

# **SOUTHERN AFRICA: FOOD SECURITY POLICY OPTIONS**

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# THE ROLE OF THE GOVERNMENT OF BOTSWANA IN INCREASING RURAL AND URBAN ACCESS TO FOOD

K. F. Mokobi and S. Asefa<sup>1</sup>

## INTRODUCTION

The Republic of Botswana is a land-locked country of 1.1 million people located in Southern Africa. It has a nonracial democracy which sharply contrasts with its neighbours, the Republic of South Africa and Namibia (South-west Africa). Thus, Botswana is continually called upon to provide humanitarian assistance to refugees from its neighbours (Botswana, 1985c).

The country's physical environment is characterized by a permanent state of drought. It experiences drought in some form seven out of every ten years. (Holm and Morgan, 1985).

Consequently, its domestic food grain production is low. During normal season, it only produces 33% of its annual grain requirement of about 200,000 mt, mainly maize and sorghum. During drought years, domestic production decreases to about 5% of domestic requirement. Thus, Botswana must import about 67% of its domestic requirement during a normal season and up to 95% during a drought period. While the country is deficient in food grain production, it has a large cattle population estimated at 2.4 million in 1985, that ensures the survival of many rural households.

Botswana's food and agricultural problems are fully recognized by the government and are considered in its national economic priority agenda. In the November 1985 *National Food Strategy* paper, the state identified the following three problem areas of the country's agricultural economy: inadequate domestic food production, inadequate nutrition and access<sup>2</sup>, and large food import and aid dependence--due to the country's geographic location,

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<sup>2</sup>Inadequate nutrition is especially severe among young children. A recent study estimated that about 25% of children are underweight in non-drought years. This figure rose to 30% during the 1982 to 1985 drought (Botswana, 1985a).

the potential political instability in Southern Africa, and its implication for national food security (Botswana, 1985a).

## OBJECTIVES

This paper examines the role of the Government of Botswana in increasing rural and urban access to food in the short-run, within the framework of the priorities and goals established by the country's national food strategy (NFS), by:

- o summarizing the country's national food strategy which determines the framework for the study;
- o describing the country's food access programmes, including the institutional framework for designing and implementing the programmes;
- o providing an analytical framework for assessing food access policy options in the short-run which have linkages to long-run economic development;
- o describing the National Rural Employment Food Access Programme, a component of the country's national food strategy;
- o providing alternative methodologies for economic analysis of the programme; and
- o drawing potential policy implications for Botswana and other Southern African nations.

## EVOLUTION OF THE NATIONAL FOOD STRATEGY

The foundation for the national food strategy was laid nine years after independence, when the government began to develop a strategy for the live-stock sector by hiring an international consultant. The consultant, Steven Sandford, recommended designing drought relief projects that focussed on people instead of livestock. This led to a 1978 national conference sponsored by the Botswana Society, which focussed on the human aspect of drought and placed drought at the top of the national government's policy agenda. In 1983 the Ministry of Finance and Development Planning established a high level committee of civil servants to design a national food strategy to identify ways and means to increase local food production, strengthen nutrition-oriented services, and augment existing capacities to respond to drought (Holm and Morgan, p. 472).

A working group was established in 1984 to formulate the national food strategy on behalf of the Rural Development Council (RDC), which was responsible for coordinating the NFS under the Ministry of Finance and Development Planning. In July 1984, the Rural Development Council adopted a

detailed report on the NFS which became the basis for the November 1985 government paper adopted by the Botswana National Assembly.

The NFS, through its link to the national planning process, is now regarded as an evolving medium term policy instrument. Its primary purpose is to provide a coherent framework for formulating and implementing a whole range of food security related programmes affecting various sectors of the economy (*Ibid*).

## **BOTSWANA'S FOOD SECURITY AND ACCESS PROGRAMME**

The goals of Botswana's national food strategy are to insure a minimum acceptable diet for all Botswana and to build and maintain national capacity to deal with drought.

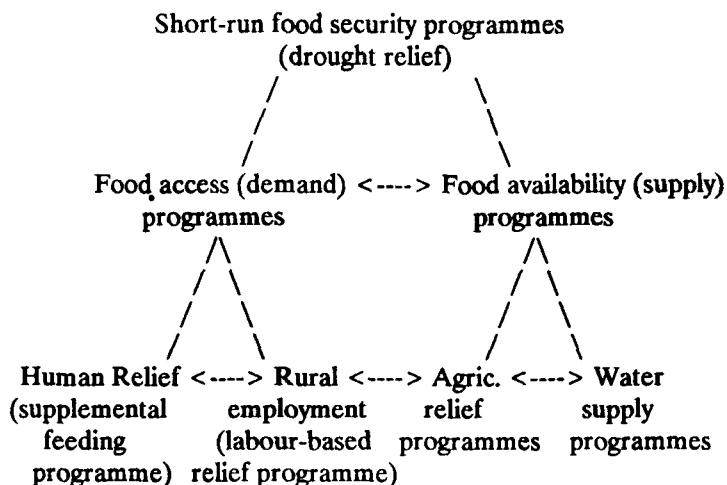
### **Programme components**

To effectively implement these goals, the government established a short-run food security programme known as the Drought Relief Programme. This consists of two food access programmes (human relief and rural employment) and two food availability programmes (agricultural relief and recovery and water supply). Figure 1 shows the conceptual classification of these programmes in relation to the government's national food strategy.

### **Human relief programmes**

A supplemental feeding programme distributes food to vulnerable groups, including malnourished children, destitutes, the elderly, primary school children, pregnant and lactating women, and remote rural dwellers. In 1984 about 60% of Botswana's population received supplementary feeding on a regular basis with the programme providing 21% of their calorie needs.

During nondrought years, food is provided five days a week in primary schools to all pupils, at health centres to medically selected preschool children, as well as to pregnant and lactating women. During drought years, the criterion of medical selection in clinics is dropped and all school children continue to receive a midday meal at school. Registered destitutes and nonschool children up to ten years of age are also fed during the drought period. Whenever possible, the feeding programme is complemented by nutrition education to encourage the use of local foods of high nutritional quality (Holm and Morgan, 1985, p. 468).



**Figure 1. Programmes in Botswana's national food strategy**

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#### National rural employment programme

A labour-based relief programme (LBRP) provides employment in short-run seasonal public works projects at a rate below the national daily wage. Public projects are selected by village development committees to provide immediate relief to drought-stricken households through cash income-earning opportunities. Projects are also intended to create useful and productive village infrastructure. One of the major rural employment projects involves hand-stamping of sorghum for school feeding by rural women on a piecework payment basis (*Ibid*).

#### Agricultural relief and recovery programme

This programme assists farmers to increase agricultural production by providing free seeds, vaccination services, and subsidized livestock feed. It funds water supply improvement and administers a cattle purchase scheme by buying older cattle from farmers at guaranteed prices. The programme also subsidizes draft power hiring for farmers with inadequate ploughing resources (Botswana, 1985c; Holm and Morgan, 1985).

### Water supply programme

This component provides funds to district water councils to meet the demand for water transportation and borehole maintenance imposed by drought. It also provides assistance to rehabilitate existing water systems and to construct new water systems in communities with extreme water shortages (Botswana, 1985a).

### **Administrative structure**

The overall food security programme, with its four components, is administered by the cooperative efforts of five ministries: the Ministries of Local Government and Lands; Agriculture; Mineral Resources and Water Affairs; Health; and Education. The Department of Food Resources of the Ministry of Local Government and Lands implements the human relief programme in cooperation with the Ministries of Health and Education. The Ministry of Health cooperates with the Department of Food Resources in monitoring the nutrition situation and in organizing on-site feeding of malnourished and vulnerable children; while the Ministry of Education oversees the feeding of primary school children. The Department of Food Resources also administers and implements the rural employment programme. The Ministry of Agriculture implements the agricultural relief and recovery programme, while the water supply programme is under the Ministry of Mineral Resources and Water Affairs.

An Inter-Ministerial Drought Committee (IMDC), coordinated by the Rural Development Council of the Ministry of Finance and Development Planning, oversees the activities of the five government ministries. The IMDC, through its small early-warning technical group, collects data and reports monthly on rainfall, soil moisture, production, and the nutritional status of the population. These reports provide policy direction for institutions implementing the drought relief programmes (Botswana, 1985a, Holm and Morgan, 1985).

## **FOOD ACCESS STRATEGIES AND ISSUES**

A recent World Bank policy study of poverty and hunger identified lack of food access as the most crucial global food security problem.

The world has ample food. The growth of global food production has been faster than the unprecedented population growth of the past 40 years ... yet many poor countries and hundreds and millions of poor people do not share in this abundance. They suffer from lack of food security caused mainly by a lack of purchasing power (World Bank, 1985).



The idea that lack of food access is primarily caused by poverty and lack of purchasing power is not new. However, until recently there existed no detailed economic analysis to show the relationship between food insecurity and lack of food access caused by poverty and entitlement failure. Sen's pioneering study (Sen, 1981) of poverty and famine showed that some of the worst famines--including the Bengal famine (1943), the Ethiopian famine (1973, 1974), the Bangladesh famine (1974), and the Sahelian famine (1977)--were due to lack of food access caused by poverty, loss of income, and exchange entitlement failure (*Ibid*). The crucial role of food access in food security is highlighted in Reutlinger's definition of food security: "Access by all people at all times to enough food for an active and healthy life" (Reutlinger, 1985).

However, emphasis on food access does not mean that food availability--the supply side of the food security equation--can be ignored. Ensuring that all members of a given society have access to enough food at all times involves both food availability (supply) and food access (demand) considerations (Rukuni and Eicher, 1987).

### Long-run strategies

Achieving food security through providing food access and reducing poverty has both short-run and long-run dimensions. In the long run, a strategy of economic growth with equitable income distribution is the best means of reducing rural poverty and providing access to food. But the long-run strategy is a time consuming and difficult task that can easily be blocked or delayed by an unfavourable policy environment caused by such factors as political instability, wars, bad economic policy, and poor management.

### Short-run strategies

Thus, until a long-run strategy of poverty alleviation linked with employment-based agricultural growth and increased food production is put in place to provide the purchasing power needed for food access, explicit short-run food security strategies are needed to provide the poor with access to food (Gittinger, *et al.*, 1977).

### The role of domestic food production, food aid, and imports

This strategy involves directed policies that change domestic food prices, or food import and export prices (Rukuni and Eicher, 1987). While such policies are easy to administer, they may distort relative food prices and create potential inefficiencies in food production (Timmer, 1986; Timmer, *et al.*, 1983). They may also involve serious political costs such as high food prices which lead to urban political instability. However, the careful use of food aid can ameliorate the possible short-run welfare losses by urban consumers until the

long-run potential welfare gains to rural producers and society at large are realized (Timmer, 1986).

#### The role of income and food transfers

These programmes, including supplementary feeding and cash transfers, are widely used as a short-run food access strategy. A commonly practiced method involves food rationing to targeted groups at "fair price shops" (i.e., below market prices) or distributing food freely at health or feeding centres during hunger periods (Timmer, *et al.*, 1983). In some cases, this strategy benefits those with better access to feeding centres, such as urban dwellers compared to the rural population in remote areas. The strategy also suffers from leakages of transfer payments to unintended beneficiaries.

Botswana's membership in the Customs Union with Lesotho, South Africa, and Swaziland provides national access to food. No one can starve as long as they have access to cash. Since urban dwellers generally have better access to a regular income, supplementary feeding is deliberately targeted more towards the rural population. First, "remote area dwellers" (i.e., a popular expression referring to all people, including the Basarwa) in settlements far away from the social service centers are entitled to a food transfer. During drought, food transfers have been an integral part of the supplementary feeding programme run by the Department of Food Resources. Second, all rural health facilities have been turned into feeding points which receive a regular food supply which is distributed to their clients. Third, all primary schools serve a midday meal to all their pupils. In the rural areas, during drought years school feeding is provided continuously, even over weekends and school holidays. The Department of Food Resources supplies food to 500-600 primary schools and 500-600 feeding centers throughout the country. The government categorizes vulnerable group beneficiaries who receive rations from the health facilities as pregnant mothers, lactating mothers, pre-school children, TB outpatients, children six to ten years old not at school, permanent destitute (group A), temporary destitute (group B), underweight children, and severely underweight children.

Permanent destitutes, people who have become destitutes for one reason or other during the years, have always been wards of the Social and Community Development Unit of the Ministry of Local Government and Lands. Temporary destitutes are individuals rendered destitute by the effects of prolonged drought. The longer the drought persists, the less households have to share with relatives and the more the extended family shrinks, dropping out those on the periphery. Underweight children are directly fed at the health facilities. Severely malnourished are fed with a mixture of dried skimmed milk, vegetable oil, and sugar--popularly known as Disco Milk. The Department of Food Resources, guided by policies formulated at the Inter-

Ministerial Drought Committee, is responsible for implementing the supplementary feeding effectively and efficiently.

### The role of rural public employment

This strategy has proved more attractive than those discussed previously, especially if the programme employs the poorest and most vulnerable groups. On the other hand, unless carefully designed and implemented these programmes are potentially inefficient due to the low value of products and services produced by the projects, relative to their cost (*Ibid*).

In Botswana, labour-based relief projects provide temporary village level employment to people whose income source has been eroded by the effects of prolonged drought. They have also proved useful in constructing much-needed rural infrastructure and productive assets such as dams and hand dug wells. Another component of this programme is the hand-stamping project, by which women in rural areas are employed by the Parent Teacher Associations to hand-stamp the sorghum which is fed to primary school pupils.

The programme is projected to provide a minimum of 50,000 workplaces in 1987-88 (16,250 person years of employment) which will be rotated among 75,000 beneficiaries. The projects are chosen by rural villagers through village development committees, with supervision and technical advice provided by district administration and district council staff. Each district and sub district has a district drought committee which employs a district drought coordinator and a labour-based relief project technical officer. Government believes that the programme provides an important injection of cash into rural areas that helps the most disadvantaged households maintain a minimum level income and, at the same time, keeps small traders and rural entrepreneurs in business. Although the wages are well below the market rate, they are adjusted every year to counter the effects of inflation. However, it is recognised that the rapid expansion of the programme has led to inadequate project supervision by poorly trained personnel. This, coupled with the urgent need to arrest the devastating effects of drought, has led to low productivity and poor workmanship. Currently, plans are underway to expand the programme and turn it into a development programme when the drought abates. Incorporated into this plan are efforts to improve supervision, particularly through the establishment of training course in labour management and appropriate techniques.

## ISSUES IN DESIGNING AND IMPLEMENTING SHORT-RUN FOOD ACCESS PROGRAMMES

Short-run food access programmes must be designed and implemented with careful consideration of their cost-effectiveness, appropriate targeting, and their nutritional effects.

### **Cost-effectiveness**

Cost-effectiveness of a food access programme is a direct function of the degree of targeting, including administrative costs involved. Targeting involves identifying the truly needy and vulnerable based on such criteria as income, location, commodity, sex, and age. Timmer, Falcon, and Pearson classify targeted programmes to include food stamps, fair price shops, supplementary feeding for vulnerable groups, price subsidies for inferior foods, food-for-work, cash-for-work, and rural employment programmes. Nontargeted programmes include general food ration schemes and fair price shops with unrestricted access; as well as such policy instruments as overvalued exchange rate, general food price policy, and subsidizing food production inputs such as fertilizer, water, credit, seed, and machinery (Timmer, *et al.*, 1983, p. 64).

How to design efficient targeted food access programmes that minimize leakages is an important research question that needs further attention in Botswana.

### **Targeting**

Botswana's supplementary feeding programme is reasonably well targeted to vulnerable groups. Recent data collected by the Rural Development Unit shows that between October 1986 and January 1987, the programme served an average of 383,000 beneficiaries per month. The vulnerable groups reached during this period included pregnant women (18,032), lactating mothers (44,420), preschool children (171,426), TB outpatients (6,257), nonschool children six and ten years of age (84,044), permanent destitutes (35,215), underweight children (15,857), and severely underweight children (1,284).

### **Nutrition**

The nutritional dimension is another crucial aspect of designing and implementing short-run food access programmes. Increased food access is by itself insufficient to solve malnutrition because economic variables such as income and prices are not the only determinants of the nutritional status (Gittinger, *et al.*, 1987).

Designing and implementing nutritional programmes require careful planning to integrate them into the overall food access strategy and to disag-

gregate and target the intervention. Targeted programmes may focus on material and child clinics, nutrition education, and supplying vitamins and minerals to deficient groups. Untargeted programmes may include general nutrition education, fortification of food such as iodizing salt, encouraging breast-feeding and appropriate use of infant formula, and establishing effective public health programmes in areas of clean water, sanitation, and inoculation. (Timmer, *et al.*, 1983, p. 64).

## SRI LANKA'S FOOD ACCESS EXPERIENCE

While Botswana and each SADCC nation must design its own food access programme based on its own particular situation, comparative experiences can provide useful lessons.

Sri Lanka has extensive experience with targeted and nontargeted food access programmes. In 1960, the government made available to everyone a free ration of 2 lbs of rice per week. In 1970, government supplemented the free rice scheme with an additional 2 lbs of rice at a subsidized price. In 1977, the general rice subsidy was replaced by a targeted programme focused on the poorest half of the population. In 1979, Sri Lanka replaced its four decade old food subsidy scheme, characterized by price subsidies and rationing of rice, with a targeted food stamp scheme based on income (Edirisinge, 1987). The new strategy was effective in reaching the lowest 70% of the population and in reducing the net food subsidy from 14% of government expenditure in 1970 to about 4% in 1984 (Bhalla and Glewwe, 1986; Edirisinge, 1987).

Contrasting the equity-oriented approach of the pre-1977 period with the post-1977 economic growth approach, Bhalla and Glewwe conclude that the latter strategy had a greater effect in raising economic welfare. However, their study suffered from measurement errors. Reestimation of the regression equation used in the study showed that they overstated the effect of post-1977 policies on social indicators (Isemman, 1987). A further drawback of the study is that the authors' interpretation of Sri Lanka's experience as a test case for the "equity versus growth" approach to poverty alleviation and economic development obscures the synthesis and complementarity of the two approaches (*Ibid*).

Sri Lanka faced several problems in implementing its food stamp scheme which was aimed at the poorest 20% of the population. Large leakages to upper income households reduced the cost-effectiveness of the transfer programme. However, in spite of implementation problems, Sri Lanka managed to integrate welfare policies of subsidized food, free education, and health care services that enabled it to achieve developed country standards in health, literacy, and life expectancy. For instance, in 1984 with 16 million

people and a per capita income of only US\$360, the average life expectancy was 70 years. This was higher than any other low-income country in the world, comparable to industrial countries such as Austria and Ireland (World Bank, 1986).

## BOTSWANA'S RURAL EMPLOYMENT PROGRAMME

The rural public employment food access programme is a part of Botswana's national food strategy. These projects (officially called labour-based relief projects) are designed to create directly productive assets such as irrigation, drainage, land reclamation, reforestation, and soil conservation measures; economic structures such as roads and bridges that facilitate market and economic activities; and social infrastructure projects such as schools, clinics, and water supply construction that create social capital (Clay, 1980, p. 1239).

### Unresolved issues

A recent survey of literature on public employment programmes identified several issues which are relevant to the Botswana programme, including:

- o how to ensure effective participation by those most in need;
- o how to generate projects that combine employment potential for the unskilled at the right place in the right season with a socially useful end product;
- o how to respond to the leakage of resources before they reach intended beneficiaries;
- o how to ensure that projects produce assets of an adequate standard and at reasonable cost; and
- o how to guarantee that the benefits are distributed to those most in need (*Ibid*, p. 1237).

Despite the vast literature addressing these concerns, controversies remain about public works programmes, especially regarding the scale and distribution of short term employment benefits (i.e., who benefits and to what extent); their long term impact on employment and incomes; their cost-effectiveness; as well as the broader political and macroeconomic significance of public works.

### Project goals

The goal of Botswana's public employment programmes (LBRP) is to provide supplemental income and temporary relief to drought-stricken communities. Its implementation follows a presidential decree that initially stated that every settlement with 100 or more inhabitants must be reached by some public employment programme (Botswana, 1985b, p. 22). Many of the projects

are seasonal and are usually discontinued in early December to give farmers a chance for ploughing, after which work resumes in two to three months (*Ibid*).

### **Employment generation**

In 1984-85, the employment programme provided an estimated 40,000 to 70,000 short term seasonal jobs to able-bodied adults in rural areas at a relief wage of P2.00 (pula) or US\$1.20/day (Holm and Morgan, 1985). The labour intensive projects are selected by village development committees.

One of the major projects employs women to hand-stamp sorghum grain into flour for school feeding. This programme created about 3,000 to 5,000 jobs during 1984-85. Thirteen other rural employment projects--including building, roads, airstrips, dams, drift fences, fire breaks, kraals, tribal shelters, pit latrines, soil reclamation, wells, clearing land, making gardens, and brick moulding--provided about 38,000 to 65,000 jobs (Botswana, 1985b, p. 24).

### **Constraints faced**

The programme faces budget, technical, and administrative constraints. In recent years, a number of volunteer agencies make technical volunteers available to the Food Resources Department, thereby reducing technical constraints. For instance, during 1984-85, 12 volunteers were employed as labour based relief project technical officers to assist drought relief coordinators and other district level project personnel. In 1984-85, 30 heavy-duty and 25 light vehicles were available to transport materials, workers, and district officials supervising various rural projects.

## **METHODOLOGY FOR ANALYZING RURAL EMPLOYMENT PROGRAMME**

Cost-benefit and cost-effectiveness analysis are two approaches that can be used to evaluate Botswana's rural employment programme.

### **Cost-benefit analysis**

This approach is used to determine whether rural employment programmes make society as a whole better off than other food access programmes alternative such as supplementary feeding. Benefits are measured in terms of social benefits. While less precisely measurable than private revenues, this concept reflects the perspective of society rather than the individual. To measure costs, the social opportunity cost or social value sacrificed elsewhere in moving factors to rural employment programmes is used. The eval-

uation objective is to estimate social benefit over social cost for all Botswana.

The starting point of applying the cost-benefit methodology to rural employment programme is to identify and measure all benefits and costs including primary, secondary, pecuniary, and intangible ones. Primary benefits consist of the value of goods and services generated by a specific public works project. For instance, for land reclamation and irrigation projects, the analysis must estimate the increased value of crops produced on reclaimed and irrigated land--less the costs of seeds, labour, and equipment used in crop production (McGuigan and Mayer, 1986). The number of jobs and total wage income gained from the project can be incorporated into primary benefits. There are also important pecuniary and intangible benefits which are difficult to measure such as lowered input costs, increased rural economic activity, improved land values, improved quality of life, improved balance of payments, and a stable socio-political environment that may result from decreased rural unemployment and slower rural-to-urban migration.

Public employment project also have primary, secondary, pecuniary, and intangible costs. Primary costs such as direct outlays for services, equipment, wages, and salaries are relatively easy to measure. In addition, the opportunity cost of resources devoted to the programme must be fully accounted for in estimating total economic cost. For instance, while we may assume unskilled rural labour utilized in public projects may have low or zero opportunity cost, the opportunity cost of other resources, (capital, administrative, and managerial) must be considered in calculating the total economic costs of the programme.

### **Cost-effectiveness analysis**

This alternative approach is used when the benefits of a public project programme cannot be meaningfully quantified (McGuigan and Moyer, 1986). In applying this method to rural employment programmes, we assume that the benefits of the programme are identifiable and socially useful, and proceed to analyze how this level of social benefit can be achieved at least-cost. In other words, assuming that Botswana can achieve some level of food access through rural employment programme, the objective is to determine the most efficient combination of alternative public projects that should be adopted.

For instance, should resources be allocated to all of the country's 13 labour-based relief projects and the sorghum hand-stamping programme, or is it possible to identify and implement the most cost-effective combination of these projects? Most of the necessary data for such analysis should be available from rural household surveys and the Department of Food Resources.



## IMPLICATIONS FOR BOTSWANA AND OTHER SADCC NATIONS

While Botswana's experience with rural employment programme and other food access strategies has implications for other SADCC states, the country is in many ways unique--relative to her neighbours in Southern Africa.

### Unique features

First, the seven year drought has mobilized indigenous national institutions to mitigate the effect of drought. Second, most Botswana are concentrated in groups of 5,000 to 35,000 along the 500 mile road network in the eastern part of the country. This geographic concentration facilitates programme effectiveness. Third, revenues generated by a diamond-led rapidly growing economy provides adequate foreign exchange to import food. Fourth, Botswana is a representative democracy which is rare in the region. Fifth, the country encourages foreign and domestic private investment in trade and transportation and receives substantial foreign aid. For instance, 20% of the country's cereal consumption was provided by foreign donors (Holm and Morgan, 1985). Botswana has attracted more foreign aid, relative to the African nations<sup>3</sup>, because:

- o It has the necessary institutions and infrastructure to move food aid relatively quickly and effectively to the needy in times of food crisis.
- o It has a flourishing private sector that is consistent with the ideology of its western donors.
- o Donor countries are interested in reinforcing the political stability of one of the few working democracies in Africa, as well as showing solidarity with friendly SADCC states surrounding South Africa (*Ibid*).

Thus, it may be difficult for other SADCC or African countries to easily draw upon Botswana's experience with rural employment and other food access programmes because most of these nations either lack the resource base to finance large food access programmes, or lack the efficient bureaucracy and decentralized democratic institutions that allow public agencies and officials to deal with the needs of the rural population.

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<sup>3</sup>For instance, in 1985 Botswana, which had one of the highest per capita incomes in Africa, received 39 kg/person in food aid, compared to much poorer Niger which received only 25.4 kg/person. (See Holm and Morgan, 1985, p. 478).

### **Questions raised**

For Botswana, the experience in designing and implementing food access programmes such as public rural employment programme raises fundamental questions about the long-run sustainability of its development strategy. Can Botswana sustain financing its expensive food access programmes? How can these programmes be linked to long-term development? To achieve sustainable long-run development, Botswana needs to expand both agricultural and nonagricultural employment and bridge the gap between short-run relief efforts and long-run development needs. It can only achieve this by creating a diversified labour intensive employment based economy which is not susceptible to a potential fall in diamond or cattle prices or a sudden decrease in food aid.

## **CONCLUSION**

Botswana's experience suggests that drought and famine is best managed as an income and employment problem, rather than a food nonavailability problem. This approach provides the rationale for labour-based relief programmes designed to replace lost income sources and offer short-term employment to the temporarily unemployed.

While sustainability and linkage to long-run development are critical issues, the political and social benefits of Botswana's short-run food access programme should not be overlooked. These expenditures are investments in human capital that increase the vigor and productivity of the rural population. In addition, they have a long-run intergenerational effect on the country's social and economic development. A country whose children experience continuous malnutrition will incur large economic and social costs in the long-run, and is unlikely to sustain economic development.

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