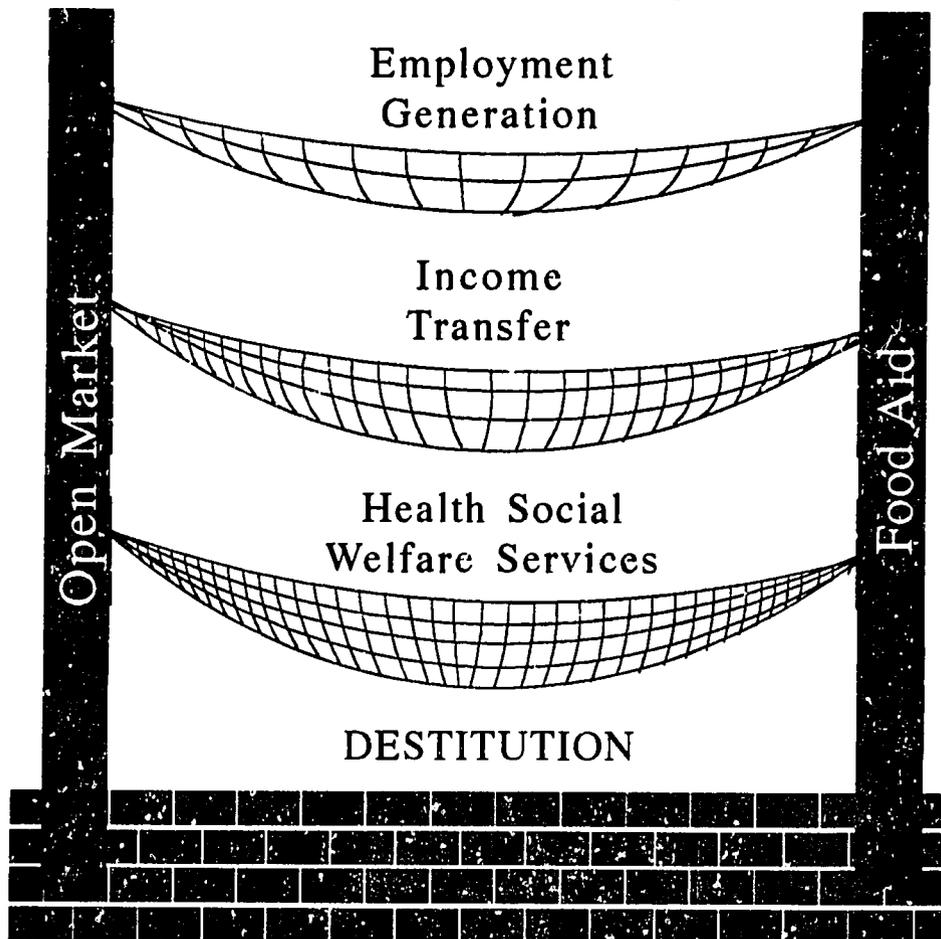


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Targeted Urban Food SAFETY NET for Mozambique



Food Security Policies

C. Teller, M. Ochoa, B. Rogers, P. Fumane,
The Pragma Corporation

October 1992

Study Supported by USAID/Maputo

**TOWARDS A TARGETED URBAN FOOD SAFETY NET
IN MOZAMBIQUE:**

AN ASSESSMENT OF PROGRAM OPTIONS

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LIST OF ACRONYMS AND ABBREVIATIONS

APROC	Small Millers Association
BMI	Body Mass Index
CIM	Compania Industrial da Matola (Matola Industrial Company [Grain mill])
CNP	Commissao Nacional do Plan (National Planning Commission)
CPSP	Country Program Strategic Plan (USAID/Maputo)
DNE	Direccao Nacional do Estadistica (National Statistics Division)
DPCCN	Departamento de Prevencao e Combate das Clamidades Naturais (Department for the Prevention and Control of Natural Calamities)
DSA	Departamento de Seguridad Alimentaria (Department of Food Security, [Ministry of Commerce])
EACM	Empresa de Abastecimento a Cidada de Maputo (supply company/warehouse for the city of Maputo)
EEC	European Economic Community
FHI	Family Health International
GAPVU	Gabinete de Apoio a Populacao Vulneravel (implements the income transfer and food subsidy scheme)
GOAM	Gabinete de Organizacao de Abastecimento a Cidade de Maputo (Office managing food supplies to Maputo)
GRM	Government of the Republic of Mozambique
GTZ	German Agency for Technical Cooperation
MA	Ministerio do Agriculture
MS	Ministerio da Saude (Ministry of Health)
MSU	Michigan State University
MT	Meticais (MT 2,800 = 1 U.S. Dollar)
NGO	Non Governmental Organization
NPC	National Planning Commission
NSA	Novo Sistema do Abastecimento ("New Supply System", Urban Food Ration System)
SCF	Save the Children Fund
SD	standard deviations
SDA	Social Dimensions of Adjustment (World Bank)
SEAS	State Secretariat for Social Action
SMI	Saude Materno/Infantil (Mother and Child Health Program)
TA	Technical Assistance
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Childrens Fund
USAID	United States Agency for International Development (country mission)
WV	World Vision

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EXECUTIVE SUMMARY

Mozambique is considered the poorest country in the world, and one that has been severely affected by recent drought and food deficits, and by a long civil war. The Government of Mozambique (GRM) now has an institutional reform plan to phase out the practically defunct food ration system (NSA) in the two major urban centers of Maputo-Matola and Beira by mid-1993. The GRM requested technical assistance of USAID/Maputo in exploring the need for, and the financial and nutritional implications of alternative, more efficient safety net type programs for the most food insecure families living in the cities (a total population of around 3 million).

The multidisciplinary Pragma team, including Mozambican experts, worked three weeks together in country reviewing the most practical options and suggesting criteria that the GRM could use to choose between them. The team used rapid assessment procedures, including document review, field observation and key informant interviews to identify the options. These, in turn, were then presented to top decision-makers, program managers, commercial and market players, donors and the food insecure beneficiaries themselves for a quick field validation and feedback.

We conclude that there should be safety net type programs developed for the larger cities because of the large number of chronically malnourished, food insecure and absolute poor households. Comparative household surveys indicate that the levels of moderate to severe chronic undernutrition in Greater Maputo (30% of children under five) are among the highest recorded recently in African capital cities, and that the level of acute malnutrition (wasting) almost doubled between 1988 and 1992 (from 3.5% to 6.5%).

The main target groups identified for safety net options were:

- (1) Severely malnourished mothers and young children living in food insecure households.
- (2) Unemployable (handicapped) males and females.
- (3) Elderly living alone
- (4) Un-underemployed males and families
- (5) Recent arrivals (so-called "afectados")

The market can be the guarantor of food security of first resort. Thus, developing an open and competitive market is the most important context for the social safety net programs. All poor households would benefit from lower and more stable prices and more reliable food supplies in the market. We support some

policy changes that would be low cost and enhance the role of the market as a safety net by lowering and stabilizing prices and increasing supply of low-quality (but similarly nutritious) food. These suggestions are based on the assumption of continued but gradually declining flows of donor food aid.

The team recommends that a patchwork of safety net options be developed instead of the NSA and price/distribution controls. The main two options the government should consider are:

- (1) Income transfers, and
- (2) Employment creation for public works.

Of the five urban food insecure target groups identified above, the first three can be covered by cash transfers, and the other two by public works. All five should also benefit from more available and cheaper basic grains provided through self-targeted commercialized food aid moving through competitive market mechanisms.

Applying eight program selection criteria to the different options in the validation exercise, the team concludes that the GAPVU cash transfer scheme is the most feasible and appropriate mechanism to increase the purchasing power of the most food insecure in the major cities. However, GAPVU must be strengthened administratively so that the transfer can function efficiently and effectively. In particular, suggestions are made to improve the nutrition screening mechanisms through existing maternal-infant health and nutrition programs which have high coverage in Greater Maputo. A Management information system for financial control and for monitoring of benefits received by households and individuals is also essential before a major expansion of the GAPVU program can be implemented.

Within the GAPVU, the option of a cash coupon transfer system was floated with the key informants, with radically differing opinions. The major advantage to coupons over cash, as evaluated in other countries, is the somewhat greater marginal propensity to spend the coupon transfer on food. Doubts were expressed, though, about the possibility of higher costs per beneficiary and per delivered cash. Given numerous reservations to the coupon idea, the team suggests that an experimental project assess this cash coupon option.

Cash for work was compared with food-for-work and with other small enterprise development and income-generating schemes. Unfortunately there is a lack of experience in Greater Maputo with these income generating efforts. Cash-for-public works is the more practical, and preferred option in this category, although it still would have a higher administrative cost and management burden than the cash transfer schemes. The best cash-for-work schemes would be those which are heavily labor

intensive, geared toward improvement of urban infrastructure and are managed through the existing city councils.

Finally, governmental organizations will need to develop the policies for, and be responsible for coordinating the targeted urban food safety net. A key planning role will be played by the recently reorganized the Food Security Policy Unit of the National Planning Commission, and key implementation roles by GAPVU, the Ministry of Health, and the NGOs. In order to design and/or improve on these scheme, technical assistance will probably be required, although ongoing implementation may not require it any sustained way.

In sum, the urgency in urban Mozambique is that the most food insecure target groups do in fact receive the income transfer in a much more efficient and effective way than has been the experience with the NSA.

**TOWARDS A TARGETED URBAN FOOD SAFETY NET IN MOZAMBIQUE:
AN ASSESSMENT OF PROGRAM OPTIONS**

1. INTRODUCTION

Mozambique is the poorest country in the world, and one of the most food deficit in the world. It depends on food donations for an estimated 80% of market requirements. This large country also suffers from a long civil war (which is ending) and two years of drought. An estimated three million people (of a total of 15 million) are at risk of starvation. People who have been affected by these situations (both "deslocados" and "afectados") have fled to safe areas and cities, and the capital city of Greater Maputo has swelled to around 1,500,000 people, of which a significant minority are considered impermanent residents.

The USAID Mission is supporting the Government of Mozambique (GRM) in its institutional reform plan to phase out the food ration system (Novo Sistema do Abastecimento or NSA) in Maputo and Beira by June, 1993. Technical assistance was requested to assist the GRM in identifying and exploring the need for and the financial and nutritional implications of alternative, more efficient safety net type programs in the two major urban centers, Maputo and Beira.

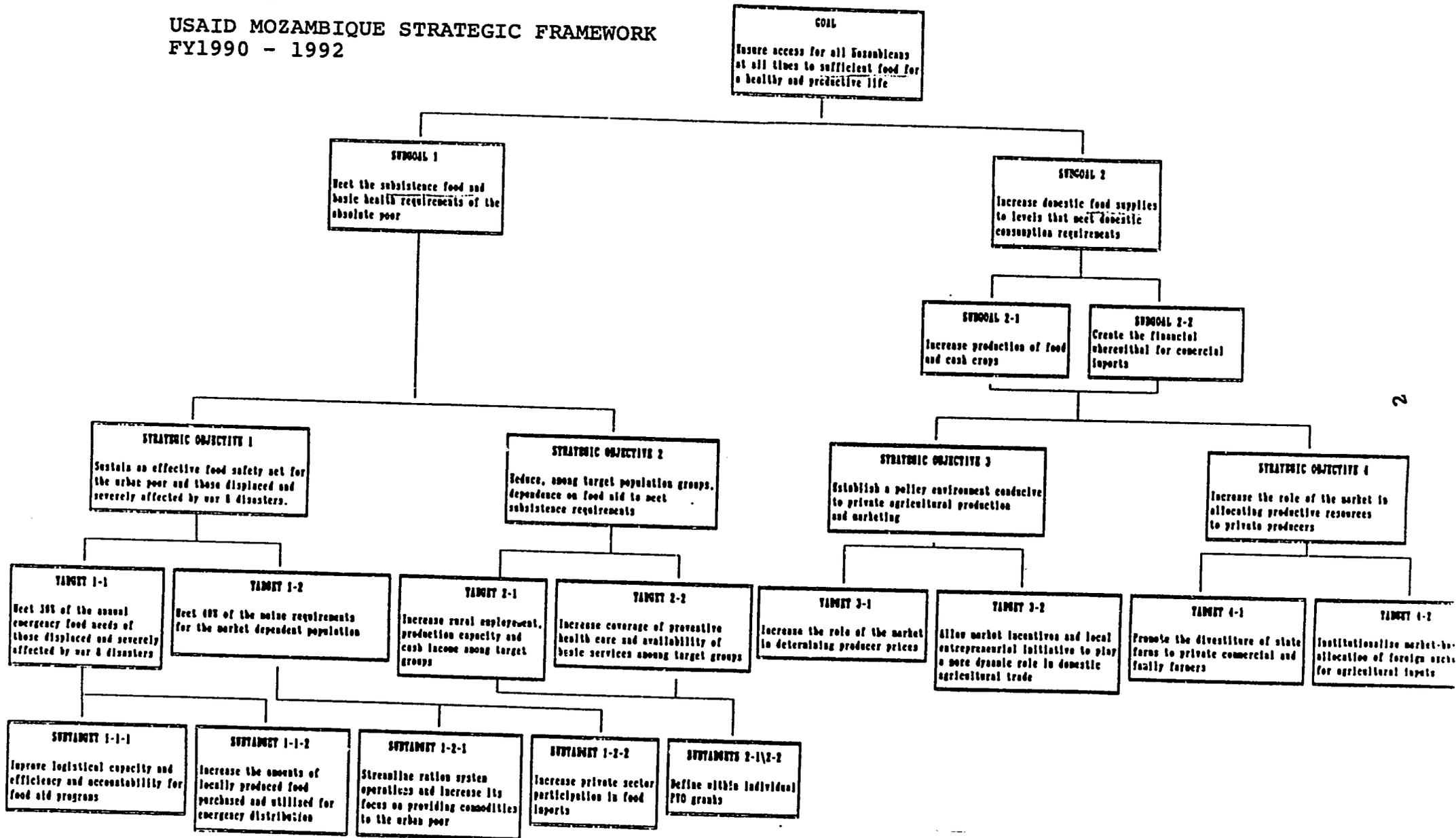
The Mission's 1990-92 Country Program Strategic Plan (CPSP) identifies food security as its main objective, and includes both rural and urban safety net targets (Figure 1). The food aid-related NSA has been ineffective, and the Mission is exploring other options, including the recently developed income transfer program called GAPVU (Gabinete de Apoio a Populacao Vulneravel). A new CPSP is now being developed, and will likely include both Title II and Title III support of food security and nutritional objectives.

The objective of the Pragma team was to support the GRM in developing an assessment of whether, and, if so, how to design and implement a more effective income transfer food safety net program post-NSA. The team was asked to assess alternative safety net type programs, describing the options and suggesting criteria by which the GRM could choose between different options or combinations thereof. The assessment was also to explore the feasibility of identifying proxies and applying alternative

¹Since in theory most refugees in the rural areas are "deslocados" and impermanent people in the cities are "afectados," we will use the term "afectados" to apply to those in Greater Maputo and Beira.

FIGURE 1

USAID MOZAMBIQUE STRATEGIC FRAMEWORK
FY1990 - 1992



Source: Country Program Strategic Plan
FY 1990 - 1992

targeting mechanisms for various program interventions in Greater Maputo. Finally the report should assist the GRM in developing a preliminary action plan.

The external team spent a little over three weeks in country. The timing was purposely coincident with the Government's need to decide on alternatives before the end of the year, and also with the reporting of the Food Security Department (DSA)/Cornell survey research on the NSA and food security situation in Greater Maputo (Sahn, 1992). The team was composed of a food economist as senior food security advisor; an economist/nutrition analyst as food program advisor; and a nutrition planner/sociologist-demographer as team leader. It was complemented by a Mozambican-based international transportation economist and a Mozambican economist as food systems analysts. The team engaged in the following activities:

- (1) Review of available data on household food security, market mechanisms and prices, nutritional situation, and the past and ongoing urban food safety net programs, including the NSA and GAPVU.
- (2) Interviews with key national policymakers, program implementers, researchers, international donors and other key informants.
- (3) Rapid assessment procedures applied to the providers and consumers, including multiple observations of key linkages in various safety net programs.
- (4) Primary data analysis of the 1991-92 DSA/Cornell University household expenditures and welfare survey in Maputo/Matola.

The team benefitted from access to USAID-supported studies by Cornell, Michigan State and Ohio State universities and their GRM Counterparts, as well as World Bank, UNICEF, GTZ and NGO studies and the government's nutritional surveillance system (see references).

II. RATIONALE FOR AN URBAN FOOD SAFETY NET

The core of the rationale for a safety net, in welfare economics terms, can be stated as follows. Since, in the end, individual economic welfare depends on individual consumption, then, when an individual's consumption remains constant but below the minimal nutrient requirements, his well-being does not remain constant as is usually assumed in theory, but decreases. This means that social welfare frontier contracts. When human productivity also decreases due to malnutrition (human capital investment argument), a further contraction of the social welfare frontier occurs. Eliminating the declines in social welfare which result from these individual well-being and productivity effects, is a condition sine qua non in maximizing socioeconomic welfare and should be achieved, if not by employment opportunities, then by means of income redistribution processes or income transfers.

An urban food safety net should in principle ensure that all urban residents have "access to enough food at all times for a healthy and productive life" (USAID/Washington, 1990). There are two elements to be considered in urban food security:

- (1) availability and price of food on the market; and
- (2) the level of household income, which is determined by the household's labor supply, its physical capacity and skill level, its access to jobs, and the household's access to productive resources, most notably land.

The present study has been undertaken to assess whether, and if so, what possible alternatives are needed to the NSA (Novo Sistema do Abastacimento), an urban food provisioning system which is due to be dismantled in June of 1993. Recent studies (including the DNE household panel survey and the DSA/Cornell cross-sectional household survey, among others) show that the NSA is providing negligible amounts of food to households (3 to 5% of total consumption), and that the system is not targeted to the poor. This means that dismantling the NSA system probably will not have any important effect on the food security of poor households, nor on prices either.

Still, most studies suggest that a substantial percentage of Greater Maputo households are poor by any standard. Estimates of the total percentage of food insecure households are on the order of 50 to 60% (GTZ/GAPVU documents, 1991-2; DNE, 1991-2); about 10 to 15% are believed to be absolutely destitute. The recent DNE household survey finds that all but the highest expenditure quintile spends over 70% of the household budget on food, suggesting a serious income constraint on food acquisition. The very low levels of remuneration for which women are reported to

work (in the periurban and the vegetable trader surveys) also suggest a high level of need, as does the substantial number of street children with whom some church groups work. The recently completed DSA/Cornell survey shows very high rates of labor force participation (both formal and informal sectors) for adults: nearly 90% for men and 70% for women, which also indicated economic stress due to low wages or low returns on non-wage work.

However, this is not to be confused with having full-time employment. Only 50% are wage earners; 20% of employed women work less than 15 days a month; and over 50% of the unemployed men cited "inability to find a job" as the reason for the unemployment. This, then, suggests an important dimension of household food security should be job creation.

Information from this survey indicates 6.5% of children under 6 in Greater Maputo are wasted (less than -2SD weight for height), often an indicator of presence of disease as well as food deprivation, and 29.5% are stunted (very short for age), usually an indicator of chronic poverty (see table 1). Information on dietary adequacy is not yet available from the survey. Consumption patterns measured in terms of budget shares show that even households in the lowest quintile of per capita expenditure consume significant amounts of bread and rice, which are higher cost staples than the cheaper yellow maize grain and flour. But this in itself does not necessarily indicate that households have reached dietary adequacy. Both rice and bread are much quicker to prepare than maize: both are sold on the street, while maize products are less so. The relatively high levels of employment for both men and women of working age suggest that the time costs of food preparation are an important consideration in determining food consumption. The high rate of employment of women in the informal, petty trade sector also means that women are out of the house during the day, dependent upon what is available on the street.

Recent studies (DNE Survey, 1992) have found unrealistically low levels of calorie consumption among poor households--- averages in the range of 1400 calories per adult-equivalent per day---which reflect underreporting and problems of measurement.

Households in Maputo undoubtedly have developed a variety of strategies to cope with their precarious situation, including many which are not likely to be reported in surveys (such as gathering wild foods; stealing; begging). It is already known that reported expenditure levels far exceed reported income levels (DNE survey, 1992). To the extent that welfare interventions are pursued, self-targeting, or those which do not involve a need for targeting, are probably to be preferred, given the difficulty of ascertaining the economic situation of a given household.

Table 1 — Percentage of Children 0-60 Months Old Who Are Stunted and Wasted

Per capita expenditure quintile	Males		Females		All	
	Stunted ^a	Wasted ^b	Stunted	Wasted	Stunted	Wasted
1	35.4	10.3	34.2	7.8	34.8	9.0
2	40.0	6.0	22.6	7.0	31.6	6.5
3	33.3	3.92	28.2	4.9	30.7	4.4
4	23.0	5.04	18.1	4.8	20.9	4.9
5	23.6	6.7	15.3	6.9	19.9	6.8
All	32.7	6.7	26.1	6.5	29.5	6.6

Source: Sahn, et al., FSD/CFNPP Survey.

^a Height-for-age \leq -2 z-score.

^b Weight-for-Ht \leq -2 z-score.

In summary, there are five good reasons for a targeted food safety net in Greater Maputo:

- (1) The level of stunting (among children under five) highly correlated with chronic poverty, is the highest recorded recently in African capitals; the level, found to be around 30% in late 1991-early 1992, has not improved in the past four years since the representative 1988 survey (MS, 1988).
- (2) The level of wasting (among children under five) has increased since 1988 from 3.5% to 6.5% now. In the lowest quintile it is nearly 10%, as high as those found in some of the more severely war-affected provincial and district capitals.
- (3) The number of "afectados" in Greater Maputo is estimated at from 600,000 to 700,000, or a large minority of the entire population. It may be that a good portion of these are recent arrivals who face relatively greater hardships by virtue of their lack of being integrated into social service systems. Some would have come anyway under normal rural-urban migration patterns. Many of these will probably not return to their homelands, particularly those in Maputo over five years and the younger generation under 25 years old.
- (4) The cost of the minimum adequate diet for a family of six was estimated in 1991-2 at around 5 1/2 times the minimum wage (42,000 Mt) (M.S., 1991). Many employed people earned far less than this.
- (5) The high percentage of those without effective demand is estimated to range from 20% (the 1992 Cornell survey) to 50% (the 1992 Schubert reports). Even with the lower estimate of extreme poverty and chronic food insecurity the percentage of families living on the precarious margin is high, and these are quite vulnerable to the rapid price fluctuations of basic grains experienced this year.

The team also believes that Beira merits inclusion in the development of a safety net. The only nutrition survey carried out in Beira was conducted last year (August) in Vaz bairro (population 8,000) among a sample of 458 households. It found an alarmingly high prevalence of 11.1% wasted. It is one of the poorest bairros in peri-urban Beira, but not the very worst off. The drought and the drastic lack of water the last two years has aggravated the food insecurity situation further up the Beira corridor. The prevalence of low birth weight in Beira, at 15%,

is also high and similar to the levels in Maputo, and indicates a high level of malnutrition among adult women.

III. IDENTIFICATION OF POTENTIAL TARGET GROUPS AND THEIR SAFETY NET OPTIONS

The main criterion for participation in an urban food safety net program is poverty: being unable to obtain sufficient food. Another basis for identifying the target group is by physiological status: nutritionally vulnerable groups, including pregnant and lactating women and small children whose future health and physical (and mental) capacity are determined in part by their current nutritional level.

The government currently distinguishes between "afectados" (i.e., affected by the war) and "deslocados" (i.e., displaced persons or refugees). This is an arbitrary distinction, since many people dislocated by the war have been in Maputo for over ten years. It is generally agreed, and health department statistics bear this out, that the most recent immigrants to the city are the most needy, because they have not yet had time to adapt to their new situation and to find jobs or to be integrated into social service programs. Until the situation in the countryside---both the drought and the war---improves, excluding the recent immigrants from any safety net program is irrational. People have not been drawn to Maputo by its generous welfare programs; they have been driven from the countryside by the drought and the war. Until it is reasonable to provide incentives to these individuals and their families to return to the provinces, their needs should be considered in a safety net program. Even then, it is likely that many of them, especially the younger ones who have no experience with farming, will choose to stay in Maputo, irrespective of any safety net program. Furthermore, excluding the recent arrivals adds an unnecessary administrative burden to many of the interventions suggested here.

The recent arrivals are supposed to be the responsibility of the emergency relief program, DPCCN, and not that of city services. However, DPCCN does not operate in Greater Maputo, but in Maputo Province, so such relief is not available to the recent arrivals in the urban area. It would in fact be quite difficult to target emergency relief only to refugees if it were available in Maputo, because of the proximity of recent arrivals and more established residents. This constitutes another argument for developing a comprehensive set of safety net options for all the needy of the city.

If the objective of a safety net is to put purchasing power into the hands of poor people so that they can obtain enough food to survive, excluding people on the basis of residency is artificial. In order to provide a counterweight to the attraction of Maputo, rather than limit services in the city, consideration might be given to developing employment

opportunities and safety net programs in the provincial capitals and other cities as well.

A. SAFETY NET OPTIONS

Table 2 shows a summary of the main target groups, their safety net options and their program selection criteria. The assumption underlying the table is that only destitute households can qualify as target groups.

**TABLE 2
IDENTIFICATION OF TARGET GROUPS
AND THEIR SAFETY NET OPTIONS**

Target Groups (Households headed or with:)	Options	Selecting Organization
- malnourished children under 5 - Pregnant/lactating women	Cash Transfer	Health Sector
Disabled	Cash Transfer	GAPVU
Elderly	Cash Transfer	GAPVU
Employable Persons	Cash for work/Food- for- work Micro-enterprises	NGOs, Executives Councils
Recent Migrants ("Afectados")	Same groups, same options, on a short time basis. Target programs for returning migration	Same: Depends on Program Option

We are proposing to identify a geographic criterion which might simplify the identification of concentrations of destitute families. A "Poverty Map", could be constructed around health posts/facilities, as suggested by the Planning Department of the Ministry of Health, with information not only from the health sector but also from other institutions. It could give an order of priority by bairro and/or health post area. In other words, that such a map can show in which "bairros" or quarteiras the poorest of the poor are concentrated. Within this broad definition of destitution, there is an important group that is the urban "deslocados", defined as migrant families living within the city boundaries or in peri-urban areas during a period of time less than

one year. These are, to some extent, the definitions taken into account by GAPVU.

From Table 2 it is possible to see that the first three target group options are cash transfers. These are screened by the health sector and/or GAPVU where programs exist to reach their target groups. Consideration should be given to further strengthening and expanding the operational capacity for targeting the potential program beneficiaries. The last two category options are, in essence, job opportunity creation.

Regarding the open market, it is obvious that regular availability of food (and especially of maize which is disproportionately consumed by the poorest sector) in the market at competitive prices is essential. There is evidence that uncompetitive markets unduly raise the price of basic foods available to the poor. Moreover, the uneven timing of the arrival of food aid (which provide a very high percentage of the maize and wheat products in Maputo) has created considerable price fluctuation over relatively short periods. These price shocks hurt the ability of the poor to manage their budgets to meet minimum consumption needs.

The screening criteria in Table 2 are classified into three categories: self targeting, anthropometric, and at the community level, much as it is being done by GAPVU using the "chefe do Quarteirao" system.

Finally, for the recent migrants it is suggested to conserve the same target groups, options and screening criteria, until targeted programs for returning migration are offered as real options.

B. THE HEALTH SYSTEM ENTRY POINT FOR GAPVU TARGETING AND ITS ANTHROPOMETRIC SCREENING CRITERIA

The main entry point for GAPVU is the maternal-infant (Saude Materno/Infantil-SMI) program, including the prenatal and the growth monitoring programs. In principle it is an excellent entry point because of very high coverage of vulnerable population in Greater Maputo. Between 80-90% of pregnant women and infant presently use the SMI program, according to the recent DSA/Cornell survey and other corroborating UNFPA and Ministerio da Saude (MS, Ministry of Health) data.

GAPVU has been slow in bringing the SMI population into the program, particularly pregnant women. GAPVU's anthropometric criteria for pregnant women are average weight gain of less than 500 grams/month (900 grams/month for twins) or a hemoglobin of less than 9 g/dl. The criteria for children are weight for age

under the 3rd percentile (lower line of the road-for-health card), or above the 3rd percentile but without monthly weight gain in the last three months. Even though the nurses and social worker are now given 1,000 Mt incentives for each identified malnourished mother or child they preselect which is eventually accepted into the program, it is still quite an inefficient selection process. For example, of 500 growth faltering children identified in one large health center from January to August, 1992, only 38 were also wasted (low weight for height), met residency requirements (at least one year in Maputo) and thus were preselected. Of these 38, only 11 were accepted by GAPVU (via the Grupo Dinamizador and Chefe de Quarterao), or only 2% of the potential pool.

There are a number of obstacles along the way (Figure 2):

Figure 2

FLOW OF LEAKAGES IN PRESENT SCREENING OF MALNOURISHED IN GAPVU

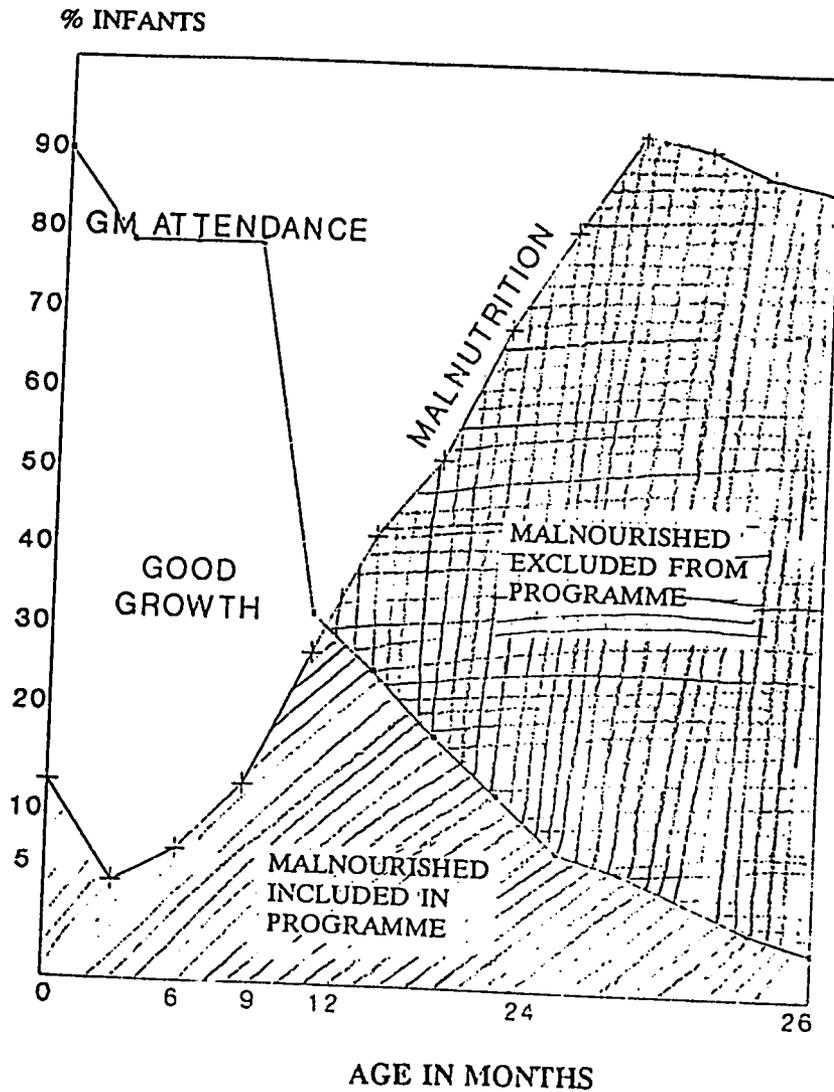
Leakages	Pregnant	Children
Low regular attendance of toddlers		+
Restrictive screening criteria	+	+
Different criteria for other programs	+	+
Taking of additional anthrop. measures		+
Lack of time, motivation, etc by nurses	+	+
Residency (1 yr.) requirement	+	+
Lack of husbands permission	+	
Household composition verification	+	
Income/employment verification	+	
Permanent/GD and Chefe Q. verification	+	
Transportation to GAPVU headquarters	+	
Time to wait/pick up cash	+	

Note: Larger leakages: + + +
Smaller Leakages +

- (1) Very low pregnancy weight gain requirements : very few pregnant women will gain less than 500 grams monthly and still be walking around. The prenatal high risk threshold in the SMI program is 2000 grams/month. Moreover, blood sample hemoglobins are rarely taken, so anemia is not often detected. Thus less than one-third of the SMI beneficiaries accepted by GAPVU in July in Maputo were pregnant mothers. In Beira, only 1 in 10 of the SMI preselected GAPVU beneficiaries this year are women.

- (2) Very low coverage of the age group with highest prevalence of wasting (12-35 months). The percentage of children in regular growth monitoring falls off sharply after 9 months of age (Figure 3). In March 1992, only one-third of the children monitored were over 12 months, while the peak of acutely malnourished children were in the second and third year of life (DSA/Cornell, Sahn, 1992). The majority of children over 12 months (when immunizations are complete) come to the health centers only if sick, and rarely come twice in three months (a criterion for identifying growth faltering).

Figure 3
GROWTH MONITORING ATTENDANCE VS
MALNUTRITION BY AGE



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- (3) Post-preselection bureaucratic hurdles: in the month of July in Greater Maputo, of 264 pregnant women and children preselected by the SMI workers as malnourished, only 118 or 44.7% arrived at the GAPVU headquarters for final selection. Of these, nearly 97% were reconfirmed by GAPVU staff. We do not know how many of the final acceptances show up monthly for the collection. Interviews with GAPVU, health system and municipal staff, and with mothers, and selected observations, have generated the following hypotheses:
- (a) Income levels can't be verified by the "grupo dinamizador" because poor families in informal sectors lack the necessary documentary evidence.
 - (b) Husbands of some eligible recipients are reluctant to give their wives permission to become beneficiaries and thus gain power in the family
 - (c) The transfer of 13,000 Mt/capita may not cover the time, effort and transportation (opportunity) costs of some potential recipients. For instance, pregnant mothers and those with infants were observed in Machava to wait all day in an open plaza waiting for their income transfer. They had to wait until late afternoon when all the "higher status" destitute groups (hundreds of old men and women and the handicapped) were slowly given their cash.
 - (d) Uneducated mothers with many other social problems may not understand the procedures involved.

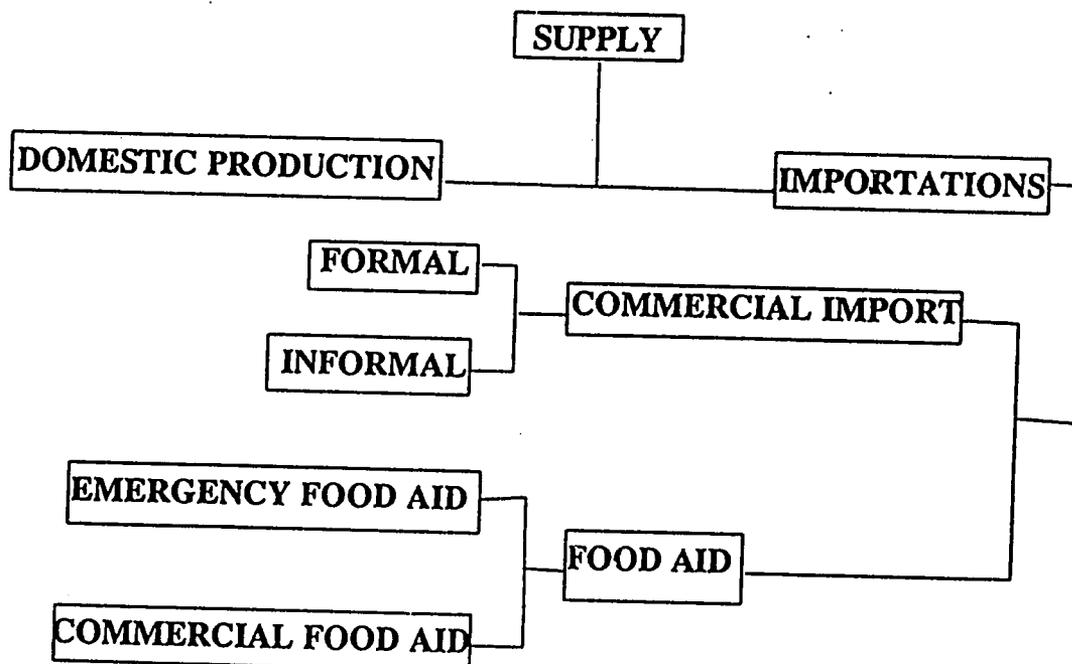
IV. MARKET MECHANISMS

All poor households benefit from lower and more stable prices and more reliable food supplies in the market, since all households depend on the market for food. (Even households with access to some productive land are unable to subsist on it, and land is increasingly scarce in Greater Maputo as afectados from the drought are added to refugees from the war.)

The market is the guarantor of food security of first resort. That is, all households benefit from food being available in sufficient quantities on the open market---those with purchasing power, because they can obtain food; those with no purchasing power because if food is available in the market there will be less incentive for emergency and relief food to be diverted.

The following scheme (figure 4) shows supply side of the Mozambican food market:

Figure 4
STRUCTURE OF MOZAMBICAN FOOD SUPPLY



There appear to be two open-market issues relevant to the urban food safety net. One is the market distortion inherent in the system of distributing donor-provided grain. The other is large-scale milling. Research on wholesale and retail prices currently being conducted by MA/MSU suggests that the very low release price of food aid maize grain is not being passed on to consumers. The system which requires authorization to buy the grain makes it possible for the authorized buyers to manipulate the market to some extent, and to capture very large rents. It is not clear where these are being charged: at the level of the consignees, or the intermediaries (licensed wholesale traders). Incentives for misreporting make it extremely hard to track actual prices paid at each level. But prices paid by small retailers (market women who are not licensed, and who buy relatively small quantities for resale) and by consumers are over twice the officially stipulated end price.

Even if donor food were sold at higher import parity prices, as long as access to the food were without the current restrictions, consumer prices would probably not be affected; in the presence of real competition, the rents would be squeezed instead of the prices to consumers increased. Furthermore, the higher initial price should have the effect of providing an incentive for commercial imports. Now, the low donor price to distributors undercuts commercial prices; the risk of importing on a commercial basis when a donor ship might arrive and drive down the price is too high. Ideally, donor aid should serve to support a competitive market that keeps prices stable and encourages commercial imports and domestic production. To the extent that food aid is of high consumer quality, it should not be subsidized.

Commercial imports should also have a stabilizing effect on the market. (Increased storage capacity currently under construction in Matola should also help in this regard.) Right now, grain prices are directly dependent on the arrival of donor ships, which causes extreme fluctuation in price. This is bad for consumers, who can't predict how much food they will be able to afford each day; it is equally bad for small retailers who face a serious risk of losing money if they buy supplies to sell just before the arrival of a donor ship. The MA/MSU studies suggest that small traders operate on extremely small margins, and those who were holding stocks when the European Economic Community (EEC) ship arrived at the end of July 1992 had to bear substantial losses. The intermediaries collect up front and so do not bear the risk.²

² The low release price is also undoubtedly a disincentive to local producers, but right now the only areas of surplus production are in the far northeast of the country, and it is probably not economically feasible, with transport costs and risks, to expect food produced there to be marketed in Maputo.

The second issue is that of milling. Right now, donor grain is distributed to wholesalers, modern roller mills (CIM in Maputo, Mobeira in Beira) and APROC, a cooperative of 135 small hammer millers. This means that donor grain is sold on the market (1) in the form of high-quality commercially milled 85% extraction maize meal; (2) as whole grain, which can be milled at any quality; and (3) in the form of 99% extraction meal, ground by the small-scale millers. As more food is commercially available, including rice and wheat flour in addition to maize, it might make sense for donors to channel more of the maize grain into the small-scale milling sector, which produces the lower-quality 99% extraction flour.

Price data from the MA/MSU project show that prices of the different qualities of maize meal are not always far apart, although whole-meal is usually cheaper than unmilled grain or the more refined meal. (The DFS/Cornell survey results should provide more insight into consumption patterns for the different types of maize meal and grain.) If whole meal is indeed an inferior food, then increasing its supply might be an effective way to target the poor with a transfer, especially if higher priced alternative foods are also freely available for better off consumers³. Furthermore, strengthening the small-scale milling sector would provide small-scale entrepreneurial and employment opportunities. APROC, the small millers' cooperative, has been involved in providing access to donor grain for its members; they have targeted women as well. Any intervention which increases competition in the market and provides employment (at relatively low cost) is desirable given that the cost to donors is no greater than releasing the grain to the larger-scale millers.

³ The DSA/Cornell data show that yellow maize is probably an inferior good (that is budget shares decrease sharply at rising expenditure levels), and that white maize, rice and wheat are normal goods: budget shares decline slightly but it is clear that quantity consumed very probably rises at higher quintiles. There yellow maize is an appropriately self-targeting cereal. At this stage, there is no clear evidence about the relative inferiority of different qualities of yellow maize flour and whole grain. Further analysis of the data will provide this information.

V. PUBLIC WORK/EMPLOYMENT GENERATION OPTIONS

A. INCOME GENERATION PROGRAMS

Adequate and reliable income is the key to household food security. While cash or resource transfers are needed to sustain those physically unable to work, employment creation is preferable for those who can work, because employment:

- avoids the creation of dependency;
- may transfer skills;
- may create lasting public infrastructure; and
- may be self-targeting (in the sense that those who choose to participate are those who have no higher-value use for their time).

Three alternative approaches to enhancing household income-earning capacity are:

- (1) public works paid in cash;
- (2) public works paid in food commodities; and
- (3) small-enterprise development.

Public works, whether in cash or in food-for-cash, involve the implementation of labor intensive projects, which may include construction and repair of roads, buildings, water systems, latrines, and other public goods. Jobs are offered, on a daily basis, at a wage level set low enough not to compete with private sector employment.

There is little experience with public works employment in Africa, though such schemes have had good success in India and Latin America. What African experience does exist has been more food-for-work than cash, and more rural and agricultural than urban. The appeal of public works, though, is strong, especially in Maputo where there is tremendous need for the creation of infrastructure, both to improve outlying areas' access to the city's markets and possible jobs, and to improve public sanitation. Because of the large influx of new migrants, there is a need for construction of buildings, such as schools and health centers, as well. The high participation of workers in very low-return employment (such as the petty trade documented in recent periurban surveys) indicates a real need for reasonably remunerative employment.

The concept of reimbursing work with food products is not new in Mozambique. However, the use of this compensation mechanism has not generally been pursued in urban areas. Rather, it has been introduced as a tool to distribute food products to affected rural areas where the cash economy has been almost totally eroded by the lack of consumer products in rural shops.

Experience in the rural areas belongs mainly to foreign NGOs which have the capacity to deliver the food to the affected zones without much difficulty. The government has not used this mechanism, as the common problems related to delivery have not been overcome.

In the rural context the reimbursement of labor with food products has probably been quite useful, given the absence or low incidence of a cash economy. However in urban areas where almost all products are now readily available, the idea of substituting cash for food can also be considered.

Public works, especially food-for-work, can pose a fairly heavy management and administrative burden. Projects need to be identified, planned, and supervised. (They may also need to be kept simple if the goal is job creation.) The cooperation of the Executive Council of the city of Maputo is essential to the implementation of this idea, since the Council would need to approve any project undertaken in the city. While laborers (the beneficiaries of the program from the food safety net point of view) would be paid minimum wage in such programs (to achieve self-targeting and avoid competition with the private sector...but see further discussion below), managers ("engineers" as they are called) must be paid at competitive rates, and any needed physical inputs must be purchased on the market. Thus the cost, in relation to the value of the benefit provided to the unskilled workers, may be high.

Public works also, of course, require the continued input of funds to be sustained. In this regard, they contrast with small enterprise development, which should be essentially self-sustaining for the beneficiaries.

Because of the planning and project development time required, implementation of public works is likely to be slow at first. Once the system is operating, though, its continuation and expansion of coverage to other areas should be more rapid. Given the scarcity of trained and experienced local project staff, public works should probably be implemented by a combination of local and international NGOs, with a strong training component for local staff. The training element, which is part of long-term development strategy, requires genuine commitment, and may slow the process down.

Depending on the logistic framework design, public works, in terms of cash for work can be a rapid- rather than slow- impact intervention, with far-reaching coverage. That is the experience in Bolivia and in Honduras with the FIS (Social Investment Fund) supported by the World Bank. Furthermore, it has been concluded (in Colombia, for example) that cash-for-work has a lower cost than food-for-work, not only in absolute terms, but also in terms of coverage or cost per beneficiary. Overall, employment for

public works does not need to be complex or costly to administer.

B. CASH- AND FOOD-FOR-WORK IN URBAN CENTERS

The concept behind providing cash/food-for-work in urban centers is to give the opportunity to those who are chronically poor and often unemployed to sell their labor and receive enough remuneration to meet their food requirements. Given the high incidence of unemployment in the urban centers some careful consideration must be given as to what type of work opportunities can be offered and what mechanisms need to be put into place to implement and monitor such a system. These fundamental issues must be considered:

- (1) The type of work offered must be that which requires the minimum technical supervision or capacity to implement.
- (2) The work should complement existing government employment schemes. In other words, they should not compete with existing government programs, thereby taking employment away from currently employed people.
- (3) Mechanisms should be implemented to finance such schemes. One possibility is to use counterpart funds derived from the sale of food aid.
- (4) The scheme should rotate through geographic zones to ensure maximum benefits to diverse populations.

Considering the above points, it is suggested that the best schemes are those which are heavily labor intensive, and that are geared towards the improvement of urban infrastructure, and which can probably be managed through the use of existing structures at the level of the city councils. Several suggestions are presented below:

- (1) Cleaning the beaches in Maputo and in selected suburbs. The use of daily labor here would allow the city services to concentrate their resources on other areas. Furthermore, we know that disposal services in the suburbs are very poor. Most families bury their garbage.
- (2) Planting trees to limit erosion along the coast.
- (3) Digging pit latrines: a service that could complement the project of "Latrinas Amelhoradas".
- (4) Establishing playing grounds for children using waste material such as old tyres, scrap metal and blocks.

The playgrounds could be set up in the various suburbs where the workers would be drawn from, to ensure maximum community participation.

All of these suggestions are labor intensive, can be used to complement existing urban services, involve community participation, and require minimum investment in setting up new control or supervision structures.

The work schemes could be set up in the following manner:

- (1) Announcements could be made on the radio that a work brigade was to be hired in a particular suburb for a period of X number of days. The radio announcements could be supplemented by direct information being disseminated in that suburb.
- (2) Each day workers would register and work on the project. As the majority of workers would be from the area where the work was to be undertaken, no transport facilities would be required.
- (3) The brigade would be deployed on the work site and paid at the end of the working day. All workers would have to register again the following day of work.

The program could be managed via the urban services department of the city council. The assistance of national and foreign NGOs could also be requested, providing there was a vehicle available for overall program coordination.

Payment for work could be either food or cash. The advantage of food is the virtual certainty that it will be consumed. However, the daily distribution of food for 200 workers (for example) is a fairly large task in logistics. It requires that some basic problems be overcome. For instance, what type of food (maize, oil, beans, sugar) is required? If the worker received maize for a week, perhaps thereafter he would require (or want) some oil or beans. If the program tries to distribute some or all of these items, control becomes difficult.

In the context of urban areas, and considering that all products are readily available in the market, remuneration by cash is probably simpler and easier to control. Payments would be based on the minimum salary per month divided by working days (eg. MT 58,000/22.5 days = MT 2,578). In addition to the wage, bread and tea could also be given at mid-day.

The above scheme requires little additional administration services being set up, is easily controlled and can be implemented in two or three suburbs simultaneously.

In order to design the scheme together with the Ministry of Commerce, Food Security and Urban services, technical assistance will probably be required, although ongoing implementation may not require any sustained TA.

C. CASH VERSUS FOOD FOR WORK

There are strong arguments favoring public employment for a cash wage as opposed to food. First, cash is physically easier and cheaper to manage, although there are obviously incentives for diversion. Second, with cash, households have maximum flexibility to purchase what they most need. Since poor households spend over 70% of their budgets on food, the probability is that most of the income received in cash would go for food in any case. And enhancing poor households' purchasing power should strengthen the functioning of the market, while providing food to workers establishes a parallel distribution system and could reduce incentives for food retailers.

Several people with long experience in Mozambique suggest arguments favoring food-for-work, however. One argument is that it is self-targeting, although the same may be true of the minimum wage employment. People are not likely to work for a food wage unless they are really destitute, we have been told. Furthermore, maximizing the flexibility of the "household" to buy what it wants may not be an advantage given that within the household there are likely to be competing interests for the use of the wage. Wages received in the form of food are more likely to be consumed as food both because of the transaction costs of converting food to cash and because in many settings food is perceived to be under the control of women in the household while cash may come under the control of the men. (Many, though certainly not all studies of intrahousehold resource allocation suggest that women may place a higher priority on food consumption than men, because feeding the family is often perceived as a woman's responsibility.)

Another possible advantage of food as a wage is that it is likely to be self-targeting to poor households while at the same time providing a higher level of benefit than minimum wage (but without drawing away other employees who are already working. A number of studies have shown (eg., the MS's Boletim de Nutricao; Reginald Green's papers for the SDA) that the minimum wage, currently 58,000 meticais/month, is not enough even to purchase a minimum diet for two persons. Yet it would be extremely difficult to justify establishing a public works program intended as a "safety net" at a wage rate higher than that received by formal sector workers. With food, the real value of the wage is somewhat camouflaged (i.e., people may psychologically discount the food because of lack of choice), and it may be politically more acceptable as a way to offer non-starvation wages for public employment.

It may be that, even within genuinely needy households, the offer of a cash wage attracts different kinds of workers from the offer of a food wage (eg., women versus men). The question of which would work "better" cannot be answered based on present experience. It might be possible to establish and carefully monitor pilot projects of both cash and food for work, and evaluate the benefits of each. However, if one approach had to be chosen, cash for work might be preferable because of the lower management and logistic burden.

D. PUBLIC WORKS VERSUS SMALL ENTERPRISE DEVELOPMENT

There are several NGO's with experience in different kinds of small enterprise development. This involves providing training and credit for start-up capital for small businesses which are expected to be self-sustaining over time. Examples include chicken and pig-raising, vegetable production (now increasingly difficult because of pressure on the land), carpentry, food preparation (bread, bolos, street foods), pottery, brick-making. The attraction of small enterprise development is that it should be self-sustaining, even self-multiplying, over time. People who have received assistance should be able to keep themselves out of destitution through work without continued inputs from outside.

The cost of small enterprise development is primarily in the provision of trainers and managers, and of materials. The credit, in a well-run scheme, should be rotating: that is, initial beneficiaries are required to pay it back.

Small enterprise development is a slow, small-scale, very management-intensive intervention---probably even more so than public works---because of the need for continued interaction with small groups. It may be a more sustainable intervention in the long-term, but probably cannot be considered a short-term "safety net." Because of its nature, coverage by a program of small-enterprise development will be small. Experience in other countries does show, however, that credit and small enterprise development schemes can expand to have a significant impact on incomes over time.

VI. CASH COUPON TRANSFER

A. THE GAPVU INCOME TRANSFER PROGRAM

In 1990 a Cornell University study (Alderman et. al., 1990) recommended to shift the present NSA food ration and subsidy system to a Maize Stamp scheme⁴. Although the logistical approach was well conceived regarding the principal administrative points, it nevertheless had problems due to the fact that the stamps were supposed to be denominated in kilograms instead of in meticaís⁵. The two main problems were:

- (1) The probability of generating a parallel market for the stamps, reducing the intended benefit to the beneficiaries; and
- (2) The impossibility of achieving a fluid mechanism of stamps redemption, given that their value would be variable dependent on the fluctuating price of a kilo of maize.

Given these facts the proposal was never implemented by the GRM. Instead, a cash transfer program, the GAPVU Food Ration and Subsidy Program, was started at the end of 1990, and began to meet the same objectives of the maize stamp idea. (Schubert, 1991, 1992.) Now, GAPVU is one of the main options that this document takes into account as part of the urban safety net for Maputo and Beira.

The Cash Coupon System attempts to combine the best features of both (GAPVU and the Maize Stamps proposal) in such a way that the result is a food-oriented cash transfer scheme. Since others have looked closely at the early years of GAPVU (Schubert, 1991, 1992), the team will not repeat their findings. Suffice it to say that the GAPVU is trying to reach as many destitute households as possible and increase their purchasing power by an amount which is sufficient to lift them out of destitution. It is estimated that about 70% of the income transfer is spent on food, and up to another 10% on fuel and materials for food preparation and cooking (Schubert, 1991).

In August, 1992, the coverage of GAPVU in Mozambican cities was around 14,000 households, and by December, 1992, a coverage of 24,000 is projected. A major problem caused by this rapid

⁴ That is, denominating the NSA ration in quantities of maize by means of a stamp, while simultaneously liberalizing all cereal markets' price and distribution controls.

⁵ The main obstacle to the stamp proposal was that it would eliminate the role of EACM and GOAM in the physical allocation of food. The GRM has pledged to eliminate the system by January 1993, but institutional resistance is likely to remain.

growth is GAPVU's inefficient administrative structures. There is great need for technical assistance in this area.

The team discussed at great length the possibility of GAPVU considering a cash coupon, as has been successfully implemented in other countries. A coupon nominated in meticaís might have the following advantages:

- greater speed in reaching the beneficiaries;
- greater coverage;
- better logistical framework;
- greater increase in food consumption; and
- a political payoff, in so far as food makes the idea of a transfer acceptable.

There was no consensus among the experts in Mozambique about the reality of these advantages. It was felt, however, that possibly the major advantage to coupons over cash is the somewhat greater marginal propensity to spend the coupon transfer on food.

The role of the Central Bank is decisive in the implementation of a cash coupon system. The Bank tries to avoid any kind of inflationary pressure on the economy. But the inflationary effect depends on the source of financing used by the program. If these were, as is preferable, to monetize commercial food aid, there are two reasons why the inflationary impact would be negligible. First, the funds are already in the market (they are not a new issuance of money), and second, food supply increases in the same amount as the food aid.

The idea was suggested to and concurred upon by several high level Mozambican officials to test the design of the Cash Coupon Transfer System by implementing a six-month to one-year experimental project, and then conducting an administrative and operational evaluation of its performance. Annex I is related to such a proposed project, using the same criteria applied to other options.

VII. CONCLUSIONS AND RECOMMENDATIONS

The Pragma team concludes that international donors should continue to support the GRM in addressing the urban food insecure with targeted food safety net policies and programs. The population of Greater Maputo has swelled recently due to the drought to upwards of 1,500,000, of which as many as half may be chronically or transitory food insecure, while others are families living on the margin ("afectados", recent migrants, ultra poor, etc.)

The preliminary data from the DFS/Cornell survey of Maputo-Matola demonstrate that most peri-urban families are working long hours, particularly in the informal sector. Further analyses of these data will address the question of calorie adequacy of their diet and opportunity costs of these long hours. However, while they might be avoiding outright starvation, this chronic deprivation is still producing around 30% moderate and severe stunting in children under six, the highest known rate of the capital cities of Africa. Moreover, based on comparable and representative household surveys, the prevalence of wasting (acute malnutrition) has risen in Greater Maputo from 2.9% in 1988 to 6.5% in 1992, and up to 9% in the poorest quintile. Wasting maybe even worse in the rural areas with recent deslocados. This high level of human capital deprivation does not bode well for mid- and long-term human resource development in Mozambique.

The main target groups for Greater Maputo and Beira urban and peri-urban areas were identified (see below) and matched with safety net options and screening criteria (see Table 3):

- (1) Severely malnourished mothers and young children living in food insecure households;
- (2) Unemployable (handicapped) males and females;
- (3) Elderly living alone;
- (4) Un- and underemployed males and females;
- (5) "Afectados", recent arrivals.

Table 3

AGE OF YOUNG CHILDREN AT FIRST GROWTH FALTERING SINCE BIRTH
CHILDREN WITH GROWTH CARDS*, GREATER MAPUTO, 1991-2

AGE (in months)	(N)	%
0 - 2	12	4.4
3 - 5	54	19.7
6 - 8	46	16.8
9 - 11	63	23.0
12 - 14	51	18.6
15 - 17	48	17.5
TOTAL	274	100.0

* Around 90% of the under-fives have growth cards

Source: preliminary data, Sahn et al, FSD/Cornell data set, 1991-92

Of the five target groups identified, the first three can be covered by cash transfers; the fourth and fifth by urban employment creation schemes. All five should also benefit from more available and cheaper basic grains provided through self-targeting commercialized food aid moving through competitive market mechanisms. The first three groups are already identified under the GAPVU, the last two through self-selection.

We suggest that GAPVU could improve the efficiency and effectiveness of the maternal-child target group identification, while DPCCN, with assistance of NGOs (eg., CARE, World Vision, Family Health International, Save the Children Fund), could address the younger adult population which is less likely to return to their areas of origin.

Three feasible screening mechanisms have been identified and matched with relevant programs:

- (1) Anthropometric- through the high coverage in the health system of prenatal, delivery and young child growth monitoring;
- (2) Self-Targeting- mainly a stable supply of inexpensive yellow maize whole grain and low wage cash-for-work;

- (3) Community Groups- Administrative targeting; identification by Chefes de Quarteirao, Grupo Dinamizador, and other traditional administrative groupings (eg. Xitiks).

DESIGNING AN ACTION PLAN

The first step in designing an action plan is to give the options some priority ranking from a technical point of view. Figure 5 is a worksheet for prioritizing and selecting among the four safety net program options: Cash Income Transfer (CIT), Cash Coupon Transfer (CCT), Cash for Work (CFW), and Income Generating Activities (IGA). Using the worksheet, each option or program can be ranked according to weighted selection criteria. The selection criteria and their assigned weights are given in the first two columns of the table. The last four columns of the table represent the four program options. The goal of this exercise is to calculate a priority ranking for each program option by multiplying the weight for each criterion by a score given to that criterion for each option, making it possible to rank the options according to their preferability.

Figure 5
Worksheet for Selection and Prioritization of Four
Safety Net Program Options

SELECTION CRITERIA	WEIGHTING	EVALUATION SCORE			
		CIT	CCT	CFW	IGA
Ease of Implementation	10				
Simplicity of Administration/Management	10				
Ease of Design	8				
Reasonable Cost/Finances	8				
Screening Structures	8				
Anticipated Impact	6				
Relation with other GRM programs	5				
TOTAL					

CIT - Cash Income Transfer
CCT - Cash Coupon Transfer
CFW - Cash for Work
IGA - Income Generating Activities

<u>Classification</u>	<u>Scoring</u>
Favorable	5
Medium	4
Uncertain	3
Low	2
Very Low	1

Field Validation of these Options

Although the team had a limited amount of time, rapid assessment procedures and key informant interviews were carried out as a quick field validation of two options. Key decisionmakers, program managers, commercial and market players, donors, government counterparts and beneficiaries were targeted for feedback. The options which ranked highest in the feedback received and interpreted by the multinational Pragma team were income transfer, followed by employment generation cash-for-work. Market mechanisms were assumed to be the context within which both options would operate.

RECOMMENDATIONS

A patchwork of safety net approaches should be considered by the GRM and cooperating donor agencies, instead of the NSA and price/distribution controls. A centralized body, such as the new Food Security Policy Unit of the National Planning Commission (CNP)⁶, could be responsible for choosing among these options and carrying out further studies and experimental projects as necessary.

These options can be put into two general categories: (1) Employment/public works creation; and (2) Income transfers. Underlying these options is the open market which is the guarantor of first resort for food security.

A. Market Mechanisms

This discussion suggests some policy changes which would enhance the role of the market as a "safety net" by lowering and stabilizing prices, increasing supply of low-quality food (i.e., with a negative income elasticity of demand), and possibly increasing the amount of employment generated by the informal milling sector and other market-supported services.

- (1) Reduce as much as possible barriers to the purchase of imported and especially food aid grain. Ensure that the grain is available for purchase by small-scale traders and millers.
- (2) Raise the release price of the donor grain closer to import parity, while simultaneously reducing barriers of access.

⁶ This new unit will be responsible for research, planning and coordination of food security policies in the country.

- (3) Facilitate access of small hammer mills to the donor grain which process whole-grain maize meal. Reduce constraints on the development of the small milling sector.
- (4) Facilitate access of small scale, competitive wholesalers to the donor grain to minimize risk of excessive price mark-ups.

These recommendations are inexpensive to implement. Raising the release price should increase the flow of counterpart funds available to the GRM for meeting current operations and investment budgets in development and relief programs. Furthermore, implementation should be relatively easily accomplished. The GRM has already substantially increased the number of authorized food aid consignees. Now that the NSA is moribund, the rationale for limiting sale by the consignees to authorized purchasers has disappeared. There may be administrative problems to the extent that those who were capturing high rents may resist administrative changes which reduce these gains. But since the system will continue to permit normal profits, and normal profits should be enough to ensure that the market continues to function, it should be possible to overcome this resistance, at least in Maputo. Thus, eliminating fixed prices is essential.

More reliable availability of food at more stable prices should have a widespread positive impact on food security of all groups.

The issue of sustainability is difficult to address. Changes in the system by which donor aid is released into the market are of course sustainable, in the sense that once the rules are established, further resource input is not required for the rules to continue in force. But these suggestions are based on the assumption of continued inflows of donor food aid. As the need for food aid (one hopes) declines, these changes should have contributed to the effective functioning of the private sector food market, by making the marketing of food aid more like commercial food marketing. It would also reduce the disincentive to the marketing of domestic production that low food aid prices to consignees have surely represented in the past.

B. Employment/Income Generating Programs

1. Employment Generation Programs: Cash-for-Work versus Food-for-Work
 - Public Works, in cash, involve: the implementation of labor intensive, small scale and low technology projects, which may include construction and repair of roads, buildings, water systems, street and beach

cleaning, latrines, and other public goods. Jobs are offered on a daily basis, at a wage level set low enough not to compete with private sector employment.

- Depending on the logical framework design, Public Works could be a rapid impact intervention with far reaching coverage.
- Moreover, it has been concluded that cash-for-work has a lower cost than food-for-work not only in absolute terms, but also in terms of coverage or cost per beneficiary. In fact, several NGOs expressed interest in initiating cash-for-work programs in the urban areas similar to those they are currently administering in the rural areas.

2. Income Generation Programs

There are several international and local NGOs in Maputo with experience in different kinds of small enterprise development. This involves providing training and credit for start-up capital for small businesses which are expected to be self-sustaining over time.

- The cost of small enterprise development lies primarily in the provision of trainers and managers and materials.
- The credit, in a well-run scheme, should be rotating. That is, initial beneficiaries are required to repay their loans into a revolving loan pool.
- Small enterprise development is a slow, small-scale, very management-intensive intervention, even more so than public works, because of the need for continued interaction with small groups. Experience in other countries does show, though, that credit and small-enterprise development schemes can expand to have a significant impact on incomes over time.

C. Targeted Income Transfer (GAPVU)

1. Cash

GAPVU's cash transfer should be strengthened administratively to more efficiently reach the elderly, disabled and the other destitute households, and expand the women and children component.

In addition, an experimental project involving the Cash Coupon Transfer System could be tried, instituting mechanisms which will allow for the following:

- (a) a comparison of the present GAPVU scheme to the coupon scheme in logistical terms;
- (b) a comparison of the cost effectiveness ratio of the GAPVU and coupon schemes; and
- (c) a comparison of their impact on food consumption. (A baseline survey is recommended.)

In addition, point (c) should be evaluated after GAPVU adopts the distribution branch of the coupon scheme. The necessity of using anthropometric screening criteria should also be evaluated.

2. Nutritional Targeting and Screening

Options for technical fine-tuning of the screening criteria and achieving greater efficiencies in the bureaucratic selection process include:

- (a) Increase the proportion of malnourished pregnant women identified and pre-selected by modifying the criteria: set the entry threshold for weight gain to less than 1000 grams/month; choose an indicator more highly correlated with household poverty drop anemia criterion as administratively unfeasible.
- (b) Screen malnourished women and infants via a single more efficient indicator, low birth weight, using under 2.0 kilos (excluding premature babies) as the threshold. Coverage of hospital and maternity center deliveries in Maputo is over 90%
- (c) Screen wasted children in the three big hospital pediatric wards which have nurses specialized in nutrition rehabilitation.
- (d) Use a combination of low weight for age (under 3rd percentile) and weight loss (i.e., growth faltering) as pre-selection criteria, thus obviating the need for nurses to take an additional and hard-to-take height measurement.

A major issue in discussions with the MS is the capacity of the health sector to increase or improve its SMI to accommodate the GAPVU targeting procedures. There are a number of advantages to this improvement, but the MS would need to receive additional resources and support from GAPVU. Thus the GAPVU program could be strengthened through better support to and coordination with the MS, including:

- (1) Tying the income supplement to the nutrition education and food demonstration provided in the weekly Special Attention clinic for malnourished children. The effectiveness of the income transfer would be improved, and this would overcome much of the resistance of government health officials to a cash transfer that (they fear) otherwise might be foolishly spent.
- (2) Adopting mutually agreed upon screening criteria as necessary and sufficient for SMI admission to GAPVU, and streamlining enrollment procedures.
- (3) The GAPVU program should create incentives for mothers to keep bringing their toddlers to the growth monitoring program beyond the age that the child is completely immunized, that is, while the child is in the age group at highest risk of becoming malnourished.

In sum, the improved targeting and screening options through the SMI health system are:

- (1) Increase the specificity of the anthropometric threshold levels, and simplify administrative screening criteria;
- (2) Increase the coverage of highest risk mothers by including all with less than 1000 grams/month; of young children by including the low birth weight babies; of acutely malnourished children in the pediatric wards; and of 12-35 month old toddlers;
- (3) Use GAPVU as an incentive for continuity of coverage in the 12-35 month old group and for attendance and nutrition education in the Special Attention clinics.

We feel that the improved screening mechanisms for the GAPVU can strengthen the MS's SMI program: particularly the growth monitoring and special attention components which lose many of the toddlers after one year of age when vaccinations are completed, but when acute and chronic malnutrition peaks in urban Mozambique. (See Table 4 for age-related growth faltering data.)

- The GAPVU can serve as an incentive for keeping infants in the MOH nutrition program for another year during their most critical growth faltering period, and include a stronger educational component of how to best invest the GAPVU income supplement.
- It can also strengthen the action component of the MS and GAPVU to provide continuity of nutrition monitoring and screening during the second year of life.

- GAPVU will need a better administrative system of information.

Governmental Coordination

Finally, governmental organizations will need to develop the policies for, and be responsible for coordinating the urban safety net. These would include the Food Security Policy Unit of the Conselho Nacional do Plan (CNP), the Ministry of Commerce, the Conselho Executivo and the State Secretariat for Social Action (SEAS). Key implementors include the Ministry of Health, GAPVU, and the NGOs.

ANNEX I

CASH COUPON TRANSFER SYSTEM DESIGN

A. Target Population and Screening Criteria.

Theoretically, the target population of the Cash coupon Transfer System can be delimited using three levels of targeting and screening criteria: (1) geographical; (2) biological; and (3) physiological status.

(1) Geographic Criterion.

A realistic "poverty map" needs to be constructed as part of the final design of the system. It must be divided and classified by urban districts as well as by "bairros" to the point that the latter could be ordered in terms of priority according to poverty intensity and concentration. Then, inside the poorest "bairros" the potential beneficiaries should be defined according to biologic criteria as follows.

(2) Biologic Criteria.

Since the Cash Coupon Transfer System is food oriented, its beneficiaries should be the most vulnerable groups of the population. These are children under five years of age, and pregnant and lactating women.

(3) Physiological status or anthropometric criteria.

The anthropometric criteria should be used depending on the answers to three questions:

- (a) How good is the geographic targeting? (In the sense of how homogeneous is poverty within the priority "bairros".);
- (b) How transitory a situation will the inhabitants of such "bairros" face in the mid- to long- term?
- (c) How reliable and accurate can the anthropometric measurements be? (Depending on the answer to the former questions, it may not be necessary to use the anthropometric criteria, relying rather on the first two criteria: the geographic and physiological.

In the final analysis, the problem with the screening criteria is that there is no food consumption indicator. Since it is impossible to predict if (1) stunting or acute malnutrition are transitory or permanent, and, (2) whether

structural or conjunctural poverty are transitory or permanent, the objective and advantage of a well constructed poverty map is that it is a proxy for the food consumption indicator. The poverty map if feasible, makes it unnecessary to wait until a child or woman is malnourished in anthropometric terms to become eligible for a potential subsidy.

B. Subsidy Size and Subsidy Length.

To the extent that the mother and child beneficiaries of the GAPVU Food Subsidy Program must shift to the Cash Coupon Transfer System, it is suggested that the same size subsidy which GAPVU uses be used in the experimental phase of the project. As the duration of the pilot project is six months, the beneficiaries, will participate for at least for six months. But the duration of the subsidy should be of one year for lactating mothers, a year and a half on average for pregnant mothers, and up to two years for children under two years of age. (This period could be extended to five years if necessary).

C. The Logistic Framework.

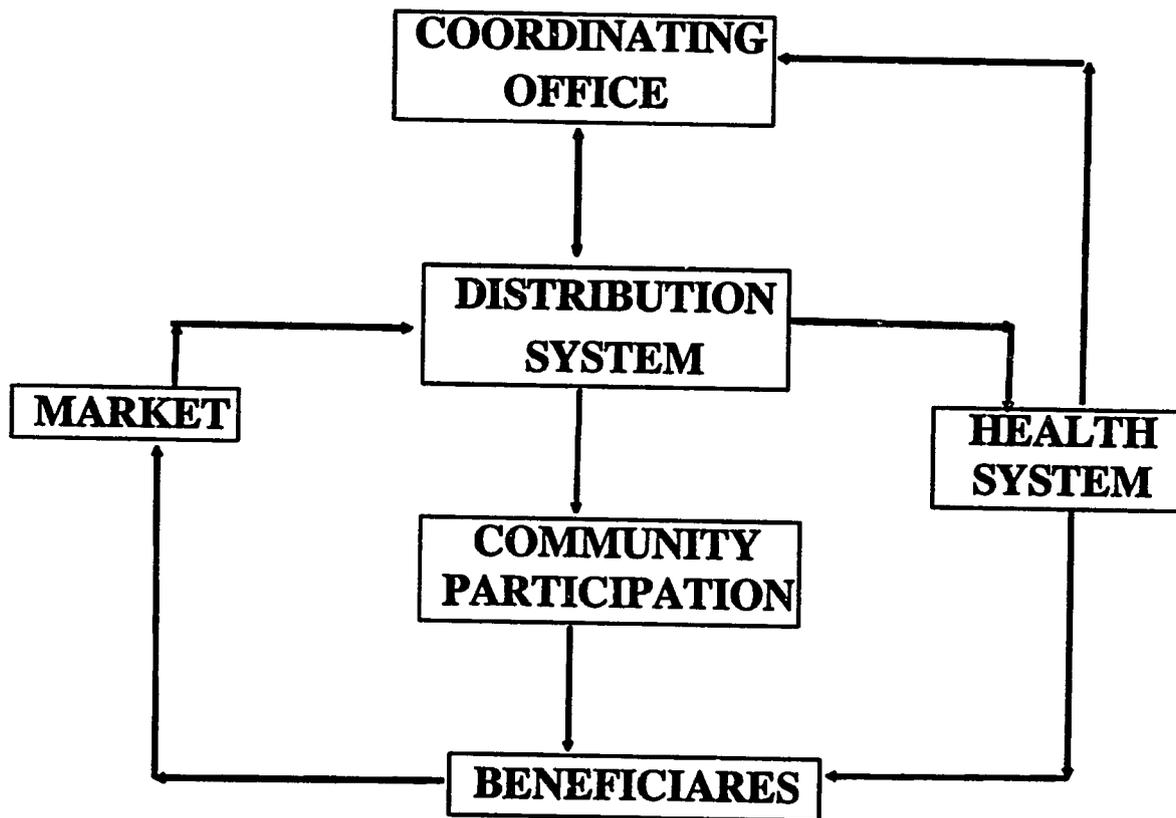
Graph 1 shows a simplified scheme for the Cash Coupon Transfer System which can also be applied to the GAPVU Food Subsidy Program. Both have the same target group and the same subsidy size. In other words, they share the same objectives. The main difference is that the GAPVU Program lacks a well designed distribution system. GAPVU is better equipped as a coordination office rather than an implementing office. The function of distributing either money or coupons could more appropriately be delegated to the banking system, under supervision of the Central Bank. This, along with the coupon system, are two improvements that GAPVU could incorporate into its logistic scheme. However, the evaluation of the experimental project will provide crucial information for the design of the final program.

Graph 2 illustrates the framework of the Cash Coupon Transfer System. Its main elements and functions are the following:

- (1) The Secretariat of State of Social Action as well as the Ministry of Finance are situated at the top of the system. They have responsibility for budget allocation.
- (2) Below the Secretariat is the Coordinating Office, GAPVU-style or GAPVU itself.
- (3) The pyramidal structure of the health system is the backbone of the Cash Coupon Transfers Scheme. The health system's main functions are:

GRAPH 1

SIMPLIFIED SCHEME FOR THE CASH COUPON TRANSFER SYSTEM AND THE GAPVU FOOD SUBSIDY PROGRAM



- (a) to recruit the local beneficiaries and to encourage their registration, which takes place at the health center or health post level;
 - (b) there, the auxiliary nurse registers the family beneficiaries who, on a monthly basis, receive the assigned number of coupons;
 - (c) the auxiliary nurse keeps on record the coupons' movement by family and by health post, and this information is sent to the District Hospital where the programming/reprogramming process takes place for the annual programming;
 - (d) as part of the interpersonal nutritional education carried out by the auxiliary nurse, a set of periodically updated instructions is given to the beneficiaries about the functioning of the Cash Coupon Transfers System; and
 - (e) at the District Hospital level one staff member undertakes the task of receiving the coupons from the Stocking Entity. The coupons will be distributed to the health post by the District Hospital.
- (4) Below the Ministry of Finance is the Issuing Entity. The Central Bank or other official entity could perform the this function. It could also undertake the functions of the Stocking Entity.
- (5) The Stocking Entity's function is to distribute the coupons at District Hospital level as well as to redeem the coupons. Since the Cash Coupon Transfers System is limited to Maputo and Beira cities, it is not necessary to have a very complex stocking network. It could be the banking system or a similar entity.
- (6) At the bottom of the scheme is the target population or the beneficiary mothers who receive the coupons at the health post level.
- (7) With their coupons, the mothers buy food in any bazar, mercearia or loja in the targeted "bairros" where they live.
- (8) The shopkeepers use the coupons to buy food from the wholesalers, producers, armazens or intermediaries.
- (9) Finally, the wholesalers, producers, intermediaries or their equivalent redeem the coupons at the Stocking Entity level.
- (10) The circuit ends when the Stocking Entity sends the redeemed coupons to the Issuing Entity or to the

Coordinating Office for accounting and controlling purposes.

It is important to emphasize that the beneficiaries could receive their coupons directly from the Distribution System, namely from the banking system (Graph 1) at Community level, as in the GAPVU Program, instead of from the auxiliary nurses of the Health System. This alternative is feasible and deserves careful evaluation.

D. Criteria for selection.

Regarding the seven criteria for selecting among target food safety net options, it is possible to conclude the following.

- (1) Ease of Design. With adequate technical assistance, designing the Cash Coupon System is relatively easy.
- (2) Ease of Implementation. It depends on the forms to be filled through the elements of the flowchart scheme. They are part of the design. Also, it depends on some points that only could be visualized after constructing a good poverty map related to the primary health care infrastructure. See points (4) and (5) below.
- (3) Reasonable Cost/Finances. Compared with other targeted options, e.g., public works and cash transfer programs, ceteris paribus, the Cash Coupon Transfers System could have the lowest cost per beneficiary and per delivered metical. It also has the largest coverage. With respect to finances, it could be possible to monetize food aid to finance it. Or it could use GAPVU resources, since it is intended to reach in part, the same target population (mothers and children).
- (4) Simplicity of Administration/Management. Again, this point depends on the design of the system. Mozambique is moving towards generating more resources to develop and implement a system like this one.
- (5) Screening structures. A self-targeting mechanism based on geographic and biologic criteria would be the best in order to ease the screening processes. Nevertheless, urban Mozambique, through its health system, has the structures that are necessary to undertake an anthropometric screening mechanism.
- (6) Anticipated impact. The Cash Coupon Transfers System could increase food consumption and nutrients intake more than any other kind of program within the safety net options.

- (7) Relation to other GRM programs. The fact that the health system is the backbone of the System, reinforces the nutrition and health goals of the program, given the synergy between the two.

F. Costs

Costs should be divided into two categories: one for the experimental phase and the other for the expansion at the city level. The cost for each phase can then be divided into two areas: the subsidy itself and the logistic costs.

Table 1 shows the preliminary estimated costs for an experimental phase of six months and an expansion period of five years. The assumptions behind Table 1 are: (1) an average family size of seven persons, and (2) a coverage per health center of 2,000 beneficiaries and a coverage of 500 beneficiaries per health post.

TABLE 1
CASH COUPON TRANSFERS SYSTEM: ESTIMATED COSTS
(US \$ 000)

COST ITEM	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Subsidy	750	1500	1500	1500	1500	6750
Logistic	150	225	225	225	225	1050
TOTAL	900	1725	1725	1725	1725	7800

G. Time Schedule.

Table 2 shows the time schedule for the design, preparation, implementation and evaluation of the experimental phase. It is assumed that if the experiment is successful, the expansion phase will continue after the eleventh month. Each step is linked with the technical assistance and training needs specified in the next section.

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TABLE 2
TIME SCHEDULE FOR THE CASH COUPON TRANSFER SYSTEM

ACTIVITY	MONTHS										
	1	2	3	4	5	6	7	8	9	10	11
Design	XXXXX										
Preparation			XXXXXXXXX								
Implementation						XXXXXXXXXXXXXXXXXXXXXXXXXXXX					
Evaluation	XXXXX					XXXXXXXXXXXXXXXXXXXXXXXXXXXX					

F. Technical Assistance and Training.

Table 3 shows the necessary technical assistance inputs and their estimated duration.

TABLE 3
TECHNICAL ASSISTANCE INPUTS FOR
THE CASH COUPON TRANSFERS SYSTEM

INPUTS	MONTHS
1 Expert in design and implementing	6
1 Expert in food marketing processes	2
1 Expert in administration and management	1
1 Expert in evaluation	1
TOTAL	10

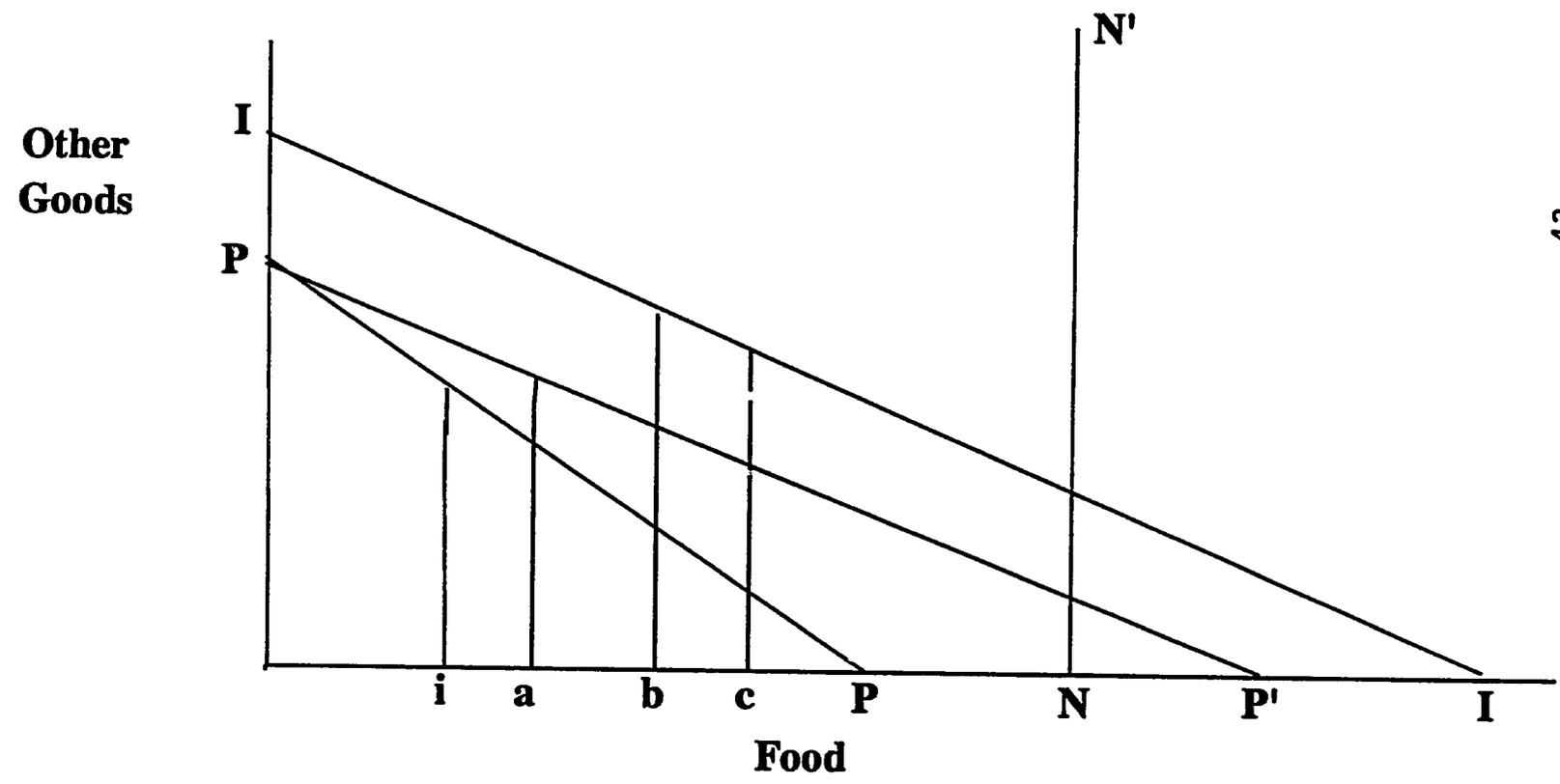
ANNEX II
IMPACT OF SAFETY NET OPTIONS ON FOOD CONSUMPTION

Regarding the economic impact of the safety net options on income, food consumption and nutrient intake, Graph 3 shows a conventional set of income levels associated with each option and their impact on food consumption in such a way that given a fixed subsidy level, Cash Coupon Transfers are better than cash transfers or open market options. Line NN is a hypothetical level of food consumption which represents "good nutrition" in food security terms.

The main points that can be determined from Graphic 1 are the following ones:

- 1) - line pp: - initial income level (before any kind of subsidy)
- point i: - initial food consumption level
- 2) - line pp': - increased income level due to open market options assuming that food prices will fall as the market liberalizes, while other prices stay the same.
- point a: - increased food consumption level due to open market options
- 3) -line II: - increased income level due to Cash Transfer
-point b: - increased food consumption level due to:
- Cash Transfer
- Cash for Work
-point c: - increased food consumption level due to Cash Coupon Transfer
- 4) -line NN' - Food Consumption level that means optimal nutrition

Graph 3 FOOD SAFETY NET OPTIONS: THEIR IMPACT ON INCOME AND FOOD CONSUMPTION



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