP supported a school meal program which is maintained by some schools. Students are charged a small fee for the meals.

4. Existing Monitoring Systems.

All health centers perform growth monitoring for children under 5 years of age using the weight-for-age system. The results of all growth monitoring for each center are summarized monthly for statistical purposes.

5. Baseline Nutrition Status.

Based on the 1983 national nutrition survey, Swaziland had a good nutrition status. Results indicated a prevalence of low weight-for-height ($<-2SD$) which were below the expected level of two to three percent for all regions. The prevalence of low weight-for-age in 1983 was approximately 10 percent.

6. Impact of the Drought on Nutrition Status.

There was no evidence of population movements or urban migration due to drought. Based on the assessment of current food and market situation, there is as yet no indication of food and water shortages related to drought or negative impacts on health and nutrition status. Review of February and March growth monitoring data at a rural health center near Marhamba, indicated that the prevalence of low weight-for-age was less than two percent. The nurse-in-charge noted that the rate of low weight-for-age has been declining in the past few years resulting in

fewer children being qualified for supplementary feeding programs. During the past few months, most visits to this rural clinic have been related to intestinal and respiratory conditions. A special nutrition survey is on-going in response to the drought and the report will be available by mid-April.

7. Most Vulnerable Population.

Subsistence farming families with no outside income will be the most vulnerable due to crop failures and rising food prices. It is estimated that approximately one-third of the 60,000 subsistence families fall into this category.

C. CONCLUSIONS.

With adequate and timely distribution of imported food there is a good chance that Swaziland can weather the drought without increasing levels of malnutrition. On the other hand, inadequate food supply or distribution, compounded with high food prices, can put the most vulnerable population in great risk of hunger and malnutrition within three to five months, and the general population within six to eight months. Overall, the country is currently in a low risk category, but this will change unless appropriate interventions occur.

D. RECOMMENDATIONS:

- Donors should support all efforts toward food security and adequate water supply as the best prevention of health related impacts of drought.
- Given the current nutritional condition of the population, donors should support the continuation of nutritional surveillance in order to identify areas of need as they arise. A cost-effective approach would be to establish a monthly surveillance system relying on data currently being collected as part of the growth monitoring program already in place. Such a system should be sensitive enough to identify prevalence of low weight-for-age that is region specific indication changes in malnutrition.
- Donors should monitor the incidence of diarrheal disease and ensure that adequate supplies of oral rehydration salts (ORS) and medicines are available.

V. LIVESTOCK.

A. BACKGROUND.

The livestock sector is important for both commercial and communal farmers in Swaziland. As in most other parts of the

region, animals owned by communal farmers represent a family's wealth and are not sold except when there is an urgent need for cash. Experts say that Swaziland is overgrazed because of this practice.

B. FINDINGS.

Swaziland farmers hold about 800,000 head of cattle, which represent a significant portion of household income. The low rainfall has had a serious impact on the livestock sector because of the reduced amount of fodder available. There is already strong evidence that farmers are selling their livestock before the cattle die of thirst or have no market value. It is now difficult for farmers to find buyers for their animals.

Livestock prices are falling rapidly - last year, average livestock prices were approximately 1,100 to 1,500 Rand. In early 1992, the average prices were as low as 750 Rand. By early April, some of the prices quoted were down to 350 Rand.

Those who can afford it are putting their animals in two "boarding houses" where commercial farmers will care for the animals until the drought is past. For the most part, however, farmers are trying to sell.

C. CONCLUSIONS.

The loss of livestock in the communal farming sector will have the effect of lost draught animal power and protein source for rural farmers.

D. RECOMMENDATIONS:

- Donors should monitor the livestock situation and be prepared to assist the government in finding solutions to help communal farmers.
- Donors should be prepared to support a livestock famine mitigation activity on a pilot basis for Swaziland. Donors should also consider emergency interventions to assist farmers in protecting their investment in livestock.

VI. ROLE OF NGOS.

A. BACKGROUND.

There are numerous indigenous NGOs in Swaziland which are engaged in various grass level activities. There is an association which groups all NGOs together.

B. FINDINGS.

Most NGOs have little or no experience in emergency programs, but are interested in getting involved in some aspect of the relief effort. The USG has already conducted one workshop on disaster planning for government and non-governmental organizations.

The NGO coordinating body is weak but could be strengthened if given direction. The Swaziland Red Cross is the most organized and experienced NGO and will probably take the lead in planning and organizing an NGO response.

C. CONCLUSION.

With limited experience in dealing with emergencies at all levels both Government and the non-governmental sectors, in Swaziland, there will be a role for NGOs. Given the probable involvement of official government bodies (i.e. police, army) in the effort, there will be a need to define the NGO role very specifically. There is a need for short-term training on management of emergency programs which could go a long way towards creating an indigenous capacity to respond to emergencies in the future.

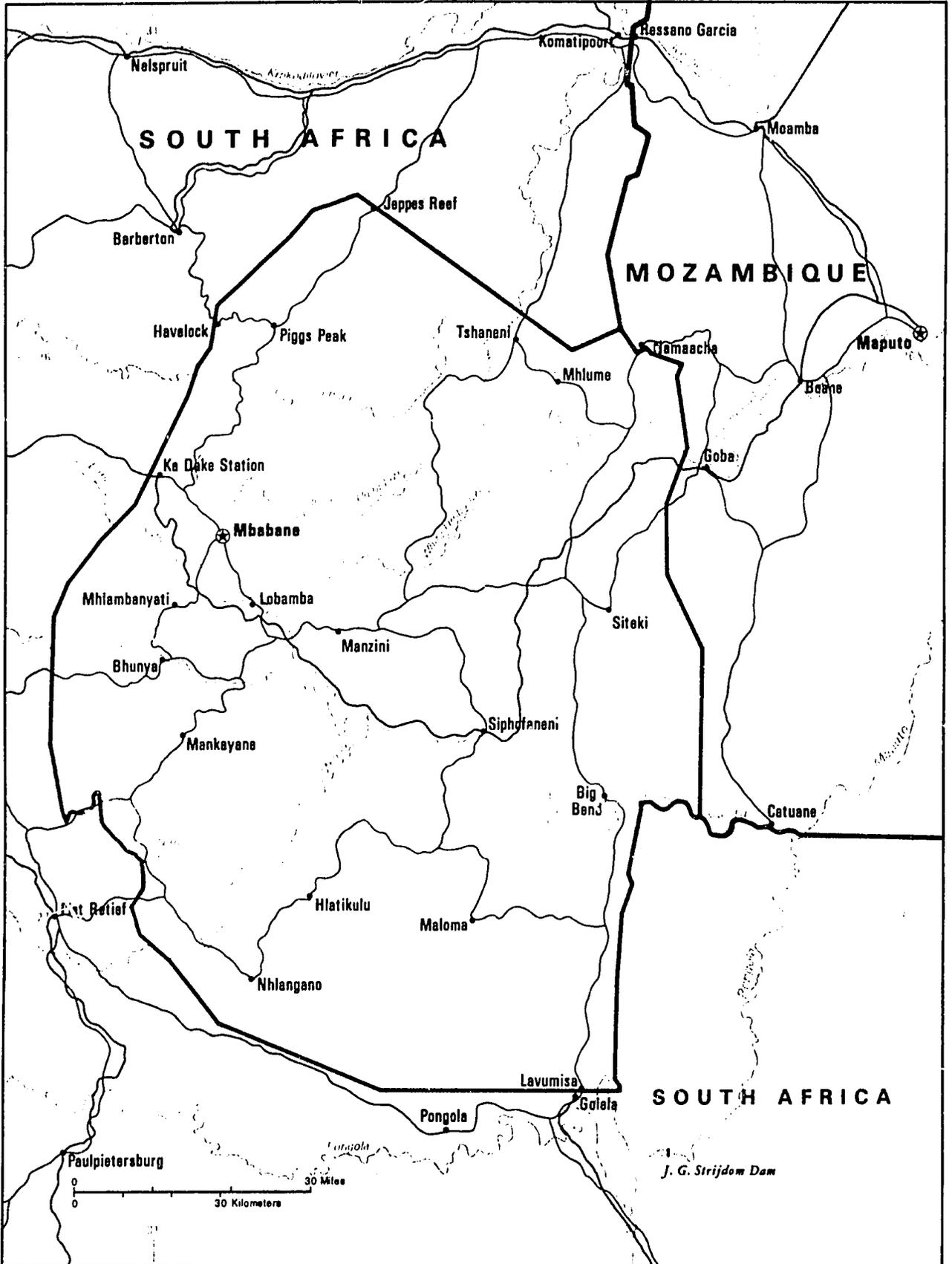
D. RECOMMENDATIONS:

- Donors should encourage NGOs to improve coordination and to work closely with the GOS National Disaster Task Force.
- Donors should support any effort aimed at assisting the NGOs to better plan and implement emergency programs in Swaziland.

SWAZILAND CONTACTS

Roger Carlson	Director, USAID
Stephen Rogers	US Ambassador
Dennis Sharma	Agricultural Officer, USAID
Louise Sobon	Representative, Logistics Officer, WFP
Alexandra Marcus	Southern Africa Director, World Relief International
Thandiwe Dlamini	National Director, Red Cross
O.K. Dlamini	Ministry of Natural Resources & Energy
Mphamali	Director, Water & Sewage Board
Napolean Ntezinde	Rural Water Supply Board
Nigel Fenwick	Chief Fire Officer
Themba Masuku	Minister for Agriculture and Cooperation
Local Health Clinic Nurse	
Local school principal and staff of ten teachers	
Farmers Women's Group	
Local Agricultural Extention Agent	
Representatives from several government and NGOs (list not available - approximately twelve people, other than Assessment Team attended meeting).	

Swaziland



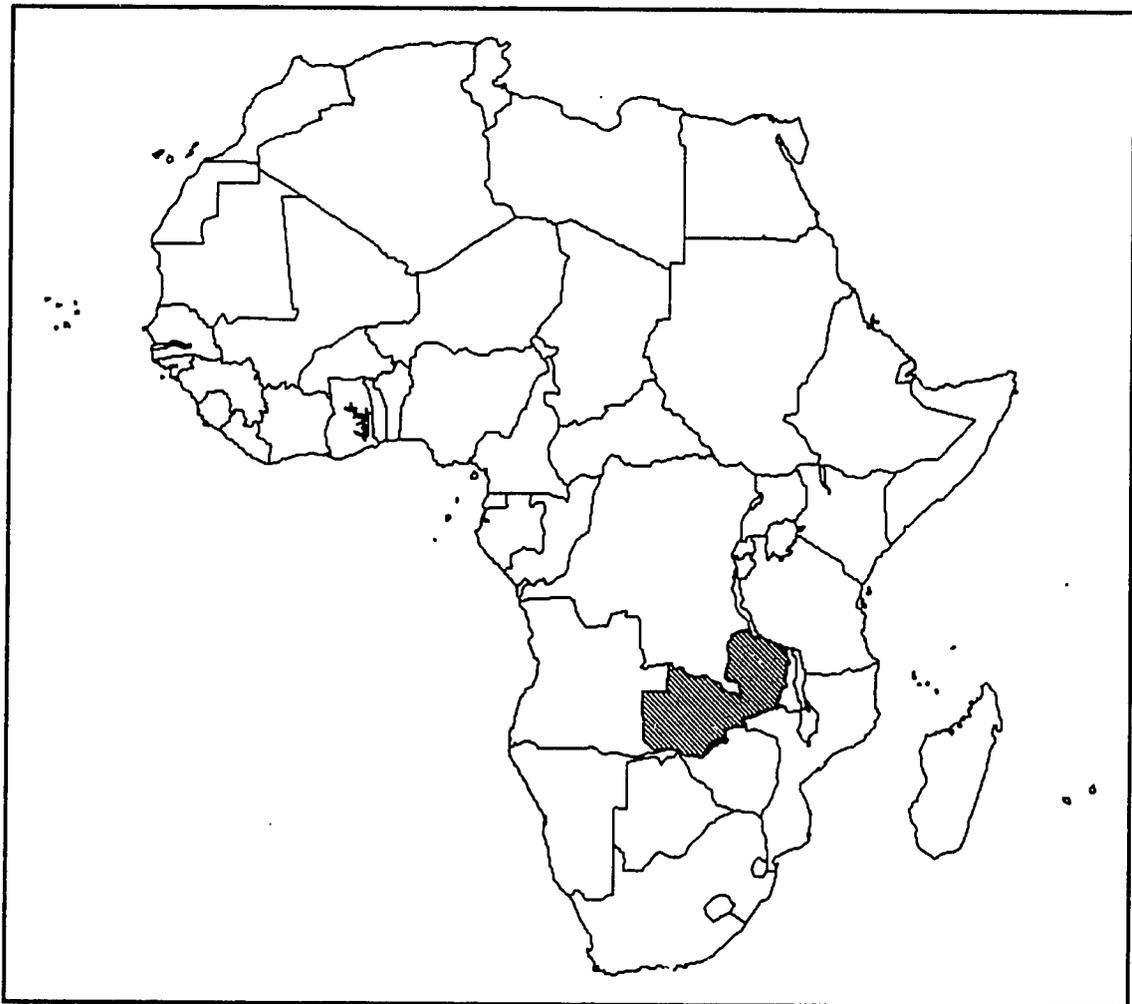
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Southern Africa Drought Assessment Country Report



ZAMBIA

ZAMBIA

NOTE: This report reflects new food production information and program developments that have occurred since the team's April assessment.

I. BACKGROUND.

The drought in Zambia comes at a time when the country is in the midst of major economic and political changes. Democracy was established in Zambia last October when the ruling government was defeated in elections after twenty-seven years of being in power. Even before the drought the government found itself with no food reserves and embarked upon one of the largest food import programs to fill the gap before the April 1992 harvest. In addition, the new government had launched truly impressive reforms, both economic and political, and the population appeared to have accepted the economic hardships as a price worth paying for longer-term freedom and prosperity.

The challenge now, however, is to respond to the drought in such a way that the short-term relief efforts effectively alleviate such a way that the short-term relief efforts effectively alleviate economic dislocations and human suffering without derailing longer-run liberalization campaigns. As such, the political and economic stakes of an adequate response to the drought, in Zambia are high-perhaps higher than in another country in Southern Africa.

II. FOOD AND AGRICULTURE.**A. BACKGROUND.**

The Southern Africa Drought has clearly not spared Zambia's food and agriculture sector, especially in the southeastern half of the country. After good early rains, there was a cessation of rains during the crucial "tasseling" stage for the maize crop. At the end of March, rains returned to some of the drought affected areas. So while there is a large loss of the maize crop in the southern part of the country, in some ways this has been called a "green drought," because unlike Zimbabwe, the rains did return late in the season.

B. FINDINGS.**1. Areas Affected by Drought**

The most severely affected areas correspond approximately to the maize-growing areas, below thirteen degrees south latitude. Malomo, Choma, Monze, and Mazabuka districts of the southern province are the most affected.

2. Magnitude of the Food Gap.

Using its food balance sheet methodology, the FAO/WFP mission calculated import requirements at 1.2 million MT of maize and other staples, namely wheat, edible oils and pulses, to avert a major food crisis during the 1992-93 marketing year. The FAO/WFP team estimated the maize production for the 1992/93 year would be only 485,600 MT, which is only about one-third of normal production. This included 50,000 MT of "green maize" from the 1993 crop.

It is worth noting that the basis for the FAO import requirements estimate is normal consumption levels, including feed, seed, and other non-food uses and losses. Thus, the estimate does not take into account shrinkage in aggregate demand, as a result of income reductions and overall economic depression, that is certain to be substantial during a disastrous drought such as the one that has befallen Zambia this year. Overall, agricultural output is expected to fall by 27 percent during the 1991/92 crop year.

The FAO estimate of 1992-93 maize import requirements for Zambia includes an allowance of 100,000 MT for "unofficial" exports (mostly to Zaire's Shaba Province) and 100,000 MT for stocks. These estimates correspond with the Government of Zambia's import requirement of 300,000 MT for these purposes. The FAO/WFP mission has also recommended that 115,000 MT of the imported maize be provided to needy rural households through direct free distribution programs, plus another 15,000 MT of supplementary foods (such as pulses and edible oil) for vulnerable groups and other special feeding programs.

3. Meeting the Food Gap.

Zambia is attempting to meet its food gap through a combination of both commercial and concessional means. To date the concessional food aid. Central to the U.S. approach has been an innovative combination of U.S. and other donor financing where U.S. resources will be used to fund the cost of food, while other bilateral donors will pay for ocean freight and inland transportation. To date, Zambia has also put together a commercial purchase of 100,000 tons of maize. Currently, the overall maize gap stands at 548,000 tons. This does not include any U.S. food under FY '93 funding, which the USAID/Lusaka mission feels will arrive in Zambia after the period of critical need is over. Additional commercial imports are also being looked at as a means of bridging the food gap.

4. Internal Food Supply Management.

With the exception of the 115,000 MT of maize which are to be distributed free of charge to vulnerable groups, the rest of the imported maize is to be distributed through commercial channels, with the full cost, to the extent possible, being passed on to the consumers.

The requirements for the free distribution and supplementary food distribution were WFP recommendations based on a painstaking analysis, organized by WFP Lusaka, of district and household neediness, measured by maize harvests and wherewithal to purchase or otherwise acquire food. WFP has proposed that, as far as possible, the direct free distribution program incorporate food-for-work, primarily as a self-selection device for targeting the program to needy households.

The issue of organizational arrangements for implementing this program, particularly at the local level, is especially thorny in Zambia's case. At the national level, the Ministry of Health will be responsible for the direct free distribution program in rural areas, which is being coordinated by the local World Food Program Office. It is expected that food for work, supplementary feeding, and free rations to households with children receiving supplementary feeding will be interventions that will be employed through NGOs, church missions, and other community based groups working in areas which are particularly hard-hit by the drought.

C. CONCLUSION.

In keeping with its policy of reversing the long-running "welfare statism" trends in the economy and society, the newly elected government wants to keep free food distribution to the absolute minimum, and to rely instead on making ample supplies of maize widely available for purchase.

While the Government of Zambia should be complimented for following this principle, in practice, however, it may be difficult, for political and humanitarian reasons, to keep the level of direct free distribution down to just 115,000 MT of maize. The loss of over 60 percent of the nation's maize crop will undoubtedly lower incomes drastically, especially among small-farm households. Even if imported supplies are sufficient to keep prices stable, large numbers of such households will presumably not have the purchasing power necessary for maintaining food consumption levels that border on nutritional inadequacy even in good years.

Administrative structures at the district level are in flux

as a result of the political transition that is underway in Zambia. There seems to be a consensus that, as a result, NGOs, church missions, and other community-based groups will have to shoulder most of the burden of implementing the free distribution program at the local level. However, numerous questions about local implementation will need to be answered as this program gets underway.

D. RECOMMENDATIONS:

- Decision makers, including donors and NGOs, should keep a watchful eye on the purchasing power situation, particularly in rural areas, and formulate contingency plans for rapidly expanding the direct free distribution program, should the original estimate of the drought's income effects prove overly optimistic, or should supply shortages inflate prices.
- Food availability and market prices should be monitored in rural areas, especially those that are drought affected, to get an early warning concerning access to food for the population at risk.

III. WATER.

A. BACKGROUND.

The most severely affected areas are the Malomo, Choma, Monze and Mazabuka districts of Southern Province. Eastern and Lusaka provinces can be ranked next, followed by Central Province. Western Province and Gwembe District of Southern Province chronically deal with water shortages, and in general, low service levels in those areas are not considered to have as critical a drought-related impact as in the other noted locations.

B. FINDINGS.

1. Difficulty in Assessing Water Availability.

Except for precipitation, very little data have been recorded about the impact of the drought on rural water supplies and sanitation. Anecdotal reports of shallow wells and boreholes drying up are relatively common. No systematic groundwater monitoring has ever been conducted in Zambia.

In spite of rains at the end of March and early April, surface flows were below normal, although flow records were not available to the assessment team. The Department of Water Affairs is currently conducting a country-wide survey, but no

formal report has yet been produced. It is too early to predict accurately the impact of the drought on urban water supplied, although it has been noted that major surface water sources are now flowing at approximately their normal end-of-dry season lows.

Further, even normal dry-season peak demands of a least 100 percent of average (Lusaka) are expected to stress urban systems substantially. Nevertheless, there exists considerable potential for conservation in urban areas. For example, the average per capita consumption for Lusaka is approximately 300 liters per day. While there is wide variation, this figure is quite high, representing 10 percent of the total population of Zambia.

2. Impact on Urban Sewer Systems.

Urban sewerage and waste treatment systems are in poor condition, although rehabilitation works have begun. Still, sewer line blockages, common in the dry season, are expected to be exacerbated this year, increasing health risks. Densely populated peri-urban areas -- not widely served by sewerage or other safe alternatives -- are of particular concern.

3. Access to Drinking Water.

Government estimates are that approximately 70 percent of the urban population and 33 percent of the rural population for a total of 47 percent overall -- have access to safe water. Some 43 percent of urban dwellers and 30 percent of rural inhabitants -- for a total of 37 percent overall -- are estimated to have access to adequate sanitation. These figures may be slightly high.

4. Other Impacts of the Drought Related to Water.

Other impacts related to water include a reduction of hydroelectric potential (loss of export capacity and importation from Zaire) and stress on livestock grazing capacity (alleviated somewhat by the late rains, but still a problem).

C. CONCLUSION.

The water and sanitation sector in Zambia is disorganized. It is characterized by fragmented responsibilities and no clear policy. A sanitation policy is non-existent. No less than five ministries share responsibilities and functions with district councils for sector planning, construction, and operation and maintenance. Little or no coordination exists among ministries, or between ministries and local councils.

Although Government recognizes the need for sector reorganization, attempts since 1987 to achieve this goal have met

with little success. Formally, a program coordination unit set up in the Ministry of Local Government has been designated to take the lead role in restructuring.

Currently, however, the status of this unit is itself in doubt. It comes as little surprise, therefore, that in the waste supply and sanitation sector, a coordinated government response to the drought has not yet been formulated, let alone a specific task force organized. Nevertheless, the Minister of Energy and Water Affairs has expressed the need for such an entity.

D. RECOMMENDATIONS:

- To galvanize the Government to respond to the drought, a specific task force can be organized under the overall drought task force.
- The social action program located in the Ministry of Local Government could take the lead in this activity, given its role in restructuring the water and sanitation sector.

IV. HEALTH.

A. BACKGROUND.

Undernutrition is a serious public health problem in Zambia, with the principal problem being protein-energy malnutrition (PEM) with manifestations of kwashiorkor and marasmus. Usually, April through to July is the period of the year when baseline nutritional status improves due to the increased availability of food from the harvest. However, because of the drought there is widespread concern among the NGOs, United Nations organizations, and the primary health care deliverers that in the next three to six months (peaking in October and November) there will be widespread, acute undernutrition.

The 1991 UNICEF National Immunization Coverage Survey showed urban coverage was 80 percent or above for children under one year and in the rural population sampled it was 50 percent. This is inadequate coverage, especially for measles, and there needs to be the capacity to respond rapidly with immunization terms to any outbreak.

Micronutrient deficiencies are also prevalent: Vitamin A in the north; iron deficiency among children and childbearing women; and iodine deficiency in the north-west and other areas. The latter, as well as vitamin B deficiencies, will only be exacerbated by the effects of the drought.

HIV has now joined malaria, diarrheal diseases, pneumonia,

urti, and measles as a major cause of hospital admission in the under one year population group. The reported prevalence of HIV in different sero-prevalence studies in hospital inpatients and outpatients and blood donors between 1985-1990 in Zambia ranges from 8-94 percent depending on the population sampled. A 1990 Lusaka study of HIV prevalence in pregnant women gave a rate of 24.5 percent. AIDS mortality is expected to increase, but there are limitations with the current surveillance practices. There is real concern in the medical sector that the under five years population will be severely affected.

B. FINDINGS.

1. Status of the Current Nutritional Surveillance System.

The current nutritional surveillance system -- The National Nutritional Surveillance Program (NSSP) -- is based in the Primary Health Care facilities (PHC) and Maternal and Child Health Clinics (MCH) and in Growth Monitoring Programs (GMP). It is coordinated by the nutrition unit in the Ministry of Health and is neither a timely, sensitive, nor responsive surveillance system. Weight-for-age data is collected at the health center level on every child aged 0-60 months on presentation to a MCH; including details on the number of new clients who are below the 80 percent line weight-for-age, the number who have failed to grow in the past month and the number of children weighed. It is important to note that there are no surveillance case definitions for marasmus or kwashiorkor in Zambia.

2. Constraints Facing the Effective Implementation of the Nutritional Surveillance System.

The effectiveness of the system is constrained by the lack the resources to follow up on non-responders. The system suffers from a shortage of trained staff at a national level to analyze, report, and provide feedback on information in a timely and appropriate manner to the provincial, district, and primary health care health providers. This has resulted in little action being initiated at the community level.

3. Uses of Data from the Nutritional Surveillance System.

At the provincial and district levels the data collected through the Nutritional Surveillance system is mainly used to determine malnutrition prevalence and then to order food supplements, rather than to influence nutrition policy. There has been no weight for age prevalence data (from the MCH) published at the national level in the last two years. The nutrition unit is a low profile, under-resourced unit of four nutritionists located in PHC in the Ministry of Health. It has minimal programmatic involvement.

4. The Supplemental Feeding Program.

The supplemental feeding program called High Energy Protein Supplement (HEPS), is theoretically available through all the primary health centers, district and rural hospitals to all children aged less than five years who are below the 80 percent weight for age, and pregnant and lactating women. However, the effectiveness of the program is hampered by its small scale and the unreliability of distribution in the outlying areas. Only 200 MT per month have been used in the program with the capacity to increase to 330 MT with the advent of the drought.

5. Institutional Capability to Deal with the Health Effects of the Drought.

While the National Food and Nutrition Commission (NFNC) is currently reviewing its mission, it has not been a success and donor aid has not been renewed. The structural readjustment in progress at the NFNC severely diminishes the NFNC's ability to direct any nutrition interventions or policy development needed in the next six months.

The Health Information Unit, which is the Epidemiology section in the Ministry of Health, is supposed to coordinate the National Nutritional Surveillance System. However, the National epidemiologist is on extended leave due to contract negotiations, weakening the capacity of the Health Information Unit to respond to increased surveillance needs.

C. CONCLUSIONS.

There are no current, unseasonal health effects that can be directly related to the impact of the drought based on a qualitative and quantitative assessment of the available information.

However, given the underlying levels of undernutrition in the population and the extent of crop failure among poor farm households, ensuring access to food, either commercial sources, free distribution and supplemental foods for vulnerable populations, is crucial to avoid an increase in the levels of undernutrition that are already existing.

D. RECOMMENDATIONS:

- There needs to be a rapid nutritional assessment to identify the at-risk population and to estimate the size of the response required in each area. The surveillance system must be easy to set up and maintain. It must also be efficient, cost-effective so it can be integrated into current institutions. This will allow targeting of the most vulnerable and assist in identifying what form of assistance

is most appropriate in each area. It will also allow the monitoring of the effectiveness of the assistance.

At the national level it is important that a committee with an emphasis on health be incorporated into the drought relief task force coordinated by the Ministry of Agriculture, Food and Fisheries. The Minister of Health is a member of the Hunger Relief Committee but it is a food committee, and not one charged with looking at the drought from a public health perspective. There needs to be planning for potential health problems. Health representation should also be extended into the district and provincial drought committee levels.

V. ROLE OF NGOS.

A. BACKGROUND.

While there are NGOs on the Hunger Relief Committee of the Drought Relief Task Force, namely Medicines Sans Frontieres and Oxfam/UK, neither agency represents the collective NGO community. The Committee, chaired by the Ministry of Community Development and Social Welfare, has reportedly met twice during which time the agenda focused on the issues of maize acquisition and the major logistical problems of importation (port and rail transportation).

B. FINDINGS.

1. Role of NGOs in the Response to the Drought.

There has been some discussion of the role NGOs may be called upon to play in response to the drought. However very little information, if any, has filtered down to the concerned NGOs. Specifically, the Ministry of Community Development and Social Welfare has held talks so far only with the WFP regarding the involvement of NGOs in the direct delivery of food to vulnerable groups - particularly in rural and peri-urban areas.

Although no final decisions have been made, some of the planning has been shared with the NGOs. This gap in the system has contributed to some frustration and confusion among the NGOs, but most are sympathetic and recognize the overwhelming problems of the new government and this untimely natural event (prolonged lack of rainfall) at such a crucial time.

2. NGO Coordination.

Unlike Zimbabwe and Malawi, the NGOs in Zambia have no highly organized coordination mechanism to provide a forum to receive and share information and resources. There are actually

three established coordinating groups which represent special interests of their constituencies. The NGOs, with an interest in accessing World Bank resources under the structural adjustment program, are co-chaired by World Vision (WVI) and an indigenous group. The Non-Governmental Organization in Community Coordination (NGOCC) is probably the most active of the coordinating bodies.

The NGO Forum usually meets once a month and was planning a meeting for mid-April. This group could probably form a drought response committee. However there is also an emerging effort on the part of the Zambia Red Cross and a couple of NGOs (Africare and WVI) to stimulate a coordinated NGO drought response group. With assistance from the International Federation of the Red Cross and Red Crescent Societies, the group has developed a lot of programmatic issues for discussion and action at its future meetings.

3. Planned NGO activities in Response to the Drought.

Most NGOs have launched their own assessments to determine conditions in their own geographic constituency areas. They plan to deal with:

- a. Defining geographic areas of operation - to reduce duplication, overlapping.
- b. Identification of recipient families and registration.
- c. Training of drought response staffs.
- d. Coordination at all governmental levels.
- e. Programmatic concerns - selective feeding and nutritional surveillance.
- f. Standardization of or uniformity of fieldwork activities and compensation.
- g. Time frame(s) for implementation.

C. CONCLUSION.

The NGOs are getting organized to respond to the drought will have an important role to play, especially in distribution of food (free of charge) and supplementary foods. The Government has recognized that they could play an important role in the overall response to the drought.

After meeting with a representative group of NGOs, the assessment team felt that while NGOs are motivated to respond to the needs of the beneficiaries, the government and the donors, they need information, coordination and some direction.

D. RECOMMENDATIONS:

-- NGOs should be encouraged to establish a coordinating group

and should have representation on the Hunger Relief Committee.

- NGOs should be supported through training and other actions by donors which will allow them to be effective in food monitoring, vulnerable group feeding, and distribution of food (free of charge).

VI. ZAMBIA'S RESPONSE TO THE DROUGHT.

A. BACKGROUND.

The President of the newly elected government of Zambia was one of the first February to declare a national emergency due to the drought. His leadership in acknowledging the severity of the drought quickly has generated support from the donors in responding to the drought.

B. FINDINGS.

1. Institutional Response to the Drought.

The Government has set up a drought task force which is under the chairmanship of the Ministry of Agriculture. This task force consists of the following committees: Aid Mobilization, logistics, animal health and disease control, internal distribution, hunger relief, agricultural credit management. Each of these committees also includes members from different government ministries, donor representatives as well as NGOs.

The Government has also made substantial contacts at the Ministerial level and technical level with its neighbors and the Republic of South Africa to facilitate the movement of food to Zambia.

2. Coordinating the response to meeting the food gap.

Through a combination of commercial and concessional means, the government, with the assistance of donors has been able to make great strides towards meeting its food gap.

C. CONCLUSION.

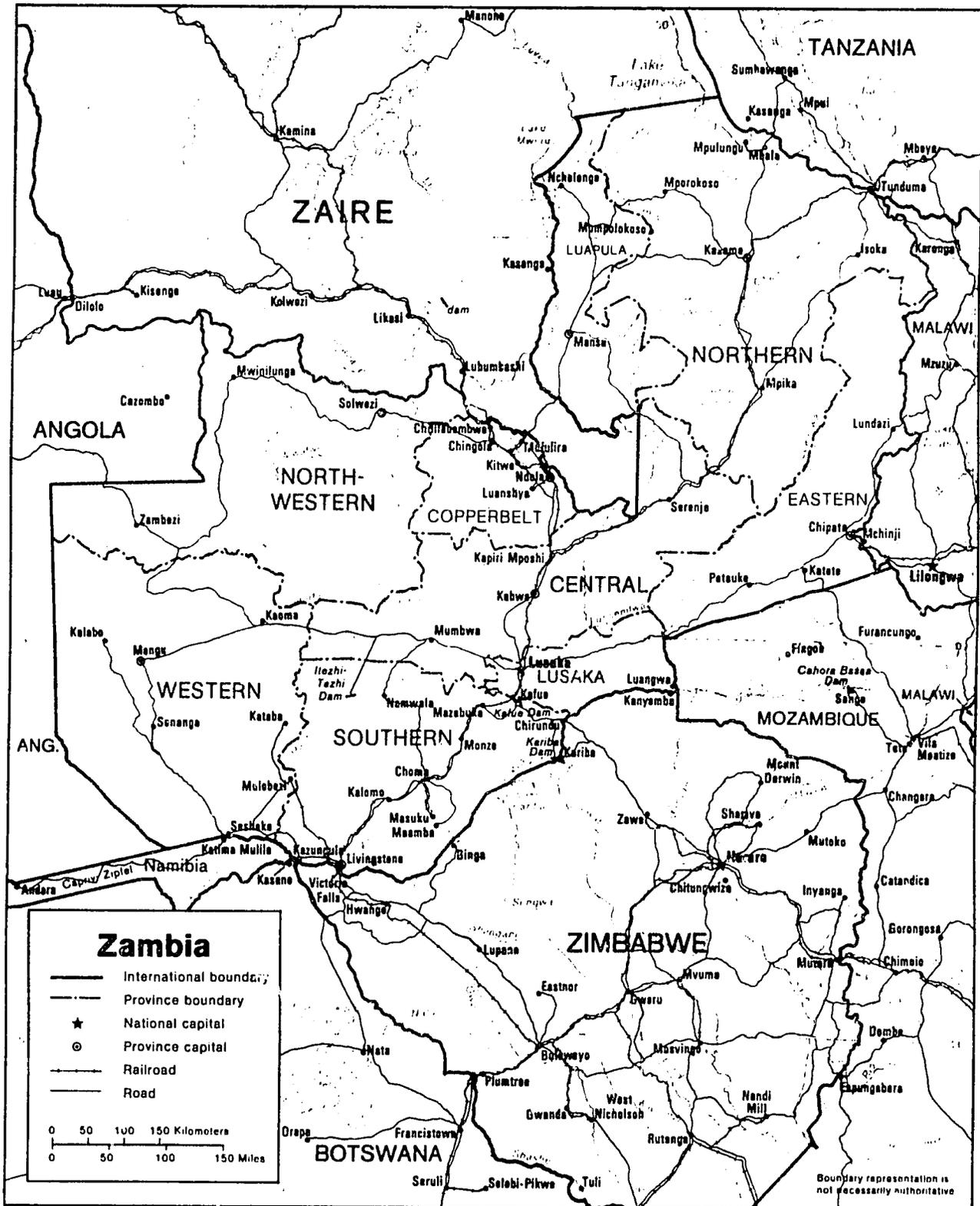
There was an early response to the drought by the Government. This enabled donors to move quickly, especially the USAID/Zambia Mission and assist the country in meeting its food gap. The government should be applauded for the partnership it has created between itself, donors and NGOs in developing an effective response to the drought.

D. RECOMMENDATION:

- Donors should assist the Government of Zambia with technical assistance, and commodities so that the institutional mechanisms it has set up to respond to the drought will be effective.

ZAMBIA CONTACTS

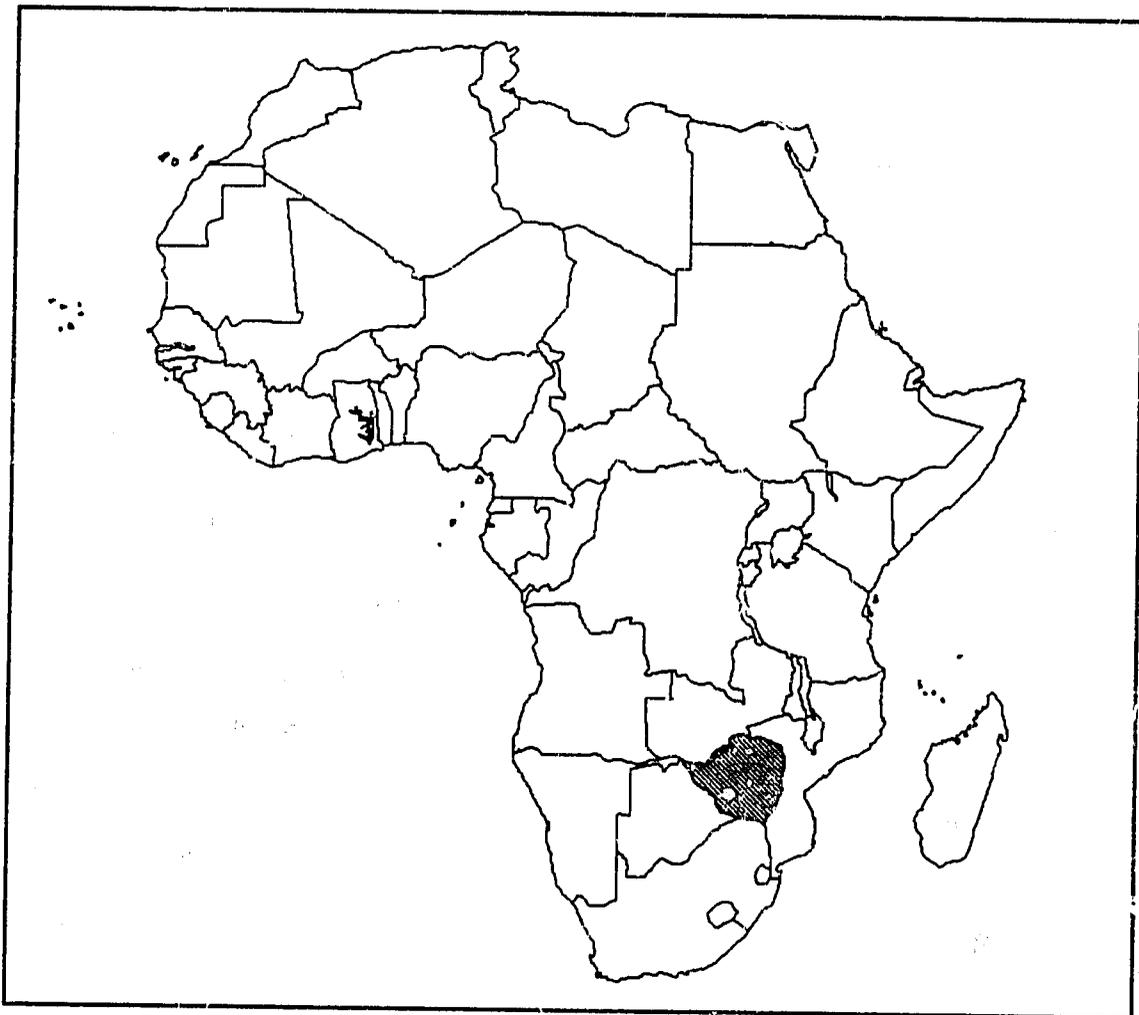
F. Winch	Director, USAID, Lusaka
P. Downs	Project Officer, USAID, Lusaka
W. Whelan	Agricultural Program Officer, USAID
G. Scott	Minister of Agriculture, Food and Fisheries
L.L. Mbumwae	Director, Water Affairs, Ministry of Energy and Water Development
R.B. Khuti	Deputy Director, Department of Water Affairs, MEWD
O.L. Sangulube	Senior Hydrologist, Department of Water Affairs, MEWD
Mr. Singh	Epidemiology Unit, Veterinary Services, MAFF
S. Shisala	Southern Province Water Supplies Engineer
Mr. Phiri	Energy Assistant, Monze District, Southern Province
Mr. Nyoni	Energy Assistant, Gwembe District, Southern Province
J. Hendrich	Managing Director, Lusaka Water and Sewage Company
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J. Mapulanga	Projects Officer, HFES, UNICEF
S. Barron	Analyst, World Food Program
S. Hagen	Senior Program Officer, Water and Transport Sector, NORAD
B. Jansen	GTZ Advisor, Ministry of Local Government
K. van Baar	Third Secretary, Royal Netherlands Embassy
C. Cadou	Civil Engineer/Kariba Hydroelectric Project, CIDA
B. Wilkerson	Representative, Volunteers in Technology Assistance
Mr. Getu	Associate Director Field Programs, World Vision International
Mr. John Oliver	Chairman, National Bulk Commodity Import Administration
Mr. Alexander Malyavin	Project Officer-UCI, UNICEF
Dr. Ahmed Magan	Project Officer Health, UNICEF
Mr. Yemane Tekeste	Project Officer, UNICEF
Dr. Roy Mwila-Chimba	Acting Epidemiologist, MOH, Zomba
Dr. Kalele Kalumba	Deputy Ministry of Health, Zomba
Dr. Alisa Holloway	International Red Cross, Red Crescent Regional Delegate Disaster Preparedness
Mrs. M. Mweemba	Acting Nutritionist in Charge, MOH, Zambia
Mr. F. Mubanga	Nutritionist, MOH
Mrs. Lonah Moonga	Luyaba Rural Health Center
Dr. Malikin'ya	Provincial Medical Officer, Southern Province
Dr. Victor Mukonka	District Medical Officer, Monze District
Major Ward	Principal Nursing Officer Chikankata Hospital
Florence Chonoweth	Chief of Party, USAID, ZAPID Project, Ministry of Agriculture
Jim McKenzie	Senior Economist, ZAPID Project, Ministry of Agriculture
John Innes	Resident Representative, World Bank
Tony Mornement	Director, Country Operations, World Food Program
Dean Mung'omba	Deputy Ministry for Economic Affairs, Office of the President





Office of U. S. Foreign Disaster Assistance
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Southern Africa Drought Assessment Country Report



ZIMBABWE

ZIMBABWE**I. BACKGROUND.**

Zimbabwe, traditionally a food exporter in Southern Africa, is suffering from the worst drought of this century. Before the drought hit in January and February 1992, the country had less than three months of food stocks left. The drought found the country in a very precarious food situation with less than 42,000 MT of corn in stock by March 1992, which was barely sufficient to meet national requirements for fifteen days. The drought has affected not only agriculture but all sectors of the economy, and will lead to an overall decline in the economy of between 8 to 10 percent. Not only will unprecedented levels of food imports be required for Zimbabwe in the next 12 to 15 months, but also non-food needs especially in the area of water will be substantial.

Two underlying factors need to be taken into consideration when analyzing the effects of the drought in Zimbabwe as well as other countries in the region. The first is the regional nature of the drought, which has affected agricultural production in all countries in Southern Africa. This requires other countries, like South Africa and Zambia to import large quantities of grain. The key to Zimbabwe being able to import and transport the unprecedented level of commodities it requires will be coordination and cooperation between South Africa, Mozambique, Botswana and Zimbabwe as well as sound internal distribution policies and programs, which will enable the food to get to the needy population.

Secondly, Zimbabwe, like Malawi and Zambia, is embarked upon an economic structural adjustment program (ESAP). Attention and resources (human and financial), which could have gone into ESAP could be diverted to meet immediate drought related needs. The effects of the drought should be separated from that of the ESAP. Otherwise, the drought could be used as an excuse for derailing the ESAP, which could have longer-term beneficial impacts on the economy. These concerns are very real and should be kept in mind in developing a response to needs emerging as a result of the drought.

II. FOOD AND AGRICULTURE.**A. BACKGROUND.**

Zimbabwe's agriculture is crucial to its economy as a source of food, foreign exchange and employment. Major crops produced are maize, cotton, soybeans, wheat, groundnuts and tobacco. In addition, Zimbabwe has a livestock quota under which it exports livestock to the EC. The majority of Zimbabwe's agricultural

producers are smallholders who are known as communal farmers. Zimbabwe also has large-scale commercial farmers who are fewer in number (less than 10,000) but produce close to 50 percent of the country's agricultural output. The commercial farms are a source of employment for over 200,000 communal area households.

B. FINDINGS.

1. Areas Affected by Drought.

The drought has affected over 90 percent of the country, devastating the areas which are primarily home to the communal farmers and a majority of their livestock grazing areas. Commercial farming areas have also been affected, but not to the same extent and magnitude as the communal areas.

2. Magnitude of the Cereal Gap.

It is clear that the widespread drought in the country has seriously affected cereal production. For a 12 month period, the total cereal import requirement was estimated by FAO at 1,380,680 MT, of which 1,289,600 MT was for coarse grains and 91,000 was wheat. These numbers include estimates for stockfeeds (i.e. livestock feed) - 210,000 MT and a stock rebuilding requirement of 100,000 MT. Hence, the total human cereal import need (including stock rebuilding) would equal 1,170,600 MT. The estimated cereal import gap till the next harvest is available (i.e. fourteen months till May 1993) is 1,646,800 MT including stockfeeds and rebuilding of domestic stocks. The FAO estimate of the food gap is a physical shortfall which does not take into account contraction in demand which could take place both due to sharply increased prices and reduced incomes of households in both rural and urban areas.

3. Meeting the Cereal Gap.

The Government of Zimbabwe has to date placed orders for 654,000 MT of commercial purchases of maize. This amount could increase if additional donor aid is not forthcoming. The largest amount of bilateral food aid to date has been from the U.S. with approvals of Sec. 416(B), P.L. 480 Title I and GSM 102 credits. If USAID/Harare's Title II request for 375,000 MT of cereals is approved, U.S. food will be second only to the Government of Zimbabwe's commercial purchases to date and will be a major step in filling the cereal import gap. While there are reports of other donors (like the EC) making pledges, the exact magnitude and type will be unclear till after the U.N. sponsored donor pledging conference in early June.

4. Internal Food Supply Management.

There are a number of issues that the Assessment Team

identified as being of concern with regard to internal food supply management.

These include: (a) the numerous food distribution programs which are either in place or being proposed, and (b) pricing and marketing policies.

a. Food Distribution Schemes:

The team identified seven different food distribution programs, which are either underway (as part of the ongoing commercial sales or drought relief programs) or being planned. These are: (1) retail commercial sales of maize as grain through Grain Marketing Board (GMB) depots - (ongoing when GMB has supplies available); (2) retail commercial sales of milled grain through outlets in both rural and urban areas (ongoing); (3) free distribution of grain (drought relief) through the Department of Labor and Social Welfare (DSW) (ongoing); (4) food for work through the Department of Labor and Social Welfare (ongoing); (5) supplementary feeding through the Ministry of Health for children under five limited in scope (proposed); (6) supplementary feeding for primary school children through the Ministry of Education (proposed); (7) cash for work under the District Development Fund being implemented by Ministries of Transport, Public Transport and Water (ongoing). Of these programs, the largest expansion is to take place in the food for work distribution program of the Ministry of Labor and Social Welfare. It is estimated that by November/December 1992 nearly 5 million of Zimbabwe's 10 million people will be receiving food under the food for work relief program.

These distribution programs raises a number of issues which need to be looked into, among which are: does the Government have the organizational and management capacity to deal with these programs? How will major macro level decisions be made on allocation of food between the commercial and relief distribution channels, as well as between commercial sales of grain and milled grain? Does the Government have the capacity to implement an expansion of the food for work program?

An expansion of food for work under the drought relief program requires implementation of a screening program at the local level. While selection criteria have been established and a form developed for use in the screening process, the possibility exists that implementation of the screening process could be slow, or, if not followed, could lead to leakages. Also, if insufficient jobs are created under the food for work program, then in effect the program will turn into a free food distribution program. Related to this is the issue of the size of ration. A minimum level of ration, e.g. 300 gm/day/person of free food could be viewed as being sufficient to provide minimum nutritional needs.

b. Pricing and Marketing Policies:

The present consumer pricing of milled grain (as meal) reflects a subsidy. If increased quantities of imported maize are channeled into the mills, the magnitude of the overall subsidy will increase. Furthermore, the beneficiaries of this will be urban and peri-urban consumers.

As most grain to be distributed in the country will be imported grain, the price at which it will be sold will be important in determining the level of subsidy and implications for the budget deficit. As imported grain is estimated to cost Z\$1500 per ton landed in Harare, a selling price less than this will reflect a subsidy.

The expansion of the Department of Social Welfare's (DSW) drought relief program is estimated (by our calculations) to cost Z\$419 million at the current GMB sale price of Z\$714 per MT of maize and internal transport costs of Z\$125 per MT. This is in effect the cost of this program to the budget at the sales price of Z\$714 per MT. If the GMB selling price of Z\$714 per MT is increased then the magnitude of the subsidy of grain provided through the DSW will increase. Also, as demands on internal transport increase, internal transportation costs will also increase leading to a further increase in the subsidy.

As the GMB does not have sales depots in remote areas, availability of grain in these areas would be limited, unless private traders or village level organizations purchase grain from GMB depots for resale. To counteract possibilities of rapidly escalating grain prices at the village level, increased flows of grain should be directed to these areas as it is not uncommon to hear reports of Z\$2000 per MT of maize in rural areas.

Other related issues include: pricing of imported maize vs. sorghum; removal of restrictions on movements of white maize between different commercial farming areas and the removal of the subsidy on roller meal; and the high cost of credit for all uses, especially agricultural recovery.

5. Need for Information Flow and an Emergency Management Unit.

With the large volume of food and non-food that has to be both imported into the country and distributed internally, there will be a corresponding increase in the volume and flow of information. It is important that this information flow be through a central location, which can serve both as a clearing house and dissemination center. This would also facilitate decision-making and allocation of food between the different types of internal distribution programs. Ideally this center

would also serve as a focal point for monitoring the impact and progress of the overall food distribution program in the country and serve as an early warning to assist in targeting.

6. Commodity Mix of Food Imports.

In addition to maize, sorghum and wheat will be coming into the country. It is important for adequate sorghum to be brought in so that it can be targeted to those areas which are traditionally sorghum growing and eating areas. This will also be useful in encouraging movement away from sole crop hybrid maize in these traditionally drought-prone areas. Vegetable oils and supplementary foods should also be imported with the latter being targeted toward the vulnerable groups.

C. CONCLUSIONS.

Together with donor assistance, especially from the US, Zimbabwe should be able to meet its food gap over the next twelve to fifteen months. To transport the food to the country will require inordinate coordination and cooperation between Zimbabwe and its neighbors. The areas of internal distribution are of most concern because there are numerous schemes planned for internal distribution and the potential exists for major tie-ups on both the external logistical side and internal distributional side, which could affect the availability of food in the most severely affected areas.

The extent to which the full cost of imported food is passed on to consumers through commercial channels, and the relative share of commercial vs emergency distribution will determine the impact of food imports on the budget deficit, as limits on the budget deficit are related to the overall country performance under the Economic and Structural Adjustment Program.

The possibility exists, that if the Government of Zimbabwe uses most of its scarce foreign resources for food imports and also does not pass the full cost to consumers under its commercial distribution program, the ESAP could be derailed.

As the number of drought-related food supply management programs increase, quick decisions will need to be made to assure access and availability of food, especially for those in the remote areas. These decisions require an executive body, quick to respond and with authority. Making decisions also requires current information from a number of sources. Ideally, information will flow both into and out of this body.

D. RECOMMENDATIONS.

-- Donors should make all efforts to fill the food gap, through both commercial and concessional means for Zimbabwe.

- Donors should provide technical assistance to the Ministry of Labor and Social Welfare so that its drought relief program could be implemented efficiently.
- Donors should encourage the Government to increase the flow of grain to rural areas, especially those places where the GMB does not have any depots. Here the private sector or NGOs should be encouraged to take an active role.
- Donor should engage the Government in discussions related to policies such as: reducing the subsidy on roller meal; passing the full cost of imported maize through commercial sales; removing movement controls for white maize between commercial farming areas; and increasing the availability and reducing the cost of credit related to agricultural recovery for next season.
- The secretariat under the Drought Task Force chaired by the vice-president should be strengthened with communications and information processing capabilities to make it effective.
- Supplemental foods should be provided by donors and the mix of cereal imports should include sorghum and wheat.
- Priority should be given to monitoring of grain availability and food prices in rural areas, especially those affected by the drought. Such information could be useful in targetting and used as an early warning of food shortages and a lead indicator for nutritional status.

III. WATER.

A. BACKGROUND.

In comparison with other inland countries visited by the assessment team (i.e. Malawi, Zambia, Botswana), the impact on water supplies in Zimbabwe has been most severe, in terms of both the level of preparedness and the risks to populations.

B. FINDINGS.

1. Difficulty in Assessing Water Availability.

The absence of reliable information at the central level has precluded a detailed quantitative assessment of the magnitude of the effect of the drought on water availability. As such, reliance on informal techniques has been necessary. Among indicators, low water levels in numerous surface impoundments, and downward pressure on livestock prices are seen as indicating lack of water in certain areas. Nevertheless, considerable

variability in the availability of even surface water resources is evident. Within the regions, there have been significant micro-climatic effects of a patchy rainfall distribution.

2. Government Estimates of Water Availability By Province.

Government estimates are that two major towns (total population 100,000) and some twenty smaller urban centers (population unavailable) are in immediate danger. The most adversely and widely impacted zones, however, are the communal areas of Matabeleland south and Masvingo Provinces (primarily less than 1200 meters elevation). These areas have a minimum population of 100,000 --- and potentially many more -- at immediate risk. Additionally, the low veld areas of the northeast (portions of Mashonaland) are significantly impacted. In these lower regions, shortages result primarily from the cumulative effect of poor levels of precipitation over several years, exacerbated by the drought this year.

Since Zimbabwe relies heavily on surface water resources, groundwater behavior has not been well studied and described. This is particularly true in the outlying communal areas of Matabeleland and Masvingo. Anecdotal evidence indicates, however, that water levels in boreholes and dug wells east of the Kalahari sands have experienced a continual decline in recent years. The impact of this year's poor rainfall most likely has not yet been experienced for these sources. Government reports that of the some 23,000 boreholes and deep wells supplying the communal lands and resettlement areas, approximately 25 percent were dry by the end of April 1992.

Among town and urban water supplies, effects have been variable. A review of nearly two dozen reticulated systems in Matabeleland north and south indicates that about half are experiencing shortages. Of this amount, at least 15 percent result from deferred maintenance and have no relation to the drought. Perhaps half are compromised from cumulative effects of previous low rainfalls. Rationing and conservation programs are in effect in the most seriously affected centers, with price-induced limits of twelve M3 (cubic meters)/month per household (regardless of size). In Bulawayo, the lack of control on institutions and the widespread distribution of private boreholes - as well as uncontrolled abstractions for agricultural use - has limited the impact of conservation to date. Additional scope therefore exists in some reticulated systems for demand-side intervention.

In Masvingo Province, the most serious, concentrated impacts may result from irrigation water cutbacks on irrigated schemes, where mass layoffs are expected by 1 May. For example, the anticipated furlough of some 6,500 workers would result in a population of more than 50,000 deprived of their main source of

income in an area with few other economic opportunities.

3. Effects of Structural Problems on Water Availability.

It is evident that deteriorating service levels - especially in the rural areas (e.g., pumps in disrepair, boreholes not fitted with pumps, shortages of casing and rising main) - frequently result from chronic, structural problems related to the sustainability of otherwise viable water sources. Local experts estimate that hundreds of boreholes are not equipped with pumps. At least one hundred are fitted with unserviceable pumps. Some three hundred trailer-browsers are out of service due to bad wheel bearings. Major donors are concerned lest an infusion of emergency relief for capital procurement (drilling rigs) and too heavy an emphasis on quantitative targets (number of new boreholes drilled) overwhelm the slow but steady progress being made in developing community-based strategies that clearly address the relative responsibilities between the government executing agencies and the beneficiary communities for operation and maintenance of systems.

The National Action Committee (NAC), an inter-ministerial body set up in 1985 to coordinate water decade activities, has been designated the point agency in developing and implementing government's drought response policy for management of water resources.

C. CONCLUSION.

There is no doubt that the drought has had a major impact on water availability through out most of Zimbabwe as seen from reports on each of the province put out by the Government. In some cases, the lack of water could be related to this years drought coming after two years of poor rainfall. Structural problems could also have led to water shortages in some areas such as lack of spare parts, engines and fuel for pumps at boreholes.

The naming of the National Action Committee to coordiante the government's response to the drought could lead to strengthening of an existing institution. But, the absence of donors and major NGOs from the core planning in this effort inhibits government in formulating a rapid, focused, and coordinated response to the deteriorating situation. To date, the NAC has been ineffective in establishing priorities and setting realistic targets for the most severely affected populations and areas. Further, the performance of government during a drought emergency response effort assisted by NORAD in 1985 showed significant weaknesses both in planning and implementation. There is no evidence that the structural causes of these problems have been addressed and remedied.

D. RECOMMENDATIONS:

- Donors (both bilateral and multilateral) and NGOs should consider rehabilitating existing water supply infrastructure and installing new boreholes in critical, specifically in targeted, areas. Such assistance could be provided through grants to NGOs working in particular areas and for spare parts and fuel to rehabilitate and enhancing existing capacity.
- Donors/Government should undertake a rapid, yet detailed field-based assessment in the most affected regions identified. This could be done involving staff of the District Development Fund and NGOs working in the water sector. A country-wide assessment could be completed within two months.
- Donors should encourage the Government of Zimbabwe to develop a comprehensive national urban water conservation strategy. U.S. experience has shown that significant benefits can accrue when a conservation policy is enacted.
- The Disaster Mitigation component of the World Bank Drought Recovery Project should be supported. Two elements of that component have important linkages with the water supply and sanitation sector: Emergency Preparedness and Accelerated Urban In-Migration Contingency Planning. For example, an emergency preparedness plan should contain an evaluation and identification of underutilized Ministry of Energy and Water Resource Development water supply points in district centers. This exercise must be combined with an analysis of logistical requirements, resources, and constraints for the bowsering of water to isolated areas if and when necessary. Such a plan should seek a maximum utilization of private sector capacity. Also, appropriate water supply and sanitation options need to be identified for fast-growing peri-urban areas, together with implementation mechanisms.
- Donors/Government should encourage NGOs to participate in community based water augmentation projects like shallow well digging, which could also complement the food for work program under the Ministry of Labor and Social Welfare.

IV. HEALTH.**A. BACKGROUND.**

While Zimbabwe's health sector is in much better condition than that of some other countries in the region, there is still some cause for concern regarding chronic undernutrition in the country.

The 1988 Zimbabwe Demographic and Health Survey (DHS) estimated that 11.5 percent of children between 3 and 60 months of age were undernourished, 29 percent were stunted, and 1.3 percent were wasted. The prevalence of stunting appears more prevalent in the rural areas.

The Rural Infant Mortality Rate (IMR) (64.5 per 1000 live births) is approximately twice that of urban children (37.8 per 1000 live births). The estimate for national IMR (1992) is 61 per 1000 live births. The eight major causes of under five year outpatient morbidity in 1990 were respiratory infections (33.0 percent), diarrhoea (6.5 percent), eye diseases (4.0 percent), skin infections (7.0 percent), clinical malaria (4.9 percent), injuries (4.4 percent), malnutrition (2.7 percent), and scabies (2.7 percent). The level of HIV infection and AIDS is not well enumerated but a 1992, sentinel survey of antenatal clinic attenders gave a HIV positive rate of 13 percent.

The major micronutrient deficiencies in Zimbabwe are pellagra, iodine deficiency, vitamin A, and iron deficiency anaemia. There have been no recent studies of vitamin A status of the population of Zimbabwe, but a 1983 World Bank review suggested that Vitamin A deficiency was a problem in several parts of the country.

B. FINDINGS.

1. Health Effects of the Drought.

There is no quantitative data available that indicates there has been a direct health impact from the drought, but this does not mean that there are not going to be adverse health effects, particularly undernutrition in the next three to six months. There has been no apparent increase in communicable diseases, skin diseases or immunization preventable diseases as a result of the drought so far. The national immunization coverage is over 80 percent for each of the EPI vaccines. However, on a district level the coverage is variable (less than 70 percent in Buhera and Mwenezi), with remote and disadvantaged districts that suffer from poor supply of vaccines and gas cylinders, transportation difficulties for program delivery and intermittent supervision having less coverage than accessible districts.

2. Current Surveillance System.

The current surveillance system for health status indicators for acute malnutrition is limited in its timeliness, sensitivity and representativeness of the population to be surveyed. It is a component of the surveillance system that monitors the primary health care clinics for infectious diseases, injuries and growth monitoring. The growth monitoring program collects weight-for-

age data on the under five population at any clinic presentation (e.g. growth monitoring and immunizations). To be useful, the timeliness of reporting has to increase from the current 6 months to 1-2 weeks for the monthly reports as the most recent report available is for the third quarter of 1991. The representativeness of the collected data is questionable because of the low attendance at clinics beyond the age of 1 year; difficulties with both providing and maintaining staff in the more remote health centers; and providing access to health centers in the rural areas.

3. Current Supplemental Feeding Programs.

There is no Government of Zimbabwe (GOZ) child supplemental feeding program (CSFP) at present. It was phased out in 1986 and replaced by community based food production, where the community was given the responsibility to feed children under five who were below the 80 percent line, weight-for-age. Non-government organizations (NGO), and individual provinces and districts have been able to implement CSFP if they used their own funding. The GOZ, through the MOH task force on child supplemental feeding program, is currently working on the policy and logistics of the CSFP with the National Steering Committee for Food and Nutrition. The GOZ is considering reintroducing a CSFP as a consequence of the drought. Two subcommittees have been formed (Food and Nutrition CSFP, and Program Monitoring and Evaluation) that are working on policy papers for the GOZ on this subject. Decisions on screening and targeting are to be made by these two subcommittees.

The proposed GOZ supplemental feeding program will not include pregnant and lactating women nor all children aged zero to five years, but only moderate or severe undernourished children aged zero to five years who are below the 80 percent line weight for age. Due to economic and logistical constraints, and the policy of the GOZ to concentrate most resources on the food relief program, the proposed supplemental feeding program will be introduced gradually.

C. CONCLUSION.

While there are no immediate signs of health effects of the drought, lack of water and food could change the situation very rapidly.

The potential impact of drought on health status and the health services are: increased infectious disease outbreaks associated with undernutrition and lack of water supply; population migration of rural dwellers to towns or cities where they perceive greater access to food, and migration from neighboring countries e.g. Mozambique; increased demand on health services; increased mortality particularly in the traditional

vulnerable groups if their food needs are not met; increased burden on limited health finances and diversion of regularly funded programs for emergency services.

It is important to reiterate that the lack of quantitative change in undernutrition is not indicative that there is not a very real threat of severe undernutrition and is in part due to the insensitivity of the current surveillance system and that health effects emerge as later stage indicators of famine. They are not necessary to indicate the gravity of the situation from a health perspective. Surveillance data is needed to be able to determine the extent of undernutrition and to identify the most vulnerable groups by age and geographic distribution, so that scarce resources can be targeted at those most compromised.

D. RECOMMENDATIONS:

- As availability of food and water are important to maintain the health status of the population, all efforts need to be taken to be sure that food and water are made available in all of the drought affected areas.
- There is the need for an emergency health/nutritional monitoring system to be implemented to assist in monitoring the impact of the food distribution program on the nutritional status and monitor the nutritional status of the affected population.
- Surveillance of communicable diseases at a district level will be important as will be the capacity to respond to any epidemics with immunization teams and appropriate health services.
- While there is need for a supplementary feeding program for vulnerable groups, this should be complementary to a general feeding program.

V. ROLE OF NGOS.

A. BACKGROUND.

NGOs in Zimbabwe have primarily been involved in developmental programs, but many of them have emergency response capabilities. Several of these organizations are led by personnel with years of drought disaster experience in other countries, (i.e. Sudan and Ethiopia) and appear to have the capacity to implement sound projects based on those years.

B. FINDINGS.

1. Response of NGOs to the Drought.

Under the National Association of Non-Governmental Organizations (NANGO), an inter-agency coordinating group, a drought relief and rehabilitation committee has been established to provide the NGOs with a forum for the exchange of information and a link with governmental ministries and international donors. The Ministry of Health (MOH) and the Ministry of Labor and Social Welfare (MOLSW) have been invited to participate on the committee and have attended NANGO meetings. During the drought response, the MOH will continue to have responsibilities for child supplementary feeding, while the MOL will be responsible for the implementation of drought relief or free food distribution. These are two areas in which NGOs have specific interests and could have the greatest impact.

Due to their traditional roles in community development and outreach together with their experience in moving vast amounts of food and non-food in the Horn of Africa, several of the NGOs are rapidly making plans for interventions related to improved water supplies, food for work projects, child supplementary feeding programs and free food distribution. NANGO has circulated a survey/questionnaire for agencies to inventory needs of constituency households and their own personnel/organizational needs and resources (i.e. vehicles, spare parts, bikes, motorbikes).

NANGO has recently undergone a reassessment of its role with the NGOs and reportedly decided that international (or expatriate) NGOs will have a less than full membership status. Given the dimensions of the emerging drought situation, some international NGOs have accepted this "quirk" and have moved on to provide management and advisory support to NANGO.

The Government of Zimbabwe is credited with averting a major disaster following the drought of 1982-84 through the implementation of successful mitigative programs (i.e. massive food distribution projects and supplementary feeding to children under 5 years). Because the impact of drought is being experienced throughout the region, the actual acquisition and delivery of food will be the over-riding problem during 1992-93.

C. CONCLUSION.

While NGOs are well organized in Zimbabwe, their predominant experiences have been in development activities rather than emergency food deliveries. Since Zimbabwe has not been a food deficit area where local institutions have broad or extensive experience in food delivery, the international NGOs, with experience in other areas such as the Horn of Africa, could play a major and useful role in enhancing the capacity of the local

groups to transport and distribute food to rural communities. The effectiveness of the NGO response to the current drought will require cooperation between the Government, NGOs and donors.

D. RECOMMENDATIONS:

- NGO staff will require training in emergency food distribution and monitoring if they are to be effectively utilized in the emergency program.
- Donors should encourage NGOs to strengthen their relationship with NANGO and to help channel and coordinate their efforts in response to the drought.
- NGO activities should be encouraged in areas of: food distribution and monitoring, rehabilitation of wells, mitigation activities like livestock herd preservation, and nutritional and health surveillance.

VI. ZIMBABWE'S RESPONSE TO THE DROUGHT.

A. BACKGROUND.

As this is the worst drought of this century that Zimbabwe has faced, and the magnitude and severity of the drought did not become apparent till early February. Initially, there was a slow response by the Government in the declaration of an emergency and decisions on the makeup of a task force to respond to the drought. There has, however, been considerable progress since the end of March in putting in place an institutional infrastructure to respond to the emergency.

B. FINDINGS.

1. Government's Role in Meeting the Food Gap.

The Government has made a major commitment to meeting the food gap from its own resources by making commercial purchases of 654,000 MT of corn. This level could increase to 1 MT. Given that the country is embarked on an economic and structural adjustment program, this could affect the availability of scarce foreign exchange for other parts of the economy under the ESAP.

2. Institutional Response to the Drought.

With the presidential emergency on the drought, the National Civil Protection Act was put in force to setup the emergency response. Under this legislation, declaration of a drought emergency task force at the Ministerial level was setup.

It is chaired by Vice-President Muzenda and has six different standing committees and one ad hoc committee. The six standing committees chaired at the Ministerial level are concerned with: procurement, transport and logistics, distribution, drought relief, national action, and public works. The ad hoc committee is concerned with donor mobilization and is chaired by the vice-president.

3. Coordination with Neighboring Countries.

Both at the technical level and Ministerial level, Zimbabwe has had contact with its neighbors bilaterally and through SADCC.

C. CONCLUSION.

By setting up an institutional mechanism and procuring food commercially while waiting for donors to respond, the Government of Zimbabwe has recognized the magnitude of the drought and has initiated a response. There are, however, numerous areas that need to be worked on in implementing an effective and continued response. These include improving the flow of information, streamlining distribution programs, improving monitoring of food distribution and getting donors and NGOs actively involved as partners in the response.

D. RECOMMENDATIONS:

- The Government of Zimbabwe should be assisted through the provision of equipment and technical assistance in facilitating information flow and decision-making of the drought emergency task force.
- The Government of Zimbabwe should be assisted through the provision of technical assistance and transport in its efforts to streamline and effectively implement its food for work and other food distribution schemes.
- Donors should provide support for the Government's drought emergency and recovery, recognizing that lack of support could lead the country to derail its ESAP.

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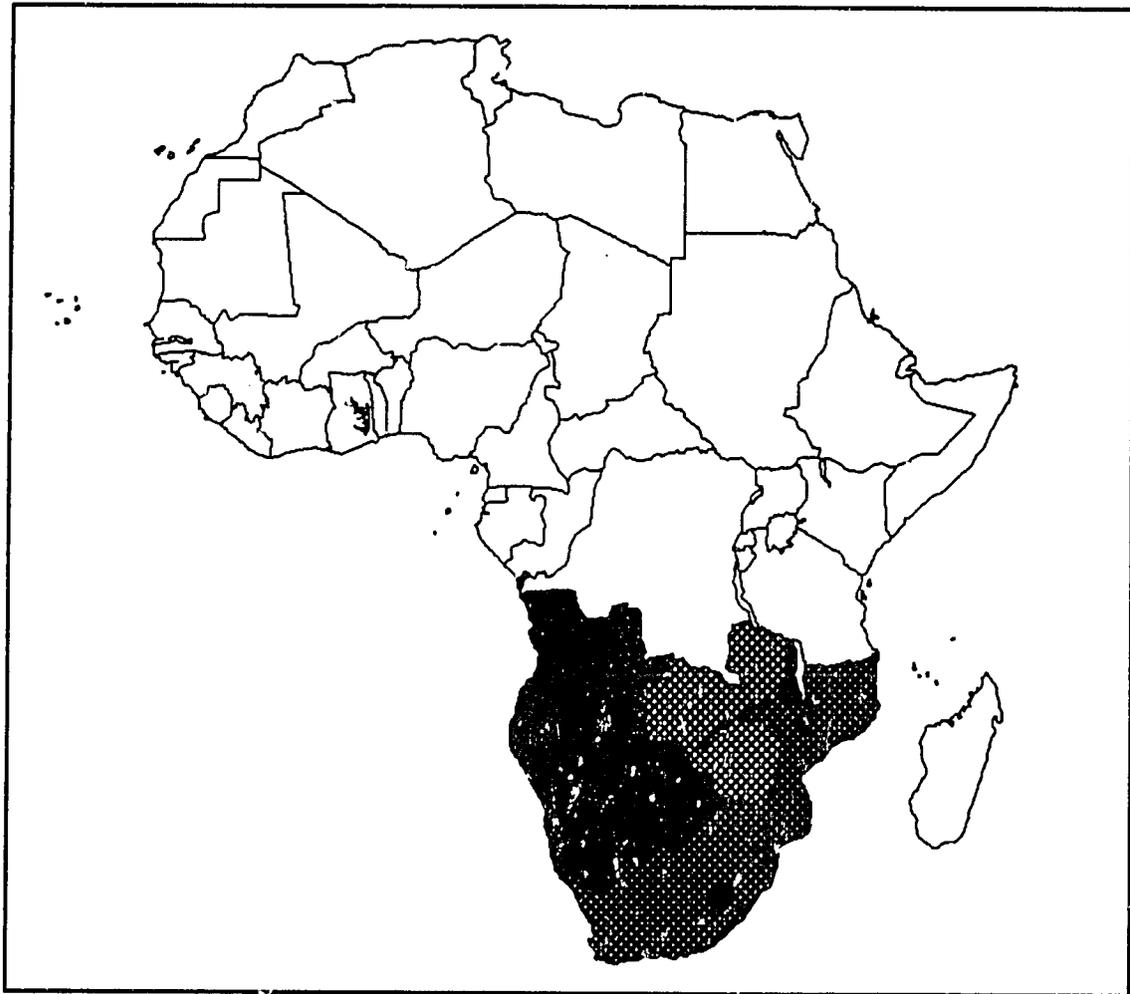




Office of U. S. Foreign Disaster Assistance
Bureau for Food and Humanitarian Assistance
Agency for International Development

Southern Africa Drought Assessment

Annex 1



SOUTHERN AFRICA REGIONAL LOGISTICS

By: Case Stek
REDSO/ESA/FFP
April 18, 1992

SOUTHERN AFRICAN REGIONAL LOGISTICS

Summary

In the early stages (December '91) of the current drought USAID/Zambia and shortly thereafter USAID/Zimbabwe requested Redso/ESA/WFP to conduct an assessment of port and railroad capacity to import substantial quantities of food commodities to alleviate potential famine. As time went on it became clear that the drought was more severe than anyone had expected and the demand for imported commodities became greater and still is continuously being adjusted upwards.

- It was also evident that as the required quantities of imported food commodities continued to rise the regional logistics system was being stretched to its limits.

This report will consist of two separate sections.

The first part will reflect current status of capacities of both ports and railroads in the region and identify the current constraints. The second part is the review of actual port facilities as originally requested by USAID/Zambia and USAID/Zimbabwe.

Discussion - Part I

During the Regional Mission Directors Conference in Harare, Zimbabwe on March 13, 1992, the current drought situation was discussed at length and potential USG intervention was reviewed. Revised estimates were presented by each Mission Director for estimated imports of maize and other food commodities for his/her country. The total imports including those for South Africa amounted to 13,000,000 mt for the next 12 - 15 months. The total imports included commercial sales, donor shipments, WFP operations etc.

It is important to utilize the number of 13,000,000 mt as potential imports to demonstrate the serious shortfall in capacity through the existing port facilities.

Schedule I reflects the rated and actual capacity of all potential ports in the Southern African Region. It is interesting to note that efficiency rating of the combined ports is 79 percent.

Breaking out the South African ports the actual capacity is 6,940,000 mt for an efficiency rate of 88.6 percent. Based on total capacity available it became apparent that the majority of food commodities had to be channeled through South African Ports. In the latter part of February/early part of March, Transnet (South Africa Transport) established an Emergency Operating Group consisting of representatives of Portnet (South Africa Harbor Authority), Spoornet (South Africa Railways), and GMB (South Africa Grain Marketing Board). The purpose of this group was to determine needs for the whole region, port facilities available in South Africa, railroad scheduling, and port allocations.

The group determined that port facilities were the limiting factor in the overall logistics. Spoornet would be able to handle all imports, not only those for domestic use but also for cross-border operations. During discussions with the staff of the Emergency Operating Group, they indicated the necessity of communications between their office and all SADCC countries to be able to allocate and schedule the port capacity. The ultimate solution, as they see it, would be to assign a representative of each SADCC country to their Operating Group in Johannesburg. They requested Redso/ESA/FFPO to communicate this request to the pertinent USAID Missions.

Schedule II shows the allocation of ports in South Africa by the Emergency Operating Group based on quantity and destination. Durban is being utilized exclusively for imports for South Africa (both Portnet and private sector operation).

East London has been designated for import for South Africa, Lesotho (Les), Botswana (Bots) and 700,000 mt for cross-border (CB) operations. Cross-border in this context would be Zimbabwe, Zambia, Malawi, and extra requirements not covered by South Africa for Botswana.

Port Elizabeth has been virtually dedicated to cross-border operation with a capacity of 1,200,000 mt (rated).

Cape Town will import 475,000 mt for South Africa and 725,000 mt for cross-border destination.

The total capacity through South African ports allocated to cross-border operation is:

East London	700,000 mt	
Port Elizabeth	1,200,000 mt	
Cape Town	<u>725,000 mt</u>	
Total	2,625,000 mt	rated @ 87.3% eff = 2,291,000 mt actual

The port of Walvis Bay was purposely not addressed by the emergency group in order to reserve it 100 percent for the use of Namibia.

The original requirement of maize for the four cross-border countries, depending on South African ports, was:

Malawi	920,000 mt
Zambia	900,000 mt
Zimbabwe	2,000,000 mt
Botswana	<u>134,000 mt</u>
Total requirement	3,954,000 mt

It is acknowledged that \pm 250,000 mt was bought from the South African Grain Marketing Board, however, this still leaves a shortfall in port availability (through South Africa) of \pm 1,500,000 mt. (Requirement for CB countries minus commercial purchase from GMB versus actual capacity of allocation in South African ports).

Schedule III identified the total capacity of Spoornet, Botswana Railways, National Railroads of Zimbabwe, Zambia Railways, Tazara and CFM to move commodities imported through the various ports in the region over and above their regular commercial traffic.

Schedule IV projects the actual loading of the railroad systems identified in Schedule III. Not only was the railroad capacity taking in consideration in developing this schedule, but also total port capacity i.e. Tazara Railways from Dar-Es-Salaam to Zambia has more capacity at 5400 mt per day than does the port itself, hence the loading schedule of the railway (Tazara) only reflects 400,000 mt annually.

Comments:

Based on the above information it has become evident that if all the quantities of maize required by the four cross-border countries materializes there will be a severe constraint as far as port facilities are concerned. This does not even take in account the 1,000,000 mt plus of other food commodities.

The other aspect of this potential problem is the close cooperation which is required between all countries and the Emergency Operating Group of Transnet, located in Johannesburg.

Unfortunately, during a recent visit to their office in Johannesburg officials indicated that GMB of Zimbabwe had "commitments" for 2,000,000 mt of maize which was to be imported through South African ports. The total volume was reserved for Zimbabwe by the Emergency Operating Group with the balance of the allocated space of 2,291,000 mt minus 2,000,000 mt (actual) or 291,000 mt to be divided among the remaining 3 cross-border countries.

There should be a process in place that can review actual and firm commitments and if it becomes necessary to be documented by L/C's or other pertinent documentation to justify an allocation of port designation and time allocation for discharge through the Emergency Operating Group.

Hypothetical or phantom commitments should not be assigned space or time in the ports. This will only create more confusion and exacerbate an already precarious situation.

SCHEDULE I

PORT CAPACITY IN SOUTHERN AFRICA REGION

	Port Capacity Bulk Commodities (000 mt)		Draft in meters	Net Capacity (000 mt)	Import Grain Silos	Mechanical Discharge	Port Restrictions	Equipment Required
	Rated	Actual (%)						
Dar-Es-Salaam Tanzania	1,000	500(50)	-8	22	Yes, but too far away from docks	No	Daylight Arrival/ Departure only	Additional Bagging Unit Shunting Engines.
Beira Mozambique	1,000	500(50)	-8	25 (high tide only)	None	Yes	Daylight Arrival/ Departure only	Diesel Locomotives, Rolling Stoc Shunting Eng
Durban RSA	3,400	3,162(93)	-12.3	55	Yes	Yes	None	None
East London RSA	1,352	1,122(83)	-10.7	40	None	No	None	Bagging Unit
Port Elizabeth RSA	1,200	1,116(84)	-10	30	None	No	None	Bagging Unit
Cape Town RSA	1,200	1,140(95)	-12	50	None	No	None	Unknown
Walvis Bay RSA	700	400(59)	-10.7	40	None	No	None	Grabs. Baggi Units
TOTAL	10,052	7,940(88.6)						

REPUBLIC OF SOUTH AFRICA - PORT ALLOCATIONS

SCHEDULE II

PORT	Tonnage to be Discharged (000's)	Discharge Capacity (Rated)	Discharge Capacity Per Day (Actual % Eff)
Durban 7 days p.w. 24 hrs p.d.	3,400 mt maize (S.A.) (2,000 mt Portnet) (900 mt D B S) (500 mt Rennies)	6,000 mt (Portnet) n.a. n.a.	5,580 mt (93) (Portnet) n.a. n.a.
East London 5 days p.w. 16 hrs p.d.	300/500 mt maize (S.A.) 22 mt wheat (S.A.) 40/50 mt wheat (Les) 60/80 mt maize (Bots) 700 mt maize (C.B.)	3,000 mt (grab) 1,500 mt (evacuator optional)	2,490 mt (83) 1,260 mt (84) (optional)
Port Elizabeth 7 days p.w. 24 hrs p.d.	1,200 mt grain (C.B.) 11 mt wheat (S.A.)	4,000 mt	3,360 mt (84)
Cape Town 6 days p.w. 24 hrs p.d.	475 mt maize (S.A.) 725 mt grain (C.B.)	3,500 mt	3,325 mt (95)
TOTAL	6,933/7,163 mt	16,500 mt	14,755 mt (89)

Total rated capacity (Portnet)
16,500 mt per day x 360 days = 5,940,000 mt annually
Rated capacity (Private Sector) = 1,400,000 mt annually
Total Cap. 7,340,000 mt annually
Actual capacity at 89% eff. 6,532,600 mt annually

Reserved:
4,500,000 mt maize (S.A.)
2,000,000 mt grain (C.B.)
200,000 mt wheat (S.A.)
Total 6,700,000 mt

189

RAILROAD CAPACITY FROM DISCHARGE PORTS

SCHEDULE III

Port	Destination	Via	Capacity Per Train	Amount of Unit Trains	Frequency
East London	Zimbabwe	Beitbridge	1,365 mt	4	Daily
Port Elizabeth	see East London				
Cape Town	Zambia/Malawi	Malikend (Botswana)	1,365 mt	3	Daily
Maputo	Zimbabwe	Direct	741 mt	1	Daily
Beira	Zimbabwe	Direct	856 mt	3	Daily
Nacala	Malawi	Direct	675 mt	2	Weekly
Dar-Es-Salaam	Zambia/Malawi	Kapiri Mposhi	1,800 mt	3	Daily

Note: All trains reflected above to additional capacity over and above regular commercial traffic and passenger traffic if any.

197

RAILROAD LOADING SCHEDULE FROM DISCHARGE PORTS TO INLAND DESTINATIONS

	Needs (M.T.)	Mozambique Ports		Tanzania		RSA Ports	
		Beira (M.T.)	Nacala (M.T.)	Maputo (M.T.)	Dar (M.T.)	BBD (M.T.)	Malikend (M.T.)
Zimbabwe	2,000,000	500,000	-	-	-	950,000	550,000
Zambia	900,000	-	-	-	400,000	-	500,000
Botswana	134,000	-	-	-	-	-	134,000
Malawi	920,000	-	70,000	-	-	425,000	425,000
Mozambique	859,000	-	215,000	644,000	-	-	-
	4,813,000	500,000	285,000	644,000	400,000	1,375,000	1,609,000
						2.76 tr. each day 1,365 net per train	3.23 tr each day 1,365 net per train
Zaire	500,000	Possible needs, no firm commitment.					

BBD and Malikend are railroutes from South African Ports to Zimbabwe

Part II

REDSO/ESA/FFP conducted a survey at the request of USAID/Zambia and USAID/Zimbabwe to ascertain the capabilities of the available ports in the Southern African Region. The primary focus of the survey was the bulk handling facilities for food commodities, the interface with road and rail transport, bagging capacity, vessel limitations, management of the port, and general condition conducive to food commodity handling.

The survey was conducted during January 5 - 10, 1992 and March 8 - 13, 1992 and included the following ports, Dar-Es-Salaam (Tanzania), Beira (Mozambique), Durban (RSA), East London (RSA), Port Elizabeth (RSA), and Walvis Bay (RSA). The information contained herein was obtained from many different sources in addition to personal observation. At each location either Port Captains or Managing Directors were contacted, discussions were held with operating staff of ports and railroads, meetings with freight forwarders and clearing agents were conducted, and various regional meetings of logistics personnel were attended. Results of this survey are shown below by location:

DAR-ES-SALAAM (TANZANIA)

Port Limitations

Maximum Length	175 meters
Maximum draught	-8 meters
Maximum vessel capacity (net tons)	20,000 mt
Day light arrivals and departures only	

Discharge Capabilities

Equipment utilized are shorecranes of various capacities with grabs discharging directly into railcars or hoppers for bagging purpose. The total capacity for bulk food commodities with current equipment is 500,000 mt annually with a daily discharge rate of 3,000 mt.

Bagging Operation

Three bagging machines are currently operating in the port with a rated capacity of 2250 mt per day, but the actual output is 1,000 mt per day.

Management

The Tanzania Harbor Authorities (THA) a parastatal, are the operators of the port facilities. Up to one year ago the bagging operation was performed by two private companies NORSK-Hydro and NECTAR but THA has taken over this operation and sub-contracted with Nectar.

Railroad Interface

The Tanzania-Zambia-Railway (Tazara) provides the interchange with the port operations. The capacity of Tazara is three "unit-trains" (aka "block-trains") of 1800 mt each daily, exceeding the capacity of the port. Tazara handles the segment Dar-Es-Salaam - Kapiri Mposhi (Zambia) at which point Zambia Railways takes over.

In discussions with operations personnel at both the port and railroad, they indicated that the change-over at Kapiri-Mposhi takes an excessive amount of time and delays turn-around of the railcars.

It has also become apparent that Tazara would have a difficult time leasing and/or rental of additional equipment because of different flange dimensions on their equipment compared with neighboring railroads. Fourteen millimeters versus twenty.

General Information

Although the port of Dar-Es-Salaam has received substantial amounts of donor funding over the last several years, still several areas need additional improving before the port of Dar-Es-Salaam could be considered a viable and efficient port for bulk food commodities handling. Areas to be addressed are:

- a. housekeeping
- b. day-to-day operational management
- c. additional bagging equipment (rental or lease)
- d. more efficient shunting of railcars plus additional equipment to accomplish same
- e. ensure that railcars which are spotted are clean and acceptable for transport of food commodities.

It should be noted that since the initial survey of the port, some of these areas have already been addressed and corrective action taken.

BEIRA (MOZAMBIQUE)

Port Limitation

Maximum length	175 meters
Maximum draught (berth)	-9 meters
Maximum vessel capacity (net tons)	20,000 mt
Arrival and departure during day light only	

It should be noted that the entrance to the Makuti channel is restricted by a sandbank reducing the draft to - 8 meters thus limiting the size of vessels.

Discharge Capabilities

The port of Beira has undergone a major rehabilitation which included the purchase of one pneumatic evacuator with a rated capacity of 200 mt per hour and two smaller units with a capacity of 120 mt each. In addition, two each double line bagging machines were purchased providing a rated capacity of 3960 mt per day. Discharge of commodities is directly in railcars/road trucks or hoppers for the bagging operation. Total port capacity for bulk food commodities is 500,000 mt annually with a daily discharge rate of 3,000 mt.

The constraining factor in the reduced discharge is the off-take from the dock area. Current equipment, a 1938 steam locomotive, is used to shunt the empty/loaded cars. The evacuators used for discharge outstrip the capacity of the shunting operation of railcars.

Improving the daily operation at the quai would enhance the discharge of the vessel and increase the capacity of the port. Vessel seize would still be limited but at least the number of vessels could be increased on an annual basis.

Bagging Operation

The rated capacity of the two double line bagging units is 3960 mt per 24 hour per day. The actual capacity is 1500 mt due to interruptions, non availability of railroad cars, and two shift operation. Again this could be improved with more efficient operation of the spotting and removal of railcars at quai site.

Management

Although limited time was spent in Beira it appeared that port management was over optimistic in their expectations. Caminhos de Ferero de Mozambique (CFM) runs the port operations as well as the Beira Corridor Railway to Zimbabwe. It appears that with the outside technical assistance (TA) improvements in the general operation of the port could increase the capacity substantially.

Railroad Interface

CFM being in charge of both port and railroad operation is a definite advantage with respect to coordination of movement of the commodities. CFM indicated that a total of three "block-trains" with a capacity of 1200 mt each could be moved during daylight hours for a total of 3600 mt per day. They are unwilling to commit themselves to nighttime operations until security risks in the area are diminished.

Nighttime operation would certainly enhance the viability of the port of Beira. In order to accomplish this, not only would the security have to be resolved, but additional equipment, locomotive and rolling stock would have to be brought in. Spoornet (South African Railways) has offered to make this available on a lease basis.

General Information

The port of Beira is a clean modern facility which could complement other ports in the Southern African Region. The two major constraints are:

- a) that only limited capacity vessels can enter the port and
- b) that the off-take from the port is limited to 3600 mt per day.

The constraints under a) cannot be improved upon without major cost but b) can be rectified by nighttime operation of the railroad which would increase the off-take to 5,000 - 6,000 mt per day. Additional locomotive power and rolling stock will have to be leased or rented to accomplish this.

DURBAN (REPUBLIC OF SOUTH AFRICA)

Port Limitations

Maximum length	263 meters
Maximum draught	12.3 meters
Maximum vessel capacity (net tons)	55,000 mt

Discharge Capabilities

The port of Durban has two different options for discharging bulk commodities. The traditional way is by means of grabs (clamshells) at a capacity 3,000 - 4,000 mt per day depending on requirements for bagging along side vessel or direct loading into railcars or over-the-road trucks. The other way is by mechanical means like bucket elevator or chain conveyor. The mechanical operation discharges directly into grain silos because the excavator system is an integral part of the bulk storage facility. The discharge rate of the mechanized system is 6,000 - 7200 mt per day and is, because of its nature, not subject to take-off rate at the quai. Total rated capacity for bulk commodities in the port of Durban is 3.400.000 mt.

Bagging Operation

As is the case with the discharging operation, bagging can be performed in two different ways:

- a) Bagging along side the vessel during discharge and bagged material to be loaded into railcars or trucks. The bagging rate depends on the number of bagging units, utilized but each unit would operate on an actual basis of 400 - 450 mt 24 hour per day.

Bagging alongside the vessel normally slows down the discharge of the vessel.

- b) Direct bagging out of the silo where the bagging units are an integral part of the bulk storage complex. The rate of bagging can also vary depending on the amount of units used, but would be 400 - 450 mt 24 hour per day per unit.

Management

Portnet, a parastatal, (South Africa Port Authority) is a division of Transnet, which also includes Spoornet (South Africa Railways). During the various meetings with staff and port captains of Portnet, they come across as well-qualified, professional individuals who are willing to assist and accommodate the movement of relief food commodities for the cross-border programs.

Railroad Interface

Since Spoornet (South African Railways) and Portnet are part of Transnet, there is excellent cooperation between the two operations. All docks, both public and private, have sufficient amount of spurs and during discussions with Spoornet about the volume of bagged/bulk commodities to be transported across the border, they indicated that their existing system would be able to handle the increased volume since they have spare locomotives and rolling stock.

Adjacent to the port facilities is a large marshalling yard equipped with automatic car washers.

General Information

The ports in South Africa are operated by Portnet, a parastatal. However, only in Durban two privately held companies are operating facilities alongside Portnet. Of the total rated capacity of 3,400,000 mt, 2,000,000 mt is handled by Portnet wharfs and equipment, and the remaining capacity of 1,400,000 mt is shared by two private companies. Durban Bulk Services capacity is 900,000 mt and Bulk Freight Terminals can handle 500,000 mt.

EAST LONDON (REPUBLIC OF SOUTH AFRICA)

Port Limitations

Maximum Length	245 meters
Maximum draught	-10 meters
Maximum vessel capacity (net tons)	40,000 mt

Discharge Capabilities

Vessels up to 40,000 mt can be received, but will have to be partially unloaded at the Ro-Ro Wharf and then moved to the final berth to complete the discharge. Draught is the limitation at the final berth.

The discharge is by conventional means (grabs) and is at 3,000 mt per day.

Annual rated capacity is 1,352,000 mt at a 83 percent efficiency level for an actual capacity of 1,122,000 mt.

Current working hours are 5 days per week, 16 hours per day. However, port management indicated this could be extended as the need increases. In addition an pneumatic evacuator could be brought in which would add an additional 1500 mt per day discharge capacity.

Bagging Operation

Bagging equipment is not currently available and would have to be leased or rented. Capacity of the equipment would be the same as other locations and be 400 - 450 mt per day per unit.

Management

Fortnet is the operator of all facilities in the port area. Management indicated cooperation and coordination would be essential in accomplishing the task ahead. Their concern focussed on the sustainability of the operation over an extended period of time (12 - 15 months).

Railroad Interface

Good working relationship exists with Spoornet and timely dispatch of loaded cars and spotting of empties is assured.

General Information

East London is basically a grain export port. The possibility was explored to utilize the grain silos located at the opposite side of the harbor.

Incoming vessels cannot discharge at this facility because only loading chutes are available. Moving bulk commodities by truck from the discharge wharf to the grain silos was considered but not viable because of the lack of adequate equipment available. Railroad hopper cars normally used in this operation for export have been diverted to the Durban operation.

1999

PORT ELIZABETH (REPUBLIC OF SOUTH AFRICA)

Port Limitations

Maximum Length	245 meters
Maximum draught	-10 meters
Maximum vessel capacity (net tons)	40,000 mt

Discharge Capabilities

Port Elizabeth is primarily a fresh citrus export port. This seasonal aspect limits the possibilities of handling discharge of bulk commodities. The fresh fruit wharf is only available for discharge during November - March time period. Two other wharfs can be dedicated to bulk discharge. Total bulk capacity of the port is rated at 1,200,000 mt, but due to limited equipment and other constraints the efficiency is only 84 percent or 1,116,000 mt annually. Daily discharge is 3,000 mt by means of grabs.

Bagging Operation

There currently is no bagging equipment available at the port. Any bagging equipment required would have to be brought in on a rental or lease basis. The same capacity of 400 - 450 mt per day per unit, as in other locations, can be expected to be achieved.

Management

Portnet is the sole operator of the port of Port Elizabeth and no private company is either located or operating in the port area.

Personnel met during this survey are well qualified and expressed a desire to expand all efforts necessary to accommodate the increased volume of traffic, including rental of additional equipment.

Railroad Interface

Portnet as is the case in all South African ports, is the operator and is part of Transnet along with Spoornet.

Working relationship between the two organizations is very much integrated.

Sufficient rail spurs are available at the quay which would allow port management to spot empty cars while others are being loaded.

General Information

From initial conversations with port management it appears that the port of Port Elizabeth might be assigned to handle a large part of the cross-border requirements.

Any cargoes consigned to Port Elizabeth would have the option to be routed (by rail) via Botswana or thru South Africa on the Beitbridge route.

This port was used extensively for cross-border shipments to Zimbabwe during the drought of 1984 with good performance.

200

CAPE TOWN (REPUBLIC OF SOUTH AFRICA)

Port Limitations

Maximum Length	250 meters
Maximum draught	-12 meters
Maximum vessel capacity (net tons)	50,000 mt

General Information

The port of Cape Town was not part of the original scheduled survey.

Cape Town was not considered to be a viable option because of the distance and corresponding high cost in moving commodities to the final destination.

However, because of increased demand by SADCC countries and the Republic of South Africa for food commodities Portnet has identified Cape Town as an additional facility for cross-border operations.

201

WALVIS BAY (REPUBLIC OF SOUTH AFRICA)

Port Limitations

Maximum Length	200 meters
Maximum draught	-10.7 meters
Maximum vessel capacity (net tons)	40,000 mt

Draught shown is only available immediately after dredging. Berths and channels are subject to shoaling.

Discharge Capabilities

The annual rated capacity for discharging bulk commodities is 700,000 mt as stated by port officials. However, it should be noted that capacity for handling bulk commodities, due to lack of proper equipment, is an actual 400,000 mt annually.

Discharge based on a two 10 hrs shift operation is 3,500 mt per day.

During the cross-border operation for Angola the port has performed well, however, the cargo was 100 percent bagged commodities.

According to the Port Captain Walvis Bay has access capacity.

Any equipment needed for a bulk operation such as grabs and bagging equipment, would have to be brought in from outside.

Management

Fortnet is the operator of the port. Management indicated a willingness to work with any shipper and to accommodate any specific requirements in order to increase through-put and utilize the excess capacity available.

Railroad Interface

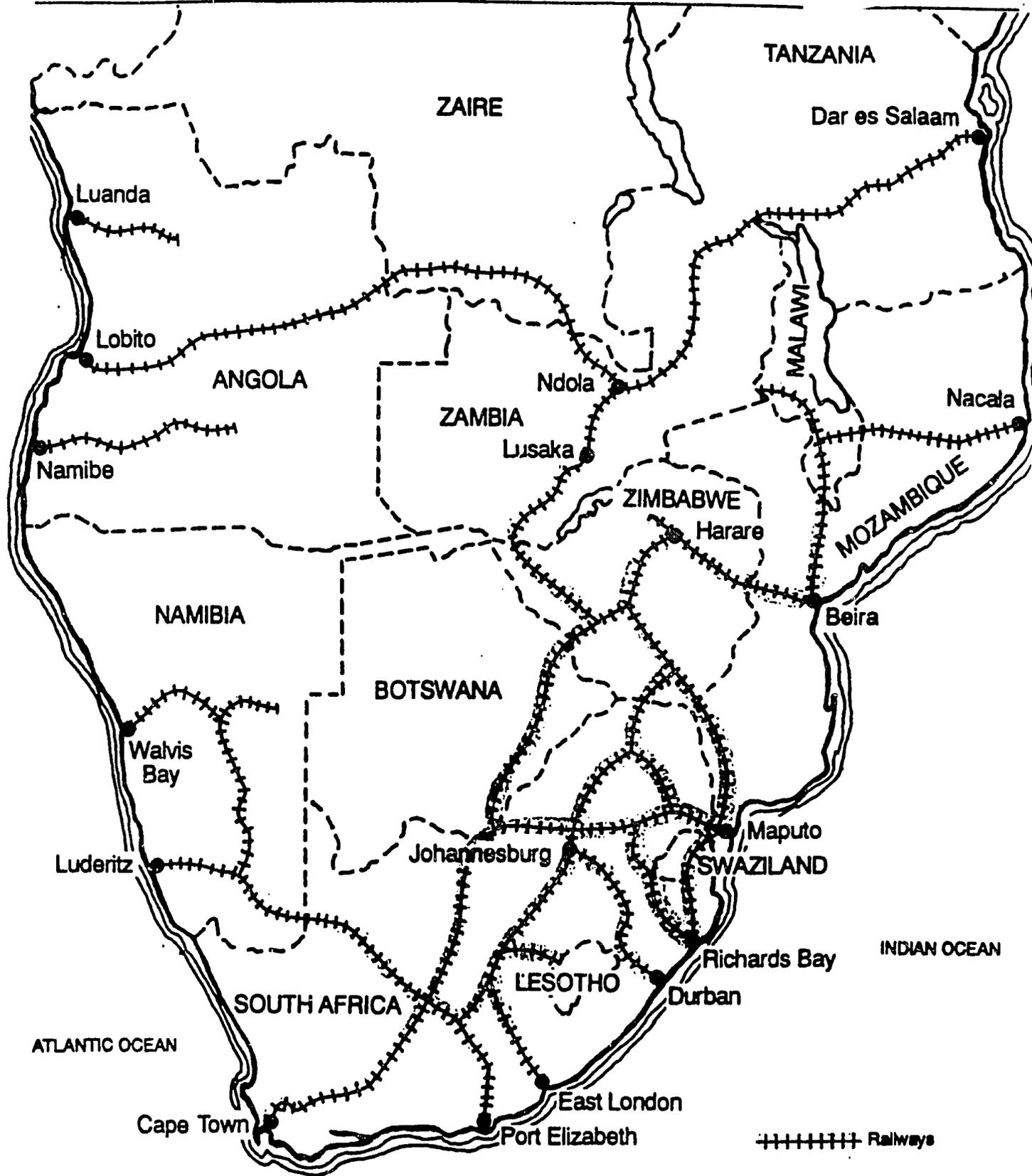
Spoornet, although involved is only a small part of the railroad system. Transnamib, a parastatal, is the major operator on the route Walvis Bay-Windhoek. There is, however, a very close working relationship between the two organizations and exchange of locomotives and rolling stock.

General Information

The port of Walvis Bay could be an option for use of imports for Botswana and possibly Zambia. The railway system provides access to Botswana through South Africa, but the routing is longer than from Cape Town.

Zambia could be served by rail up to Grootfontein and cargo (100% bagged) would have to be trans-loaded onto trucks. High cost of inland transport would be a major consideration in determining the use of Walvis Bay.

Southern Africa



Source: *Total Response to Total Strategy: Toward Economic Recovery and Development in Southern Africa*, Report of the North South Roundtable Consultation in Julliasdale, Zimbabwe, December 1-3, 1988 (Islamabad, Pakistan: North South Roundtable, Society for International Development, 1989), p. iv.