

Country Development Strategy Statement

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INTRODUCTION

The Republic of Botswana, which has been settled by hunter-gatherers, agriculturalists and pastoralists for nearly two millenia, occupies 582,000 square kilometers (km) in the center of the Southern Africa plateau. The dominant population groups are now the Setswana-speaking people,¹ called Batswana, who entered the area in a series of movements culminating in the 17th and 18th century.

Geographically, Botswana appears to be one of the least promising of any African country. A large area of the country is covered by a plain which constitutes the major portion of the Kalahari Desert. The climate is semi-arid, with regular periods of drought. Rainfall, while seasonal, is also erratic in its spatial and temporal distribution. Most of Botswana's rivers are ephemeral with the notable exception being the Okavango River in the northwest.

Subterranean water supplies 75% of Botswana's human and animal needs. The soils throughout most of the country are marginal and vulnerable to erosion. It is estimated that less than 5% of the country's land area is cultivable. Much of the land is suitable for beef production as evidenced by cattle which out-number humans several fold.

The apparent meager geomorphic inheritance is deceptive, for Botswana contains mineral wealth. Copper, nickel and manganese have been identified in eastern Botswana, and the first two are being excavated at Selebi-Phikwe.

¹The Tswana are a linguistically and genealogically defined sub-group of the Sotho people who over the past five hundred years have become culturally differentiated from other southern Bantu speaking peoples with whom they share a common heritage and origin.

Exceptionally large coal reserves are evident and presently coal is being supplied for power generation at the Morupule colliery. Rich diamondiferous Kimberlite pipes have been discovered near Orapa and Jwaneng. This has propelled Botswana into the position of a major producer of the world's diamonds. An aeromagnetic survey conducted in the mid-1970s suggested the presence of iron, chrome, platinum and asbestos. Less exotic minerals, such as soda ash and potash have also been discovered. While mineral wealth is considerable, two caveats are needed: the scarcity of water poses a severe constraint to mining projects; full exploitation also requires large inputs of capital and skills presently not available in Botswana.

Historically and contemporarily, Botswana has been and remains inextricably linked to economic and political systems beyond her boundaries. The early export of animal products² to the Cape in 1844 and Botswana's membership in a customs union with her neighbors in 1893 were early manifestations of present trade relationships between Botswana, South Africa and larger European markets and the contemporary Southern Africa Customs Union. The initial flow of labor to the diamond fields in Kimberley in 1877 was a precursor to the increased and continuous supply of Botswana workers to South African mines, a trend which peaked in 1976. The first mineral concessions given to an Englishman and an American in 1877 foreshadowed the contemporary mining companies, Anglo-American, DeBeers Botswana (Debswana), and American Metal Climax (AMAX), and Botswana's present "mineral-led" economy.

The British Protectorate of Bechuanaland became the independent nation of Botswana in September 1966 without spawning a national liberation movement,

²Ivory, kaross and ostrich feathers.

a rather distinctive feature in that the Protectorate was surrounded by neighbors who eventually became involved in armed struggle. Today southern Africa has become one of the most politically and militarily turbulent regions of the continent. Botswana, however, has shown maturity in the balance she maintains between the apartheid regime in South Africa and the demands of black nationalists in neighboring countries. Botswana is pragmatic about her economic dependence on South Africa and while formal diplomatic relations are not maintained, business is vigorous. Botswana is landlocked and depends on South Africa ports for the importation and exportation of goods. South Africa remains the major source of Botswana's imports, primary of which are food and petroleum products. The latter is used for transport and to drive borehole pumps upon which Botswana's livestock industry depends. Botswana also plays a major role in the Southern African Development Coordination Conference (SADCC) which, motivated by political and economic reasons, is encouraging increased transportation and economic links among member States.³ The permanent secretariat of SADCC is located in Botswana's capital, Gaborone.

Botswana is a multi-party democracy. The country is politically stable; political prisoners are unknown; and politicians and civil servants are incorrupt, even by the most rigorous standards. Nevertheless, Botswana is not immune to the ills afflicting other African societies. Botswana's 1982 population is estimated at 975,000 with an approximate growth rate of 3.3% per annum.⁴

³SADCC members include Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, Tanzania, Zambia and Zimbabwe.

⁴The 1981 preliminary census figure is 941,027 which compares with a total of 574,094 people enumerated in the 1971 census and thus presents a high annual compound growth rate of 5%. It appears that the 1971 census may have been under-estimated and the per annum growth rate is about 3.3%.

The crude birth rate is estimated at 50.8/1,000; crude death rate 15.6/1,000; child mortality rate 97/1,000; and life expectancy 57 years. Urban centers continue to attract, but to an increasing extent are unable to provide jobs for the growing number of people emigrating from rural areas. In 1964, 3.9% of the population were urban dwellers; by 1971 this figure was 14%; and 1981 census figures have reached 16%. Total enumerated population in Gaborone in 1971 was 17,713 and the 1981 figures reached 59,700, a 12.9% annual compounded growth rate. Thus, Botswana has one of the highest rates of urbanization within Africa. Urban areas in the country also present a sex imbalance numerically in favor of women: 44% males, 54% females (2% unaccounted). While the reverse is true in other parts of Africa, Botswana's sex ratio is attributed to males being employed in South Africa.

Tribalism, although officially discouraged, is evident in the socio-economic structure of Botswana. Tribalism, however, has not been politicized to the extent that it has in other parts of Africa and does not represent a threat to the national unity of Botswana. The main areas of distinction have evolved due to historical differences among ethnic Batswana such as the Bangwato, the Bangwaketse, the Bakwena, the Batawana, and the Baralong. Other tribal groupings in the country include the Subiya, the Herero, the Mbukushu, the Yei, the Kgalagadi and the Kalanga. Botswana's most publicized group of people call themselves the San and are referred to by others as Basarwa or Bushmen. They represent one of the world's largest remaining groups of hunter-gatherers. The San were the sole inhabitants of southern Africa for nearly twenty thousand years, but today they represent less than 5% of Botswana's population.

I: ANALYSIS

A) MACRO-ECONOMIC OVERVIEW

(1) Introduction

Since Independence, Botswana's economy has expanded markedly due to the rapidly developing mineral sector. Economic growth has exceeded expectations, resulting in Gross Domestic Product (GDP) increasing during the 1970s at an annual rate of 25% in nominal terms and approximately 12% in real terms. This equates to an estimated 9% per capita growth rate. In current prices the 1982 GDP is estimated at Pula 950 million,⁵ representing a per capita average of P975. This growth has been generated primarily by favorable returns from large mining investments and consistent increases in the size of the national cattle herd, resulting in increasing foreign exchange revenues from these sectors. Over the past two decades fundamental structural changes have occurred in the economy: agriculture's share of GDP (in current prices) declined from 45% in the 1960s to 12% in 1980/81, while the mining sector grew from 1% to over 25% of GDP.

During the heady growth years of the 1970s, Botswana experienced financial stability. Mineral and livestock production increased, world demand of these goods was robust and commodity prices were strong, thereby providing Botswana with increasing average annual recurrent revenues of 24%.

Concurrently, Botswana's average recurrent expenditures were increasing at 27% annually. These expenditures were comfortably offset by recurrent revenues, with surplus revenue being available to finance capital expenditures. Recurrent revenues and expenditures have averaged 29% and

⁵The currency of Botswana is the Pula (P). The official exchange rate between the Pula and the United States Dollar, as of August 1983, is one Pula equals .91 U.S. Dollars.

21%, respectively, of GDP. Imports, although increasing at an average annual rate of 23%, were covered by the country's overall positive balance of payments. At the end of 1980, foreign exchange reserves were equivalent to seven months of imports and debt servicing was less than 4% of export earnings. Since 1980, debt servicing as a percent of export earnings has remained stable, while foreign reserves have been sufficient to cover between four to six months of imports. During the last decade, Gross Domestic Investment (GDI) increased rapidly, reflecting the development of the mining and commercial sectors and the expanding livestock industry and Government services. From 1974/75 to 1980/81,⁶ GDI averaged an annual 43% of GDP. Modest increases in GDI are expected during the first half of the 1980s until major coal mining infrastructure developments occur in 1985. This development is expected to increase significantly the GDI rate.

Since mid-1980, the momentum of adverse international economic forces and two serious droughts have impacted on Botswana's economic base. These natural and economic forces have impeded the country's impressive growth and disrupted temporarily the Government's planned levels of development assistance to the rural population. Evidence of this is the virtually zero growth for the period of 1981/82 compared to 12% average annual real growth in GDP during the 1970s. The overall balance of payments changed from a surplus of P94 million in 1979 to a deficit of P61 million in 1981, and returned to a P57 million positive balance in 1982. The interrupted growth is attributed to a depressed world market demand for minerals and a diamond glut derived from excessive production. In 1981, diamond exports decreased by 39%, while total exports decreased by 18%. Nevertheless,

⁶The GOB fiscal year is from April 1 through March 31.

Botswana continues to employ frugal fiscal management as evidenced by the small annual budget deficits ranging from 2% of GDP in 1979/80 to 6% in 1981/82. Budget deficits could, however, increase over the next two years if mineral prices and diamond sales remain depressed.

An equally serious event in 1981/82 was a drought which reduced crop output; agricultural production was approximately 20,000 MT of food grain compared to about 55,000 MT in years of moderate rainfall. Similar grain shortages are expected this year as a result of the second consecutive year of drought. Cereal import requirements for 1982/83 are estimated at 135,000 MT.

Botswana's foreign trade depends on three basic commodities: diamonds, copper/nickel matte and livestock. Diamond production has grown from 2.4 million carats in 1972 to about 8 million carats in 1982, contributing approximately 20% of GDP, 50% of export earnings and 25% to 35% of Government revenue. Copper/nickel matte and the livestock industry each represents approximately 20% of export earnings. Another important revenue source for the Government is its share of the taxes from membership in the Southern Africa Customs Union, which provides between 33% to 40% of GOB's annual revenues.

In 1981 the GOB initiated financial and economic measures to arrest the decline in the economy. The GOB introduced corrective policy actions, which included increasing the central bank rate from 5.75% to 8% followed by successive rate increases through May 1982 when the rate was fixed at 12%. Correspondingly, the commercial banks increased their prime rate from 9% to 14.5%; their liquid asset requirements were increased by 5% to 35% for current accounts and 10% for savings accounts. Other credit and cash restrictions were imposed, thereby dampening inflationary tendencies.

Finally, public sector salaries were held constant until April 1983, recurrent and development expenditures were reduced by 10% and 12%, respectively, and a selective sales tax was introduced. The outcome is a budget under control, a positive balance of payments, and debt servicing representing 5% of export earnings.

With the successful functioning of these policies, the opening of the Jwaneng diamond mine and the 6% increase in diamond prices, Botswana's economy is expected to realize modest growth through the 1980s.

(2) Fiscal Policy

Botswana's fiscal practices are sound and conservative as evidenced by healthy annual current account surpluses shown in Table I. Recurrent revenues increased at an average of 24% annually compared to an average growth of 27% for recurrent expenditures. Recurrent revenues have consistently exceeded expenditures, resulting in revenue surpluses available for financing 64% of capital expenditures. The balance of capital expenditures has been financed by external grants and loans. Historically, recurrent revenues have averaged 29% of GDP; in 1981/82 they were 30% of GDP; and they are expected to reach this level in 1982/83.

The principal sources of revenue are rebates from the Southern Africa Customs Union (33% to 40%); royalties, dividends and taxes from mineral sales (25% to 35%); revenues from corporate and personal income taxes (25% to 35%); and the recently introduced (September 1982) sales tax on petroleum products and alcohol. This new tax is anticipated to raise P15 million annually, or 5% of total recurrent revenues.

Table I
Summary of GOB Budget

	(In Millions of Pula)								Estimated
	1974/ 75	1975/ 76	1976/ 77	1977/ 78	1978/ 79	1979/ 80	1980/ 81	1981/ 82	1982/ 83
Recurrent Revenue:	62.5	79.7	70.9	100.2	136.8	212.2	268.9	283.0	328.0
Recurrent Expenditure: (includes interest payments on debt)	<u>37.0</u>	<u>48.8</u>	<u>64.8</u>	<u>73.8</u>	<u>99.1</u>	<u>122.0</u>	<u>166.8</u>	<u>200.0</u>	<u>239.0</u>
Budget Surplus:	25.5	30.9	6.1	26.4	37.7	90.2	102.1	83.0	89.0
Capital Expenditure and Net Lending:	33.2	41.2	43.3	49.2	73.1	106.1	141.5	141.0	196.0
Overall Deficit:	7.7	10.3	37.2	22.8	35.4	15.9	39.4	58.0	107.0
Financing the Deficit:									
External Grants	5.3	8.1	16.5	17.4	29.7	36.9	37.7	40.0	38.0
Loans	18.3	19.4	23.5	8.0	16.2	15.3	13.5	13.0	66.0
Decrease in Cash Balance								5.0	3.0
GDP	208.5	269.8	310.8	354.2	504.2	689.4	805.0	950.0	1093.0
Recurrent Revenue as % of GDP	30	30	23	28	27	31	33	30	30
Recurrent Expenditure as % of GDP	18	18	21	21	20	18	21	21	22
Overall Deficit as % of GDP	4	4	12	6	7	2	5	6	10

Recurrent expenditures of P200 million for 1981/82 are directed to: Government operations (36%); social services (34%, consisting of education, health, housing and community services); economic services (18%, consisting of agriculture, industry, infrastructure and mining); allocations to district governments (9%); and interest payments (3%). This represents 21% of 1981/82 GDP. The overall deficit for the period is P58 million or 6% of GDP.

The GOB's budgetary deficit may increase in 1982/83 to an estimated P107 million or 10% of GDP due to expected increases in recurrent and capital expenditures for education, community and social services, transport/communications and interest payments. These increases will be partially offset by minor decreases in expenditures for defense and mining. Recurrent expenditures are estimated at P239 million or approximately 22% of GDP.

Botswana's prudent fiscal policies and excellent project planning ensure that recurrent costs are covered. GOB fiscal management addresses the concerns raised in the AID Policy Paper on Recurrent Costs.⁷ Furthermore, the "International Comparisons of Government Expenditures"⁸ ranks the GOB's expenditures to public services (average), defense (low), education, health, agriculture (all high) and a ratio of greater than one for other goods and services to wages. This ratio indicates a lack of foreign exchange constraints.

Since the GOB recurrent revenues and expenditures have averaged 29% and 20% respectively of GDP during the years 1974/75 through 1981/82, it is highly probable, given the increasing excavation of minerals, that future recurrent revenues and expenditures will remain close to this historical average.

⁷AID Policy Paper on Recurrent Costs 1982:2.

⁸Ibid, p. 12.

Therefore, there is a high probability that annual recurrent revenues will provide timely and adequate coverage for annual recurrent costs.

(3) Monetary Policy

In August 1976, the GOB discontinued using the South African Rand as its common currency and introduced the Botswana Pula, and established an independent central bank and monetary system. This policy change provided the GOB with options to change the external value of the Pula, to improve the management of foreign exchange revenues, to take advantage of currency convertibility and to have relatively unrestricted capital flows.⁹

Initially, the Pula was on parity with the Rand and both were pegged to the U.S. Dollar at one Pula to U.S. \$1.15. In April 1977, the Pula was revalued by 5% to U.S. \$1.2075. In May 1980, the GOB discontinued pegging the Pula to the U.S. Dollar and changed to a broad basket of currencies with 50/50 pegging to the Special Drawing Rights unit of account and to the Rand. This provided a diversified representation and more accurately reflected Botswana's relationship with its principal trading partners. In November 1980, the Pula was revalued by 5.3% against this basket of currencies. In May 1982, the GOB devalued the Pula by 10% and introduced stringent monetary actions; i.e., increasing the central bank interest rate to 12%, and increasing by 5% the liquid asset requirements for commercial banks to 35% for current accounts and to 10% for savings accounts. In response to these actions, commercial banks raised the prime rate to 14.5% and curtailed lending operations. This, among other interventions, had the effect of decreasing high inflation and narrowing the spread between the Pula and South African Rand. The inflation rate in early 1983 was estimated at 12%.

⁹AID Policy Paper on Private Enterprise Development 1982:2.

Since the early 1970s the overall balance of payments has shown a surplus. In 1981, the balance of payments turned negative with a P61 million deficit and foreign reserves declined by P37.4 million to P217.1 million. During the first quarter of 1982, foreign reserves continued to slide to P196.1 million, the lowest level since mid-1979. In addition, domestic credit decreased slightly during this period, reflecting a tight liquidity position of the commercial banks. This situation was aggravated by an increasing import trend, a depressed world mineral market and a freeze in diamond sales.

In early 1983, the economy stabilized as a result of monetary and fiscal policy measures enacted in May 1982, coupled with an increase in world diamond prices for small gems. Inflation declined to approximately 12% and GOB foreign exchange reserves increased to P370 million, representing six months of imports.

1982 foreign trade produced a positive balance of payments of P57 million compared to a P61 million deficit in 1981. Devaluation of the Pula in mid-1982, combined with other previously cited measures, portends a moderating monetary policy that will not only support a strong currency but also encourages diversification of the economy and increased employment in the agricultural and manufacturing sectors.

(4) Mining

The mining industry is the principal contributor to foreign exchange earnings and the largest employer, outside of Government, in the country. Nine thousand individuals are employed in mining, and 13,500 people have mining supportive jobs. Mining revenues are the catalyst to ensure sustained economic growth in Botswana. Principal mining activity consists of the excavation for diamonds, copper, nickel and coal. This sector

produces 25% of GDP, 30% to 40% of Government revenues and approximately 70% of export earnings. Table II depicts mineral output, export value and percent of export earnings.

Since 1974, diamond production has been concentrated in two mines, Orapa and Lethlakane, in central Botswana. In 1982 a third mine, Jwaneng, opened in southeast Botswana, with an expected capacity of 5 million carats annually. By the mid-1980s, Botswana is expected to produce 10 million carats per year, representing 13% of world diamond production. The three mines are operated by DeBeers Botswana Mining Company (Debswana) with equal equity participation by the GOB and DeBeers Consolidated Mines Ltd. After sorting and preliminary valuation by the Botswana Diamond Valuing Company, the diamonds are supplied to the Central Selling Organization (CSO) in London, an organization that markets approximately 80% of the world's diamonds.

Despite a depressed international diamond market, Debswana's volume of production dropped only about 6% in 1981; however, diamond export earnings declined by 39%. Three factors explain this disparity: (1) in 1981 wholesale diamond prices dropped by 30% to 60% depending on the carat size; (2) DeBeers placed a quota on members' sales to the CSO in an attempt to reduce the world diamond glut and stabilize prices; and (3) the GOB decided to operate Debswana at full production to maintain employment levels.

As a result of these actions, Debswana released the majority of its production to CSO for eventual sales to a weak world market, with the balance being stock-piled.

Table II

Mineral Output, Export Value and Contribution to GOB Revenues

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>Estimated 1983</u>
<u>Diamonds</u>							
Carats (Millions)	2.7	2.8	4.4	5.2	4.9	7.7	8.0
Export Value (Millions of Pula)	46.8	75.5	183.8	236.9	145.0	246.0	310.0
<u>Copper/Nickel Matte</u>							
Metric Tons (Thousands)	30.8	39.5	39.8	40.1	46.6	45.0	47.0
Export Value (Millions of Pula)	39.9	49.8	60.8	80.8	80.0	56.0	80.0
<u>Coal</u>							
Metric Tons (Thousands)	294.0	314.5	355.1	371.5	379.9	414.0	480.0
Domestic Value (Millions of Pula)	2.2	2.3	2.7	4.1	4.2	6.5	7.2
<hr/>							
Total Value of Minerals (Millions of Pula)	88.9	127.6	247.3	321.8	229.2	308.5	397.2
Export Earnings as % of Total Exports	-	68	68	75	66	69	71

In 1974 copper/nickel mining was started at Selebi-Phikwe in northeast Botswana. Estimated deposits are 40 million tons of ore with a 30 year life span. Major shareholders are Botswana Roan Selection Trust, Ltd. with an 85% share (consisting of Anglo American Corporation of South Africa with 30% equity, AMAX Nickel Inc. of U.S. with 30% equity and public ownership representing 25%) and the GOB with a 15% equity. The mine was beset with technical problems during the initial two years of operation, followed by low world market prices for copper/nickel matte in the late 1970s. Although the mine is now considered one of the most technically efficient copper mines in the world, a depressed world metals market and a large commercial debt are preventing the company from making consistent net profits.

Preliminary explorations indicate that an estimated 17 billion MT of economically recoverable coal reserves are located in eastern Botswana. In mid-1982 the GOB signed an agreement with Shell Coal Botswana Ltd. The firm is conducting feasibility studies to determine the economic viability of developing an estimated 3 billion tons near Serowe. Pre-feasibility studies indicate that production could be initiated in 1988 with 5 million tons being produced annually and increasing to 10 million tons in 1992. Coal deposits are low to medium quality, which is acceptable export quality for thermal use (steam coal).

At present there is one coal mine in operation at Morupule, with an estimated deposit of 5 million tons. This mine produces steam coal for the domestically operated Selebi-Phikwe copper mine and the generators for Botswana Power Corporation. Annual coal production has been in the 300,000 MT range but should increase to over 600,000 MT annually by the mid-1980s in response to

increasing demand for coal-fired electricity generators and other projects.

(5) Commerce/Manufacturing/Construction

From 1978 to 1982 the commercial and service sector of the economy experienced an average real growth of 18.5% per annum. Manufacturing represents approximately 5% of GDP and employs approximately 8,000 persons. About 2,000 of these are employed by Botswana Meat Commission, which contributes an estimated 50% of the manufacturing sector's value-added. Village industries, i.e. handicrafts, sewing and beer brewing, account for 15% of value-added; the balance of value-added is supplied by small private enterprise activities amounting to approximately 100 businesses, with over one-third of these operations employing less than 10 workers.

Construction activities provide an estimated 6% of GDP. This activity is growing with the increasing numbers of Botswana owned enterprises.

Construction represents over 50% of total investment but its contribution to value-added is small due to the large amount of imported items from South Africa. For example, from 1977 to 1982 construction projects were estimated at P1.3 billion, with value-added amounting to only P171 million.

Historically, South Africa has dominated the Botswana construction and manufacturing industries and has provided approximately 90% of the required imports for these sectors. Domestic expansion has been hindered because of Botswana's membership in the Southern Africa Customs Union, which prevents the imposition of import duties on another members' goods, except for infant industry protection. Conversely, Botswana benefits from this association by receiving Customs Union revenues, and by attracting businesses from neighboring African countries which are interested in

exporting to South Africa. For example, some Zimbabwean firms are relocating in Francistown to take advantage of duty free entry into the Southern Africa Customs Union. Impediments to developing a larger manufacturing base in Botswana are the small size of the domestic market, relatively high cost of infrastructure and the shortage of skilled technical and managerial personnel.

The GOB recognizes these impediments and has responded by introducing financial incentives; i.e., a fixed 35% corporate tax, low relative to neighboring countries; 115% tax allowance for machinery and equipment; and tax allowance of 200% of employees' secondary school training costs. Tax and investment holidays are offered for prospective businesses. Training institutions are being established to address the lack of qualified personnel.¹⁰

In May 1982, the GOB's Financial Assistance Policy (FAP) was introduced in an effort to stimulate local businesses. The main objectives of the FAP are to increase domestic production and create employment opportunities through the availability of attractive financial packages. The GOB initially provided P5 million in 1982 to assist qualified entrepreneurs for a five year period through a combination of financial grants and tax allowances. The processing of FAP applications and the administration of the program are the responsibilities of Ministry of Commerce and Industry and the National Development Bank (NDB). The FAP provides incentives to employers who favor labor intensive rather than capital intensive activities and who agree to establish projects outside major urban centers.

¹⁰AID Policy Paper on Private Enterprise Development 1982:2.

The criteria for approving applications for FAP grants differ according to the category of projects. Small-scale activities are judged on the need for the proposed enterprise in a specific area of the country, the probability of success and number of persons to be employed. Medium and large scale projects also are judged by these guidelines, but the main determinant is the project's potential to realize at least a 6% economic rate of return.

The FAP has received a favorable response from Botswana entrepreneurs. Since its inception, 245 small-scale (under P10,000) FAP applications have been approved for a total value of P900,000, creating an estimated 710 new jobs. Examples of proposed enterprises include sorghum mills, cement block manufacturing, carpentry, welding, horticulture, dairying, sewing and knitting operations. Thirteen medium-scale (10,000 to P750,000) applications for projects involving P1.7 million have been reviewed; they are expected to create approximately 338 new jobs.

Other complementary institutions that assist private enterprises are: The Botswana Development Corporation which assumes equity positions in new businesses; the Botswana Enterprise Development Unit, the Botswana Advisory Services and Partners for Productivity, which assist small-scale business by providing workshops and training courses; and the Brigades, a rural community non-profit organization which provides training and undertakes productive work in rural communities. There are 20 Brigade Centers in Botswana.

(6) Agriculture

The agriculture sector contributes about 12% of Gross Domestic Product (GDP), provides 4% of formal employment (4,800 workers) and 119,400 jobs in family

agriculture. Less than one-third of crop production is marketed. Principal crops consist of staples such as sorghum, maize, millet, and some groundnuts and pulses. Annual cereal requirements are estimated at 150,000 metric tons (MT), of which 55,000 MT are usually produced in years of moderate rain. Food deficits are covered by imports from South Africa.

Less than 25% of cultivable land is planted annually. Yields are low: 140 to 220 kilograms/hectare (kg/ha) for sorghum, maize and millet on small-scale farms with less than 10 hectares. Surplus producing farms, usually located in eastern Botswana, are larger, with higher yields and relatively efficient operations that employ modern technological packages. Arable agriculture in Botswana, although frequently described as the backbone of the rural economy, has long been recognized as insufficiently productive and secure to fully sustain the rural populace. Twenty percent of rural dwelling units do not have arable land. Eighty-four percent of all landowning units plowed land in normal rainfall years (1977-78) compared to 50% in drought years (1978-79). Ninety percent of rural dwellings produce harvests which are insufficient to feed people of the dwelling unit (6 persons). In non-drought years, the mean harvest of crops per unit was 800 kg with a distribution of 12% dwellings with no harvests, one-half of all farms produced under 320 kg and the top 10% produced over 1600 kg.

Cash income from the sale of crops is also a variable in the equation. In a normal rainfall year, only 14% of farms sold any crops, less than one-half of them receiving more than P40 in total from these sales. The Ministry of Agriculture estimates that, at current prices and yield levels, a farmer can earn more from selling one ox than he/she can realize from growing four hectares of sorghum or maize.

Livestock dominates the agriculture sector, accounting for 80% of the sector's share of the GDP. The national herd is estimated at 3 million cattle, and grazes on 38% of Botswana's total land area. Annual offtake (6% to 10%) is considered low for the ecologically fragile rangeland. The Government of Botswana (GOB) is attempting to introduce modern livestock methods to improve range/livestock management practices, and has constructed a new abattoir in Maun with a capacity of 50 to 80 head per day and intends to build one in Francistown with a 300 to 400 head per day capacity. Presently, the only operating abattoir that is approved for exportation of meat products is the Botswana Meat Commission (BMC) abattoir in Lobatse with an 1,800 head per day throughput.

BMC contributes 20% to foreign exchange earnings and employs approximately 2,000 workers, one fourth the total number of employees in the manufacturing sector. BMC was established in 1965 as a parastatal agency with authority to purchase, slaughter, process and market livestock for export. The abattoir has been renovated in recent years and can slaughter 1,800 animals and debone 1,200 animals per day. BMC markets boneless beef, beef carcasses and canned corned beef to South African and European consumers. The European Economic Community (EEC) is BMC's most profitable market, with sales of 5,200 tons of high quality beef in 1981, valued at P16.3 million. In 1982 BMC supplied this market with 12,000 MT of beef, representing 63% of Botswana's preferential beef quota to the EEC.

Table III illustrates Botswana's cattle production, annual offtake, BMC slaughtered cattle, export value and export earnings as a percentage of total exports:

Table III

Botswana's Cattle Production Export Value and
Offtake for Years 1977 through 1983.

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>Estimated 1983</u>
Cattle (000)	2,600	2,717	2,817	2,911	2,967	3,000	3,000
Total Slaugh- tered	<u>235,720</u>	<u>193,840</u>	<u>274,960</u>	<u>178,500</u>	<u>238,000</u>	<u>277,000</u>	<u>280,000</u>
BMC	195,850	149,350	228,960	141,000	205,000	237,000	240,000
Other	39,870	44,490	46,000	37,500	33,000	40,000	40,000
Estimated Off- take Percentage Rate	9	7	10	6	8	9	9
Export Value (Millions of Pula)	42.6	32.1	70.0	34.1	73.0	97.0	100.0
Export Earnings as % of Total Exports	-	17	19	8	21	22	18

(7) Workforce and Employment

Botswana's potential workforce in 1981 consisted of approximately 451,400 persons (46% of the population) between the ages of 15 to 64. The active labor force consisted of 284,200 persons, representing 63% of the potential workforce. This group is segmented into the following categories: (1) 97,100 in the formal sector, excluding 22,300 domestic employees; 8,500 self-employed; 119,400 persons engaged in family agriculture; 5,800 part-time workers; and 31,100 unemployed (11%). The balance of people in the potential workforce (167,200), consisted of economically inactive or discouraged workers.

The most vulnerable groups are the part-time workers and the unemployed totaling 36,900 persons or 13% of the active workforce. Only 1% of this group completed secondary schooling (12 years), while 25% completed their primary education (7 years) and 67% have not completed primary school. In 1982 there are in excess of 28,000 primary school leavers, of whom about 15,000 will seek employment. These 15,000 plus an additional 2,000 prospective employees will be available for approximately 8,200 new jobs in the formal sector of the economy this year. Unsuccessful candidates will be required to engage in a combination of agriculture/livestock, part-time work, and informal employment in the rural and urban areas.

Formal sector employment in Botswana has grown from 62,900 in 1977 to an estimated 97,100 (excluding domestic employees) in 1981, representing about 8,500 new jobs per year. Principal components of this sector consist of government (27,000), commerce and services (19,000), construction (16,000), mining (9,000) and manufacturing (8,000). Of the estimated 97,100 employees in the Botswana formal sector, 30,100 have less than 7 years of education; 33,000 hold a primary school certificate; 25,000 possess a junior certificate; 7,000 are secondary school graduates; and 2,000 hold a university degree. In addition there are 35,000 Botswana employed in South Africa, of which an estimated 18,000 are employed in the mines. The latter figure has and will continue to decrease because of South Africa's policy to recruit mine labor primarily from South African "Homelands".

The GOB has enacted a policy to increase viable job opportunities in rural areas and to expand educational facilities to accommodate additional secondary students. In addition, there is an acute shortage of university

graduates needed to meet the increasing demand of Botswana's expanding economy and to eventually replace several thousand non-Batswana employed in the public and private sector. In 1982 there was an unmet demand for an additional 3,600 secondary school graduates and 1,100 university graduates.

(8) Prospects for Development and Growth

Based on an extremely conservative forecast, the probability is high for modest real annual growth through 1989 as Botswana's economy matures. The continuation of prudent fiscal management and conservative monetary policies in combination with reasonable excavation of diversified mineral resources should enable Botswana to maintain a favorable overall balance of payments and generate sufficient revenues to finance social and economic development activities through the 1980s.

In the short-term (1983 to 1985), inflation should abate to 10%, copper/nickel production should remain constant with prices increasing by 8%; diamond production should vary between 9 to 10 million carats with annual sales of approximately 6 to 8 million carats at prices increasing by 10% per year; beef exports should grow at 3% per year with revenues increasing by 11% annually; and the value of arable agricultural production should equal the annual rate of inflation. During this period, GDP should grow at 2% to 3% in real terms, overall balance of payments should be positive and foreign reserves should be equivalent to 5 to 7 months of imports. Government revenues should continue to generate a surplus with recurrent expenditures increasing at about 16% per year, a decrease from previous years.

From 1985 to 1989, inflation is estimated to be 7% per annum and mineral production should stabilize at 10 million carats and 47,000 MT of copper/nickel matte. Mineral price increases should equal the inflation rate of 7%,

with the exception of diamonds which should increase at an annual rate of 10%, or 3% in real terms. By mid-1980s, world diamond production will be approximately 80 million carats compared to estimated world demand of 100 million carats. Revenues from livestock should rise by 8% per year and exports should continue to grow at 3% per year as a result of an expected increase in offtake and sales of beef to existing and new markets.

Botswana's construction, commercial, manufacturing and service sectors should experience the greatest growth and gain an increasing share of GDP. Two important factors should contribute to rapid growth in these sectors: (1) infrastructure development for coal deposits; and (2) greater economic activity between the countries in the Southern African Development Coordination Conference (SADCC). Presently only about 9% of Botswana imports and a similar percentage of its exports make up Botswana's trade with SADCC countries. During this period, GDP should increase at 4% to 5% per annum in real terms, foreign exchange reserves should drop significantly in response to increasing imports of goods and services for developing coal deposits and GOB's recurrent revenues should increase considerably, reflecting a sizeable increase in receipts from the Southern Africa Customs Union. By the late 1980s, agriculture should start realizing real growth at about 2% per annum, as a result of improved technology and agricultural programs started in the early 1980s.

B) THE GOB'S DEVELOPMENT PLAN AND IMPLICATIONS FOR USAID/BOTSWANA'S STRATEGY

Prudent fiscal, monetary and sectoral policies have facilitated steady economic growth and positioned Botswana for continuing growth in the 1980s. These policies and related development objectives are found in the National Development Plan V. The recently conducted GOB mid-term review of the Plan concluded

that the basic objectives and strategy of NDP V would be pursued in the next plan period (NDP VI 1985-89). The objectives of rapid economic growth, social justice, economic independence and sustained development are to be achieved through a basic strategy of reinvesting the financial returns from mining to improve the living standards of the majority of the population who do not benefit directly from mining generated revenues.

The rural areas will continue to receive priority in Government programs, both in the productive sectors and in the provision of government services. The Financial Assistance Policy (FAP) provides greater incentives for rural production than for urban activities. The Arable Lands Development Program and related rural development efforts such as projects for self-sufficiency in small stock, horticulture and poultry will be intensified. The proposed abattoir in Francistown should facilitate increased off-take rates and related increases in cash income from cattle. Increased funding allocations will be made to the Districts to encourage village and district development initiatives. The accelerated development of rural secondary schools will ensure that relevant education and training is made available to the rural population.

The GOB will pursue a number of policies and programs to stimulate job creation and train people for productive employment during the NDP VI period. Vocational and technical training will be increased at the pcst-junior secondary levels. The FAP will be well into its implementation phase. The Ministry of Commerce and Industry's business extension and other related Government services will be expanded and improved. The private sector and Government will expand and improve training programs to prepare Batswana with opportunities to fill new jobs and take over positions now held by

expatriates.

The GOB has consistently demonstrated compliance to its development plans and a strict control of project expenditures. Similarly, the government has made effective use of donor funds. Other donors' share of actual development expenditure in the first three years of NDP V has been P182.8 million of a total expenditure of P340.8 million or 54% of all development expenditure. During this period USAID/B has made disbursements of approximately \$35 million, most of which was made for projects emphasizing workforce development and the creation of income-producing opportunities in rural areas.

USAID/B concurs with preliminary directions for NDP VI. The principal problems confronting Botswana in this decade are growing unemployment and underemployment, particularly in rural areas, juxtaposed against projected shortages of trained manpower needed for both the formal and informal sectors. The concentration of unemployment and underemployment in rural areas where most of the labor force resides and where income is derived predominately from agriculture highlight the importance of increasing agricultural production as a priority concern. The scarcity of trained manpower to meet formal sector demand and increase employment in the productive sectors is a constraint to the entire development effort; it will only be alleviated by expanding and improving the relevance and efficiency of the formal education system and by increasing non-formal training opportunities.

The GOB continues to look to USAID/B for assistance in addressing these priorities. The problems and their policy and program implications are discussed in detail in the following sections which for analytical purposes have been identified as Human Resource Development and Agricultural Development.

C) HUMAN RESOURCE DEVELOPMENT

(1) Introduction

The working age population of Botswana is expected to grow by approximately 17,000 persons a year during the 1980s while the number of formal sector jobs will grow annually by only 8,200. The prospects for the remaining 9,000 persons fall within the informal sector or part-time employment. Jobs in the informal sector are characterized by low remuneration and underemployment. Opportunities for advanced training and education are scarce due to technical and other resource limitations of Botswana's training and educational institutions. The shortage of entrepreneurial, managerial and administrative talent and the lack of a skilled workforce are crucial constraints to the creation of job opportunities in the formal and informal sectors.

The employment of skilled expatriates in technical and professional positions and the use of on-the-job training programs are helping to alleviate manpower shortages. In addition, Botswana's formal education system must continue to provide the long-term solution to the problem. The GOB has rapidly expanded the formal education system since independence; enrollment rates are 85% for primary, 12% for secondary education and the adult literacy rate is 46%. The Government intends to achieve universal primary education by 1985. The GOB is also emphasizing improvements in the quality of its education system and working to expand post-primary and advanced training programs. Significant discrepancies between labor market demand and supply however, will persist through the 1980s.

The following discussion will analyze labor supply and demand, identify specific supply shortages, and describe the implications of the analysis for

Botswana's development. It will also provide the analytic framework and rationale for the priority emphasis on developing human resources and agriculture in Botswana. A more detailed analysis of agriculture is found in Part I, Section D of the CDSS.

(2) Labor Demand and Supply

The principal characteristics of labor demand and supply for the 1971-81 and 1981-89 periods are described below.

(a) Demand for Labor, 1971-1981: The overall rate of growth in the demand for labor in the formal sector was 10% per year, climbing from 37,500 in 1971 to 97,100 in 1981. The demand grew the fastest in construction, commerce, and manufacturing, accounting for over half of the nearly 60,000 jobs created during the decade.

Of the 97,100 employed in 1981, 65% had primary education or less, 26% possessed junior secondary education, and the balance had more advanced educational levels. One-third of the jobs in 1981 required post-school training. Most of these were in jobs employing individuals with junior secondary or higher education.

(b) Supply of Labor, 1971-1981: In 1981, there was a potential labor force of 451,400 individuals between the ages of 15 and 64. 284,200 were actually in the labor force, either employed or looking for work, resulting in a labor force participation rate of 63%. Approximately half of the individuals employed in 1981 were in the formal sector. Of the 253,100 employed workers, 119,400 or 47% were in the formal sector.¹¹

¹¹The difference between the 97,100 in the demand section of the paper and this figure is accounted for by domestic workers not measured in data collected from employers.

There was a relatively low unemployment rate of 11% in 1981; 31,100 of the 284,200 person labor force were unemployed. However, many individuals outside of the labor force were discouraged from seeking work because of poor job expectations, resulting in an unemployment rate which is probably biased downward. Unemployment was inversely related to both schooling and age in 1981. For example, 92% of those unemployed, had primary education or less. The recent and large increases in the number of primary school graduates implies that the unemployed are relatively young. It seems reasonable to conclude therefore that a significant number of the measured unemployed were young people making the transition from school to work or to other forms of additional training.

The supply of educated manpower grew from 126,900 in 1971 to 233,400 in 1981 for an annual rate of 6.3% and a net increase of 106,500. The greatest percentage increases occurred among those with primary and junior secondary education.

(c) Demand for Labor, 1981-1989: Formal sector employment is anticipated to grow by 6.7% per annum, down from the 10% rate achieved over the last decade because of the less buoyant economic growth forecasted for the 1980s. Despite the projected rate decline, the absolute number of new jobs created in this eight year period will be 65,500, exceeding that of the earlier period by some 5,000 jobs.

Most of the new, formal sector jobs will continue to be in electricity/water resources, manufacturing, construction, and banking/business. Relative shifts in the projected growth of the various sectors, however, indicate a significant corresponding shift in the demand trend for educated and trained manpower. First, the demand for highly educated manpower will decline slightly to an

annual rate of 5.2% while demand for those with less than primary education will rise at a rate of 7% annually. The two large relatively education intensive sectors, mining and government, are not projected to increase workforce levels as fast as overall employment growth. Second, the demand for workers who combine formal schooling with some form of vocational and technical training will increase significantly. Third, the greatest growth in jobs will occur outside the public sector.

(d) Supply of Labor, 1981-1989: There will be 133,900 more individuals of working age (15 to 64) in 1989 than in 1981, assuming that the working age population will grow at the same rate as the general population. The total working age population should be 585,300 in 1989. The labor force in 1989 will be 368,700, up from 284,200 in 1981, assuming no change in labor force participation rates during this period.¹²

The estimated number of educated individuals will increase from 233,400 in 1981 to 412,400 by 1989 for an annual growth rate of 7.4% compared to the 3.3% growth in the working age population.¹³ This represents a significant increase in the educational attainment level of the working age population.

¹²The labor force participation rate and consequent number of persons in the labor force will probably be higher. The majority of labor force entrants will be young persons with some education and there normally is a positive correlation between educational attainment and labor force participation. However, there are a number of factors which will tend to work against this positive impact. First, the expansion of post-primary education will lead to a growth in the number of young Batswana who elect to continue their education rather than enter the labor force. Second, slower economic growth during this period may influence the decision to postpone entry into the labor force.

¹³The working age population will increase by 133,900 over the period 1981 to 1989, whereas the number of individuals with some education will increase by 179,000 over the same period. The difference between these two figures is accounted for by the different age groups. For example, the working age group of 15 to 64 excludes many young people who will have completed primary education or less which will be included in the figures used to compute the increase in the stock of educated manpower.

The greatest rates of growth in the supply of educated manpower will occur at the post-junior secondary level (senior secondary, 11.0%; university diplomas/degrees, 10.6%).

(e) Labor Demand and Supply, 1981 to 1989: The foregoing discussion provides a basis for a further analysis of labor force composition and for a disaggregation of demand and supply factors to pinpoint specific problems. Changes in the composition of the labor force will have significant implications for manpower policies and programs. If the labor force participation rate remains at the 1981 figure of 63%, an estimated 84,500 people will enter the labor force during this eight year period. The bulk of these new entrants would find employment in the formal sector which is expected to grow by 65,500 jobs in the same period. The formal sector's share of employment would therefore rise from its current share of 47% of total employment. If, however, all the expected 133,900 individuals becoming of working age in this period were to enter the labor force, the labor force participation rate would rise to 71% by 1989. In this case, only 49% of these individuals would find formal sector employment. This would imply a significant growth in the number of people employed or looking for work in the informal sector.

Some increase in the labor force participation rate appears reasonable as discussed previously. The greater this increase the greater will be the pressure to develop employment strategies and programs which cater equally to the formal and informal employment sectors.

The formal sector of the economy should absorb an additional 65,500 persons during the 1981 to 1989 period. However, there will be a net increase of 179,000 in the number of people with some education. This means that there

will be a significant number of people with some education who will enter the labor force but not find employment in the formal sector, even assuming that many of these will be below the working age in 1989 and that not all will decide to enter the labor force. The majority of these will be individuals who have a primary education or less and who must look for employment in the informal sector.

The principal findings which emerge from this demand and supply analysis are four: stabilization in the numbers of the lesser educated; a projected surplus of primary school graduates; a shortage of junior secondary school graduates; and a shortage of more highly educated manpower. These are briefly described below.

Stabilization in the numbers of lesser educated manpower:

In 1981, the excess in the supply of manpower with less than primary education was 76,200; it is estimated to grow to 88,800 by 1989. While this represents a significant number of individuals who will have to be absorbed outside the formal sector, the problem, which faces policy makers in the early 1980s, will not have significantly worsened by the end of the decade.

Surplus of primary school graduates:

This group is composed of those who have completed primary school and who will be unable to find jobs in the formal sector. This surplus will increase dramatically, from approximately 75,000 in 1981 to about 176,000 in 1989. Demand projections, however, indicate increasing shortages in the supply of primary school graduates who have had some further training, from a shortage of 9,400 in 1981 to a shortage of 17,100 in 1989. The above figures indicate that (i) the supply of primary school graduates is

is outpacing demand, and (ii) further training is required to meet the limited but increasing formal sector demand.

Shortage at the junior secondary level:

The gap between the supply and demand for manpower with a junior certificate education both with and without additional training will increase. The shortage was 9,700 in 1981 and is expected to rise to 11,000 by 1989. The greatest shortage will be in the number of junior secondary graduates with vocational and technical training. In 1981, for example, 70% of the jobs requiring a junior secondary education also required additional training. Only 30% of the junior secondary supply, however, possessed the required additional training. In 1981, the shortfall of junior secondary graduates with additional training was 13,000; by 1989, the shortfall will have increased to 28,500. The above figures indicate that the supply of junior secondary school graduates, particularly those with additional training, needs to be significantly increased to meet projected labor demand.

Shortage of more highly educated manpower:

The shortage of individuals with senior secondary and university level education will continue but the gap between supply and demand will narrow. The projected 11% annual growth in the supply of highly educated manpower will reduce the shortage from 4,700 in 1981 to 3,900 by 1989. While the demand for expatriates to fill this gap will persist, their proportion in this category of the labor force should continue to decline steadily.

(3) Implications for Human Resource Development in the 1980s

The previous analysis suggests that the primary human resource concerns over this decade should be the increasing number of young persons with primary education who are unable to find work in the formal sector and the projected

shortages of manpower with appropriate levels of post-primary technical training and formal education. The implications are clear. Measures should be taken to create employment opportunities for primary school graduates and to increase the supply of manpower with vocational, junior secondary certificate, and more advanced educational levels.

(a) Employment Creation for Primary School Graduates: The stimulation of employment opportunities for this group may be analyzed from several perspectives: what needs to be done to increase demand for jobs which only require the most basic levels of education; what improvements can be made in the education currently offered by primary schools; and, lastly, what are the most appropriate types of training needed to enable primary school graduates to gain entry into the workforce.

The informal sector and, by implication, the rural sector will be particularly important to employment creation efforts. The formal sector will be unable to absorb the rapidly increasing surplus of primary school graduates identified in the preceding analysis. Employment in the informal sector is the principal alternative in the short to medium-term. The rural sector workforce predominates in the informal sector; representing 74% of the national workforce, containing the greatest number of the lesser educated and incurs the greatest hardships of underemployment and unemployment. Sixty-four percent of all rural sector employment is in informal sector family agriculture. The potential for increasing production and incomes from arable crop agriculture exists and will be discussed in detail in Section D of the CDSS Analysis. Existing underemployment and low productivity in this subsector is so severe, however, that near and medium-term prospects for new employment opportunities are marginal at best.

Off-farm enterprises will have to be a primary source of new jobs in the informal sector.

Informal, off-farm employment is concentrated in a few specialities in rural areas. Beer brewing and the selling of food and clothing are the major activities. Other informal activities include hunting/fishing, traditional and spiritual healing, jewelry, washing, hairdressing/barbering, shoe repair, car repair, bicycle repair, tinsmithy, carpentry, brickmaking, thatching, basket making, wood carving, etc.¹⁴

There are several constraints to the expansion of informal sector employment which include: (i) transport problems (obtaining materials and marketing); (ii) lack of entrepreneurial and management skills (maintaining accounts, inventories, personnel, marketing, and quality control); (iii) lack of information regarding efficient methods of production; (iv) lack of technical skills; and (v) lack of capital. The GOB is attempting to address these constraints and stimulate the creation of rural employment which requires relatively low levels of skill.

The Financial Assistance Policy, described previously, provides capital and other incentives for the creation and expansion of labor intensive enterprises in rural areas. The establishment of a Labor Intensive Employment Fund to encourage the use of unskilled labor in the public sector is also being considered by the GOB. The expansion of the Ministry of Commerce and Industry's Rural Industrial Officer Program will improve and increase technical, training and other business extension services to address the aforementioned constraints to small enterprise development.

¹⁴Botswana Informal Urban Sector Study, Ministry of Local Government and Lands, 1983.

The implications on the labor supply side are also evident. A more intensive education and training effort directed at primary school graduates will be needed to improve their chances of gaining employment. First, students leaving school after completion of primary education will need to be better equipped to cope in a situation where employment may depend on initiative and creativity; primary school curriculum will need to place increasing attention on practical knowledge and skills. Second, special attention should be given to the promotion and development of low cost, post-primary forms of vocational and technical training. Third, attention must be given to the training needs and employment opportunities of women since they will constitute a larger share of the primary school graduates.

The GOB is developing programs and policies with donor assistance to address these problems. These efforts include expansion of the Brigades, promotion of private sector training, and qualitative improvements in primary education.

There are a number of organizations providing post-primary training. These include the Ministry of Commerce and Industry's Botswana Enterprise Development Unit and Rural Industries Innovation Centre, the Ministry of Agriculture's extension staff, the Brigades, and a number of non-governmental organizations offering training in secretarial services, nursing, various crafts and business skills. The most important of these organizations is the Brigades which the GOB intends to improve and expand as the country's basic craft level training program. The Brigades are community-based, autonomous, non-profit entities which combine craft and artisan training with production activities.

With respect to basic formal education, the GOB is already taking measures to improve the quality and appropriateness of primary education. The rote, memoristic fashion of learning is being abandoned, and curriculum revisions and improved teaching techniques are being introduced to provide a broader, more relevant learning program.

(b) Increasing Skilled Manpower at the Junior Secondary Certificate Level:

The gap between labor market supply and demand will continue to widen over the 1980s without a major effort to expand the availability of junior secondary education. The provision of additional places in the junior secondary system is necessary to address this problem; job market demand, however, will be greatest for young people who combine both secondary education and further vocational and technical training.

The GOB is considering a major expansion of junior secondary level access beginning in 1984 under a two-fold strategy. The first involves the removal of inefficiencies within the system by permitting the existing supply of classrooms and teachers to cater to a larger number of students. The second involves an expansion in the number of places in secondary schools combined with qualitative improvements in the curriculum. If this strategy is implemented, it would allow entry into secondary schools to nearly double in 1984 and will have a significant impact on the heretofore declining transition rate between the last year of primary school, Standard 7, and the first year of secondary school, Form I. The MOE also plans to shift from the present system of 7-3-2 years of primary, junior secondary, senior secondary school, to a 6-3-3 system by 1987. This transition and the possible expansion in secondary classrooms and teachers would diminish the current shortage of secondary school leavers.

The GOB is also developing in-school and post-school training opportunities relevant to the junior secondary capability. Vocational training centers and agricultural science blocks are being added to secondary schools, and post-school training is being expanded in training institutions such as the Botswana Agricultural College, the Polytechnic, the Botswana Institute of Administration and Commerce, and the Automotive Trades Training School. The private sector is also being given incentives to expand their training programs. An example of this is the GOB allowing firms to deduct 200% of the value of approved training costs from taxable income. Another policy measure under consideration is a combined training grant and levy system, which would require contributions from all firms. When a firm undertakes training, it would become eligible to receive a grant out of the resources raised through the levy.

(c) Increasing the Supply of Highly Skilled Manpower: Significant progress should be made in narrowing the gap between the demand for and supply of highly skilled manpower in the 1980s. The GOB is expanding senior secondary and university education, and is continuing external scholarships and the recruitment of expatriate personnel to fill the gap between manpower supply and demand.

Slight increases in senior secondary enrollments will occur until 1987 when Form IV admittance levels will nearly double to 3,500. This will be accomplished by establishing two new senior secondary streams each year at existing secondary schools and by the construction of several new schools before the end of the decade.

The University of Botswana is undergoing a period of consolidation following the recent attainment of full university status. The GOB has sought more

self-sufficiency in university education but has correctly weighed this desire against factors such as the country's small population, varied manpower needs and resource limitations. Enrollments are projected to increase only slightly from a current enrollment of about 1,000 to approximately 1,200 in 1985. Academic programs are being expanded slowly, the most recent being the development of degree and diploma programs in primary education under the USAID/B Primary Education Improvement Project (633-0222). Discussions are also underway regarding the possible incorporation of the Botswana Agricultural College into the University to provide an undergraduate degree program in agriculture.

Higher level training institutions outside of Botswana will continue to be relied upon to meet many of Botswana's skilled manpower needs. The need for lawyers, doctors, veterinarians, engineers, architects, agronomists, accountants, and other specialists is substantial but does not justify the establishment of local programs. The GOB is currently funding a significant amount of overseas training and will finance about 100 participants over the 1983-86 period.

Expatriate employment will continue to be needed for positions requiring knowledge and skills which are in short supply. The absolute number of expatriates will probably decline slightly from the current 4,600 and represent an increasingly smaller proportion of total formal sector employment.

(4) Donor Assistance

The financing of education and training services in Botswana is principally the responsibility of the central government. Recurrent expenditures for education and training administered by the MOE have grown at an average

annual rate of 20% over the past five years; the budgeted amount for the 1983/84 fiscal year represents 13.3% of total expected national recurrent expenditures. Developmental expenditures administered by the MOE are expected to total 7.7% of all development expenditure in the NDP V planning period.

Donors have provided approximately 70% of all development expenditures for education over the 1979/80 - 1981/82 period. Significant amounts of expected development expenditure remain to be negotiated over the remainder of the NDP V planning period. It is clear that donors have played and will continue to play an important financial and technical role in the sector.

The World Bank (IBRD), the Swedish International Development Authority (SIDA), the United Kingdom (U.K.) and USAID/B are the most active donors in the sector. The following is a summary of major donor priorities, categorized by levels of education:

Primary Education:

SIDA has concentrated on school construction and on developing teaching aids and curriculum; IBRD on school construction and the expansion of the teacher training college system; and USAID/B on the improvement of teaching through the establishment of degree and diploma programs and short-term in-country training for primary teacher college staff, head teachers, and inspectors.

Junior Secondary:

The African Development Fund (ADF) is financing a new Junior Secondary Teacher Training College; the IBRD is considering a fourth education loan most probably focused on secondary education and a continuation of assistance to the Brigades; and USAID/B is planning a major education sector assessment leading to a FY 1985 project which will address post-

primary education and training needs with emphasis on the junior secondary level.

Advanced Training and Education:

The U.K. and USAID/B are the major resources for external and in-country training, including the placement of operational experts (OPEXers) to fill personnel gaps and provide on the job training for Batswana counterparts.

(5) Summary

The analysis of labor demand and supply suggests the following human resource problems which will persist over the decade:

An increasing number of young men and women with primary education who are unable to find work in the formal sector;

A growing requirement for post-school vocational and technical education;

A need to continue expansion of formal schooling at the secondary level and above; and

A continued reliance on expatriates for higher level technical positions.

The major policy and program implications of the analysis include the following:

Rural sector economic activity must be enhanced for the generation of new jobs and increased incomes. Emphasis should be given to developing new off-farm jobs. Arable agriculture also warrants special consideration given its importance to the livelihood of the bulk of the rural population;

Existing vocational training and technical education institutions need improvement and expansion to help supply the skills demanded in the market place;

Curriculum and related improvements are required in primary education to provide a more relevant education for the majority who will neither attain higher levels of formal education nor gain formal sector employment;

The output at the junior secondary level must be increased and training for higher level skills should be continued in Botswana and abroad to reduce the supply shortages in critical skilled job categories; and

Other donors will continue to play an important technical and financial role in addressing human resource constraints.

D) ARABLE AGRICULTURE

(1) Introduction

The preceding human resource analysis has demonstrated that a significant proportion of the rapidly growing labor force will have to be absorbed by the informal sector which is based principally in rural areas. Agriculture accounts for 49% of all employment in Botswana and approximately 90% of all the informal sector jobs in the economy. Traditional family agriculture, involving both animal and crop production, is the predominant informal sector activity.

The agricultural sector in Botswana is ill equipped to fully utilize a growing rural labor force under existing conditions. Livestock production dominates agriculture, accounting for about 80% of the sector's share of GDP. Livestock ownership is highly skewed, however, with only 6.7% of

the rural households controlling 54% of the national cattle herd. At the other extreme, 31% of rural households hold no cattle and 16% own ten or less. The majority of rural households engaged in agriculture are primarily dependent on raising crops.

The following discussion provides a detailed analysis of arable agriculture's potential for increasing food production and rural incomes. It also addresses the constraints to production and presents the implications.

(2) The Productivity Potential of Arable Agriculture

Employment in arable agriculture is characterized by low productivity and relatively few working hours. Crop production is very difficult and risky under prevailing conditions. Soils are generally poor, and annual rainfall is low, erratic and unevenly distributed ranging from less than 250 mm in the southwest to about 650 mm in the northeast. Drought also occurs with some regularity. Crop production levels vary widely from year to year as depicted in Table I.

Table I
Crops Produced, 1974 to 1982
(000's of metric tons)

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
Sorghum	72.3	33.8	55.5	33.9	15.5	4.3	29.1	28.3	3.9
Maize	33.8	28.7	62.6	35.4	14.0	2.3	11.6	21.4	12.4
Millet	-	8.5	n.a.	4.1	2.5	.9	2.3	1.9	.5
Bean/Pulses	n.a.	n.a.	n.a.	n.a.	6.5	1.0	1.8	2.7	.5
TOTAL	106.1	71.0	118.1	73.4	38.5	8.5	44.8	54.3	17.3

Source: National Accounts of Botswana

Returns from traditional farming are very poor.¹⁵ Yields are as low as 140 to 220 kilograms per hectare for sorghum, maize and millet. The 1981 average crop income, including the value of production consumed by the household, was estimated at P140 for a family of six persons.

There appears to be significant potential for increasing traditional farm yields and output. This potential, if realized, would increase rural incomes and mitigate the range of problems associated with a rapidly increasing rural workforce. An indication of this potential is the higher yield levels and cattle off-take rates achieved on commercial farms and on the traditional Barolong farms. The Barolong are a distinct Batswana ethnic group located in the extreme southeast corner of Botswana. They are classified as traditional farmers and are mostly typical of that group in educational attainment, farm household size, and other definable characteristics of the traditional farm household. The major distinguishing factors are: (a) the Barolong live on their farms in contrast to the majority of other traditional farmers who commute to their crop lands and, (b) the Barolong practice improved methods of crop production, much of which may be due to their proximity to South Africa and exposure to improved farming technology.

Crop yields and cattle off-take rates of commercial farms, Barolong farms and traditional farms are compared in Table II below.

¹⁵Traditional farms are generally located on communal lands, employ little or no mechanization, and use mostly conventional technology. In contrast, commercial farms are mostly mechanized operations on freehold property and employ more advanced production technology.

Table II
Average Agriculture Productivity, 1980 and 1981

	Barolong Farms		Traditional Farms		Commercial Farms	
	1980	1981	1980	1981	1980	1981
Yield in kg/ha Sorghum	362	604	215	224	460	450
Yield in kg/ha Maize	388	732	167	306	907	893
Yield in kg/ha Millet	-	-	159	144	-	600
Yield in kg/ha Beans	183	172	144	176	250	700
Beef Cattle Off-take (%)	14.4	11.8	8.4	8.5	22.4	24.7

Source: Botswana Agricultural Statistics

The rate of abandonment (area planted but not harvested) is also considerably higher on traditional farms than on the Barolong farms and commercial farms. The respective rates are 25%, 8%, and 5.5% for both 1980 and 1981. In 1981 traditional farmers planted 270,200 hectares and harvested 203,100; Barolong farmers planted 12,400 hectares and harvested 11,400; and commercial farmers planted 20,000 hectares and harvested 18,900.

Another important factor in determining the potential for increasing arable crop production is the availability of suitable but unused land. A total of 290,200 hectares were planted in 1981 and 286,700 were planted in 1980. Another 55,000 hectares of land that had been planted at least once by traditional farmers in the prior five years were found not to have been planted in 1980, indicating further hectareage available for cultivation. A total of 1,360,000 hectares has been identified as potentially suitable for cultivation in Botswana. Land currently planted thus represents 21% of all potentially cultivatable land

and only .05% of the total land area of Botswana.

The significant variables for increasing arable crop production levels, then, appear to be higher yields per hectare, less hectarage abandonment and expansion in the number of hectares under cultivation. Given adequate rainfall, the latter two variables are probably dependent upon some success in achieving the first.

Barolong crop yield levels for maize and sorghum are 200% greater than existing yields of other traditional farmers. Soil and climate conditions in the Barolong area do not vary markedly from conditions in other traditional farming areas. It is reasonable to suggest that other traditional farmers could approach and possibly attain the yield levels achieved by the Barolong if they adopted simple extensions to existing practices. These include improved fencing, the spreading of manure to improve soil fertility, winter plowing, early planting, row-planting, effective weeding and bird scaring. These techniques are generally used on Barolong farms.

The calculation of potential crop production from the traditional sector, assuming the adoption of such improved practices, provides the basis for determining the potential impact on farm incomes and employment. Assume that (a) all traditional farmers attain the crop yields now being achieved by the Barolong; (b) all immediately available hectarage is planted; and (c) all planted land is harvested. Traditional farm crop production would then increase to 144,000 metric tons, a three-fold increase from the 1980 and 1981 average production levels. This amount added to existing commercial and traditional cash crop production (groundnuts and sunflowers) would result in a total crop production of 153,000 metric tons. Cereal crop production (sorghum, maize and millet) would total 146,000 metric tons, 139,000 MT from traditional

farmers and 7,000 MT from commercial farm operations. This would essentially meet Botswana's current cereal consumption requirements.

At the farm level, a household of six persons would produce a yearly average of 2,210 kilograms of grain. The annual household income derived from this production would be P590, valuing the 925 kilograms which is likely to be consumed by the household at existing retail prices and the marketable surplus at the existing farm gate prices. This represents a four-fold increase from the existing average household crop income of P140 per annum.

Traditional cropping practices now require about 16 person-days per hectare. The average area farmed is about 4.5 hectares. These averages are indicative of the fact that crop farming is one of several economic activities in rural households and strongly implies the existence of severe underemployment. Crop production currently contributes relatively little income to the poorer farm families. Their main sources of income are off-farm employment within Botswana and migrant work in South Africa. Male family members are often away from home; even when they remain in rural areas much of their time is devoted to tending cattle belonging to others. Consequently, women provide 70% of the labor for crop production. This system has developed over generations in response to environmental conditions and changing economic opportunities in Botswana. This pattern of labor allocation appears sensible from the standpoint of maximizing economic returns and minimizing risks.¹⁶

The achievement of higher production levels would certainly require additional hours of labor and a willingness of the affected households to divert labor

¹⁶Kerven, The Effects of Migration on Agricultural Production; from the final report on the National Migration Study Project (633-0095).

from other activities. However, the relationship between crop productivity and labor is not simple and direct. As the recent National Migration Study (633-0095) suggests, the economics of arable agriculture need to be assessed in light of the fact that non-quantifiable costs and benefits may substantially alter the profitability profiles of farming units. It is reasonable to state however that the opportunity cost for expanded labor input into crop agriculture is generally low given the severe underemployment and lack of alternative employment opportunities in rural areas. The farmers who are now primarily dependent upon crop agriculture are most likely underemployed to such a degree that the additional work needed to increase yields would only lead to fuller employment. Production increases therefore would result in increased incomes, not generate new jobs. Most households would also continue to require wage income from migrant work, occasional labor and livestock. Similarly, employment of modern methods and practices in livestock could result in a higher cattle offtake rate and further improve income levels.

(3) Existing Practices and Environment

The realization of the aforementioned potential increases in yields and farm incomes is contingent upon traditional farmers' adoption of improved farming techniques and the behavior of a number of other variables affecting production. The existing practices of traditional farmers, the constraints to production, and the implications for the development of arable agriculture are discussed below.

The traditional farming system in Botswana consists of broadcasting seed, plowing with a team of six to eight oxen that are raised for meat rather than draft purposes, chasing away birds at the end of the growing season and finally, harvesting by hand. The traditional farmers' fields are normally communally-owned and located within 30 kilometers of the village. Thirty-two

percent of the traditional farms are headed by women who typically have less access to labor and draft power, have less land, and are less likely to settle at the lands. The educational level of the traditional farm holder is low; 68% have no formal educational training. The majority of the traditional farmers have received no advice from agricultural extension agents. Only 8% are using commercial fertilizer or manure, and only 3% are using an insecticide. Most farming families have invested in no more than a single row plow and only 48% own their own source of draft power. The majority of the rural poor are excluded from obtaining credit by their lack of collateral. The resulting cereal and cash crop yields from the average 4.5 hectares being cultivated by the traditional farmer are too low to sustain the typical farm family of six.

The constraints to arable crop production are numerous, entailing technical, endogenous and exogenous factors. Many known techniques and methods are already practiced on the Barolong and commercial farms to overcome or work around many of these constraints. Other constraints are unique to the resource poor farmer and require special consideration.

(a) Technical Constraints: Limited and erratic rainfall, drought in the most severe instance, is the main constraint to crop production in Botswana.

Existing seed varieties are reasonably well adapted to the region and yield capacities are beyond the levels now generally being realized. Efforts have to be directed to maximize effective use of the available moisture; agronomic practices such as tillage, row planting, timeliness of planting, fertilizer application and weed control are known to improve water use efficiency and increase yields.

Inadequate draft power is a serious limitation on most small farms especially since the timeliness of operations is crucial. Many farmers do not have draft

animals or tractors and often must wait until they can be borrowed or hired. Those who use oxen often delay plowing and planting at the beginning of rains so that the oxen may feed and gain the strength lost during the dry season. Many farmers lack the necessary resources to obtain the tillage and planting equipment which is readily available for purchase. These draft power and equipment constraints often prevent farmers from timing their operations to best suit soil moisture conditions. Crops are often planted too late and in dry, rough seedbeds, resulting in low yields.

Other technical constraints confronting the crop farmer include: bird damage, poor soils, lack of seed varieties, weeds, insects and roaming livestock. Farmers who grow sorghum and millet invariably report bird damage as a serious constraint to production. This ever-present hazard often encourages the sowing of maize, a less drought resistant crop, in areas traditionally planted in sorghum. The reduction of bird damage is difficult, but the use of family labor to guard fields and scare birds has proved most effective and is commonly practiced. Soil crusting is a major problem in the hardveld soils. The crusting results in poor seedling emergence and underscores the need for timely planting. New early maturing sorghum seed varieties are needed and could prove useful when planting is delayed because of draft power constraints or late rains. Another factor inhibiting yields is the presence of weeds which reduce the nutrient and moisture content of soils; weeding is not practiced uniformly. Insect damage on sorghum, millet and maize crops is prevalent, but insecticide control is considered uneconomical and is seldom practiced. Lack of fencing to protect arable lands is a problem for many farmers; roaming livestock frequently damage cereal and legume crops.

(b) Endogenous Constraints: Endogenous constraints are also significant.

These refer to the limited capital and labor resources of the small scale farmer. The major constraint of this type is the farmers' lack of resources needed to purchase and maintain adequate draft power to ensure timely planting. Six to eight oxen using traditional plowing practices are needed to cultivate the six to eight hectares which is the minimum farm size needed to provide a viable household income level. The second issue for the farmer is the opportunity cost applied to labor. The additional labor required to expand production may necessitate the diversion of labor from an existing alternative application. The traditional system is now low in labor and capital costs, and modification to the system depends on the farmers' assessment of probable returns and the best use of limited household resources.

(c) Exogenous Constraints: A major exogenous constraint to increasing crop production is the competition from South Africa. South African production costs are low and the Botswana market is open, resulting in relatively low producer prices. Under these conditions it is difficult to guarantee remunerative prices for local producers. Botswana's Agricultural Marketing Board has fixed producer prices at a level competitive with those in South Africa to avoid illegal marketing across the border.

The other principal exogenous factors are those associated with the supply of goods and services needed for production and the marketing of farm outputs. Botswana's public and private institutions charged with these functions are considered adequate for the task. Technical and endogenous constraints appear more binding than the exogenous ones.

(4) Implications

Most of the Government's efforts in agriculture to date have concentrated on the highly remunerative livestock subsector. There is now more awareness of

the limitations of livestock production as a source of employment and income for the rural poor. The GOB is therefore placing considerably more emphasis on increasing arable crop production. The main GOB vehicle for stimulating crop production and rural development is the Arable Lands Development Program (ALDEP). The objectives of ALDEP are to approach self-sufficiency in basic grains and legumes, to raise small holder incomes, to create employment in rural areas and to slow rural to urban migration. ALDEP has a two pronged strategy: First, to promote production oriented activities which are expected to have a positive impact on crop output, incomes and employment (i.e. improving input delivery, agricultural credit, extension and marketing); and second, to implement infrastructure improvements such as the construction of wells, small dams, fencing, and farm to market roads.

ALDEP utilizes and builds upon existing institutions such as the Agricultural Extension Service, the Botswana Agricultural Marketing Board (BAMB) and the cooperative movement. BAMB and the cooperative movement are developing marketing and input supply points nearer to farming communities. Selected inputs are being subsidized in combination with small holder credit administered by the National Development Bank. Credit schemes for donkey draft power and for the adoption of planters and cultivators are underway. Farm improvement grants are also available for small scale water supply and fencing projects. The financial incentive required to encourage farmers to invest more time, energy and capital in their operations is being provided with assured output prices which are now established prior to the beginning of the cropping season.

ALDEP is broadly designed to address most of the issues important to crop agriculture. At the practitioner level, the farmer must gain knowledge of

and adopt improved farm practices and inputs. A critical constraint in this regard has been the shortage of trained and experienced manpower, particularly the district extension agents. The Botswana Agricultural College Expansion Project (633-0074) has significantly increased the number of trained extension agents; as they gain field experience, extension services will be better equipped to provide the services needed by small farmers.

The development of technological packages appropriate to specific local ecological and social conditions is important for programs aimed at increasing production. This requires adaptive research in the basic food crops and selected cash crops as well as an understanding of the small farmers' crop and livestock problems. Improved and more relevant agricultural research is needed. Beef production has dominated the research agenda in the past and has been of little benefit to the majority of households owning little or no cattle. A major new project, Agricultural Technology Improvement (633-0221) is specifically directed at arable agriculture and the small farmer. The project employs farming systems research to further identify production constraints and develop cost effective technical solutions to farmers problems; it will strengthen the Ministry of Agriculture's research capabilities and institutionalize linkages between research and extension. The project also addresses the need for improved seeds by financing seed research and establishing an improved seed distribution system.

(5) Donor Assistance

The Ministry of Agriculture's (MOA) recurrent budget represents about 6% of total GOB recurrent expenditures; it is scheduled to grow at 10% per annum in real terms over the NDP V period (1979-85). The MOA administers about 10.5% of all budgeted development funds. The arable agriculture subsector accounts

for approximately 20% of the development budget for agriculture during NDP V, up from the 9% budgeted for the previous plan period (1976-1981).

Donors have financed approximately 50% of all development expenditures for agriculture over the 1979/80 to 1981/82 period. USAID/B, the European Economic Community, and the United Kingdom were the major contributors, concentrating mainly on agricultural training and education, institutional development, and the livestock subsector.

Donors can be expected to become more active in non-cattle agricultural development in the future given the shift of the GOB in this direction. USAID/B has already accomplished this through an almost exclusive concentration on arable agriculture, primarily the Agricultural Technology Improvement Project (633-0221) which will be active through the CDSS plan period. ALDEP, which received initial assistance under the Rural Sector Grant (633-0077), is being expanded with assistance from other donors. The African Development Fund (ADF), the African Development Bank (ADB) and the International Fund for Agricultural Development (IFAD) have recently concluded assistance agreements for ALDEP implementation amounting to approximately \$17 million. This will directly complement USAID/B's efforts in applied agricultural research. Botswana will also benefit from regional agriculture research programs currently being planned under Southern African Development Coordination Conference (SADCC) auspices with assistance from the Cooperation for Development in Africa (CDA) donor group. The GOB chairs the SADCC Committee charged with developing regional agriculture research cooperation and programs.

(6) Summary

The GOB has become increasingly concerned about its rapidly growing workforce faced with limited job opportunities in the formal sector. Rural areas contain

the bulk of the unemployed and underemployed and most of the jobs in the informal sector which must absorb up to 50% of the new labor force entrants. The predominant economic activities of the informal sector are livestock and crop production. Arable agriculture is of particular importance since it is labor intensive and is practiced by traditional farmers, the most disadvantaged producers.

There exists a significant potential for increasing yields on traditional farms which currently produce most of Botswana's cereals production. Up to a three-fold increase in production and corresponding income could be achieved if traditional farmers were to adopt the improved technology currently practiced by the Barolong farmers, a traditional farm group now obtaining high yields.

The principal constraints to increasing traditional farm yields are of a technical nature. The technical solutions are generally available in Botswana and are already employed by traditional Barolong farmers, a group which is similar in most respects to the traditional farm subsector. A concentrated GOB effort to address the production constraints of small farmers is now under way with the initiation and planned expansion of ALDEP. An essential and complementary program of farming systems research and related institution building has also been begun recently. ALDEP helps provide the array of services and goods needed by producers while farming systems research develops the information and technical packages needed by farmers.

II: STRATEGY

A) STRATEGY STATEMENT AND INTRODUCTION

USAID/B's two interrelated program goals are to increase income opportunities, especially in the rural area and to increase the supply of trained manpower equipped to participate productively in the public and private sectors of the economy. The strategy contains the following three principal objectives:

To improve the quality and efficiency of the primary and post-primary educational systems to better meet projected workforce requirements;

To provide advanced training for administrators and technical personnel to help increase and diversify employment opportunities;

To strengthen selected institutions which are directly responsible for increasing agricultural and off-farm productivity and incomes in rural areas.

USAID/B's program goals and strategy objectives were established after considering four major factors: the macro-economic and sectorial analyses; the evolution of USAID/B assistance; the priorities and program involvement of other donors; and, the established AID priorities for development assistance.

(1) The Analysis

Lack of job opportunities and an inadequately skilled workforce are becoming Botswana's most critical impediments to sustained economic development. Botswana has been able to maintain a respectable rate of economic growth since Independence, based largely on resources generated from a developing mineral sector. The most difficult task for the government will be to

continue to translate this relative prosperity into productive investments which will broaden the economic base and provide additional employment. A crucial and overriding constraint to the creation of new employment is the underdeveloped human resource base. A rapidly growing, relatively unskilled labor force is faced with limited opportunities for productive employment, particularly in the rural areas where most of the population resides. The informal sector will have to absorb a large proportion of the new labor force entrants. The expansion of small business and arable agriculture, major activities in the informal sector, will be particularly important. There is also a lack of sufficient numbers of trained Batswana to fill current and projected job vacancies in the formal sector, resulting in lower productivity and a continued dependence on expatriate staff. Required technical, managerial and entrepreneurial skills are in short supply.

The principal objective of Botswana's Fifth National Development Plan (NDP V, 1979/80-1984/85) is to increase employment opportunities and income for the many Batswana who receive few direct benefits from the still small formal sector. The plan emphasizes rural development to increase employment and incomes and proposes specific measures to foster labor intensive production and economic diversification in both the formal and informal sectors. USAID/B's strategy addresses these employment and manpower constraints and supports the Government of Botswana's (GOB) policy and program initiatives in education, workforce training, and employment creation.

(2) Evolution of the USAID Program

Since the initiation of assistance in 1970, USAID has provided significant assistance for human resource development. Over 400 participants have received advanced level training in the U.S. and approximately 40 Operational Experts

have filled key GOB positions while counterparts were being trained at home or abroad. In formal education, USAID/B helped in the establishment of the University of Botswana and the expansion of the Botswana Agricultural College. More recently, USAID/B has embarked upon a primary education improvement program. This involvement has established the U.S. as a primary donor in the area of human resource development and a respected source of technical expertise in education and manpower development.

A similar situation exists in the field of agricultural and rural development. USAID/B provided key inputs to the organization and operation of the Ministry of Agriculture through agricultural planning and livestock projects. Assistance is now provided for farming systems research to develop technological packages which will increase productivity in arable agriculture.

USAID/B assistance under the Rural Sector Grant (633-0077) has evolved from a broad based experimental effort in rural development to a more focused program to generate off-farm employment and increase incomes in rural areas. USAID/B has thus become a major donor associated with rural employment generation and applied agricultural research.

(3) Complementarity with Other Donor Programs

Other donor contributions both actual and planned have been carefully considered in the determination of USAID/B's strategic objectives. Major donor contributions to Botswana's development programs have been examined in the analysis.

4) AID Development Assistance Priorities

The proposed strategy and method of implementation are consistent with the Agency priorities of institution building, private sector development and

technology transfer. Institution building activities are being undertaken by the Ministries of Agriculture (farming systems research); Education (primary school teacher training); and Commerce and Industry (rural business extensions). Approximately 20% of Botswana Workforce and Skills Training project resources will be for training in the private sector. Similarly, the ultimate beneficiaries of USAID/B's Rural Sector Grant and Agricultural Technology Improvement projects are small entrepreneurs and farmers. Technology development and transfer is a prime characteristic of USAID/B's efforts in farming systems research and is an important aspect of the assistance to improve the formal educational system and increase rural employment and incomes.

B) DETAILED STRATEGY FY 85-89

USAID/B's three strategic objectives for achieving the interrelated goals of improved income opportunities and manpower development are discussed below.

(1) Improving the quality and efficiency of the primary and post-primary educational systems to better meet projected workforce requirements.

(a) Primary School Education: The high priority which the GOB has assigned to primary education is reflected in plans to provide universal primary education and to increase the numbers of classrooms and qualified teachers. The analysis suggests that the primary school will need to give more attention to teaching practical knowledge and skills to better equip students to cope in a situation where employment will depend on initiative and creativity. USAID/B is assisting the GOB in this respect through the Primary Education Improvement Project (633-0222). This project is: (a) upgrading the efficiency, quality and relevance of primary education through pre-service and in-service training for teacher training staff, teachers and inspectors, and (b) establishing undergraduate programs leading to Diploma and Bachelor

level degrees in primary education.

(b) Post Primary Education: The analysis section concludes that there is a growing requirement for vocational and technical training, and the expansion of formal schooling at the junior secondary level and above. The GOB is considering a major expansion of junior secondary level access beginning in 1984, complemented by in-school and post-school training opportunities. USAID/B plans major assistance in this area beginning in FY 1985. An educational assessment will be conducted jointly by USAID/B, AFR/TR and AID/S&T to recommend, among other things, the assistance most suitable for increasing access to and improving the efficiency of post-primary education. USAID/B is already providing the GOB with technical expertise to develop the plans for this expansion by funding a technical expert in the Planning Unit of the Ministry of Education. Additional USAID/B assistance through the proposed educational assessment and the design of a FY 1985 education project will help the GOB in formulating plans for the development of its post-primary training and educational system.

USAID/B's strategy in the education sector is consistent with the Agency's policy position which holds that the highest marginal returns on education investment, at least in the short-term, are likely to result from improvements in the quality and efficiency of the existing system.¹⁷ The Primary Education Improvement Project (633-0222) is structured along these lines and this perspective will guide the development of the proposed FY 1985 Secondary Education Improvement Project (633-0229).

¹⁷AID Policy Paper. Basic Education and Technical Training, December 1982, p. 7.

(2) Providing advanced training for administrators and technical personnel to help increase and diversify employment opportunities.

The analysis predicts that the shortage of individuals with senior secondary and university level education will continue and that the demand for expatriate labor will persist. The GOB is working to alleviate these shortages through increased senior secondary and university placements, and external scholarships for undergraduate and graduate studies. USAID/B has been and will continue to be a major donor with respect to the latter.

The major objective of USAID/B's Workforce and Skills Training Project (BFAST, 633-0231), is alleviating the critical shortage of skilled manpower in both the public and private sectors. This project concentrates on the manpower needs of the private sector, related institutions, and four government ministries: Commerce and Industry, Agriculture, Education, and Local Government and Lands. These institutions have a key implementation role in the GOB's strategy for generating employment in rural areas. The BFAST project will train Batswana to fill administrative and technical positions critical to policy formulation and program implementation by these ministries. Operational Experts (OPEXers) will be provided to fill key GOB positions vacated by personnel released for long-term training. Private sector training is also included to support the development of small-scale enterprises and expand the pool of manpower with basic managerial, entrepreneurial and accounting skills.¹⁸ In addition, the amended Rural Sector Grant project will finance short and long-term training for District Administrators.

¹⁸AID Policy Paper, Private Enterprise Development, p. 8.

The BFAST project will be active throughout the CDSS plan period. This emphasis on post-secondary training derives from the Agency's policy on education and human resources development which "encompasses a concern for building up developing country public administration and management capability to provide services to the poor".¹⁹

(3) Strengthening selected GOB institutions which are directly responsible for increasing agricultural and off-farm productivity and incomes in rural areas.

The analysis has indicated that a large share of the rapidly increasing and relatively unskilled labor force will have to find work in the informal sector. This workforce is predominantly rural based and already engaged in that sector through traditional farming and occasional off-farm employment. There is considerable potential for increasing incomes on traditional crop farms. The GOB has a policy and program commitment to increase arable agricultural production in the traditional sector as evidenced by its support to the Arable Lands Development Program (ALDEP). A similar commitment has been made for the promotion of off-farm employment through the Financial Assistance Policy (FAP) and support to the rural industrial program of the Ministry of Commerce and Industry. USAID/B will assist these rural development efforts by strengthening two institutional capabilities: farming systems research in the Ministry of Agriculture, and small business extension and training in the Ministry of Commerce and Industry.

ALDEP is now moving from a pilot stage to full institutionalization on the national level. It has full GOB policy and resource commitment augmented by

¹⁹AID Policy on Education and Human Resources Sup. A to Handbook 1, May 16, 1978.

substantial other donor contribution. However, there still exists important gaps in the knowledge of area specific farmer practices, constraints, and potential. There will be a continuing requirement to systematically research these topics, develop pragmatic technical solutions, test these on farmer's fields, and develop effective service delivery systems appropriate to local conditions. This is the broad purpose of farming systems research and is the principal objective of the Agricultural Technology Improvement Project (ATIP, 633-0221). Specifically, the project will: (a) increase the Ministry of Agriculture's research capacity to determine appropriate technological packages for small farmers; (b) strengthen the institutional linkage between research and extension; and (c) ensure the supply of appropriate seed varieties to farmers.

ATIP started in FY 82 and will be in operation during the CDSS plan period. Agriculture research is a long-term proposition requiring a sustained effort, fully integrated into the entire institutional system which impinges on food production. ATIP is a start in this direction and additional assistance will most likely be required over the long-term. USAID/B plans to utilize the resources to be made available under the Cooperation for Development in Africa (CDA) and Southern Africa Development Coordination Conference (SADCC) regional efforts in agricultural research development.

The analysis has shown that the most probable short to medium-term impact of increasing small farm production will be on increasing rural incomes and decreasing underemployment. The generation of new jobs will depend upon the further diversification of the economy and the expansion or creation of productive off-farm enterprises. This is a major element of USAID/B's assistance strategy. USAID/B is a major donor associated with recent

Botswana initiatives to generate off-farm employment opportunities through the Rural Sector Grant and, to a more limited extent, through the Small Enterprise Development Project (633-0228) which augments the capacity of a local non-profit organization to assist small businesses.

Assistance during the first phase of the Rural Sector Grant (RSG) enabled the Ministry of Commerce and Industry to initiate its rural industrial officer (RIO) program. The institutional capabilities of the RIO program will be strengthened and the program expanded during the second phase of the project. The RIOs are responsible for: (a) coordinating rural business development efforts at the district level; (b) assisting entrepreneurs to identify new off-farm production possibilities; (c) providing (or arranging for) the technical and training assistance needed by entrepreneurs; and (d) the processing and approving of capital assistance requests by small businesses under the Financial Assistance Policy (FAP) program. The project addresses the need for economic diversification through the promotion of new businesses. Two small sub-components of the project, Horticultural Estates and Agricultural Small Projects, also expand non-traditional agricultural production (i.e. vegetables, poultry).

The RSG and ATIP projects also respond to the training and employment needs of rural women. Nearly 80% of the beneficiaries under the Horticultural Estates sub-project were female; approximately 50% of those entrepreneurs trained under the RSG were women; and women will be major beneficiaries of ATIP since approximately 70% of the traditional farm workers and 30% of farm household heads are women.

The development of off-farm employment opportunities will be an area of continued USAID/B concern during and beyond the plan period. USAID/B intends

to explore relevant project possibilities for initiation in FY 1987 or 1988. These may include strengthening the credit delivery system for small business, technical assistance for private sector development, and special studies or experimentation relevant to economic diversification.

C) COMPLEMENTARY ACTIVITIES

(1) Population

Aggregate labor supply is outpacing labor demand. The GOB recognizes the effects of the population's 3.3% growth rate on its efforts to reduce unemployment, but has adopted only mild policy and program measures to help reduce population growth. The GOB has essentially opted for a low key approach of incorporating voluntary planning services into its maternal and child health care delivery system.

USAID/B's strategy is to encourage policy development on voluntary family planning and continue activities which heighten awareness of the problem. Activities will include policy dialogue, information dissemination and education, possibly leading to institutional development activity at a later stage. USAID/B will continue to monitor and support the Family Planning International Association (FPIA) activities in Botswana, and will follow-up on the outcome of the contraceptive prevalence survey currently under discussion with the GOB. Program opportunities may also arise pursuant to the World Bank's recent appraisal of a proposed health project. In addition, regional and centrally funded resources will be used to the maximum extent feasible.

(2) Housing: Sites and Services Development

The percentage of Botswana living in urban settlements rose from 4% in 1964 to 16% in 1981 and is projected to increase to 32% by 1991. The Government

has recognized that inaction in urban areas would not discourage the rural exodus, and correctly decided in 1974 to legitimize existing squatter areas and deal with the realities of urban migration. The Government is endeavoring to rationally accommodate rapid urbanization while stressing rural development to help abate the influx to urban areas.

USAID/B has supported this approach and in 1976 secured a Housing Guaranty loan for the development of a sites and services project in Gaborone. A 15 million dollar follow-on loan, entitled Gaborone West Housing and Facilities, was recently signed and project activities will occur well into the plan period. This loan will finance infrastructure and community facilities, and will provide building material loans for some 3,000 new homes. The project will also provide credit for individuals who wish to expand their homes, and for commercial facilities which will be rented to small entrepreneurs. Technical assistance will also be provided to the Self-Help Housing Agency and to a new housing division in the Ministry of Local Government and Lands. Two of AID's priority areas, institutional development and the private sector, will be addressed in this project.

D) BENCH MARKS

USAID/B's active and proposed projects during this period will assist the GOB to make significant inroads to alleviate developmental constraints and to improve the overall standard and quality of life of Batswana in the 1980s. Specific bench marks have been established to help evaluators measure the extent to which USAID/B strategy, goals and objectives are achieved. These are as follows:

1. To increase the percentage of qualified primary school teachers

from 62% in 1980 to 70% in 1989;

2. To decrease the projected shortage of junior secondary graduates with additional training by approximately 10%, from the expected shortage of 28,500 to an estimated shortage of 25,000 in 1989;
3. To increase the percentage of primary school graduates who gain access to junior secondary school from the current percentage of 33% to 75% by 1989;
4. To reduce the projected shortage of persons with a higher education from 3,900 to 3,700 by 1989;
5. To create the capacity within the Ministry of Agriculture to test, develop and extend new farming systems recommendations so that at least 8,000 traditional farmers increase average yields by 50% by 1989; and
6. To strengthen the institutional capacity of the Ministry of Commerce and Industry to provide extension services to approximately 2,000 small businesses, create about 4,000 new jobs and arrange for short-term technical training for an estimated 10,000 persons by 1989.

In summary, the achievement of USAID/B's strategy goals and objectives should contribute significantly to the GOB's efforts to make discernible progress in increasing: 1) employment opportunities; 2) rural incomes; and 3) the number of skilled Batswana.

III: THE ANALYSIS, STRATEGY, AND AGENCY PRIORITIES

The GOB has employed prudent economic policies and sound management practices over the last decade, which provides an excellent base for continued economic growth. A major concern, however, is the rapid growth in the labor supply which is outpacing demand and which is insufficiently skilled to meet the requirements of much of this demand. Unemployment and severe underemployment will persist, particularly in rural areas where low productivity and low

incomes are most prevalent. The implications are clear: The workforce must be educated and trained to better meet job requirements; labor intensive jobs must be created; and rural productivity must be increased to generate viable income levels. The GOB has committed itself to these tasks through a series of policy and program measures.

The analysis has shown that: (i) the primary school system requires improvement and that critical shortages in the supply of junior secondary graduates and more highly educated manpower must be addressed; (ii) there is a reasonable potential for increasing crop production, resulting in increased incomes of traditional farmers; and (iii) economic diversification and small business development in rural areas are the primary means of accelerating the growth of new jobs.

USAID/B's strategy goals of increasing the supply of skilled manpower and increasing rural incomes and jobs are consistent with these findings and the GOB's development priorities. The specific strategy objectives are to: (i) improve the quality and efficiency of the primary and post primary educational systems to better meet projected workforce requirements; (ii) provide advanced training for administrators and technical personnel to help increase and diversify employment opportunities; and (iii) strengthen selected institutions which are directly responsible for increasing agricultural and off-farm productivity and incomes in rural areas.

The strategy objectives will be accomplished through institution building, private sector development, and technology development and transfer. Manpower training will be concentrated in the four key GOB institutions most responsible for increasing employment opportunities; three of these, the Ministries of Education, Agriculture, and Commerce and Industry will receive additional

assistance to develop specific capabilities necessary to achieve the strategy objectives. The private sector, small farmers and rural entrepreneurs, will benefit from USAID/B assistance in agriculture and rural development.

Technology development and transfer will occur in the improvement of primary school teaching and the development of technology packages needed by small farmers to increase agricultural production.

IV. RESOURCE REQUIREMENTS

Implementation of USAID/B's strategy will require a minimum funding level of \$10 million per annum over the 1985 to 1989 period. This level will enhance economic development, will enable USAID/B to maintain its influence with Government on the issues addressed in the strategy, and will assist in promoting political stability in one of the most turbulent regions of the African continent. Moreover, Botswana is organized on the principles of democracy and a free market economy. Botswana is becoming one of the development "success stories".

USAID/B intends to gradually introduce loan assistance as indicated in recent Annual Budget Submissions. The projected economic conditions of Botswana are such that the GOB could manage the debt servicing suggested by a program of grants and loans.

USAID/B will continue to reduce its portfolio, from 21 active projects in FY 1982 to 7 high impact projects by October 1, 1986; most of this reduction will occur prior to that date. The portfolio will continue to reflect a concentration of resources on education/manpower development and rural development/agriculture. Planned obligations for FY 85 and FY 86 indicate approximately 80% of yearly obligations will be directed to education/manpower development and 20% to rural development/agriculture. Planned allocations over the balance of the plan period

are approximately 75 to 80% for education/manpower development and 20 to 25% for rural development/agriculture.

USAID/B will reduce its current workforce level by one full-time direct hire officer by eliminating the Assistant Program Officer position in December 1983. USAID/B will operate efficiently and effectively at a personnel level of 11 full-time direct hire and two part-time direct hire. The direct hire staffing pattern is proposed as follows: Mission Director, Deputy Mission Director, Program Officer, Project Manager, Agricultural Development Officer, Human Resources Development Officer, General Engineering Officer, Project Development Officer (regional responsibilities), Controller, Executive Officer, Executive Assistant, Administrative Aide (part-time), and General Services Officer (part-time).