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Annex B
MANPOWER/EDUCATION

A Report to the Congress on

**DEVELOPMENT NEEDS
and OPPORTUNITIES for
COOPERATION in
SOUTHERN AFRICA**



MANPOWER IN SOUTHERN AFRICA

A summary and synthesis
of manpower findings from
SADAP Sector Analyses and
an assessment of manpower
opportunities and constraints

Gary A. Walker

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Note: The term "manpower" is used throughout this report in the dictionary sense of the term and refers equally to men and women.

PREFACE

The following report represents an attempt over five weeks in September - October, 1978 to synthesize and summarize the findings of the SADAP sector assessments^{1/} in accordance with the following terms of reference provided by USAID:

"6. Manpower

a) Phase Two

Based on the appraisals of manpower problems presented as elements of the sector assessments to be conducted under the Southern Africa Development Analysis Project, ^{2/}SADAP (including the assessments described herein), ^{2/} synthesize the manpower information into an overall manpower assessment which will delineate national and regional opportunities and constraints."

In order to ensure that conclusions drawn from SADAP assessments are broadly consistent with manpower constraints, opportunities and priorities in the region, the report goes beyond the Terms of Reference and also reviews 44 recent non-SADAP manpower related reports whose contents are summarized in Annex I. The findings of some of these reports were then synthesized with SADAP findings in order to develop the generalized summary of strategy elements common to the region which appears on pages 7-20. Part II on Country Perspectives then compares and contrasts the general areas of need with the particular realities of each country.

^{1/} SADAP assessments are available on the following topics: agriculture, health, institutional constraints, labor migration, manufacturing, mining, refugees, shelter, transport and telecommunications and women.

^{2/} i.e. - Terms of Reference for other sector assessments completed by Pacific Consultants.

The information in Annex II summarizes the manpower recommendations of the SADAP assessments. It should be noted that, although there is often no further elaboration of these recommendations in the SADAP analyses in terms of project or program details, the information so presented suffers from its removal from the context of an overall discussion of a given sector. Some recommendations, therefore, make more sense when read as part of a more comprehensive sector analysis.

Finally, it should be noted that the objective of this paper is to present a summary and synthesis of numerous other reports, to link this with the SADAP findings and to offer an overall assessment of areas of need in the field of manpower development. It is not based on field research and does not claim to be original in its findings, conclusions or recommendations. If anything, the consultant was awash in reports which presented more data and analysis gathered and analyzed over longer periods and in greater depth than was possible for this report.

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LIST OF ABBREVIATIONS USED IN REPORT

AAI	African American Institute
BEC	Botswana Extension College
CSO	Central Statistics Office
DANIDA	Danish International Development Agency
EDF	European Development Fund
FAO	Food and Agriculture Organization
FI	Farmer Institute
FRELIMO	Front for the Liberation of Mozambique
FTC	Farmer Training Center
GCE	General Certificate of Education
GOL	Government of Lesotho
GOM	Government of Malawi
GOS	Government of Swaziland
GRZ	Government Republic of Zambia
ILO	International Labor Office
NDP	National Development Plan
NTTC	National Teacher's Training College (Lesotho)
NUL	National University of Lesotho
ODM	Overseas Development Ministry
RSA	Republic of South Africa
SADAP	Southern Africa Development Analysis Project
SCOT	Swaziland College of Technology
SWAPO	Southwest African Peoples Organization
TNDP	Third National Development Plan

UBS University of Botswana and Swaziland
UNDP United Nations Development Programme
UNZA University of Zambia

CURRENCY CONVERSIONS

<u>Country</u>	<u>Currency</u>	<u>Symbol</u>	<u>Value</u> [*]
Botswana	Pula	P	P1=\$.90
Lesotho	Rand	R	R1=\$1.15
Swaziland	Emalangen	E	E1=\$1.15
Malawi	Kwacha	K	K1=\$1.13
Mozambique	Escudo	ES	ES1=\$.03
Zimbabwe	Rhodesian Dollar	R\$	R\$1=\$1.54
Namibia	Rand	R	R1=\$1.15
Zambia	Kwacha	K	K1=\$1.33
South Africa	Rand	R	R1=\$1.15

* as of 7-24-78

I. INTRODUCTION

A. A Manpower Strategy Framework

Numerous reports analyzing the prospects for development in the majority-ruled states of southern Africa have stressed the importance of inadequately educated, trained and experienced manpower as the most fundamental and recurrent constraint upon virtually every sector of the economies in question. Critical shortages of technical, administrative, managerial, and professional personnel have had profound adverse consequences for economic performance, government efficiency, the capacity of countries to utilize international technical assistance effectively and the achievement of political and social goals.

Many other specific constraints to the proper and timely development of the southern African economies have been identified in variously defined sectors. Despite glaring exceptions such as the resource base and geopolitical position of Lesotho or the exacerbating effects of declining copper prices and closed borders for Zambia, the chronic underlying difficulty for southern African development has been, and continues to be, an inadequate pool of human resources. For this reason, it is suggested that consideration be given to using manpower development as the primary integrating mechanism for the articulation of an overall strategy framework for donor participation in the development efforts of the region.

Other sectors would not be neglected. Their development would be stimulated through a manpower approach. Basic human needs would be addressed fully and be augmented by manpower training programs. Rural development schemes would benefit from the availability of greater numbers of better trained indigenous counterparts. Manufacturing requires a skilled and efficient workforce. Mining is hampered by shortages of local technicians. And sophisticated health care cannot be sustained in the absence of substantial support staffs capable of numerous specific and highly differentiated tasks.

To permit the optimal utilization of new and strengthened local capabilities, a secondary, but essential, element of this approach would involve greater emphasis on infrastructural development. Skilled farmers must be able to transport their goods to market, efficient workers require domestic and foreign outlets for their products, and well trained managers must have a telephone system that works. If skilled manpower is seen as an engine of development, infrastructure is the tracks on which it runs.

The precise number and level of personnel required for each sector of every economy in the region has not been determined; however, there is no mystery with respect to the depth and nature of manpower shortages in southern Africa and there is no shortage of surveys, analyses, and reports on either the overall situation or the peculiar

requirements of many specialized areas in most countries.^{1/} Existing knowledge with respect to manpower needs and availability has not yet been fully mobilized. The resolution of manpower problems can be facilitated through the translation of available data into useable modules of information, able to have an impact (a) on program and project formulation and implementation and (b) on monitoring and measuring the results of such development initiatives.

The central recommendation of this report, that an overall strategy framework (not strategy per se) be built using manpower as the key integrating mechanism, does not imply a single approach or a grand strategy on a regional level. It suggests using existing data to help affected governments to review sectoral targets defined in NDPs and elsewhere and to measure their capacity to achieve such targets with existing resources. Tables^{2/} could be constructed as an aid to visualizing the interrelationships among the many strategy elements and to demonstrate their collective impact on the goals of the strategy framework.

^{1/} See Annex I for an enumeration of some of the data in 44 studies which were available to the consultant. This, plus the bibliography, gives some indication of the wide range of studies available and the topics covered. It also reveals those aspects of manpower development which have been assessed less thoroughly by the studies reviewed by the consultant and points particularly to the need for more data on Mozambique, Namibia and manpower training needs in rural and urban informal sectors and for rural development. The Annex is presented to ensure that this report and future ones build upon information which is readily accessible.

^{2/} See page six.

Once country data were properly organized, a regional framework could be constructed by building upon national elements and highlighting regional consistencies. These, in turn, could form a reasonable basis for assessing existing regional training efforts and developing additional ones. Elements of a strategy framework could be local, provincial, or national in character. They could be projects, programs, or policy innovations. They could address different problems at varying levels of resource inputs and could affect all sectors. In these ways, the evolution of a framework would differ from the advocacy of a specific strategy which would identify a more narrow set of problems and seek to overcome them.

To some extent a manpower-focused framework already exists in some countries; however, the structure, existing components, and impact have not usually be conceptualized or measured from this perspective. The detailed articulation of such a framework would have more than heuristic value; it would permit numerous disparate development initiatives to be assessed for their impact on each other and would provide a clearer sense of the direction, pace, purpose, and results of international donor assistance in a manpower context. In short, such an approach could involve:

using existing manpower data to help affected governments to review sectoral targets defined in NDPs and elsewhere;

- presenting a summary of all SADAP recommendations from a manpower development perspective (see Annex II for an enumeration of these);
- comparing existing targets with present national training capabilities supplemented by external opportunities;
- assessing SADAP and other recommendations in terms of their likely impact on the gap between manpower requirements and training capabilities;
- reviewing external donor assistance being implemented and planned in terms of augmented training capabilities and higher output of skilled personnel;
- identifying priority areas for possible assistance in manpower development which would (a) expand the total trainable pool from which individuals could then be recruited into more specialized areas, and (b) expand training capacity;
- assisting affected governments to establish or strengthen, within the planning units of each ministry and the central planning unit, a coordinated approach to manpower planning through a manpower strategy framework which will allow governments to measure and monitor progress on a regular basis.

The following chart depicts one means to visualize the monitoring and planning effort suggested above and illustrates the kind of information donors and planning ministries would need to assess development efforts in all sectors within a manpower strategy framework.

TABLE I
 SAMPLE TABLE TO CHART ELEMENTS OF
 A MANPOWER STRATEGY FRAMEWORK*

National Manpower Goals — (Agriculture)	1							ETC.
	2							
Strategy Elements	Expanded Primary Education and Primary Curriculum Reform		Formal Sector Agricultural Training Development		Training of Subsistence Farmers: Extension, Cooperatives, etc.			ETC.
	INPUTS	OUTPUTS	INPUTS	OUTPUTS	INPUTS	OUTPUTS		
Actions to implement strategy elements								
School Gardens Program	10 Volunteer instructors; equipment, etc., \$180,000	Primary Agricultural education in 80 schools (1980)			Primary school gardens double as extension demonstrator plots	(Describe as expected)		
Teacher Training Project	Personnel Equipment etc.	(Expected to affect this strategy element)	Personnel Equipment Scholarships Amount, etc.	25 teachers a year with formal agricultural background	Personnel Equipment etc.	(Expected to affect this strategy element)		ETC.
Construction of 28 New Primary Schools								
ETC.								

*Note: All actions to implement strategy elements will not necessarily affect all elements.

B. Fundamental Manpower Strategy Elements Common to the Southern Africa Region

Almost any observations with respect to the nature of manpower constraints, their origins or possible means to overcome them run the risk of repeating analyses and conclusions presented elsewhere. Existing documentation is, however, quite useful when it can be demonstrated that there is general agreement regarding underlying problems and the needs which require priority attention. Actions to meet these needs are, consequently, more likely to lessen constraints and have the optimal impact on manpower development.

The following key areas for reform and initiatives have been repeatedly identified for the region. Although many have been addressed to varying degrees through project, program and/or policy initiatives, on the whole, they warrant continued attention and many difficulties could be ameliorated more rapidly with greater levels of better targeted assistance.

I. FORMAL EDUCATION

A. Primary Level

1) Adaptation of the curriculum to the rural environment. Primary education should be provided as a complete program of study which nonetheless prepares a minority to obtain further academic or vocational training as available. Pupils do

not "fail" selective entrance exams and, therefore, do not see themselves as easily as "condemned" to a life of agricultural pursuits rather than rewarded with government wage employment. Each student is encouraged to understand his success in completing the primary curriculum and is able to understand that with basic literacy skills and substantive knowledge gained from a primary curriculum which stresses agricultural techniques and rural living he will be prepared to contribute to family and community life.

2) Strengthening language and mathematics skills.

Pupils should be provided with a working knowledge of their mother tongue and the official language of the country. In addition, more emphasis should be placed on math, basic science and nutrition.

3) Expanding the pool of human resources. Most

countries in the region have set a goal of universal and free primary school education for all children. This has not yet been achieved in any of the countries in the region but it is of central importance for resolving manpower shortages at other levels since a recurring problem has been a lack of trainable people - people with sufficient skills upon which to build others.

B. Secondary Level

1) Adaptation of the curriculum to National Requirements. At this level, the curriculum may reflect colonial systems which stressed rote memorization, overemphasized religion and European literature and basically tried to prepare Africans for lower level positions in the local administrations of colonial governments. Most reports stress the need for more concentration on math, science, language skills and practical subjects like typing, accounting, bookkeeping and organizational skills.

2) Creation of new "intermediate schools" more adapted to the non-academic requirements of the majority of pupils who continue beyond primary school. Some countries wish to strengthen primary school skills and reduce costs with the equivalent of a Junior Certificate program that would be more practical than the traditional program which leads inexorably to competition for the GCE or "failure" for those who are eliminated. Again, at all stages the idea of those completing a program rather than failing to make the next rung is emphasized in reports.

C. Tertiary Level

1) Undergraduate University Level requires substantial development according to most reports.

Zambia wants to build a second university campus in Solwezi, the UBS and NUL total enrollment figures are small, there is no higher education in Namibia and despite great strides in education at all levels, the number of expatriates in the wage sector at least in Malawi and Botswana is actually higher today than at independence. More emphasis is needed in technical, scientific and agricultural subjects since some countries will experience educated unemployment if most graduates continue to be B.A. liberal arts generalists interested primarily in law or the civil service. Support is required for capital costs, teaching staff, recurrent budget, research and development.

2) Graduate level academic and professional education is still undertaken almost wholly outside the region. UNZA has law and medicine programs and some graduate courses but most African students from the region obtain advanced degrees in the U.K., Canada, the U.S. and similar countries. Most manpower recommendations and reports focused on primary education or vocational training or made projections for expatriate manpower needs resulting from continued shortages of high level trained local manpower. There are numerous recommendations for scholarships to Western institutions but little discussion regarding major

initiatives in this area. Although initial and recurrent costs are high for such institutions and the available resources might reach more people in less time if applied directly to meeting "basic human needs of the poorest 40%", in the medium term the continued absence of such institutional development will mean restricted capability of African countries to address their own problems in their own institutions. If lessened dependence and institution building are favored approaches in the future, this area would seem overdue for reassessment.

D. Vocational Training

Expansion of types and quantities of such training.

Some countries have fairly good systems for vocational training and require more teachers and equipment while others are still limited in their capability in this area. Nearly all reports stress this area for priority attention since it can a) help alleviate unemployment, b) supply critically short practical skills to those living in rural areas, c) reduce wastage caused by machines which break down and cannot be repaired and d) provide potential counterpart personnel for further training on development projects.

2) Better Targeting of Training to National Needs. As mentioned previously, available information is not always used and reports which identify critical shortages of skills do not always have their findings reflected in the decisions of governments. Particularly in the case of women, some countries have been slow to do more than provide rhetorical support for training of women.

E. Teacher Training

A large number of primary teachers in the region are untrained and have less than the minimum qualifications for their positions. Many teaching posts are held by expatriates. Expanded training for posts at primary, secondary and vocational levels reform of the curriculum to reflect the reformed goals of the curricula they will be expected to teach are stressed.

II. NON-FORMAL EDUCATION

A. Agricultural Extension

1) Extension Education for Subsistence Farmers.

Most reports stress this as fundamental to rural development and indicate that more emphasis must be placed on socio-cultural barriers to the transfer and adoption of new skills in this area while maintaining the important efforts at transfer of appropriate technology, provision of demonstration plots, etc.

2) Functional Literacy. Some reports stress the usefulness of teaching farmers to read in their own language and then providing them with materials to read on topics of direct concern to their everyday life (nutrition, farming practices, health services etc.). The difficulties with this are a) little is written in most local languages, b) some countries have several local languages and few speakers and c) it has not been proved that what people learn through reading such material is not more easily and cheaply conveyed through demonstration plots and other means while basic literacy will solve the problem over the longer term in a more effective manner. Despite these reservations, programs of this nature are supported in some countries.

3) Multi-Purpose School Gardens. Many reports stress the need for more agricultural training at primary and secondary schools. Since primary schools especially are often in very rural areas, school gardens could serve community demonstration purposes as well as those of the school and farmer-parents could be involved in the projects undertaken by their children. Parents could learn new techniques while also passing on some traditional knowledge to their children in this new environment.

B. Non-Formal Informal Sector Training

1) In Urban Areas many forms of petty trading and small services are performed which do not require formal vocational training yet could benefit from instruction provided at youth centers and community centers in squatter and impoverished urban areas usually on the periphery of the region's cities. As demonstrated in Annex I, this is one of the least discussed areas in the reports surveyed by the consultant. It is sometimes linked to discussions of handicrafts or small-scale industries as an area for employment creation but should also be examined from a manpower development perspective.

2) In Rural Areas many similar forms of trading and services occur but more are directed towards the needs of farmers and more dispersed populations. There are some activities which are supportive of rural development which could be strengthened through non-formal training in youth or local party centers. This area is also discussed only infrequently in the reports available.

C. Brigades and Youth Activities

1) Brigades sometimes have a para-military character in terms of their form of organization and provide socialization as well as training. Under

different names and with different structures these organizations contribute to a reduction in youth unemployment, build supra-ethnic national loyalties, provide labor for development projects and teach some vocational skills to their members. The Botswana Brigades, Zambia's efforts to enlist youth in the Rural Rehabilitation Program and Mozambique's mobilization of youth through FRELIMO represent three quite different approaches to marshalling youth for national service outside a military framework. Few SADAP reports mention this approach and the topic also appears to be neglected in most of the reports reviewed in Annex I. The need to provide training and productive activities for primary school leavers to reduce rural-urban migration and strengthen the viability of rural communities is, however, a major concern of most governments of the region and is stressed in several reports as a growing problem. Initiatives to reduce constraints and stimulate the activities of such institutions may offer a major opportunity to address the unemployed and untrained school-leaver problem.

2) Other Youth Activities offering non-formal education and training include programs such as SAIL (Social Action in Lusaka), Girl Guides and Boy Scouts, the Red Cross, church activities and other PVO programs. While less developed in the region than in most developed countries, they do form an important institutional resource which could be utilized more effectively to overcome constraints in manpower identified in both SADAP and non-SADAP reports.

III. WORK RELATED EDUCATION AND TRAINING

A. Apprenticeship and Journeyman Programs

In addition to formal vocational training in a Trades Training School or very informal instruction at a youth center in a squatter area (for example) with limited resources, Trade Unions sometimes have apprenticeship programs and development projects often have counterpart positions for local personnel who are expected to learn a specific task while attached to an expatriate whose job he is expected to take over after a specified time. In specific trades and at particular levels, this approach to manpower development can be of central importance and initiatives could be considered in this regard in direct cooperation with local African unions.

B. In-Service Training

- 1) Government and Parastatal Organizations sometimes have training programs to upgrade Ministerial or parastatal staff capabilities. Programs can range from a one week "retreat" for discussions of management techniques to night classes for secretarial personnel. Frequently, such training can be well targeted since it is intended for specific people who are to fill specific slots. Encouragement and support for this approach appears in some reports, however, it probably represents an area which has been neglected by international donors relative to formal education expansion and curriculum development. Although reaching fewer numbers of people, such training can have a disproportionate effect on institutional capabilities as a result of the targeted nature of the training.
- 2) Private Enterprise and possible support for or linkages with manpower development initiatives of transnational and local companies is rarely mentioned in the literature reviewed. Training ranges from clerical to professional and a survey of programs of this nature might help governments to identify those which might be expanded to include non-company personnel who nonetheless need similar skills for employment in other areas.

IV. SPECIAL PROGRAMS FOR TARGET GROUPS WHICH CUT ACROSS I-III ABOVE TO PROVIDE EXTRA TRAINING ASSISTANCE

A. Programs for Women

1) Agricultural Extension Training targeted specifically for women has been recommended in several reports since in some countries the majority of the agricultural labor force is female and local custom may make effective extension work by a male agricultural extension agent difficult.

Other reports indicate that some women defer agricultural decisions or the adoption of innovations because this is often seen as the prerogative of the absent male head of household. Efforts to translate the official support of governments of the region into improved opportunities for women could have important benefits in agricultural productivity.

2) Vocational Training has been the almost exclusive preserve of men. The construction of hostels for women to permit separate accommodations at vocational training centers in some countries would create more opportunities for women in this area.

B. Programs Affecting Migrant Laborers

The magnitude of labor migration when compared to the capability of the Departments or Ministries of Labor in the region to monitor and service the needs of migrants is disconcerting. It has been recommended in several instances that such Depart-

ments be strengthened and that additional manpower be trained to carry out their duties.

C. Programs Affecting Refugee Populations

Expanding the capacity of local institutions to accommodate increasing numbers of refugees is a popular way to expand educational opportunities for refugee groups since the host government also benefits through the expanded infrastructure which is constructed on its territory. Specific initiatives have been recommended to increase training and to create an institution which would permit refugees to have an organized means to participate in identifying future training and employment opportunities for this community. Manpower development of refugees can have positive benefits for host governments faced with manpower shortages under certain conditions.

V. THE ORGANIZATION OF MANPOWER DEVELOPMENT

A. The Governments of the Region

It is frequently recommended that the central planning ministries establish or strengthen their manpower planning units and that similar units be established or strengthened in a number of substantive ministries. To support this initiative,

the Central Statistical Office often then requires additional staffing and training for staff in order to feed basic data to the planners. Training for these areas is variously recommended in the form of formal advanced training in planning or statistics or in-house training of counterparts or upgrading of operational personnel.

B. The Need for Further Study

Despite the considerable body of literature on the subject of manpower development in the region and the emphasis in the first part of the Introduction to this report that existing data need to be used more effectively, a number of reports have identified specific gaps in manpower information. In addition to making data more comprehensive and detailed, the gathering and analysis of such information must be seen as a continuous process of monitoring, planning and projecting training and skill needs.

VI. THE EMPLOYMENT AND INCOMES PERSPECTIVE

The question of manpower development can also be approached from an employment and incomes perspective. This approach tends to identify areas for job creation and then indicate what training might be needed for local

personnel to fill the envisaged jobs while an education perspective tends to examine the likely expansion of the job market in terms of possible shifts of emphasis in education and training programs. Both sometimes overemphasize the modern wage sector at the expense of the subsistence sector.

Most of the topics outlined above are intended to affect a particular aspect of education or training or they address the problems involved in organizing and implementing the proposal through more effective government administration and institutional responsiveness. There are some observers such as John Simmons and Samir Amin^{1/} who reject major portions of the more conventional debate about what type of curriculum is most "relevant" or whether management training in parastatals or in-service training of strengthened manpower planning units in government ministries will have the greater impact.

1/ See, for example, John Simmons, The Education Dilemma: Policy Issues for Developing Countries, (Baltimore: Johns Hopkins Univ. Press, 1978) or his article "Can Education Promote Development?" in the March, 1978 issue of Finance and Development (Vol. 15, No. 1). Similar issues and a concern about the effects of colonial education structures are considered in Samir Amin, "Le Développement Inégal: Essai sur les formations sociales du capitalisme périphérique" (Paris: éd. De minuit, 1974) and Adam Curle, Education for Liberation (London: Tavistock Press, 1973.)

Instead, they focus on the socio-political context in which manpower development occurs and seek to determine who benefits from it, whether those benefits are shared equitably between various income groups and what impact present systems have upon the poorest segment of the societies in question.

Simmons maintains that "education can promote development" if the latter is defined as movement toward "a more humane society with political systems more responsive to the poor". At present, he claims that most data demonstrates that investment in education widens the gap between rich and poor in the sense that those who benefit are mainly upper income families. He concludes from this that "further investment in most aspects of the existing educational systems of non-socialist developing countries would work against the interests of the poor..." (p. 38 F & D). His solution is "education for self-reliance and participation" which depends primarily upon "people in the villages and neighborhoods to study and solve their own problems." The school of thought represented by Simmons points to projects where villages choose their own teachers, manage their own school affairs and maintain the buildings.

The education for self-reliance approach has an important role to play in many countries in spreading basic literacy, encouraging popular participation in development efforts and providing appropriately trained manpower for rural areas. It is not a panacea, however, and should not be romanticized as the key to untangling the complex web of manpower, employment, income, education and equity problems. It may too often be true, as Simmons points out, that throughout the developing world where the "children of mostly upper income families receive higher education, it is mostly they who will benefit".^{1/} They may receive the most direct benefits in terms of entry into the elite and high earning power, however; short of revolution, there are existing manpower development systems - both formal and nonformal - which cannot be ignored by donors on the basis that income and class disparities may be perpetuated which are little different from those in the donor countries themselves. Further, donors are obliged to work with existing governments whose members are often

^{1/} In southern Africa many children at secondary and university levels have non-literate parents and many more have family members who cannot be described as part of the elite. Upward mobility based on achievement is probably more possible in Zambia and Botswana, for example, than in many developing countries. Case studies of Pakistan and some Latin American countries are not fully analogous to southern Africa and generalizations drawn from these areas are not always valid in other developing areas.

not enthusiastic about radical overhaul of the systems in place.

In an imperfect world and in the absence of gross and sustained tyranny by government against its own people which makes development assistance a dubious proposition, donors can make a useful contribution in a number of the areas summarized above. Organizing those contributions into a manpower strategy framework may serve to facilitate comprehension of the various elements and their interrelationships. This, in turn, will highlight areas of neglect and specific initiatives which might require greater priority. The village based participatory education for self-reliance is a key ingredient for overall manpower development and should be incorporated into the matrix but it should not become the latest development fad to which limited resources are committed at the expense of other equally vital areas.

II. COUNTRY PERSPECTIVES

A. Botswana

1. Current Manpower Resources and Constraints

The data base for an appraisal of Botswana's present manpower situation is relatively adequate and the government has recently completed a major policy review of the education sector.^{1/} Government decisions with respect to manpower development have been taken in light of known constraints and within the context of the country's anticipated manpower needs and overall priorities as expressed in the National Development Plan for 1976-81. Three key aspects are of central importance to an understanding of Botswana's manpower situation: its scale and rural character, the continued severe shortage of skilled indigenous personnel for the modern sector and the distortions caused by labor migration to South Africa.

Perhaps the most apparent feature of the manpower picture is its small scale. With a total population in 1978 of just over 700,000, of whom less than half are between the working ages of 15-64, the country begins with a small population base which historically has had little exposure to formal education. Table II provides key statistics which

^{1/} Report of the National Commission on Education, Education for Kagisano, (Gaborone: Government Printers, April, 1977), two volumes.

outline this limited scale and are important in order to understand the possibilities and limitations of the potential pool of human resources on which the country must depend.

TABLE II
Botswana Manpower Profile

1. Population (1976)	691,000
2. Population Growth Rate (1976)	3.2%
3. Population aged 15-64 (1976)	343,000
4. Wage Sector Employment (1976)	65,756
5. Expatriate Wage Employment (1977)	4,000
6. Batswana Employed in South African Mines (June 30, 1977)	31,385
7. Total Batswana Employed Outside Botswana (1977) - includes domestics, farm labor etc.	46,000

Despite its small scale, the economically active population of Botswana nonetheless depends to a significant extent upon wage employment outside the country and requires considerable assistance to improve general productivity and generate greater levels of income which can be more equitably distributed. The average annual growth of wage sector employment in Botswana of about 3,000 jobs per year when compared to the 1996 estimate of 703,000 economically active persons yields a projection that would lead to the tentative conclusion that Botswana, without major economic reversals, may be able to maintain about the same percentage of its citizens in wage sector employment over the next

generation as it has at present. It is clear from the above, that the major problems and opportunities for manpower development lie in rural development where the bulk of the population continues to live.

The profile of rural life and incomes provided in the Rural Income Distribution Survey of 1974/5 is a measure of the constraints on rural manpower development but it also delineates features which suggest potential for development and for government policy initiatives. The key findings of the Survey were that:

1. The poorest ten percent of rural households had incomes less than R233 per annum;
2. This group derives 25% of its income from "transfers" - remittances from migrant laborers, free meals and gifts;
3. The mean income from crops after deducting expenses for crop producing households was R114 per annum;
4. In contrast, mean income from livestock, after subtracting costs for livestock-owning households was R481 per annum, or more than four times greater than stockless households;
5. The richest ten percent of rural households with incomes over R2,094 per year depended on livestock for 63% of their income;
6. Five percent of the population own 50% of the cattle and 45% of the population has no cattle;
7. About 45% of rural households had incomes below the already austere poverty datum line.

Given the context of highly inequitable income distribution, its correlation with cattle ownership and the

fact that Botswana already has the largest herd in its history grazing in a fragile ecological zone given to cyclical droughts, it is not surprising that the Botswana government has placed increasing emphasis on agricultural development. The SADAP recommendations similarly stress the introduction of agriculture into the primary teachers' training curriculum, development of agricultural courses at secondary levels and the promotion of non-formal adult agricultural education in the rural areas.

Increased emphasis on manpower training for rural development will require strengthened programs of agricultural extension, more time allocated to agriculture in primary schools, assistance to small entrepreneurs to enable them to provide support services to rural communities from local towns and provincial centers, encouraging more educated Batswana to study agriculture as a profession and ensuring the timely delivery of government services within a policy framework conducive to rural progress. A national policy in this regard and its effective execution depends, however, as much on the presence of capable Batswana officials as on willing partners in rural areas who can be motivated to adopt new farming techniques, restrain the expansion of the national herd and reduce the tendency for younger people to migrate to Botswana's few urban areas.

In 1976, the NDP reported 8,808 established government posts of which 1,800 were vacant and slightly more than 800 were held by expatriates. Thus only about 6,200 Batswana were employed by government, representing about ten percent of total wage employment for that year but a higher proportion of skilled manpower. The NDP expects the number of expatriate personnel to rise to about 1,100 in 1978 and decline somewhat in the 1980s. With the continued growth of the Botswana economy and the limited skilled manpower pool, this may be difficult to achieve. Although the estimated gap between output and demand for skilled manpower does not appear overwhelming in absolute numbers, demand is calculated in rather narrowly defined terms of posts expected to be established. It is of central importance to examine the size and rate of expansion of skilled manpower to have an understanding of the constraint this poses for government and in general, even to a basically rural country with a small population such as Botswana.

At the tertiary level, during the academic years 1976/7 and 1977/8 approximately 620 Batswana were enrolled in degree programs at UBS and another 200 abroad. The intake for the former year was 102 compared to a target of 140 while that for the current year stood at 114 compared to a NDP target of 160. In addition, there was an average each year of 107 additional students preparing for diplomas or certificates in teaching, agriculture, home economics and other

non-degree areas. In the critical area of agriculture, there were only 16 students enrolled in 1976/7 and 27 enrolled in 1977/8. The targets set by the NDP are based upon the 1972 manpower survey which projects demand in a number of areas, however, it is hard to imagine that Botswana would face the spectre of nationals trained in agricultural sciences unable to find employment at a time when the central role of agriculture for rural development is being stressed. Until now, the 1972 manpower survey has not been updated. Its revision, taking account of government priorities for rural development would seem to be of some priority.

Secondary school enrollments and projections through 1985 (Government and aided schools) show a steady increase from 10,219 (Forms 1-5) in 1977 to 18,410 in 1985, however, the output of secondary completers is drastically smaller than total enrollments as shown in Table III and can be explained by the low pass rate. For Cambridge passes, the government of Botswana assumes a rate of just 20% for 1976 and 1977 rising to 25% in 1978 and 1979 and 30% thereafter. For the Division passes, rates are estimated at 33% now rising to 40% by the 1980s. Clearly, the perspective presented in the Introduction that formal education should not be seen as a long process of weeding out the "failures" to identify those who may continue is highly relevant to the Botswana case.

TABLE III
OUTPUT OF SECONDARY COMPLETERS

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
1. Form V. Completers (NDP projections)	867	872	1064	1236	1248	1248
2. Division 1 or 2 Cambridge passes	173	174	266	309	374	374
3. Division passes	286	288	372	433	500	500

SOURCE: Education for Kagisano, p. 270

Students with Cambridge passes are eligible for university degree programs at UBS or abroad as well as for the Teacher Certificate programs, the Botswana Agricultural College diploma and some other further education programs. Thus there was a total pool in the entire country of 173 secondary graduates who were considered qualified for university level work in 1976 and the number rose by one in 1977. Government expects an improvement in these figures as shown by the projections for 1978-1981, however, even these are modest figures when it is recalled that the Botswana government alone expects to employ 1,100 expatriates in 1978. When one then considers the need for skilled nationals in commerce, mining, management and agriculture to name but a few areas, it is clear that the output of the secondary schools must be expanded by improving the quality of primary education and the teaching capability at the secondary level in order to increase the percentage of pupils with satisfactory passes.

Those with Division passes (who are eligible for teacher programs and agricultural diplomas) might be provided with additional instruction to upgrade their scores and those who do not complete given remedial training and additional opportunities to take the examinations. The "school-leavers" - those who do not complete their secondary educations - are of course a valuable resource and some of them receive vocational training.^{1/}

Botswana has made important progress towards its objective of universal primary education and estimates that in 1978 approximately 80% of children of primary school age are attending school. Preliminary drafts of the education sector paper for the Fifth NDP from 1979-1985, which have been prepared by the Ministry of Education, point out that there have also been qualitative improvements at the primary level during the current Plan period, e.g. improvements in the content and relevance of the primary curriculum, an increase in the number of School Inspectors, improved radio broadcasting for schools, more equipment and a reduction of the gap between standards of equipment in urban and rural areas.

^{1/} The National Centre for Vocational Training had 200 trainees in 1977/8 of whom 150 were enrolled in six week courses and the remaining 50 in full year programs for those with no previous vocational training but with three years of secondary school.

In 1975 there was a total of 116,293 primary school pupils, rising to 125,588 in 1976 and 137,290 in 1977 for an annual increase of about ten percent. The number of classes also rose to 4,338 in 1977 which were supervised by 2,636 qualified and 1,859 unqualified teachers. The total number of teachers has risen continuously and the output of trained teachers appears to have been inadequate to meet this increase since the percentage of unqualified teachers in the teaching force has increased annually since 1975 and this trend is expected to continue at least until 1980. The constraints identified above at secondary and tertiary levels in terms of the available trainable pool, therefore, have direct consequences for efforts to expand primary education sufficiently to achieve universal education while at least maintaining the current quality of teaching. On a more positive note, NDP projections had anticipated a slower expansion of qualified teachers and a slower decline of unqualified ones than has actually occurred.

Another constraint at the primary level associated with the effort to achieve universal education has been a widening gap between the number of classrooms, offices, teachers housing and other amenities required and those available in the remainder of this decade. Added to this have been delays in the physical expansion of primary teacher training colleges which will mean that enrollments for 1978 and 1979 will fall behind NDP targets. Government expects to achieve its target of an intake of 900 students by 1980.

More important, perhaps, than physical constraints which can be overcome with time and money in a reasonably short period, is the concern expressed by the Ministry of Education with the quality and motivation of those who are admitted for teacher training. The Ministry has pointed out that most direct entrants from secondary schools are those who have failed to pass the Junior Certificate exam allowing them entrance into Form IV and who have not found a place in any other training program. As a last option they then decide to teach primary school until a better opportunity presents itself.

Vocational training is provided chiefly by the National Centre for Vocational Training (NCVT) and the Botswana Brigades. Table VI shows the comparative expenditure for different types of education and training provided by government. No more than five percent of total funds have been available for vocational training yet of the 13,602 pupils in Standard VII in 1976 only 2,861 places were available in Form I of secondary schools administered or assisted by government and an additional 2,126 places in unaided secondary schools. Among the over 8,000 primary leavers without secondary places, therefore, the NCVT could only assist those few who had some work experience in a trade and could be sent by an employer for a six week course while the Botswana Brigades have been plagued by staff shortages, a need to shift to employment-generating projects to prevent turning out persons with skills but no employment prospects and a

lack of coordination with the Botswana Entreprises Development Unit (BEDU). The projected 15% per annum increase in trainees has consequently not been realized.

Non-formal education programs are undertaken by a variety of ministries, donors, PVOs and others and it is not clear what the total impact of these activities may be in this area. A survey of non-formal education, its ability to reach rural areas and women and ways to reach more primary school leavers, if not already being done, would seem to be a useful undertaking to provide the Ministries of Education and Planning with better data. Such information would also make the new Non-Formal Education Unit in the Ministry of Education more effective in its efforts to make the facilities of the formal education system available for adult education, agricultural extension education and the activities of the Botswana Extension College (BEC).

The level of expenditure on non-formal education is also not clear from available documentation. Budgets are presented by ministry and non-formal education is a component, inter alia, of the Ministries of Education, Agriculture, Health, Local Government and Lands and of the University's Division of Extra Mural Services. The Brigades are the major non-formal activity of the Ministry of Education while Rural Training Centers and the Agricultural Information Centers function through the BEC and the Ministry of Agriculture. Local Government and Lands works with Village Development Committees which elect one of their number to receive training

in community development and project identification. Added to this are the family health educators from the Ministry of Health, radio listening groups and experimental adult education programs. The 1976-81 NDP calls for the preparation of a national plan for non-formal education and recognizes the need for coordination of activities, however, latest available information indicates that more needs to be done in these areas. The Rural Extension Co-ordinating Committee has a subcommittee on non-formal education which is responsible for inter-ministerial coordination. It could be quite useful to government to have a comprehensive assessment of the impact of all these activities on manpower development and to be able to compare available resource levels with needs and possible donor initiatives in this area to augment existing government programs and address the question of special programs for returning labor migrants. The survey suggested above could include these questions as well as identify means to ensure greater coordination of non-formal activities to obtain the greatest multiplier effect from ongoing programs.

The question of migrant labor is the third key aspect of Botswana's manpower situation which bears comment. As stressed in the SADAP analysis on labor migration, the need for Botswana to lessen its dependence on South Africa

as a source of wage employment results more from the impact of labor migration on the total development of the country than on purely short-term economic consequences, a number of which are positive for both the individual and the country as a whole. The SADAP study recommended a planned and phased withdrawal of labor at a pace to be determined by the Botswana government which would realistically reflect the capacity of Botswana to reabsorb its citizens in productive activities inside the country. International assistance would be required to strengthen that capacity and provide alternatives which ensured both individual welfare and development benefits to the country in general.

About half of all Batswana aged 20-30 are employed in South Africa, an estimated total of 46,000. Of these, about 25,000 were employed in the mines during the first quarter of 1978. Recruits come disproportionately from the poorest families and this has serious implications for manpower development, particularly in agriculture. The non-formal education programs may not have their optimal impact if they are reaching primarily those who do not see themselves as heads of households and are therefore unable to make decisions involving agricultural innovations. Special programs for women and the training of female agricultural extension agents would, therefore, seem to be of considerable importance. The timing of many non-formal educational initiatives may also be critical since many of the young men, upon completion of their nine month contracts, return for the critical period of the agricultural cycle.

2. Current Government Policies and Priorities

The recent Government Paper^{1/} on education policy in Botswana forms the basis for this brief summary of government's priorities and policies. It is an illustration of the thorough and systematic approach of the Botswana government and demonstrates that government is fully aware of its difficulties and is seeking to remedy them in a planned and coherent manner. Government has identified the following strategy elements as key to overcoming the constraints on manpower development discussed above.

1. Highest priority given to strengthening the primary level;
2. Creation of a new kind of intermediate school with standards and costs between the present levels of primary and secondary education (see Table VI). This would begin to address the problem of school leavers and seek to turn the pupils who do not enter secondary education into a resource;
3. Stress that the purpose of school at all levels is to prepare for the "real world" through the development of basic skills of literacy and numeracy to make them more self-reliant;
4. Eliminate disparities between rural and urban and between public and private education;
5. Effective and wide-ranging non-formal education programs have to be developed.

^{1/} Government Paper No. 1 of 1977, National Policy on Education, approved by the Botswana National Assembly in August, 1977.

The findings of the SADAP sector appraisals (See Annex II) are quite consistent with government's own view of its problems and what needs to be done to correct them. The emphasis in the foregoing summary of Botswana's manpower development constraints is similarly in harmony with government's own assessments. Despite manpower projections in Table IV through 1988 from the NDP, the government Policy Paper has stated that "the education policy that government will carry out has far reaching implications for manpower needs and supplies of skilled and educated people...implementation...will require many educated people to serve as primary, intermediate and senior secondary teachers and to work as supervisors and administrators..." The emphasis therefore is on increasing the pool of basic human resources through stress on primary education in order to prepare more children for further training in intermediate and secondary schools and to produce self-reliant young adults who can benefit from expanded, better targeted and better coordinated non-formal education programs.

In light of the above, interested donors could review the enumeration of ongoing projects and programs referred to in Annex III, review the SADAP recommendations relating to manpower presented in Annex II and refer to supportive documentation summarized in Annex I in order to respond to the expressed priority needs of the Botswana government in the

area of manpower development and express that response in an organized and comprehensive manner, possibly through the manpower strategy framework approach suggested in the Introduction.

3. Critical Areas for Priority Attention

This section has been added as a summary of main points for those who prefer to skim this document for major country specific conclusions which are:

1. that Botswana's manpower is critically short of both skilled and educated personnel;
2. That the pool from which more highly trained and educated personnel should be derived is too small;
3. that Botswana must therefore concentrate on ensuring that more of its citizens have basic skills necessary to permit further training of either a formal or non-formal nature;
4. that to accomplish this, more resources should be expended on improving the quality of primary education through improved teacher training, better equipment and physical facilities and efforts to reduce the disparity in the quality of education provided in rural and urban areas;
5. that non-formal education is critical for the majority of pupils who do not continue formal education beyond primary school but that provided so far has not been part of a national plan, has been inadequately coordinated and has not been surveyed and assessed comprehensively for its impact thus far on the country's continuing problems;
6. that the key area for non-formal education is in agricultural extension which would help the poorest families to a greater extent since they tend most frequently to be stockless, would benefit from shared use of formal sector facilities and would be assisted by greater emphasis on agricultural science in the primary school curriculum and the curriculum for primary school teacher training;

7. and that manpower development schemes must take account of migrant laborers both in terms of providing them with training and in being aware of the effect their absence may have on programs implemented for the benefit of rural populations generally.

TABLE IV

EXPECTED SUPPLY AND DEMAND FOR SKILLED AND EDUCATED WORKERS BY 1988, ASSUMING CURRENT POLICIES

	Standard 7	Forms I and II	Forms III and IV	Form V and UBS Part I	Degree	Total Form I and above
1. Annual outputs (1981 and onwards)	21 006 ^{a/}	237 ^{b/}	1 958 ^{c/}	1 235 ^{d/} (Form V)	133	3 563
2. Total demand in 1988	6 839	2 299	24 215	7 705	2 395	36 614
3. Botswana remaining in 1988 from 1972 workforce ^{e/}	1 560	520	4 920	880	140	6 460
4. Additions from Education ^{f/} 1972-1987	g/	2 288	18 890	9 550	2 090	32 818
5. Total supply in 1988 (row 3 + 4)	g/	2 808	23 810	10 430	2 230	39 278
6. Surplus or deficit (row 5 - 2)		+509	-405	+2 725	-165	+2664

- Notes: (a) Standard 7 enrolment less repeaters and Form I enrolment in public schools.
 (b) Form I and II leavers not continuing.
 (c) Form III and IV leavers not continuing.
 (d) Form V enrolments including those who will continue.
 (e) Mortality rate based upon life tables for the Botswana population, applied separately for each five year age group. Retirement age of 60 used. See 'Manpower and Employment in Botswana', 1973.
 (f) Calculated from projected enrolments in all types of schools, with adjustment for participation rates in the labour force.
 (g) Supply of Primary leavers far in excess of demand; not possible to estimate how many will be employed in these jobs, but no supply deficiency expected.

SOURCE: Fourth National Development Plan and calculations of National Commission on Education

These data are based upon calculations by the Central Statistics Office, published in Education Statistics, as adjusted by the Commission. They refer to reported expenditures of the Ministry of Education only (except for primary education, where District Council expenditures are included). Coverage and methodology have changed somewhat during the period shown. The more recent data tend to be more nearly complete. Comparison of unit costs by level shows Government's relative expenditure per student, by level, not differences in total costs. Data are for calendar years and thus correspond to academic years, except in the case of the University.

a/ Primary education expenditures include all Ministry of Education expenditures plus District Council expenditures and are relatively complete statements of recurrent costs. Primary enrolment includes all registered primary schools.

b/ Secondary education expenditures shown exclude grants and teachers' salaries for aided schools. Enrolment includes only Government secondary schools.

c/ Teacher training expenditures shown cover mainly the salary expenses of Teacher Training Colleges. Students training allowances are included here rather than under primary.

d/ Vocational education includes the National Centre for Vocational Training, that portion of Brigades' expenditure paid by Government, and Botswana Training Centre through Financial Year 1974-75. Botswana Training Centre transferred to Directorate of Personnel after 1 April 1975. National Centre for Vocational Training began operation in 1974.

Breakdown of recurrent Ministry of Education expenditures on vocational training, 1975

	Brigades	NCVT
Total expenditure	78 554	246 255
Salaries only	1 436	113 639
Enrolment	927	249
Unit cost total	84.74	988.98
Unit cost salaries	1.55	456.38

e/ University level includes main grant from Ministry of Education to the University and bursaries payments. No information on salary expenditures available separately thus unit salary costs cannot be calculated. Enrolment includes all Botswana students enrolled at UBLS and UBS, plus students in foreign universities and diploma courses, plus Teachers Certificate enrollees.

TABLE V

SUMMARY OF TRENDS IN EXAMINATION RESULTS, 1968-1975

PRIMARY SCHOOL LEAVING EXAM ^{a/}					JUNIOR CERTIFICATE EXAM				CAMBRIDGE SCHOOL CERTIFICATE EXAM						
number sitting exam	PSLE GRADES				number sitting exam	total number passed	percent passed	Merit + A and B passes	Percent merit + A and B	number sitting exam	total number passes	percent passed	Division 1 and 2 passes ^{c/}	Percent Division 1 and 2	
	A %	B %	C %	D _{b/} %											
1968	4 793	7	24	53	16	451	289	64	171	38	160	113	71	50	31
1969	5 490	4	18	62	17	525	358	68	207	40	206	152	74	69	34
1970	6 638	10	34	42	15	804	533	66	248	31	255	168	66	63	25
1971	7 941	10	34	40	16	1 119	754	67	451	40	275	185	67	77	28
1972	10 130	10	20	47	23	1 207	904	75	742	61	378	227	60	94	24
1973	11 838	11	20	47	22	1 463	1 201	82	820	56	503	240	48	77	16
1974	13 457	11	19	46	25	2 560 _{d/}	1 667	65	1 024	40	519	242	46	67	13
1975	14 111	10	20	46	23	2 355 _{d/}	1 819	77	984	42	686	371	54	121	18

Notes: a/ Includes candidates from aided and unaided primary schools.

b/ Fail

c/ Division 1 and 2 passes on the Cambridge Exam are eligible for admission to University

d/ In 1974 and 1975, data on Junior Certificate results include candidates from private secondary schools, evening and continuation classes.

SOURCE: Education Statistics

TABLE VI

GOVERNMENT RECURRENT EXPENDITURES ON EDUCATION BY LEVEL, 1972-75

	Year	Primary ^{a/}		Secondary (Government) ^{b/}		Primary Teacher Training ^{c/}		Vocational ^{d/}		University ^{e/} and Third Level		Adminis- tration		GRAND TOTAL all levels 100%
Total expenditures, all items	1972	1 819 671	53%	635 442	19%	124 458	04%	103 805	03%	590 884	17%	137 958	04%	3 412 22
	1973	2 097 905	53%	700 373	18%	125 741	03%	150 236	04%	666 194	17%	212 221	05%	3 952 67
	1974	2 963 805	52%	967 890	17%	228 197	04%	296 947	05%	914 113	16%	360 006	05%	5 730 99
	1975	4 633 094	53%	1 783 096	20%	298 348		375 602	04%	1 179 897	14%	498 477	06%	8 713 67
Teachers and other salaries only	1972	1 557 052		344 707	16%	124 458	06%	72 316	03%	not reported	70 039	03%	2 168 66	
	1973	1 800 143	72%	366 278	15%	125 741	05%	103 313	04%		100 312	04%	2 495 90	
	1974	2 503 343	68%	593 891	16%	195 841	05%	162 983	04%		200 470	05%	3 656 12	
	1975	3 970 834	69%	1 089 770	19%	242 311	04%	146 887	03%		272 065	05%	5 721 86	
Enrolments	1972	81 662		2 714		302		978		364		not applicable	not applicab	
	1973	95 511		3 124		345		1 037		371				
	1974	103 711		3 720		409		996		410				
	1975	116 293		5 921		489		1 176		549				
Total expenditure per student	1972	22.28	- 1	234.13	- 4	413.77	-12	106.14	+37	1 623.31	+11	not applicable	not applicab	
	1973	21.97	+30	224.19	+16	364.47	+53	144.88	+106	1 795.67	+24			
	1974	28.58	+39	260.19	+16	557.94	+ 9	298.14	+ 7	2 229.54	- 4			
	1975	39.84		301.15		610.12		319.39		2 149.17				
Of which: salaries cost per student	1972	19.07	- 1	127.04	- 8	413.77	-12	73.94	+35	not applicable	not applicab			
	1973	18.85	+33	117.28	+36	364.47	+32	99.63	+64					
	1974	24.14	+42	159.54	+16	478.83	+ 3	163.64	-24					
	1975	34.15		184.05		495.52		124.90						

Expenditures in Pula.

Percentages of total and of salary expenditures are percents of the grand total. In unit cost sections, percentages show year-to-year changes in unit cost... see detailed notes on accompanying page.

SOURCE: Education Statistics and National Commission on Education

B. Lesotho

1. Current Manpower Resources and Constraints

A recent appraisal of the issues confronting Lesotho in the area of manpower development is provided by the 1976 USAID-financed report, titled Human Resources Development Study for Lesotho.^{1/} The report focuses on formal and non-formal education and examines manpower development particularly in the health and agriculture sectors. It also considers the problem of labor migration, assesses the modern private and government sectors from a manpower perspective, and makes both sector specific and general recommendations for initiatives to develop Basotho manpower. The World Bank Education Sector Memorandum of June 1976 and the Bank's Appraisal of a Second Education Project of November 1977 both contain appendices (the latter constituting revised versions of the former) on "Manpower and Employment" and on "Education and Training." These provide fairly detailed compilations of the statistical base upon which most analyses ultimately depend. A third non-governmental assessment of Lesotho's manpower situation is contained in the ODM Mission Report of late 1976 which reviewed the country's requirements for skilled personnel, made recommendations regarding the level of U.K. assistance for the 1977-1980 period, and analyzed the constraints on national development in Lesotho caused primarily by manpower shortages.

^{1/} For full citations see bibliography.

The best government sources which were available are the 1975-1980 NDP, the Annual Statistical Bulletin for 1977, and the paper on education and training prepared by the government's Central Planning and Development Office (CPDO) for the International Donor Conference held in Maseru in September 1977.

When the above sources are compared to SADAP analyses and recommendations and an attempt is made to synthesize this material into a dozen pages which pinpoint major conclusions, the task is made somewhat easier by the degree of consensus which exists as to the nature of the problems and what might be done to alleviate them. Although most reports agree that skilled manpower constraints can gradually be lessened within Lesotho through training programs and incentives to retain trained personnel in the country, most are less sanguine with respect to the overall manpower situation. Observers are generally pessimistic since Lesotho has 200,000 of its citizens employed in South Africa who, were they to return in the foreseeable future, would have few means to sustain themselves in a country which is small, landlocked, mountainous and possessed of few natural resources, has generally poor agricultural prospects, and suffers from severe soil erosion problems. Lesotho is, like many African states, an artificial entity whose borders reflect the outcome of war and colonization; however, the country is unique in being surrounded by South Africa which contains land and people who were once part of a greater Basotholand. As such, the manpower

difficulties of Lesotho can only be fully resolved as part of the resolution of the problems of South Africa itself since, in the absence of apartheid and a minority white-only regime in South Africa, it is probable that Lesotho and the international community would accept the employment of many Basotho in the neighboring economy as a logical means to lessen the employment problems of Lesotho and the labor needs of South Africa. In such a context, the governments of Lesotho and a majority-ruled Azania (South Africa) could work together in the area of manpower development to provide opportunities for citizens from both countries.

Present analyses understandably address the contemporary domestic manpower position of Lesotho which is that "a severe shortage of trained manpower is a major obstacle in Lesotho's development."^{1/} To appreciate at which junctures SADAP manpower recommendations in the various sectors may have a bearing on addressing this problem and to permit precise comparisons with other states in the region, the following summary of Lesotho's present situation is provided.

^{1/} Government of Lesotho, Donor Conference Paper, September 1977, page 1, opening sentence. The ODM Mission Report put the matter even more bluntly by stating: "A critical and even damaging constraint on the implementation of the Second National Development Plan will be a shortage of skilled and educated manpower." (p. 2)

Table VII
Lesotho Manpower Profile

1. Population (1976)	1,191,000
2. Population Growth Rate (1976)	2.2%
3. Population ages 15-64 (1975)	664,000
4. Wage Sector Employment (1975)	27,500
5. Expatriate Public Sector Wage Employment	300 (2%)*
6. Basotho Employed in RSA Mines (April 1977)	100,000
7. Total Basotho Employed Outside Lesotho (Est. 1977)	200,000

* Private sector expatriates at diploma level constituted 75% of all employees and represented 84% of all employees at degree level in 1971.

The formal and non-formal education systems operate to provide necessary training for a labor force which in 1975 was estimated to be composed of 540,000 persons, 283,000 male and 257,000 female. The occupations of the labor force can be divided as shown in the following table:

Table VIII
Lesotho Labor Force Occupations (1975)

1. Modern sector in Lesotho	27,500	5%
2. Informal Sector in Lesotho	22,500	4%
3. Employed in RSA	200,000	37%
4. Employed in Agriculture in Lesotho (subsistence)	<u>290,000</u>	<u>54%</u>
TOTALS	540,000	100%

Sources: IBRD Appraisal of a Second Education Project in Lesotho, Appendix 1, p. 1, and the NDP, p. 42. GOL expects the total labor force to rise to 600,000 by 1980.

The character of the domestic manpower pool is distorted by the absence of 37% of the active labor force; however, that distortion is even more acute than this figure would imply since the 37% in question represents 170,000 males and only 30,000 females. The greatest number of males are recruited from the 20-30 year old age category and male migrants represent about 60% of the male workforce! The role of women and the effect of formal and non-formal training schemes upon them is, therefore, probably more important in Lesotho than in virtually any other country in view of the degree of dependency of the country, in both the modern and subsistence sectors, upon their skills and labor.

The Second NDP for 1975-1980 set a target of 60,000 new jobs during the Plan period in the wage sector with the expectation that 18,500 would come from wage employment in Lesotho's modern sector, 11,500 from handicrafts and wage-paid agriculture, and 30,000 from migrant labor. Government's NDP goal was to "lower the rate of increase of migrant labor to 4% per annum." Lesotho is confronted, however, not only with a distorted population profile caused by labor migration, but also by the frustrating realization that there are very few options to the present employment pattern in the short- to medium-term. Further, the GOL has little leverage to alter its circumstances very significantly. Government may "plan" for an additional 30,000 jobs in RSA, but whether these jobs

exist and whether Basotho nationals are employed in them is the result of decisions made in South Africa. Further, the size of the wage sector in Lesotho makes it nearly impossible to conceive of all migrant labor returning home to wage sector employment. The "answer" as in many African countries them seems to lie in agriculture; however, Monyake and van der Wiel have noted that "if every Basotho in the farm population aged 15-59 years were to work on the land available for cultivation, each person in that group could work for about 19 days per year."^{1/} The manpower constraints described above as "severe, critical, and damaging" therefore act as a further barrier to development in a situation which is already characterized by exceptionally difficult development problems.

A less courageous people might have despaired at their difficulties and succumbed to the temptations of substituting political rhetoric for a conscientious and organized approach to maximizing what assets they have. Instead, the Government of Lesotho has prepared an ambitious development plan which anticipates a public investment program of R11.6 million to be buttressed by international assistance totaling a minimum of R47.0 million over the Plan period. The Donor Conference in September 1977 and recent reports of the U.N. recommending additional assistance to Lesotho to counter the adverse consequences of border problems with the Transkei area of South Africa have helped to focus additional world attention

^{1/} As quoted in SADAP report on Labor Migration, p. 17.

on both the normal development problems of the country and those caused by its unique geographic position.

The international donor community may, therefore, wish to make assistance to Lesotho one of its highest priorities. While translating priority attention into concrete development achievements in the manpower field may require more attention to likely employment opportunities for trained manpower than might be necessary in countries with a larger resource base, wage sector or better economic prospects; the conclusion quoted below of the RTI study (see bibliography) on this point is endorsed by this report. If recalled when project design teams are formulating projects, Lesotho will probably gain more than if there is overconcern for linkage between each trainee and a particular slot in the wage or non-wage areas.

"Training of Basotho should be limited primarily by the number of qualified students and the resources available, and only secondarily by the domestic demand for them. Lesotho's major resource is its people, and a trained workforce is more valuable than an untrained one." (p. 18)

The objectives in manpower development in Lesotho, therefore, would appear to be (a) to strengthen the formal system to produce more better educated and trained nationals in fields where their skills will be in the greatest demand in Lesotho, while not unduly restricting formal sector opportunities in absolute terms because of possible educated unemployment; (b) to recognize that some Basotho may have to be employed outside the country for some time to come and

that it is better to have citizens armed with skills which can be used in Lesotho first but elsewhere if necessary than citizens whose primary attribute is physical strength; and (c) that the non-formal system is critical for the optimal development of agriculture, manufacturing, and other sectors which can employ subsistence sector citizens in income generating activities. The figures in Table VII, which show the preponderance of expatriates in private sector activities requiring a diploma or degree, would indicate that significant educated unemployment is unlikely in Lesotho in the near future in any event. The above points need to be made, however, because some analyses seem concerned with ensuring that the pace of formal education output is closely meshed with positions available in the country. In fact, Lesotho may need to consider incentives to retain qualified Basotho in the country since wage differentials have attracted some into employment in South Africa, whose skills could be used in Lesotho. This would suggest that a "surplus" of educated people could assure Lesotho of meeting its own needs and provide a reservoir of talent for future development.

The foundation for manpower development in Lesotho is its primary school system which consisted of 1,078 schools with 222,017 pupils in 1976, of whom 91,168 were male and 130,849 were female. There were 2,975 qualified and 1,260 unqualified teachers (29.8%) for a pupil/teacher ratio of 52.4:1. In 1976 there were 50,294 pupils who entered Standard I while 17,784 were entering Standard VII.

The intake for Form I of secondary school in 1976 was 5,846 which would indicate that in 1977 at least 11,500 primary school pupils did not find places in secondary schools.^{1/} The figures indicate that approximately 70% of the relevant age group (6-12 years) are enrolled, excluding possibly as many as 3-5,000 additional students from South Africa.

The greatest increase in primary enrollments occurred in 1974 when primary fees were abolished. In that year over 30,000 additional pupils were enrolled. Many were over the entry age of six and many migrated from South Africa, so that new female entrants to Standard One were twice the population cohort and new male entrants were 1.6 times their age cohort. The World Bank estimates that it is now possible that all female Basotho are entering primary school sometime between the ages of 5 and 14, while males probably represent slightly more than 60% of their population group.^{2/}

The RTI report of May 1976 sets out quite well the various positions of the Ministry of Education and its critics with respect to the degree of curriculum reform which may be required, the level of attention which should be given to primary school leavers as opposed to those who continue in

1/ Most basic statistics are taken from the GOL Annual Statistical Bulletin of 1977.

2/ Appraisal of a Second Education Project, Appendix 2, p. 3. The male/female discrepancy which continues throughout almost the entire education system is explained by the fact that males are traditionally employed as herdboys in their youth and can then migrate for mine employment when older. There are thus continuing disincentives for male education in Lesotho.

the formal sector and on other educational issues such as the quality of the system, preferred instructional materials, and the examination system. These considerations will not be repeated here, however, it is important to note the direction adopted by the Ministry of Education and the CPDO since the RTI Report was completed.

By the beginning of 1978, a Primary Curriculum Unit had been established to develop new materials and review existing texts for their relevance to Lesotho's needs. UNICEF and the World Bank are assisting in this effort. A Curriculum Development Center to review curricula at all levels of education has been established as part of the Training for Self-Reliance Project funded through an IDA credit. An Educational Institutions Mapping Exercise should have been completed by late 1978. This will provide information which will permit the rationalization of school expansion programs and teacher allocations.

The British Government and the EDF are cooperating to improve the quality of primary education and government expects to reduce its pupil/teacher ratio to 45:1 while providing better physical facilities. For example, CARE is executing a Desk Production Project to reduce the percentage of classrooms without desks (as of late 1977 about 60% of primary classrooms had no desks).

Yet, as pointed out by the following quotation, Lesotho's efforts to provide quality education at all levels is hampered by more than inappropriate curricula or an insufficient number of desks:

"In Lesotho...there appears to be general agreement that the quality of education... is low...improvements involve more than curriculum reform. They also require changes in teacher training, adjustments in the school cycle, improvements in...equipment and a closer linkage between schools and communities. Most basic of all is the required change of attitudes towards education...The fundamental problem...is that the educational system is... self-serving, i.e., it is education to prepare for more education rather than education for living and employment."^{1/}

Statistics regarding secondary education recall the problem of Botswana of the size of the trainable pool and the manpower constraints caused by such a narrow secondary level in the educational pyramid. In 1976 there were 16,726 students enrolled in Forms I-V.^{2/} Of these, 5,846 were in Form I and 1,113 in Form V. The following Table demonstrates the steep pyramid with obvious implications for the production of high-level Basotho manpower.

Table IX

Secondary School Enrollment Statistics (1976)

1. No. of Pupils who sat Form III Junior Certificate Examination . . .	3,745
2. No. of Passes . . .	1,797 (48%)
3. No. of these Passes in 1st Class . .	19
4. No. of Pupils who sat Form V GCE Examination . . .	1,131
5. No. of GCE Certificate Passes . . .	340
6. No. of GCE First Division Passes . .	19
7. Percent of Intake into Form IV Passing Examinations . . .	29.9%

Source: Annual Statistical Bulletin, 1977, tables 80 & 82.

^{1/} Lesotho: Education Sector Memorandum, p. 2.

^{2/} Malawi, with nearly five times the population of Lesotho, however, had only 14,489 secondary students in 1975/6. See Part C below. Lesotho spent about 9% of GDP in 1975 for education which is regarded as a high ratio for Africa.

It is also important to note that males accounted for 45% of those enrolled, thereby continuing the primary trend. It is only in Form V and university that there are more males than females in school and the margin is very slight. Secondary students were distributed in 61 schools with 454 classrooms in which 447 qualified and 174 unqualified teachers provided instruction in 1976. The pupil/teacher ratio was 26.9:1. About 185 teachers were expatriates who, together with qualified Basotho teachers tended to live and work in the less rural school areas, with the result that the quality of education was inferior in the more remote areas.

By 1980 the GOL expects to have 265,000 primary students enrolled in classes taught by 5,540 teachers and 19,500 secondary students taught by 736 teachers; however, the number of unqualified teachers at primary level is expected to increase from the 1976 figure of 33.6% to a 1980 figure of 45.5%. The percentage of qualified secondary teachers is expected to rise to 81.5% by 1980 from a 1976 level of 71.4%. These figures reflect the impact of expatriate teaching and the output of secondary teacher training efforts in the country, as well as highlight the need to expand primary teacher training at a faster rate.

At the tertiary level, the NUL enrolled 501 Basotho and 100 foreign (mostly refugee) students in 1976. There were 65 graduates in 1976, 23 receiving B.A. General degrees, ten obtaining diplomas in Agriculture, and the remainder receiving degrees or diplomas in Accounting (6), Economics (8), Administration (4), etc. The NUL had 95 teaching staff in 1976-77,

with the largest number (11) in Education, followed by Geography (8), and Mathematics (7). The University is receiving technical and capital assistance, inter alia, from the AAI, Britain, DANIDA, UNDP, and West Germany, but appears to need additional assistance in constructing staff housing, hostel facilities, classrooms, offices, and infrastructure. At least 40 of the faculty are provided by donor assistance.

In the areas of vocational, technical, and non-formal education, Lesotho has launched a number of initiatives which are summarized in Table X.

TABLE X

Summary of Principal Lesotho Development
Activities and Institutions in Vocational,
Technical, and Non-Formal Education & Training

1. National Teacher Training College (NTTC)
Trained about 600 teachers since it opened in 1975; supplements traditional training with instruction in agricultural studies, manual skills, child care, nutrition and health; expects staff of 85 and enrollment of 720 by 1980, plus additional 350 students doing practice teaching at primary and junior secondary levels; from 1978 est. output of 200 primary and 100 J.C. teachers per year; shortage of teachers for NTTC.
2. Training for Self Reliance
World Bank-funded project of support to the Lesotho Technical Institute which, together with the Lesotho Institute of Public Administration, provides courses in auto mechanics, plumbing, carpentry, etc. Plans to 1982 anticipate addition of commercial and more vocational courses.
3. Community Outreach Program
Using workshops located in secondary schools and functioning as part of Training for Self Reliance, project will operate to reach local communities near secondary schools with non-formal training; Peace Corps Volunteers involved here.
4. Vocational Schools Expansion
Four existing vocational schools (Qacha's Nek, St. Elizabeth, Bishop Allard & Leribe Crafts) to be expanded if donor funds can be identified. GOL will

pay teachers' salaries and Basotho need to be trained for these teaching posts.

5. Polytechnical Development

Proposed by UN Farah Mission, GOL now seeking funds (as of late 1977) to provide basic job-oriented vocational training for 4-6 months for Standard 7 school leavers and some now-adult school leavers.

6. Lesotho Distance Teaching Centre

Permits citizens to prepare for JC and "0" level examinations through courses on radio and in weekend classes. Classes offered in agriculture, book-keeping, commerce, math, and English, for example. Supported by Irish Government and other donors, the Centre also prepares pamphlets for government education campaigns relating to the census, family planning, etc.

7. Lesotho Youth Services

Practical training in carpentry, tailoring, joinery, agriculture, etc. This program is non-formal and tends to be more community development oriented and to work in areas like public health, cooperatives, youth leadership, and sports. Training, board, and lodging free to about 100 students a year. Donor aid received from Republic of China, Israel, and Unitarians of Canada.

8. Farmer Training Centers (FTC)

The Ministry of Agriculture's FTCs provide training courses, in-service training for staff, meetings for farmers' associations and women's organizations and young farmer (youth) training courses. The four centers in 1973 held 82 courses with 2,470 participants (of whom 1,815 were women), 13 in-service courses and 4 young farmer courses with 110 participants (61 women).

9. Other Activities

The Department of Cooperatives has 45 staff in its Education Department and holds training courses; Ministry of Health has a program of nutrition education; Department of Community and Rural Development has 18 offices around the country trying to motivate people to practice conservation of soil and water and follow better nutrition habits.

It is apparent that a wide variety of manpower development programs have been mounted by the government in response to its needs for national development. The list above demonstrates

the range of existing institutions which can be strengthened and adapted to meet Lesotho's growing manpower needs. It also highlights the need for coordination between ministries to ensure that programs reinforce one another and are able to make optimal use of limited financial and physical resources.^{1/}

As in the case of Botswana, a thorough survey of non-formal ongoing activities and their impact--perhaps on a cost/benefit basis--would provide government with a useful tool to facilitate the rational and comprehensive planning of these activities and suggest savings which might be accomplished through developing new uses for existing infrastructure, both physical and organizational. An interested donor should consider a multi-country survey including Botswana, Lesotho, and Swaziland, since there may also be comparative aspects of the experiences of these countries in non-formal education which could be applicable to the others. Such a survey should not be rushed into but should reflect a careful review of both the literature of the subject and the opinions and priorities of the governments of the countries in question. UNESCO, ILO, FAO, and UNDP might be usefully involved and a detailed Terms of Reference should require recommendations which outline possible administrative reorganization which would rationalize the approach to the many components of non-formal education and training.

^{1/} Involved in the above are the Ministries of Education, Agriculture and Health; the Cabinet Office, the Department of Community and Rural Development and PVOs like Catholic Relief Services, CARE and the Lesotho National Council for Women.

The notion that more training needs to be provided to the majority for whom primary school is a terminal program is neither new to Lesotho nor unique to this report. It will also come as no surprise that the formal sector needs to be expanded as well and that vocational training is required in numerous fields. The SADAP analyses point to manpower development initiatives as outlined in Annex II in a variety of technical and vocational fields suitable for their sectors of concern. Due to the compartmentalized nature of the sector pieces, however, formal education is not mentioned as often as specific training for a particular function (railway shunters, health administrators, field assistants for extension work, etc.). This is more a reflection of the organization of this massive analysis of southern Africa needs than it is a statement on the relative adequacy of formal education. For this reason, rather than for any lack of appreciation of the considerable needs for aid in the non-formal/vocational area, this brief synthesis of Lesotho's manpower requirements tends to stress formal education and assistance to women to a greater extent than the areas enumerated in Table X.

In this regard, the SADAP report on Women in Development makes the very sensible recommendation that more training be provided to women at the intermediate level and through the Lesotho Agricultural College where the annual output is 25 male and 10 female graduates. Female extension agents may be particularly useful in view of the skewed population profile

of the country. More investigation should be done with respect to the propensity of female farmers to accept innovations from male or female extension agents. Conventional wisdom in most reports assumes that women are reluctant for cultural reasons to have too much contact with male extension agents, however, this assumption should be verified before being accepted. Finally, the SADAP recommendation of assistance through the Lesotho National Council of Women (p. 68) would serve the double purpose of institution building as well as manpower development of women's skills in the areas mentioned in the SADAP report on women and in the areas listed above.

2. Current Government Policies and Priorities

The NDP for 1975-1980, the papers submitted by the GOL to the September 1977 Donor Conference in Maseru, and the Emergency Program which recently modified certain aspects of the NDP form the basis for an assessment of current government policy.

In a speech by the Minister of Finance in April 1978 it was announced that the GOL had budgeted R18,903,009 for "Social Services" for FY 1978/79. Since more detailed figures are not available for the current year, the recurrent expenditures for 1975/76 and the estimates at that time for 1979/80 provide some idea of what represents the greatest government expenditures in the sector. For FY 1975/76 the expenditures shown in Table XI represent 27% of total government recurrent

expenditure and this is expected to rise to 31% by 1979/80. Primary and secondary expenses are composed chiefly of teachers' salaries.

TABLE XI

Summary of Expenditures for Formal and Non-formal Education and Training in Lesotho

1. <u>Total Recurrent Expenditure 1975/76</u>	<u>R7,045,000</u>
a) Primary (49%)	R3,428,000
b) Secondary (18%)	R1,278,000
c) Tertiary (20%)	R1,397,000
d) Administration (5%)	R 347,000
e) Teacher Training (3%)	R 186,000
f) Other (5%)	R 408,000
2. <u>Est. Recurrent Expenditure 1979/80</u>	<u>R11,063,000</u>
a) Primary (40%)	R4,450,000
b) Secondary (15%)	R1,636,000
c) Tertiary (14%)	R1,500,000
d) Teacher Training (9%)	R1,036,000
e) Administration (3%)	R 390,000
f) Other (19%)*	R2,301,000

* Includes Non-formal training (2%), the Polytechnic (5%), Inspectorate of Schools (5%), General Studies College (7%), and the Civil Service Training Center (1%).

Source: Lesotho: Education Sector Memorandum, Appendix I, pp. 8-12 and NDP, p. 190.

In addition to the above, of course, there is external aid to the sector (estimated at R2,914,000 in 1976) and capital costs which for the 1975-80 period were expected to reach R11 million. The greatest capital expenditure was planned for secondary school expansion, followed by teacher education, vocational/technical training, university expansion, non-formal education, and lastly, primary school construction. Technical assistance was similarly targeted to strengthen secondary education and teacher training programs, followed by vocational/technical education and the university.

Non-formal education receives low priority, yet it is the form of education likely to reach the largest number of people and offer some further training for the primary-school leavers who do not continue in the formal structure. Again, a survey of present non-formal activities and their impact (or lack of it) on development in the three BLS states might provide useful data for future planning and government decisionmaking in this sector.

Since the publication of the figures in Table XI, the government has had to alter the rate of implementation of its development plans in order to allocate more resources to internal security. The Minister of Finance has stated, "... now that the livelihood of the nation is threatened by South Africa's Bantustan policy and new attitudes toward migrant labor, Government has been obliged to take drastic action to accelerate key elements of the Plan and to take additional steps urgently needed to ensure the nation's food supply and security. The greatly increased volume of the internal security provision (in the budget) is in response to the harsh realities beyond our control. We have unavoidably had to divert scarce development resources towards this end."^{1/}

Thus, although Lesotho's commitment to education and training is undiminished, it is unclear what consequences this turn of events has had for government expenditures, both capital and recurrent, in the area of manpower development during 1978

^{1/} Speech of the Minister of Finance, April 1978, "The Estimates of Revenue and Expenditure, 1978/79." (mimeo)

and to what extent this may have been compensated for by supplemental international assistance.^{1/}

3. Critical Areas for Priority Attention

The main conclusions which should be noted are:

1. That greater assistance is required to improve the quality of education in the formal sector to provide better educated personnel needed for development projects and economic expansion.
2. That women play a critical role in Lesotho so that projects outlined in the SADAP paper on women should be viewed as a beginning to the mobilization of the local population for development. Women form the majority of pupils in primary and secondary schools and are often responsible for farms in the absence of migrant spouses employed in RSA. This fact should motivate international donors to help Lesotho make its country a showcase for the participation of women in development.
3. A detailed analysis of the role of non-formal education in Lesotho would assist government in its planning and could promote better coordination of what appear to be disparate activities undertaken by numerous Ministries and Departments.
4. That the number of educated personnel should be increased as funds permit without undue regard for the possible appearance of educated unemployment.

^{1/} For further information on this subject, see "Assistance to Lesotho," (Note by the Secretary-General) of 30 March 1977 (S/12315) and document S/12438 of 9 November 1977 with the same title. These provide detailed recommendations for special aid for Lesotho and were submitted to the UN General Assembly by Mr. A. Farah, ASG for Special Political Questions.

C. Malawi

1. Current Manpower Resources and Constraints

Probably the most recent and useful survey of Malawi's education system and the implications for manpower development is the Malawi Education Sector Survey prepared by the World Bank.^{1/} The Bank survey assesses the data provided by the last Manpower Survey of Malawi which was conducted in 1971 and makes projections of high and intermediate manpower requirements through 1980. It also incorporates information from Malawi's 1973-1980 Education Plan and the Education Plan supplement on Technical and Vocational Education, 1976-1990. The Bank mission assessed formal and non-formal education and training and examined both public and private systems. Special attention was given to four areas: (1) formal sector primary, secondary, and tertiary education; (2) agricultural and technical education; (3) teacher training; and (4) adult education and special education programs. These areas were then related to manpower requirements, educational financing capabilities, and implications for World Bank assistance and agricultural and industrial development plans.

The Bank report underscores many of the themes which the Introduction to this report emphasizes as being recurrent throughout the region while also identifying key manpower constraints which are peculiar to Malawi and recommending actions to lessen them. The main conclusions and recommendations for Bank action appear as Table XIV to this report. The areas

^{1/} World Bank, Malawi Education Sector Survey, February 23, 1978 (Report No. 1781-MAI). For full citations of other documents, see bibliography.

identified for Bank assistance followed extensive discussions with officials of Malawi's Ministries of Education, Labor, Agriculture, Planning, and others. The Government is aware and is working towards the resolution of many of its manpower constraints within the context of its own priorities and financial limitations.

Given the above, the present synthesis provides a review of the major findings of the above surveys and profiles the manpower situation in Malawi to permit comparative analysis with conditions in other countries in southern Africa which have been included in this report. It also facilitates an appraisal of SADAP recommendations which affect manpower and have been made with respect to other sectors (See Annex II)

The key statistics which depict the human resource framework within which manpower development and planning must occur are presented in the following Table.

TABLE XII

Malawi Manpower Profile

1.	Population (1976)	5,200,000
2.	Population Growth Rate	2.6%
3.	Economically Active Population	
	Aged 15-64.	1,700,000 *
4.	Wage Sector Employment (1976)	271,000 *
5.	Expatriate Wage Employment (1975)	2,500
6.	Malawians Employed in South African	
	Mines (1978).	17,000 **
7.	Malawians Employed in Southern Rhodesia	
	(1975).	102,892 ***
8.	Estimate of Malawians Employed in South	
	Africa in non-mining areas	110,000 *

Sources: (*) Memorandum on the Economy of Malawi (World Bank Report 1677a-MAI of Sept. 1977);
 (**) Africa Research Bulletin, Feb. 1978;
 (***) CSO, Salisbury, Dec. 1975.

Since independence the Malawi Government has made rapid strides in raising agricultural production through the development of plantation crops for export and an emphasis on economic growth. Growth has been stimulated by using a large part of public expenditures for directly productive sectors (chiefly agriculture) and for sectors which support production in a direct fashion such as communications and infrastructure. As a consequence, the output of skilled and educated manpower has been insufficient for development needs and the performance of traditional smallholders has been generally disappointing.

These two conclusions are supported by statistics which demonstrate the performance of the formal and non-formal education systems and suggest that greater emphasis on manpower development along the lines suggested in Table XIV are required. In addition, a comprehensive approach to non-formal manpower development in the rural areas targeted at smallholders and supported by adequate resources and government concern would serve to link efforts to ameliorate manpower constraints on several fronts and may facilitate the development of an overall strategy framework such as suggested in the Introduction.

At present, the Ministry of Agriculture and Natural Resources (MANR) conducts training for Farm Home Instructresses who provide instruction in improved farm practices for rural families and are particularly targeted to assist female household members in recognition of their important role in overall

smallhold farming. From 1969 (when the program began) until 1976, a total of 151 trainees completed the course and in 1977 a further 27 were enrolled.

The MANR also provides extension services and supports Farmer Training Centers (FTCs) to assist smallhold farmers. It is expected that these programs will be strengthened by the creation of a new Department of Agriculture Development from the merger of the Extension Services and the Department of Technical Services sometime in 1978. At last report, however, the field ratio of extension agents (called technical assistants in Malawi) to farm families varies from about 1:500 in development project areas to 1:2000 elsewhere, there is little systematic visitation, and overall efficiency is reported to be low. All the usual problems of inadequate transport, insufficient transport, insufficient training of inadequate numbers of technical officers, poor transfer of research findings to intended beneficiaries, and minimal follow up are apparent.

The fifty-four FTCs in 1975 reached a total of 17,275 students (7,778 male, 6,200 female, and 3,297 government staff). The day FTCs (38 of the total) operated an average of two days per week for farmers and four days per week for women learning home economics. Staff is not full time and includes the Farm Home Instructresses and a field assistant from MANR. The remaining centers are residential, have full-time staffs, and more intensive instruction. Non-formal training is also provided through the FTCs by programs established by the Ministries of Health and Community Development and Social Welfare. Adult literacy classes are provided as well.

The SADAP appraisal of agricultural manpower in Malawi concludes that women's training programs need to be expanded and upgraded and that in-service training is of central importance and is adequately being assisted by UNDP and the U.K. There appears to be a consensus that "in general, agricultural education and training is well organized and adapted to local conditions";^{1/} however, given Malawi's population and rich agricultural potential, a substantial expansion of present efforts seems warranted. If undertaken with U.S. assistance, cooperation to expand and make the operations of FTCs more efficient would relate well to ongoing U.S. assistance to the Bunda Agricultural College and would also address the needs of the poorest segments of Malawi's population in a direct manner. The Farm Home Instructresses program also appears to offer a nucleus around which a more ambitious program designed to reach much larger numbers of rural families could be mounted. Expansion in these areas would, of course, need to be carefully coordinated with the efforts of other ministries, particularly health.

If USAID were to accept the SADAP agricultural sector recommendation that it establish a full-time presence in Malawi within the U.S. Embassy, possible initiatives with U.S. participation may then be able to be discussed on a more continuous basis and their possible integration into the Malawi National Rural Development Program (NRDP) could be assessed. The NRDP, with plans and projections to 1990, is to become the principal vehicle for smallholder development. It will integrate Malawi's

^{1/} Malawi Education Sector Survey, Appendix II, p. 2.

existing agricultural projects such as the Shire Valley Project into a single overall plan in which manpower development will be prominently featured. The NRDP will seek to stimulate smallholder production within Malawi's long-standing policy of encouraging labor-intensive activities and controlling tendencies toward the growth of income disparities through maintenance of relatively low wages.^{1/}

Malawi has increased its planned expenditure on education from 2.4% of total development expenditures in 1974-77 to 5.0% for 1977-1980, representing an increase of Kwacha 13.4 million. Agriculture and Natural Resources (in which much non-formal education expenditure falling under the MAND presumably is classified) will decline from 22.9% to 17.2% of the total budget but increase in absolute terms from K39.1m to K59.7m within the time periods mentioned. The following Table provides an insight into government priorities and a sense of the level of total available resources and their origins.

^{1/} From 1966-1976 agricultural exports increased by seven percent in real terms while the share of exports from smallholders fell from 55% in 1964 to 37% in 1976. This would indicate that exports of estates increased at an average of ten percent per year compared to an increase of smallholder exports of only three percent. Income distribution appears to be relatively good when compared to most developing countries with available statistics (based on data from 1969) showing that the poorest 40% of households received 15% of income while the highest 20% received 53% of income. The World Bank reports that Malawi has one of the highest ratios of jobs created per development dollar invested of any developing country.

TABLE XIII

Revised Estimates of Resources and Expenditure on Development Account 1977/78

<i>Resources</i>		<i>Expenditure</i>	
HEAD 061—Loans	K	HEAD	K
U.K. Development Loans ..	2,000,000	070 Community and Social Development ..	80,000
U.S.A.I.D.	2,772,433	071 Education	5,131,103
K.F.W.	4,146,230	072 Finance, Commerce and Industry ..	9,856,228
D.A.N.I.D.A.	2,491,008	073 Government Buildings	2,377,821
I.D.A.	14,032,474	074 Health	1,199,155
A.D.F.	1,467,082	075 Housing	1,673,787
CITIBANK	8,765,341	076 Miscellaneous Services	2,163,926
A.D.B.	5,058,746	077 Agriculture	13,282,366
CHASE MANHATTAN LTD.	4,437,738	078 Fisheries	484,785
BARCLAYS BANK		079 Forestry and Game	2,149,099
INTERNATIONAL ..	100,000	080 Surveys and Lands	182,033
HEAD 062—Grants and Reimbursements:	37,991,297	081 Veterinary Services	735,656
HEAD 063—Local Borrowing	16,000,000	082 New Capital	1,182,188
HEAD 064—Miscellaneous	339,431	083 Posts and Telecommunications ..	3,492,457
		084 Power	4,902,904
	99,601,780	085 Transportation	43,476,441
Less: Deficit as at 31-3-77	12,801,399	086 Water Supplies	3,413,605
	86,800,381	087 Works Organization	183,271
Estimated Deficit at 31-3-78	9,144,444		
	<u>95,944,825</u>		<u>95,944,825</u>

Source: Malawi Government Financial Statement 1978/9.

The breakdown of the use of these funds for manpower development and the current profile of the formal education situation presented below point out other constraints which accelerated donor assistance might help to alleviate. The shortage of skilled and educated manpower has had adverse consequences for Malawi's development in both the modern sector where skills are directly in demand and in the traditional sector where skilled personnel are needed to instruct smallholder farmers and others in techniques which will raise rural productivity and incomes. To a considerable extent, manpower shortages in the modern sector have been reduced through the use of expatriate manpower who now constitute 75% of the high-level manpower employed in the country. Continued constraints in formal sector education are likely to perpetuate this state of affairs unless greater expansion of the sector is accomplished in the near future.

At the primary level, 642,000, or 53% of the age group, were enrolled in primary school classes (Standards 1-8) in 1976 and government projected these figures to increase to 1,208,000 enrolled by 1988, representing 73% of the age group available for schooling. Over the period 1972-77 primary enrollments increased by 12% per annum in the 2,140 primary schools in the country. Average enrollment is 300 per school but there are wide variations. The pupil/teacher ratio stands at 50:1. About twenty percent of the 11,000 primary teachers are considered unqualified by the Ministry of Education.

Two new primary teacher training colleges are under construction and about 300 teachers are enrolled each year in the Malawi Correspondence College in-service teacher training program. This, together with better preparation at the primary and Forms 1-3 secondary levels, should strengthen the primary teacher cadre.

Curriculum revision has recently resulted in the inclusion of agriculture and home economics in primary schools and craft training is planned. As with other countries in the region, the number of primary pupils able to find places at the secondary level is small (about 15%) and greater emphasis is now being placed on primary education as a complete experience which will equip Malawi's youth for self-reliant life in rural communities and give them basic skills which will help them learn from FTC and other non-formal training programs and from

reading and listening to educational radio broadcasts on nutrition, farm techniques, and so forth. Stress has been placed on upgrading science and math teaching at primary level to improve receptivity and ability to benefit from further education as it can be provided.

A key constraint identified by the World Bank mission is the inadequate level of school supplies and furnishings in village schools. The poor quality or absence of basic facilities is being addressed by government to the extent that model schools are being constructed in some districts as examples of the kinds of locally-made furnishings and equipment government recommends that villagers build for their own schools.

At the secondary level, 14,400 students (25% female) were enrolled in Forms 1-5 in 1976 representing 3.2% of the age group, while government projections indicate a rise to 34,400, or 4.7% of the age group by 1987/8. Thus, a decade from now less than 5% of the secondary school age group and about 20% of primary pupils will have formal sector educational opportunities at secondary level. These figures demonstrate clearly why this report has discussed non-formal rural-oriented training schemes first but they also illustrate the need for more rapid expansion of formal sector educational opportunities to lessen development bottlenecks and dependence on high-level expatriate manpower.

The World Bank recommends "during the next ten years...that Malawi increase the growth rate of secondary school enrollment to 7.5% per annum (from the present 4.5%) to meet manpower needs..."^{1/} The report also urges improved efficiency in the system to reduce the dropout rate which stands at 35% for secondary schools on average but is as high as 90% for girls in day schools. Fewer dropouts and better pass rates for the Junior Certificate and MCE (Malawi Certificate of Examination, equivalent to a GCE) would reduce per pupil costs and expand the skilled manpower pool at a faster rate.

Increasing enrollments and higher pupil retention rates mean that the present 61 secondary schools (31 with boarding) will need to be expanded or new ones constructed. The present level of 750 secondary teachers will need to be increased placing greater demands on teacher training institutions, particularly if the decade-long trend of supplanting expatriate teachers with Malawian teachers is to continue. (In 1966 over 75% of the secondary teachers were expatriate while in 1976 two-thirds were Malawi citizens.) Finally, additional resources will have to be found for equipment, supplies, and teachers salaries.

The curriculum is being progressively revised and practical subjects are available in about half the secondary

^{1/} Malawi Education Sector Survey, Summary and Conclusions, p. ii.

schools (agriculture, commercial courses, woodwork, home economics, etc.) and there is the normal option of transfer to teacher training institutions after receipt of the Junior Certificate. Similarly, teacher training curricula are being revised to ensure that new teachers are able to teach the revised curriculum which is more geared to Malawi's needs.

At the tertiary level, the University of Malawi is organized in an innovative manner which permits it to serve as the parent institution for three constituent colleges (Chancellor College in Zomba, Bunda Agricultural College, and the Polytechnic in Blantyre), to offer lower level craft courses and to offer trade courses in several skill areas in cooperation with an employers' council.

Enrollment is about 88% male and the total student population of 1,179 for 1976/7 was divided as follows: Bunda - 227, Chancellor - 637, and the Polytechnic - 315. Total enrollment has remained constant over the past several years. The teaching staff is largely expatriate and in June 1977, for example, the total academic staff was 170, of which 51 posts were vacant and of the remaining 199, 87 were filled by expatriates and 32 (27%) by Malawians. University output averages 300 annually and in 1975/6 114 B.A. or equivalent degrees were awarded and 169 diplomas. Of the latter, fifty were in Agriculture and 23 in Education.

The small number of graduates and the high dependence on expatriate academic manpower suggests that general expansion of tertiary activities is called for. Present government projections estimate an enrollment of 2,200 by 1986, but this could be revised once the currently planned and possibly ongoing manpower survey update is completed and can be assessed in relation to likely manpower requirements in the wage sector. USAID is providing considerable assistance to the Bunda Agricultural College and, as recommended above, this could be coordinated with an expansion program in non-formal rural manpower development based on the FTCs and related programs. Formal and non-formal education should be viewed as part of a single training effort since non-formal training is frequently only as good as the trainers and supervisors who receive formal sector education. To expand one requires a rising output in the other.

Available reports indicate that tertiary training is needed at higher levels for secondary teachers to indigenize the teaching staffs while expanding them, for agronomists and related agricultural specialists, for the liberal arts for an accelerated staff development program at the university, and for primary teachers who can upgrade the quality of basic education to provide students able to master more material at more sophisticated levels at the secondary and tertiary levels. The SADAP sector appraisal on transport and telecommunications recommends that aid be provided to the Polytechnic to permit the institution to teach accounting to degree level. It should be noted that British aid provides the principal

assistance to the Polytechnic and this is a subject which ODM may wish to consider.

Unlike neighboring Zambia, Malawi does not have as broad an institutional framework in which to develop vocational skills, but rather relies, first of all, on the Polytechnic with its total enrollment of around 3,000 at the technician and trade levels (full and part time, day and evening). A thorough report of possible avenues for vocational training expansion through the Polytechnic was completed in November, 1974^{1/} and forms the basis for the country's plans in this area.

Trade training is also conducted through apprenticeship where formal instruction at the Polytechnic or the limited number of other technically-oriented schools not attached to the university (Ministry of Works Training School or the Fisheries Training School, for example) is followed by on-the-job training with an employer who pays wages at fixed rates. When the apprenticeship is completed, the wages are refunded to the employer through the Industrial Training Fund. The Youth Brigade Centers of the Ministry of Youth and Culture also offer trade training at two locations primarily in the building trades and motor mechanics. From the various trades training centers one gains an overall sense of the activities in this area, however, the results are more clear when the total cadre of trade-tested craftsmen produced are examined.

^{1/} "The Richards Report" of the Inter-University Council for Higher Education Overseas, November, 1974.

In 1974 there were 175 grade one, 334 grade two, and 590 grade three craftsmen, for a total increase over 1973 of 1,099.^{1/} While it is clear from Malawi Government documents that a shortfall is anticipated in many trade areas, further assessment of this area should be undertaken by donor field personnel to identify possible areas for technical cooperation and, consequently, this report has no observations to make in this regard.

The possible repatriation of the remaining Malawians employed in South Africa and Southern Rhodesia could pose problems of reintegration for the Malawi economy; however, available reports and recent discussions with the Malawi Ministry of Labor indicate that the return of 155,000 Malawi miners in 1975/6 had few serious repercussions, since most were absorbed into estate agriculture, their rural communities, or, in a few cases, the wage sector. The Malawi Government does not believe that special efforts are required for the development of this manpower pool but they are, of course, free to participate in the existing vocational and non-formal schemes discussed above.

2. Current Government Policies and Priorities

The basic objectives outlined in Malawi's 1973-1980 Education Plan are to: (a) base education development on the needs of the economy, (b) revise the curricula of most formal institutions to reflect national needs, (c) ensure the efficient

^{1/} For a thorough discussion of the vocational training system, see the Malawi Education Plan Supplement No. 2 on Technical Education, referenced in the bibliography.

utilization of existing institutions and resources, and (d) to achieve more equitable distribution of educational and training facilities and benefits.

The translation of these objectives into priorities can be seen in part in Table XIII which reveals the levels of expenditures of government by sector. Since independence, education has ranked third after agriculture and transportation in these terms; however, if manpower development is considered in a broader context it is more difficult to know what resources have been expended since they fall under the budgets of several ministries.

The 1976 supplement to the Education Plan stresses the following areas for priority government attention, and these are consistent with many of the activities mentioned above. They include:

1. Improvement of quality and quantity of primary education through (a) an assessment of the magnitude of the dropout problem and identification of measures to reduce it, and (b) the expansion of primary teacher training to provide an output of about 1,000 per year.
2. The introduction of practical subjects on both the primary and secondary levels and the provision of more and better equipment.
3. Government policy is to expand secondary school enrollments to 15% of the age group by 1980; however, budgetary constraints and lack of teachers is likely to keep this figure under 5%
4. To provide additional skilled manpower government policy is to expand the university to an annual intake of 2,200 in 1985, develop a Natural Resources College, and increase the number of places available at technical schools.

Finally, some indication of government priorities may be gained from a glance at efforts in the manpower planning field within government. The Manpower Planning Unit in the Economic Planning Division of the Office of the President is reported to be understaffed and inexperienced. The Manpower Assessment and Utilization Unit in the Ministry of Labor is reported to be conducting some studies including a tracer project of JC and MCE students and a labor survey by households to be based on the 1977 census results. A new Manpower Plan which would survey employment by level and skill and make demand projections is seen by some in government to be needed, and there is evidence to suggest that the British would finance a manpower exercise of this nature if approached.

3. Critical Areas for Priority Attention

To summarize the main conclusions of a country-specific nature which appear in the above discussion on Malawi, it should be noted:

1. That the NRDP will provide an opportunity to focus greater attention on smallholder farmers and to coordinate rural development between existing project areas and other parts of the country.
2. That non-formal education of an extension nature could and should be expanded in this context using existing structures principally of the MAND and Ministries of Health and Youth & Culture.
3. That such an expansion could be facilitated by close coordination with Bunda College and present-U.S. assistance there.
4. That continued skilled manpower shortages and dependence on expatriates could be lessened through more rapid expansion of the secondary and tertiary formal sector education systems with emphasis on secondary teacher training, agriculturalists, and

university graduates able to prepare for advanced degrees through a university staff development program.

5. That additional efforts are required in vocational training where output and estimated manpower needs vary widely (1976-86 requirement of 8,000 at JC level is compared to projected availability of 350 for vocational/technical training--Ministry of Education figures).

TABLE XIV

Principal Recommendations from the World Bank Education Sector Survey of Malawi

A. Strengthening Administrative Capability

- (i) A detailed review of the organization and staffing of the Ministry of Education should be undertaken.
- (ii) Transportation should be provided for the field inspectors to enable these supervisors to cover their territories effectively.
- (iii) In-service, upgrading training courses should be developed for administrators, inspectors and headmasters.
- (iv) Detailed plans for the long-range development of the educational system should be developed.
- (v) Programs to improve the internal efficiency of the Ministry of Education should be developed.
- (vi) Improvement of the facilities of the Malawi Certificate of Education and Testing Board should be undertaken.

B. Improving the Quality of Education

- (i) A Curriculum Development Section should be created to organize and administer the present dispersed efforts.
- (ii) The feasibility of making use of the new textbook publishing facility should be studied to determine the practicality of providing an adequate supply of locally produced learning materials.
- (iii) The in-service teacher training program should be expanded and a plan developed to improve career opportunities and other incentives for teachers.
- (iv) Standards for primary school construction and furnishing should be developed and enforced.

C. Providing for Manpower Requirements

- (i) The present program of introducing practical and agricultural subjects into the curricula should be extended to provide these courses in all schools as rapidly as possible.
- (ii) Secondary day schools should be expanded, particularly at the junior secondary school level, to meet manpower needs.
- (iii) The planned expansion of technical schools should go forward rapidly including provision for the teaching of business studies in three of these schools.
- (iv) The introduction of degree-level programs in engineering and business at the Polytechnic should be given full support.
- (v) The planned expansion of the secondary school teacher training program at Chancellor College is justified and deserves support.
- (vi) The development of the proposed Natural Resources College should be undertaken, possibly on an even larger scale than originally planned.

D. Improvement of Educational Opportunity

- (i) A school mapping analysis is needed to identify under-represented groups and to determine the proper locations of future schools.
- (ii) Further study should be undertaken to identify the causes of the high dropout and repetition rates; and also of the low enrollment and completion rates of female students.
- (iii) Hostels should be provided at selected day secondary schools to provide enrollment opportunities for students not living in the immediate area.

E. Development of Adult Education Programs

- (i) Educational Radio and Correspondence College programs should be expanded to provide programs directed

towards adults including "how to do it" subjects such as keeping farm accounts, nutrition, health and other useful topics. Additional facilities should be provided in the rural area for adult education.

(ii) Special programs should be developed which would provide training for adults in crafts, trades, agriculture and other areas making use of school workshops and laboratories when these facilities are idle.

(iii) The adult literacy program should be expanded.

The development program outlined above is tentatively estimated to cost K 68.0 million of which K 23.0 million has already been provided. The program should be introduced in phases starting with improvements in administrative capability and manpower development programs for which long lead times are required. Its implementation would take about ten years.

D. Mozambique

1. Current Manpower Resources and Constraints

Since independence in 1975, Mozambique has been undergoing a continuous and fundamental transformation from a colonial state whose economic and social systems were tailored to benefit a small minority to a more egalitarian structure in which the welfare of the poorest segment of the population is now of paramount concern to the government. In the case of Mozambique, "the poor" constitute a large proportion of the total population whose per capita income is probably now somewhat less than \$200 per annum. Even this figure is misleading since many people in the rural areas live at subsistence level and are only marginal participants in the money economy.

The following Table provides an outline of the scope and character of the manpower pool available to Mozambique for the mobilization for development which is at the center of government's philosophy.

TABLE XV

Mozambique Manpower Profile

1.	Population (mid-1978 est.)	9,830,000**
2.	Population Growth Rate (1974 est.)	2.2%*
3.	Population Aged 15-64 (est. 1975).	4,200,000*
4.	Employment by Sector (est. 1975)	
	a) Subsistence Agriculture	3,000,000*
	b) Commercial Agriculture	575,000
	c) Industry.	100,000
	d) Services.	350,000
5.	Number of Mozambicans Employed in South African Mines (April 1977)	38,200***
6.	Total Number of Mozambicans Employed Outside Mozambique, i.e., RSA, S. Rhodesia and Malawi	80,000****

Notes: (*) Sources are World Bank Atlas 1976, internal World Bank working documents, and UN estimates; (**) Projected from 1974 estimates using est. growth rate; (***) Source: Mines Labor Organization Annual Report, 1977; (****) This estimate is more a guess than an estimate, since strife in S. Rhodesia and localization in RSA make any accurate figure impossible to obtain.

The most severe constraint on the labor force profiled in Table XV is its lack of skills. An internal World Bank paper concluded that:

"the major constraint to the development of... (Mozambique's) resources is that 85% of the population is illiterate, debilitated by disease, and skilled only in the traditional agricultural methods of production. Further, the educational, health, and agricultural extension services and other institutions necessary to train and mobilize the population into a productive development resource are completely insufficient to the task."1/

In 1964/65 only about 22,000 Africans were enrolled in primary schools, there were six academically-oriented secondary schools in which most of the students were Portuguese and the first institution of higher learning was established in 1966. The University of General Studies had an initial

1/ IBRD Office Memorandum on Mozambique, September 1975, p. 9.

enrollment in 1966 of 540 students, of whom one was a Mozambique African. The University of Lorenzo Marques was founded in 1967 and by 1975 had an enrollment of 2,000. In 1973 there were fifty African students at the university (now the Eduardo Mondlane University) and thirty of these were from Swaziland! Teacher training was similarly almost non-existent in colonial Mozambique, with sixty-eight students in primary teacher training at the country's only training center in 1964 and no secondary training aside from a belated effort to establish a program at the university which, it appears, never materialized due to the departure of Portuguese personnel during the transition to independence.^{1/}

The state of education at the time of independence is of central importance to an understanding of the plight of Mozambique today. The country has sustained the loss of the bulk of the Portuguese community with the attendant loss of skills primarily in the government, commerce, and commercial agricultural areas. It has been buffeted by the consequent loss of revenue which the Portuguese presence brought into the economy and has, therefore, been faced with the need to depend to a greater extent on international donor assistance to meet development targets.

The government is painfully aware of this legacy of colonial neglect and is committed to a massive effort to upgrade the education and skills of its people. Government has stated that its investments will give priority to

^{1/} For a lengthier discussion of these points, see the USAID paper, "Transition in Southern Africa: Mozambique," February 1977.

education, health, agriculture, and road transportation, in that order. The ruling political party, FRELIMO, has already begun developing a mass primary and secondary education system, technical education programs with stress on paramedical training, teacher training programs, and adult literacy classes.^{1/}

Government is, however, confronted with formidable obstacles in the expansion of its educational system, among which are the following:

1. Instruction in Portuguese. African literacy in Portuguese is extremely low, yet it remains the official language of the country and the language of instruction at most levels of education. There is thus a shortage of teachers able to provide instruction in the Portuguese language so that pupils can then advance in the school system. Further, the use of Portuguese rather than English or French makes it more difficult to obtain expatriate personnel with the necessary language skills.
2. Educational Infrastructure. There has been no known comprehensive mapping of educational facilities to permit rational planning for expansion of the system. It is probable that expansion is occurring haphazardly which, while better than no expansion in a country as short of formal sector opportunities as Mozambique, nonetheless means that considerable efficiency is being sacrificed and some duplication of effort may be occurring.
3. Shortage of Teachers. Most secondary and higher level teachers such as existed in Mozambique were Portuguese prior to independence. The vacancy rate probably remains high and the percentage of unqualified teachers is probably also quite high. Primary teachers have always been in short supply and undertrained. With rapid educational expansion, quality is likely to suffer further.

^{1/} IBRD Memorandum, p. 11.

4. Shortage of Supplies and Equipment. While the approach of the government to encourage villagers to build their own schools and maintain them is essential, the shortage of desks, paper, teaching aids, etc. only exacerbates the problem of the teacher shortage.
5. Non-Sectoral Concerns. Constraints on other sectors of the economy and the country's overall financial position^{1/} also have an adverse impact on education and training. The UN Secretary-General reporting to the Thirty-First Session of the General Assembly in 1976 stated, "The present situation is such that Mozambique cannot hope to carry out any normal kind of development program." (A/31/266) At present, Mozambique is concentrating on emergency projects to ensure the country's survival in the face of a closed border with Southern Rhodesia, the effects of repeated invasions of Mozambique by the Smith regime, and the impact of floods and the presence of over 70,000 refugees.

As of July 1978, the GOM had signed cooperation agreements with eighteen countries which are providing assistance, often of an emergency character, to maintain present levels of production and provide essential services. These include Denmark, India, Italy, Norway, Pakistan, Portugal, Sweden, the USSR, and Zambia. This aid will contribute to Mozambique's investment program; however, the UN has published a list of priority projects for which no funding was available as of July 1978 and requested assistance from the international community. Included on this list^{2/} were the following projects relating to manpower development:

^{1/} The government's budget at the end of 1976 showed a cumulative deficit of \$57.5 million plus an additional 1977 deficit of \$28 million. The total public sector deficit is much larger when losses suffered by the railways, ports, airline and telecommunications systems are included. The UN estimates this total deficit at \$185 million. By the end of 1978 this is expected to rise to \$305 million. The balance of payments deficit is also high and rising with the UN estimating \$185 million for 1977. For 1978

- | | |
|--|-----------|
| 1. Vocational Training for Mechanics | \$138,600 |
| 2. Support for Communal Villages | 82,000 |
| 3. Chokwe Training Center for
Tractor Drivers | 69,000 |

The agrarian and vocational foci of the above-mentioned projects are consistent with the recommendations of the SADAP analyses which, in their respective sectors, recommend technical and vocational training rather than broad-based assistance to the formal education sector. Given the need to adapt the formal sector curriculum and institutions into a form suitable to achieve the development objectives of the new government, it is probably preferable for outside donors to focus on the "hard" areas while local resources undertake the social transformation in which basic education will play such a central role.

With respect to vocational training in the transport and telecommunications fields, therefore, it should be noted that Mozambique has good harbors and rail links to the land-locked countries of Southern Rhodesia, Swaziland and Malawi, a port at Maputo of critical importance to South Africa, and represents a major export/import route for both Botswana and Zambia. The capability of Mozambique's labor force in the area of transportation is, therefore, of some interest

the UN estimates imports worth \$635 million and exports worth \$205 million.' About half of this can be met by net receipts on invisibles and from capital account transactions. Government has no foreign exchange reserves and receipts from gold sales cannot meet the deficit since the arrangement with South Africa in this regard was terminated by South Africa. For a complete review of the financial situation, see "Report of the Economic and Social Council, Assistance to Mozambique," (A/33/173) of 12 July 1978.

2/ Ibid., pp. 12-14.

to its neighbors as well as to government which depends upon revenues from the transport of goods for a significant share of its income. Government is aware of its critical manpower problems in this field and has been receiving technical assistance from external donors for the maintenance of Maputo Harbor. Over the longer term, it is a Mozambique Government priority to train nationals to operate the nation's transport infrastructure.

To this end, the SADAP sector analysis of transportation and telecommunications has recommended technical assistance for manpower development in railways through the establishment of a training center for the region in Limbe, Malawi and has suggested assistance through IMCO to set up a training facility in Maputo for port and ship workers.

The SADAP recommendations in this field are limited in in scope and insignificant when compared to government's needs in this sector. The United States has major resources and skills which could make an impressive contribution to technical training in the transport area. Perhaps the SADAP assessments could serve as a point of departure for detailed discussions by USAID officials with other donors and the Government of Mozambique to launch a major effort at manpower development within a framework which would be mutually satisfactory to the U.S. and the host government. Such an effort would begin to create a more balanced assistance

effort in the region and assist major U.S. aid beneficiaries in the region, such as Botswana, Lesotho, and Swaziland, by upgrading the skills of those Mozambicans on whom they depend for the import and export of their goods.

No SADAP recommendations were made with respect to manpower development in the agricultural sector; however, it is clear from UN documents and the 1976 FAO study that training for rural development through non-formal education constitutes a high priority for the GOM. Training through the Ministry of Agriculture in the fields of crop production and protection, livestock production, land and water use, forestry and mechanization were to be undertaken through the following projects:

1. Development of the National Agricultural Training Center at Umbeluzi;
2. Development of the National Agricultural Machinery Training Center at Tete; and
3. Strengthening of the Natural Resources Training Center.

(For further discussion, see FAO study referenced in the bibliography.)

Numerous additional projects have been identified in which training of indigenous personnel will be of critical importance and the GOM has identified a large number of posts requiring expatriate personnel until Mozambicans can be trained.^{1/} U.S. donor assistance in this regard might be

^{1/} See Note by the Secretary-General, "Assistance to Mozambique," 5 May 1976 (E/5812/Add. 1) for a ten-page list (p. 22).

provided through multilateral channels which have been established or bilaterally once this becomes feasible.

The role of women in the new Mozambique has been recognized by the government as an important one. There have been some efforts to train women at village level and there is a commitment by government that they should be given equal educational opportunities. The SADAP analysis on Women in Development did not include a section on Mozambique.

Little is known about the reintegration of migrant laborers from South Africa into the economy of Mozambique. It is supposed that, not unlike Malawi, most laborers were reabsorbed into their home areas and some may have gone to the urban sector to seek wage employment. A survey of returned migrants' skills might be useful to identify individuals for further training whose existing skills could be adapted to national needs.

2. Current Government Policies and Priorities

The Third Congress of FRELIMO, the governing political party of Mozambique, issued a summary statement of its policies in most sectors of the economy in 1977. The summary statement reflects the emphasis placed on the mobilization of the population to build a more equitable and productive society free of the distortions created by centuries of Portuguese colonial rule. To this end, government intends to utilize the school system to:

- a) ensure that "the workers and their children have access to all levels of education;
- b) ensure that it is "put at the service of socio-economic development" (education should be relevant to the work and life of the people so that it stimulates production and the welfare of the whole population);
- c) ensure that teachers do not become an elite, but form part of their local communities and learn to live and work as equals with the population they are educating. To this end, greater effort will be made to train teachers to understand their new role in an environment free of colonial assumptions about hierarchy and privilege.

Government has also placed priority on basic literacy and expects to introduce this through the workplace (rural cooperatives, factories, etc.). A goal of training 5,000 literacy teachers by 1980 has been set and they are to work through provincial literacy training structures. By 1980 government hopes to have achieved the following:

- 3,000 primary teachers given refresher courses annually
- 300 new teachers trained annually
- 60,000 new students to reach class Four
- five agricultural schools created
- one industrial training school created
- 130 graduates produced from Industrial Institute
- 180 graduates produced from Agricultural Institute
- create teacher training institute
- create university selection process to ensure that students admitted from among children of workers
- create manpower planning body
- establish courses for workers (by 1978), probably in non-formal education pattern

In most government and party documents, the political content of education has been stressed as an essential element to build a "new" man who will selflessly contribute his skills

and knowledge to his community and country. Government is seeking to inculcate in the population a sense of Mozambique nationhood and culture which is reflective of its African heritage and to lessen residual Portuguese influences which are perceived to have been elitist, exploitative, and contrary to the interests of the bulk of the population. Mobilization for production and education for self-reliance and employment are basic themes underlying the transformation of Mozambican society and they are not very different from the goals of neighboring majority-rule countries with different political systems but very similar needs.

3. Critical Areas for Priority Attention

The following conclusions are drawn from the above summary:

1. The shortage of skilled and educated manpower is the most critical constraint on Mozambique's development.
2. Much of the assistance being provided at present is more of an emergency than developmental character as a result of political strife in neighboring areas, the consequent influx of refugees, and flood disasters.
3. Donor assistance appears to be desired foremost in technical/vocational areas within the manpower sector.
4. SADAP recommendations have been quite limited in scope--possibly due to restrictions imposed on U.S. assistance to Mozambique by the U.S. Congress--but might usefully act as a point of departure for more detailed discussions with the GOM once aid becomes feasible.
5. At that point the U.S. may wish to work closely with established multilateral agencies to develop a program of assistance which stresses vocational/technical areas.

E. Namibia

1. Current Manpower Resources and Constraints

The overriding constraint for manpower development in Namibia has been the illegal occupation of the country by the Republic of South Africa and the imposition of racially discriminatory legislation designed to ensure preferential treatment in nearly all areas of life for the white minority. The application of apartheid and the forcible division of the African population into ethnically-based "homelands," which act as labor reserves, helped to ensure that few Namibians received training or education which they could use to compete in the wage sector for other than unskilled jobs.

The following Table gives some indication of the size of the manpower pool and the base from which manpower development must proceed. It is important to note that African wage sector employment as broken down by the ILO lists the following number of Namibian Africans in higher level manpower positions: managerial, executive and administrative - nil; clerical - 554; professional and technical - 1,987; teachers and student nurses - 1,869; skilled and semi-skilled supervisors - 2,599. These personnel would fall under category 5c (Other Wage Employment) below but they give some indication of the level of trained personnel a newly independent Namibia will have to build upon.^{1/}

^{1/} Though published in 1977, the figures quoted above in the ILO report, Labour and Discrimination in Namibia, appear to be from 1971. Statistics are often dated

It should also be noted that the total population of Namibia is sometimes in dispute. SWAPO asserts that South Africa has consistently underestimated the African population while RSA claims that SWAPO inflates the figures for its own purposes. It is generally agreed by international observers that the population is probably approaching one million, including whites who are citizens and residents and Namibian refugees resident in Zambia and elsewhere.

TABLE XVI

Namibia Manpower Profile

1.	Population (est. 1977)	950,000*
2.	White Population (est. 1977)	100,000*
3.	Population Growth Rate	3.0%**
4.	Population Aged 15-64 (African)	355,285*
5.	African Wage Sector Employment	
	a) Mining and Quarrying	7,267
	b) Day Laborers	25,017
	c) Other Wage Employment	20,681
	d) Total	52,955***
6.	White Wage Sector Employment	
	a) Government Service	14,000
	b) Commercial Agriculture	6,500
	c) Commerce and Finance	5,000
	d) Mining	3,000
	e) Other	5,000
	f) Total	33,500***
7.	Number of Namibian Africans Employed in South African Mines	2,500

Notes: (*) Source: W. H. Thomas, Towards Acceptable Development Strategies for Independent Namibia, p. 356; (**) Source: World Bank Atlas, 1976; (***) Source: Labor and Discrimination in Namibia, ILO 1977, Tables XV & XVII; it should also be noted that many whites are classified as South Africans and have passports of that nationality.

in assessments of Namibia since South Africa now subsumes them into overall figures for RSA as a security measure. A Manpower Survey was conducted by South Africa in 1973 which shows quite similar figures characterized by a slight increase in most areas for Namibian Africans. It is available for comparison in W. H. Barthold, Namibia's Economic Potential..., p. 74 (see bibliography)

It is beyond the scope of this analysis to recommend measures for manpower development in Namibia for the following reasons: the manpower survey undertaken by Dr. Reginald Green at the University of Sussex on behalf of the Institute for Namibia has not been made available, there is no independent government able to articulate its priorities and needs, many statistics are either dated or suspect since the South African regime has subsumed some into its overall figures for South Africa and may have altered others to suit its own propaganda needs, the duration of what one author has termed "imposed adverse conditions"^{1/} is not known which makes estimates of future needs all but impossible, and the likely level of conflict and attendant loss of life and property in the nationalist struggle against the South African occupation of Namibia is not known.

A synthesis of available documentation with references to where SADAP findings bear on manpower development can be provided and this can be assessed within the context of the general profile presented in Table XVI. Special attention should be given to manpower development initiatives which are possible in the refugee area and to the views of SWAPO, the leading nationalist organization which has fought the occupation of their country by South Africa since the early 1960s.

^{1/} Brian S. Wilks, et. al., "An Analysis of the Main Aspects of Manpower and Education Needs for Namibia in a Situation of Transition to Majority Rule," (Final Report, No. 6, January 20, 1977) prepared for AID by the African-American Scholars Council, p. 2.

As stated at the outset, the key constraint on manpower development has been the policies of South Africa. The education system is deliberately designed to ensure superior education for whites as a racial group and to guarantee that Africans become "efficient and undemanding common laborers, insulated from foreign ideas and, if possible, even from too much communication with blacks from other homelands."^{1/} Historically, education and training for Africans in Namibia was largely an extension of the system in South Africa itself. Statistics regarding the South African system are, therefore, generally applicable to Namibia as well. During 1969/70 (the last year for which RSA made data available which would permit this comparison), for example, the South African Institute of Race Relations made the following comparison of expenditures per pupil and as a whole by racial categories.

TABLE XVII

South African Expenditures for
African Education Compared to
Other Racial Categories

a) Per Capita

White	R282
Coloured	R 73
Asian	R 81
African	R 16

b) Total Expended (millions of Rand)

White	R314
Coloured	R 42
Asian	R 16
African	R 50

Source: S.A. Institute of Race Relations,
Survey of Race Relations, 1972, p. 344.

^{1/} Elizabeth Landis, "Human Rights in Namibia," Dakar, January 1976, p. 50.

The implications of this discrepancy are made clear in the following quotation:

"Calculating on the basis of a total expenditure on White education of R300 million and R50 million for Africans in that year, and dividing the totals by the number of children between the ages of 5 and 19 inclusively as revealed by the 1970 census (1.1 million Whites and 5.8 million Africans), we can see that expenditure per head of school age going population in 1970 was R272.7 for Whites and only R8.62 for Africans. That is to say for every R1 the government spent on the education of each African child between the age of 5 and 19, it spent R31.6 for each White child in the same age group."^{1/}

Attempts to isolate information pertaining to Namibia have been made by several authors. The most recent analysis of Namibian education indicates that the above discrepancies are simply reduced proportionally to fit the smaller population of Namibia, that variations are the result of local factors, and that the pattern of discrimination and its effect upon the manpower situation in the country is relatively consistent with the overall expenditure pattern presented above.^{2/}

Specifically, the expenditure on education for all groups as a percent of the total vote for services from the South West Africa Account of the RSA decreased from 20.2% in 1951/52 to 13.9% in 1963/64. Although the total amount

^{1/} Freda Troup, Forbidden Pastures: Education Under Apartheid, (London: International Defence & Aid Fund, 1976), p. 31.

^{2/} See Marion O'Callaghan, Namibia: The Effects of Apartheid on Culture and Education, (Paris: UNESCO, 1977). Thomas, for example, estimates the per capita expenditure for education in 1975 at R614.94 for Whites, R163 for Coloureds, Namas and Rehobothers and R68.38 for Africans. There are nearly as many estimates and methods of reaching them as there are sources, but the disparities demonstrated by the Institute for Race Relations remain substantially at the same ratios.

rose during this period from R6 million to R33 million, allowances must be made here for inflation and the rapidly rising school age population. More recently, expenditures are shown in the following Table:

TABLE XVIII

Estimates of Expenditure to be Defrayed
from the South West Africa Account
1970/71 and 1976/77

Item of Expenditure	1970/71		1976/77	
	Amount	Percentage of Total Expenditure	Amount	Percentage of Total Expenditure
"Bantu Education"	R2,560,000	2.61%	R3,730,000	1.94%
"Bantu Administration & Development"	R13,133,000	13.4%	R51,446,000	26.7%

Source: O'Callaghan, adapted from Table 47.

A further breakdown of these figures was not available; however, in a general sense their translation into the number of pupils who receive what quality education at what levels provides a basic understanding of the present and projected educational and skill levels of the manpower pool that is now of school age.

Table XIX shows African enrollments for 1974 as quoted by O'Callaghan and taken from the "Bantu Education Journal" of South Africa. These are tolerably consistent with the estimates provided by Thomas (p. 252) for 1975 who estimates lower primary enrollments for Africans at 74.1% compared to Table XIX's average lower primary percent of 72.5% for 1974.

Table XIX

African enrolments by standard, showing percentage of total enrolment for each standard, 1974

Standard, substandard or form	Ovambo		Okavango		Caprivi		Rest of Namibia	
	Number of pupils	Percentage						
<i>Lower primary</i>								
A	23,688	34.011	6,844	42.322	1,404	18.757	5,226	20.188
B	13,896	18.398	3,253	20.116	1,363	18.209	4,587	17.720
I	10,533	13.945	1,990	12.305	1,230	16.432	3,862	14.919
II	7,509	9.942	1,332	8.236	865	11.556	3,424	13.227
SUBTOTAL	57,626	76.297	13,419	82.981	4,862	64.956	17,099	66.055
<i>Higher primary</i>								
III	6,226	8.243	952	5.887	739	9.873	2,743	10.596
IV	4,534	6.003	664	4.106	581	7.762	2,151	8.309
V	3,039	4.023	504	3.116	489	6.533	1,665	6.432
VI	3,061	4.052	351	2.170	508	6.786	1,225	4.732
SUBTOTAL	16,860	22.322	2,471	15.280	2,317	30.955	7,784	30.070
TOTAL PRIMARY	74,486	98.620	15,890	98.262	7,179	95.911	24,883	96.125
<i>Junior secondary</i>								
I	478	0.632	161	0.995	166	2.217	500	1.931
II	306	0.405	75	0.463	82	1.095	270	1.043
III	197	0.264	32	0.197	32	0.427	128	0.491
SUBTOTAL	981	1.298	268	1.657	280	3.740	898	3.469
<i>Senior secondary</i>								
IV	29	0.038	11	0.068	21	0.280	64	0.247
V	32	0.042	2	0.012	5	0.066	41	0.158
SUBTOTAL	61	0.080	13	0.080	26	0.347	105	0.405
TOTAL SECONDARY	1,042	1.379	281	1.737	306	4.088	1,003	3.874
TOTAL PRIMARY AND SECONDARY	75,528		16,171		7,485			

Source: Bantu Education Journal, Vol. XXI, No. 4, May 1975. Percentages calculated by the author.

Source: O'Callaghan, p. 144.

The figures presented by Barthold match O'Callaghan's and were also taken from the "Bantu Education Journal." In sum, African students enrolled in schools in Namibia in 1975, according to official South African sources, were divided as follows: primary (A-VI) - 129,927; secondary (Forms I-V) - 3,654; teacher training - 576; technical training - 354; and universities in South Africa (there being none in Namibia) - 40. For comparison, neighboring Botswana with an African population of about 150,000 fewer people than Namibia, had 116,293 primary pupils in 1975, 10,219 secondary students in 1977, and 820 university students in 1976. The key difference, therefore, is in the rate at which the education pyramid narrows. The implications of this for the output of skilled manpower are obvious.

The character of teacher training provided in Namibia is similar in intent. Although 576 Namibian Africans were enrolled in teacher training programs in 1975 (an increase from 492 in 1974), it is reported that all students were being trained for the lower primary teachers' course or the primary teachers' certificate. Of all those being trained in 1974, 69.7% were being trained exclusively to teach the lowest grade of the lower primary teachers' course.

The number of Namibians enrolled in 1973 at universities in South Africa (40) is so ridiculously small that it hardly seems worth commenting on the additional restrictions placed upon them as a result of being compelled to attend institutions

of inferior quality within the apartheid system rather than be permitted equal access to whatever university might find them qualified for admittance. Namibians are subject to the same educational restrictions as black South Africans. The international community has managed to place at least 236 Namibians^{1/} at universities in 1977/78 from among the refugee population, however, an independent Namibia will obviously need more well educated people than this to administer the country.

The few Africans being trained for technical areas were almost entirely confined to lower level skills training (painting and glazing, brickmaking, tailoring, plastering, carpentry, etc.) and were distributed among five trades training and one vocational training center. While this type training is certainly essential, it is too little and is carried out to the exclusion of even middle-level technical training.^{2/}

In the area of technical education, a key sector is, of course, agriculture. The SADAP assessment of manpower in this sector found that Namibia is relatively well equipped institutionally for a country which has a small population and has not yet achieved independence. With three agricultural colleges, twelve research stations, an extension and veterinary service and organizations providing credit to farmers, there

^{1/} See SADAP Refugee Assessment, Annex V. The breakdown from 1969-1974 of Namibians at South African universities is even more dismal by comparison: the six-year total of entering students is 147 men and 21 women.

^{2/} O'Callaghan, p. 151.

is potential for an independent Namibia to adapt these institutions for the welfare of the majority. At present, as the SADAP paper states, "The bulk of these institutions provide services only to the white minority of the country." Given the educational pyramid described above, it is unlikely that there would even be a sufficient number of African candidates once places at these institutions were opened to all races.

Technically skilled manpower will also be needed in the transport and telecommunications fields. To this end the SADAP appraisal of this sector recommends that contact be established between South African Railways and international donors to see what data on training accomplished and likely training needs could be obtained in order to plan post-independence initiatives in this regard. As with the agricultural survey, no specific recommendations were made, probably for some of the same reasons mentioned above. The health sector SADAP analysis was not completed at the time this summary was being prepared, the assessment of the role of women did not include Namibia, and the mining paper offered few specific recommendations.

While reluctant to draw conclusions with respect to initiatives in Namibia in the absence of an independent Namibian government, there are opportunities for manpower development among Namibia's refugee population. The SADAP appraisal of refugee needs makes several recommendations

which affect Namibia (see Annex II). To begin to compensate for the narrow educational pyramid and restricted opportunities inside Namibia at all levels, the report recommends a greatly expanded effort to educate and train Namibian refugees. Target percentages would be set and a specific timeframe established for a massive increase in opportunities at all levels. The Institute for Namibia could be the focal point for this international effort which should be mounted as soon as possible regardless of the latest permutations of the discussions involving progress towards Namibian independence. If independence comes in 1979, the programs can be transferred into Namibia gradually. If independence takes longer and involves more conflict, training can continue in the knowledge that nationalist forces and the international community will eventually prevail on this question.

2. Current Policies and Priorities of the Namibian People

In the absence of an independent government, current policies and priorities are obviously less clearly articulated than would otherwise be the case. The United Nations is the legal administering power for Namibia as recognized by the International Court of Justice, the United States, and every other country except South Africa. In its legal capacity, the UN has established a UN Institute for Namibia in Lusaka, Zambia whose purpose is to conduct research and train Namibians, inter alia, to form the core of a future civil service. In December 1977 the UN Institute held a seminar on manpower development

problems, during which time the views of a representative cross-section of the Institute's staff (most of whom are leading Namibians) were presented and some tentative conclusions reached on this question. A brief summary of these views is presented here in the belief that the views offer some guidance regarding the likely course of action of a new Namibian government.^{1/}

1. Manpower development is important and urgent since Namibians "have been totally left out of all levels of administration by the South African regime" unlike other former colonies, and there is a likely exodus of the skilled white population upon independence.
2. In view of this, a manpower survey was commissioned by the Institute to identify training needs, manpower needs, and to begin to establish a roster of Namibians abroad who will be available for service in an independent Namibia.
3. In the health sector, priority would be given to distributing what was available to the maximum number of people, which implies a rural focus rather than construction of larger health complexes in urban areas. This has implications for the kinds of health training required.
4. Training in the traditional sense will not be sufficient given the breadth of Namibia's problems and there will need to be efforts to mobilize the entire population to participate in their own development. This would imply emphasis on large-scale non-formal schemes geared directly toward meeting people's needs for functional knowledge.
5. The need for expatriate personnel after independence is recognized; however, it was felt that the Green estimate of 15,000 was excessive and that lower-level administrative positions without technical content would have to be held down by former freedom fighters who would receive in-service training as available.

^{1/} See UN Institute, "Report on the Manpower Seminar," December 5-7, 1977. The seminar was held to consider the first draft of the manpower survey prepared by Dr. R. Green of Sussex University.

6. Management personnel will have to come from the approximately 650 educated Namibians now outside Namibia plus the upgrading of some of the 65,000 workers in industry.
7. The role of women in development was stressed and there was a call for a transformation of women's roles and their unqualified participation at all levels of social and economic development.
8. There was a consensus for the establishment of a Manpower Planning Unit within the Institute, the Council for Namibia, SWAPO, or jointly. The task of the Unit would be to follow up the recommendations of the seminar and form the nucleus of a post-independence planning capability.
9. There was a lack of consensus regarding an approach to the question of rural manpower development and which existing institutions needed to be abolished and which could be successfully modified to meet the needs of the majority after independence.
10. The seminar was clear that "it would not be acceptable to consider existing institutional structures in Namibia as the basis for assessing the country's manpower requirements, since different needs will undoubtedly reflect themselves in different institutions after independence."
11. In manufacturing, import substitution and the training of personnel to work in such industries would be important since "existing importation of goods from South Africa is unlikely to continue after independence."
12. Establishment of new institutions has manpower implications and the seminar mentioned these in terms of the need to create a Central Bank, a National Agricultural Research Board, etc. Modification of present commodity and research boards also has manpower implications that must be detailed.
13. Managers will also be needed for the conversion of large white farms into state farms. Their scale should be of manageable proportions since it was noted that these are difficult to run efficiently if they are too large and there is insufficient Namibian skilled personnel.

14. The need for training of mining engineers and technologists was specifically mentioned in view of Namibia's vast mineral deposits and the need to control the country's wealth for the benefit of her own people.
15. The next research task of the Institute will be to propose a development strategy for the new Namibian government. This will have definite manpower implications.

F. SWAZILAND

1. Introduction

Detailed summary assessments of Swaziland's manpower situation have been provided as appendices to the World Bank's May 1977 Appraisal of a Second Education Project and are entitled "Manpower and Employment" and "Education and Training". The Manpower Review of Swaziland of February 1977 by a British aid mission offers an overview of manpower shortages and assesses the training capacity of the country and Swaziland's short-term need for skilled expatriates. In June 1977 AID sent a manpower team to Swaziland for ten weeks to produce a "Manpower Requirements Study" which would examine overall needs for low, middle and high level skills necessary to ensure the successful expansion of Swaziland's Rural Development Area Program (RDAP). The AID generated report was completed in September 1977 in cooperation with the US Department of Agriculture.

Building upon basic statistical data provided by the CSO in Swaziland, the aforementioned reports and the government's own 1977 report from the Ministry of Education titled "A Financial and Statistical Analysis of Swaziland's Educational System with Projections to 1985," the government has just completed a comprehensive description and analysis of the formal sector employment position with conclusions for education, training, wages, incomes and localization.

This report is titled Skills for the Future by Christopher Colclough and Peter Digby.^{1/} Thus Swaziland's needs for formal skilled and nonformal agricultural manpower have recently been assessed, there is some data available from the CSO on most aspects of the education system and on wages and employment, and other donors are active in this field and have their own assessments of the situation.

Consistent with the previous country specific summaries the following Table presents basic data to serve as a point of reference with respect to the character of the total manpower pool.

Table XX
Swaziland Manpower Profile

1. Population (June 1975)	510,212*
2. Population Growth Rate	3.18%**
3. Population Aged 15-64 (June 1975)	262,252*
4. Active Labor Force (est. 1975)	181,000
5. Wage Sector Employment (1976)	76,942***
6. Average Percent Skilled Expatriate Employment in Public & Private Sectors	45.9%***
7. Swazis Employed Outside Swaziland in June 1975	33,189****
8. RSA Mine Recruits (7/76-6/77)	17,355****

Notes: *Source - Annual Statistical Bulletin for Swaziland, 1976 (latest ed.); **Source - World Bank Atlas, 1976; ***Source - Employment and Wages in Swaziland, 1976, CSO Swaziland. Of this figure, only 16,543 are in public sector. Private sector includes self-employed, domestics, small traders and curiously 1,216 "unpaid family workers" are included in total; ****Source - "Wages in Swaziland," Federation of Swaziland Employers, 1977.

^{1/} For full citations of all documents, see the bibliography.

The following summary of contemporary conditions and problems in the supply of and demand for manpower in Swaziland will permit comparisons to be drawn with other country summary appraisals and suitable reference can then be made in the introductory overview with these points in mind.

2. The Manpower Situation and Future Levels of Demand^{1/}

Total wage employment in the modern sector grew at about 10% per year from 1970 to 1974, with public and private sector employment growth rates being broadly similar. Wage rates have increased more rapidly in the private sector until recently, as has productivity. The public sector wage bill has grown rapidly (roughly 25% per year 1972-1974) primarily because numbers employed increased faster than earnings. Prior to the February 1976 salary revisions, public sector salaries at higher levels lagged significantly behind those in the private sector: these have now been reduced in many cases. Unlike many Third World countries, the public sector in Swaziland represented only 22% of modern sector wage employment in 1974.

Paid employment will likely grow by 6% per year until 1980. If this rate is sustained, if the labor force grows at its current rate of 3%, and there is no change in the relatively small amount of migration to South Africa, then the absolute size of the labor force available for work in

^{1/} This section is a shortened and modified version of a summary extracted from Manpower Review of Swaziland, Report of a Mission on British Technical Cooperation to Swaziland, January/February 1977, (London: ODM, March 1977), pp. 10-16.

subsistence agriculture should begin to decline by the mid - 1980s. Overt unemployment in Swaziland, although unevenly distributed, is not thought to be high - only 15% - and in the last analysis unemployed junior secondary school leavers can usually return to the subsistence sector (even if they apparently do not do so until after their expectations of finding a modern sector job have been frustrated).

Using 1974 figures, localisation has fared least well at the administrative and technical level (51% expatriates) and the skilled level (40% expatriates). Since 1974 the percentage of non-citizens working in the clerical group appears to have declined considerably as a result of increased junior secondary outputs. In short, over 90% of all Swazi citizens in paid employment are employed outside the administrative, technical, and skilled categories.

Public sector clerical employment has grown an average of 70% per year over 1972-1974, compared with only 16% per year for the public sector as a whole. The public sector administrative and technical category grew very little over 1972-1974 by comparison; however, if the many vacancies in the technical and professional areas had been filled, growth would have been more rapid. The critical manpower constraint seems to be the shortage of high level manpower and certain kinds of middle-level manpower to 1980, particularly in the sciences. University output targets for art/social science degrees are being over-achieved and non-science based public sector jobs should be filled by Swazi citizens by the mid-1980s.

However, science-based jobs are unlikely to be fully localised before 1990.

Middle and higher-level skill shortages affect public and private sectors to different extents with the private sector continuing to have a relatively larger share of non-citizens. These shortages represent serious development constraints - shortages of junior administrators, nurses, support staff, and agricultural extension workers will delay project implementation and the training of more skilled manpower. This shortage will remain critical because it is from a small pool of qualified candidates that the requirements of the University, Science/math teacher training, technical education, and the immediate employment market have to be met.

Shortages of upper secondary science-based output contrast with sizeable surpluses of lower secondary outputs. Secondary education has expanded 15% per year in the past few years with lower secondary expansion significantly in excess of that due to Government policy of providing secondary education for all primary leavers with requisite qualifications. As the Government's policy in this area is unlikely to change, and access to junior secondary education will not become more difficult, each year this sector will probably continue to provide 2-3 times as many leavers as there are relevant job opportunities available. (A different curriculum and modified job expectations might do much to ameliorate this problem without resorting to a reduction of educational

opportunity to meet perceived employment constraints.)

On the supply side, the estimated number of adults with some education or training who will enter mostly the wage labor market is indicated below.

Table XXI

SWAZILAND: OUTPUTS OF THE EDUCATION/
TRAINING SYSTEM 1976-1980

<u>Level of Training</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1976-85</u>
Grade 10	1700	2100	2100	2400	2400	10,700
Grade 12	1100	650	700	900	900	4,250
SCOT	200	230	270	275	275	1,250
<u>Specialized</u>						
Post-Secondary	280	310	370	450	500	1,910
Degree	40	50	50	55	60	255

SOURCE: ODM Manpower Review, p. 13

A requirement of around 620 administrative and technical workers per year is thought to exist compared with an expected annual supply of 450. Yet, as stated above, science graduate output from the University is likely to fall significantly behind schedule. The Swaziland College of Technology (SCOT) is expected to meet the needs for new skilled technical workers by 1980, but progress in localization is expected to be slow since SCOT graduates quantitatively improve the situation but qualitatively there may be difficulties due to a lack of essential work experience.

At the middle level the skills shortage is unlikely to be reduced since the University takes most Level I and Level II secondary output. This underlines the need to improve

the quality and quantity of senior secondary education in math and science. The middle level manpower shortage is also a serious indirect constraint on development since the effectiveness of high-level manpower is diminished by lack of support staff and expatriate recruitment is difficult at the middle-level. Despite junior secondary school leaver absorption problems, parental pressure for more secondary education is very strong and the policy of providing all qualified primary leavers with secondary places combined with a commitment of universal primary education will result in further rapid expansion of lower secondary output. The junior secondary level over-supply problem is also a reflection of the large financial rewards accruing to those with educational qualifications who succeed in finding employment. Policies of curriculum reform are therefore unlikely to succeed in the absence of policies to reduce the rigid link between income differentials and educational qualifications and policies to convince youth that village life need not represent failure or poverty.

The ODM report offers this summary of the current demand/supply situation:

- "a. The critical manpower problem remains a shortage of high and middle-level manpower. The highest vacancy/expatriate proportion lies at the professional and technical levels and in such cadres as engineering, veterinary officers and technicians.

- b. At the high manpower level it is likely that dependence on expatriates will continue well beyond 1980 since it requires 10-15 years to train the appropriate type of personnel given the need for on the job experience before local manpower can be replaced.
- c. More serious than the high level manpower shortage is the situation at middle levels this will be difficult to alleviate in future years unless there is a marked improvement in the quality of secondary school outputs... (This) is a serious constraint on development in view of the greater difficulty in filling vacancies in the categories of teachers, junior administrators and nurses and in view of the large cost in terms of development given that the effectiveness of high level staff is diminished by lack of support staff.
- d. Co-existing with this situation of shortages at higher and middle levels is a situation of emerging surpluses of junior secondary leavers. This is likely to become more acute in the absence of a rapid expansion of employment opportunities in view of the government's policy of universal primary education and the provision of secondary education for all primary leavers with the requisite qualifications.
- e. Within this overall over-supply situation at the secondary level a critical shortage of secondary graduates with Level I and Level II passes in mathematics and science-based subjects remains. Although the decline in quality, as measured by the COSC examination results, has been arrested this year, it is uncertain whether this is a reflection of a long term trend. There remains an acute shortage of students for training placements to relieve the constraint on localization in Departments such as Works, Agriculture Posts and Telecommunications."

3. Governments' Assessment of Manpower Achievements and Constraints

It is instructive to compare the government's own conclusions regarding its strengths, weaknesses and emerging problems with those of the British Mission since they are quite similar and indicate a general consensus between the developing country and its principal donor and former colonial power. The following extract presents the principal conclusions of the Ministry of Finance and Economic Planning in its May 1978 report Skills for the Future:

Chapter 1

The number of Swazis who are dependent upon self-employment in agriculture will continue to increase over the next decade. The most important priorities for employment policy, therefore, are to improve the standards of living of those outside the formal sector. Policies to increase incomes of workers in the rural areas and in the informal urban sector are critical if the lives of the poorest people are to be improved. (1.7)

Chapter 2

Reasonable progress has been made in localising the public service, but many private sector employers have made very slow progress with localisation. (2.4)

A very high proportion of posts in central government require skilled workers. Caution should be observed in allowing rapid establishment increases in Government, because so many of the additional jobs require skilled people. The skill requirements of new projects should be explicitly incorporated in project evaluation procedures. (2.6)

Stronger efforts should be made to attract educated Swazi women into formal employment. (2.8)

Chapter 3

The overall requirements for skilled workers are likely to be increasing at around 7 per cent per year over the next decade. But the requirements for craft, technical and science-based professional workers are likely to increase faster than those for other groups. (3.6)

A large proportion of skilled jobs in Swaziland require formal training and previous job experience in addition to secondary or higher education. A large measure of responsibility for localisation must therefore fall upon employers themselves - to ensure that Swazi employees receive the training and experience they require to perform effectively in skilled jobs. (3.8 - 3.11)

1. The numbers shown at the end of each section indicate the corresponding paragraphs in the main body of the report.

* Emphases added by consultant to stress areas of agreement with the above summary of the findings of the ODM mission.

Chapter 4

Earnings differentials associated with education in Swaziland are very large indeed. Higher education brings earnings which are up to 40 times greater than those typically gained from small-holder agriculture. These differentials explain the strong political pressures to continue the expansion of schooling at junior and senior secondary levels. Differentials of this magnitude produce serious distortions in both education and the labour market. Quite apart from equity considerations, such differentials seriously hamper the growth of productive employment. The introduction of an incomes policy which aimed to reduce these differentials significantly would be advantageous to development and particularly to the growth of opportunities facing the poorest people (4.2, 4.3)

In the private sector the basic local salary and the inducement payments for expatriate workers are not specified clearly enough. All firms should introduce common local salary scales for all workers. Inducement allowances should be kept as a separate set of payments to those expatriate workers who receive them. (4.6)

Chapter 5

Secondary school outputs have recently been much greater than the annual increase in the number of jobs. As a consequence, unemployment among secondary school leavers has recently appeared. This problem will become very much worse over the next few years. (5.3 - 5.6)

With the move towards a universal basic education programme of ten years, the majority of such school leavers will be unable to find jobs in the formal sector. The introduction of universal basic education is laudable, but the present exclusively academic content of primary and junior secondary schooling must change. Experience from elsewhere suggests that there will also need to be changes in the present system of certification and selection if the new programme is to bring real educational benefits for the majority of students for whom basic education will be terminal. (5.7)

Current expansion plans for senior secondary schooling will lead to the emergence of unemployment amongst Form 5 leavers also during the next few years. Enrolments at this level should be cut back. A progression ratio from Form 3 to Form 4 of, at most, 30 per cent is appropriate. There would be considerable benefits to be gained from shifting resources away from senior secondary towards primary schooling over the next ten years. (5.8)

The quality of maths/science teaching at primary and junior secondary levels is in urgent need of improvement. (5.9 - 5.11)

Continued expansion of university-level education is appropriate. First-year enrolments should increase from about 140 degree students to about 250 in 1984. This should allow complete localisation of senior professional posts in the formal sector by the end of the 1980s. This, however, will be very much dependent upon securing a much larger proportion of enrolments in maths/science based disciplines. Less than 50 per cent of students should be enrolled in the humanities, and most of these should become teachers in the secondary schools. (5.13 - 5.16)

Continued expansion of craft training at SCOT and under the apprenticeship system is required. Secretarial and commercial training programmes also need to be expanded. Existing plans for technician training appear to be appropriate. (5.18 - 5.21)

Improvements in the quantity and quality of formal education and training alone are insufficient to ensure the speedy replacement of expatriates by local workers. Employers must take on responsibility for training their Swazi personnel. Specific measures should be taken by Government to ensure that this occurs. The following measures seem to be needed:

- (1) Tighter control of the work permit system is required. Before permits are granted or renewed the Labour Department should require the prior submission of a localisation plan for the establishment concerned, setting target dates for the hiring and training of counterpart staff, and for the replacement of existing expatriates. All firms should be expected to have reduced their existing expatriate complement by half by the end of the Plan period, and to have fully localised by 1989. (5.22)
- (2) The present tax rebates allowable for approved training programmes in the manufacturing sector should be extended to cover all sectors. (5.25)
- (3) A 'training levy' should be introduced whereby all private and parastatal sector organisations (excluding education) would pay an annual sum to the Government for each expatriate worker in their employ. The revenues from this levy should be used to finance training scholarships for Swazi employees in the private and parastatal sectors. (5.26)
- (4) The staffing of the Labour Department should be increased, to ensure effective implementation of the above measures. (5.27)

The above review of current manpower trends coupled with the most recent government conclusions with respect to Swaziland's manpower situation raises three questions: (1) What is the present character and quantity of output of Swaziland's educational and training programs which have led to the above conclusions, (2) What efforts has Swaziland made to respond to the above findings and (3) What new initiatives from international donors might be welcome to assist Swaziland to lessen the manpower constraints which have been identified?

4. Present Character and Output of Swaziland's Educational and Training Programs

Table XXII
Swaziland Formal Education Statistics

A. Primary Education

Number of Pupils (1977)	96,835
Number of Teachers (1977)	2,672
Number of Schools (1977)	436
Teacher-Pupil Ratio(1977)	1:36.2
Percent of Female Pupils (1977)	49%
Percent of Grant-Aided (Mission) schools (1975)	80%
Percent of Schools Electrified(1977)	10.6%
Percent of Schools with School Gardens	22.2%
Percent of Schools with Water Source	40.8%

B. Secondary Education

Number of Pupils (1977)	19,359
Number of Teachers(1977)	978
Number of Schools(1977)	70
Junior Secondary....43	
Senior Secondary....27	
Teacher-Pupil Ratio	1:19.8
Percent of Female Pupils(1977)	47.5%
Percent of Grant-Aided (Mission) Schools(1975)	45%
Percent of Schools Electrified(1977)	49.9%

C. Teacher Training

Number of Students Enrolled for Secondary Teacher's Certificate(1977)	117
Number of Students Enrolled for Primary Teacher's Certificate(1977)	237
Number of Students Passing Examination in 1977 (a) Secondary, (b) Primary	45 (a) 87 (b)

D. University Level Education (Degree) - 1977

Number of Students Enrolled in Swaziland	309
Number of Students Enrolled Abroad	138
Academic Disciplines All Students	
(a) Agriculture	42
(b) Business/Economics	125
(c) Education	123
(d) Engineering	44
(e) Law	18
(f) Medicine	66
(g) Other	29
TOTAL	447

E. Diploma and Technician Level - 1977

Number of Students in Swaziland and
Abroad Fields (a)-(g) above582
(includes SCCT)

Sources: "Education Statistics 1977," CSO Mbabane;
"Training Report 1976-1977," Office of the
Prime Minister, Mbabane; World Bank
"Appraisal of a Second Education Project..."

In 1977 there were 114,117 Swaziland citizens of primary school age (defined by GOS as 6-13) of whom 84.9% were attending classes. The GOS plans to achieve universal primary education by 1985. The principal constraint at the primary level remains the poor quality of the teaching staff with only 27% regarded as qualified in 1975. The number of primary teachers increased by 309 from 1975 to 1977 whereas only 87 new qualified primary teachers were produced in 1977. This would indicate that the number of unqualified teachers is increasing as well as the number of qualified ones. The primary teacher upgrading program has an intake of 100 teachers per year for six-week courses and the primary teacher training college (William Pitcher College) is being expanded in an effort to meet a target of 80% trained primary teachers

by 1985. A survey of physical facilities was conducted in 1977 for each District and the Ministry of Education is reviewing the findings of the survey to determine areas which need upgrading and which Districts should receive priority.

The secondary system has expanded rapidly from 2,390 students in 1963 to nearly 20,000 in 1977 in order to accommodate 24.5% of the school age population (14-18) as of 1975. Of this number, there were 1,395 candidates for the GCE "0" level examinations in 1977 (compared to 356 in 1970) of whom 194 passed in Divisions 1 and 2 to qualify for university entry while another 1,128 passed in Divisions 3 and 4 to qualify for diploma courses and technician training. A key constraint here also is the shortage of teachers, particularly in the sciences. In 1975 about 71% were qualified, of whom 41% were Swazi citizens. The SCOT as of 1975 was producing only about five teachers per year and this is a severe constraint on efforts to strengthen the science and math curriculum at secondary level.

The GOS recognizes the need to expand university education and enrollment at the Swaziland campus is expected to increase from 563 in 1976 (degree and diploma for Swazi and re e students matriculated there) to 886 in 1981 and 1,013 in 1986 with the largest increases occurring in science, economics and education. The average number of degree holding university graduates of Swazi nationality from UBS over the

past three years is estimated at 75-80 people. The low enrollment contributes to high per pupil recurrent costs.

With respect to non-formal education and training, the World Bank has characterized programs as representing an "extensive network" while observing that a lack of coordination has "greatly reduced" the cumulative impact of those programs.^{1/} The Bank report provides a summary of each of these programs and outlines major constraints and current activities. They include the Farmer Training Centers and Extension Worker Training schemes of the Ministry of Agriculture, the Ministry of Education's Rural Education Centers, evening classes and International Education Center, the Cooperative Movement and handicrafts training programs of the Ministry of Commerce, Youth Center Courses and the Sabenta Literacy Institute of the Ministry of Local Administration and programs of the missions. As indicated above, non-formal education will need to be coordinated to maximize its impact and also be linked to curriculum reform to ensure that more school leavers have alternative opportunities.

5. Response of the Swaziland Government to its Findings and those of other Interested Parties

The most dramatic response of the Swaziland government can be seen in the substantial shift in capital expenditures which has occurred in the education budget for 1977/78 compared

^{1/} World Bank, Appraisal of a Second Education Project..., Appendix II, pg. 4

to 1976/77. Expenditure for secondary education has plummeted by 79% while that for primary education has been cut nearly in half. Expenditure for UBS and for Rural Education Centers has meanwhile increased dramatically. Table XXIII demonstrates that recommendations concerning the need to assist junior secondary and primary leavers to adjust to rural living and receive further training while also addressing the growing problem of a surplus of secondary output compared to available wage sector jobs requiring this level of general education have been heeded. The need for expanded tertiary education has also been translated into action with a large increase in expenditure for UBS.

Table XXIII
Estimates of Government Recurrent and Capital
Expenditure for Education 1976/77 and 1977/78

CLASSIFICATION	1976/77	1977/78
Salaries and Wages	4,492.9	6,406.1
Intermediate Consumption	622.2	556.4
Transfers Internal	115.1	129.0
Transfers to Post-Secondary	1,130.8	1,720.5
TOTAL RECURRENT EXPENDITURE	6,351.0	8,812.0
Primary Schools	426.9	249.5
Secondary Schools	831.5	174.6
Rural Education Centres	83.3	1,800.0
Teacher Training	256.8	100.0
S.C.O.T.	891.6	720.0
U.B.\$.	230.6	2,256.4
Misc.	279.6	219.5
TOTAL CAPITAL EXPENDITURE	3,000.2	6,520.0
TOTAL EXPENDITURE	9,351.3	15,332.0

Note: Figures may not add up due to rounding. Source - "Education Statistics 1977," CSO June, 1978.

Swaziland's education budget of E6,186,481 represented 22.5% of appropriated departmental expenditures for that year and was the largest single budget item. Works, Power and Communications followed with 10.8% and Agriculture with 10.4% in the same year.^{1/} The Establishments and Training Department, with 6.8% of total expenditures, also engages in substantial training for the public service and other post-secondary training. Of E2.2 million for 1975/76, the Department expended E800,000 on "manpower development" and E634,000 on "Post-Secondary Education." In the same year the Ministry of Local Administration expended E167,000 on adult literacy, E44,000 on youth camps and E189,000 on community development. In short, the total amount expended on formal and nonformal education and training cannot be accurately determined from the budget, however, it appears that a third or more of Swaziland's entire budget is spent in this way. As mentioned for Botswana and Lesotho, a regional survey of non-formal education activities and expenditures would provide more detailed data from which better analyses of the impact of non-formal programs could be made and such a survey could foster greater cooperation among the various undertakings.

Government has also responded to the findings above by engaging in a major curriculum reform effort. At primary level, the reform is designed to introduce students to

^{1/} "Recurrent Estimates of Public Expenditure for FY 1977/78," Government of Swaziland, pg. 9.

agriculture while greater emphasis is being placed on science and math subjects. The strongly academic secondary curriculum is also being changed to include more science subjects and practical courses such as domestic science, industrial arts and agriculture. The World Bank education project is assisting with equipment and workshops.

6. Critical Areas for Priority Attention

The following areas may offer an opportunity for international donors to increase their assistance to Swaziland in manpower development:

1. Finance a survey of non-formal education activities and expenditures on the regional level;
2. Provide greater assistance to the expansion of primary teacher training which is expected to continue to experience a shortfall of output through the 1980s;
3. Strengthen agricultural extension education along the lines suggested by SADAP agricultural sector recommendation (see Annex II);
4. Consider providing additional math and science teachers at secondary level (Peace Corps/CUSO/VSO/UNV etc.) and in the teacher training institutions to enable Swaziland to increase the output of trained personnel in the sciences;
5. Once the survey recommends optimal methods to coordinate nonformal education, assistance to the Ministry of Local Administration and Ministry of Health should be considered to strengthen health education (see SADAP recommendation in Annex II) and the Youth Camp and other rural activities of Local Administration;
6. Technical Assistance to the CSO coupled with fellowships to train Swazi statisticians appears to be needed urgently. CSO does an admirable job with a skeletal staff but the planning and implementation of projects throughout the country could be enhanced with assistance in this area;

*See also the Manpower Requirement Study on RDAP done for AID in September, 1977 for details.

7. The SADAP mining sector appraisal recommends establishing a School of Geology in Swaziland or Mozambique. This could be discussed in more detail with UBS and government to determine whether it fits with their expansion program and to obtain cost estimates. Swaziland is well-endowed with minerals and could lessen its dependence on expatriates with the expansion of geological training. Whether an institution-building project or fellowships outside the region would be preferable would be the subject of discussion for a project design team.
8. The planning capacity of Swaziland's substantive ministries may require strengthening to cope with increased project demands and the changed priorities of government in the education field. This should be borne in mind when donor initiatives are being considered for the above suggestions.

G. ZAMBIA

1. Current Manpower Resources and Constraints

After forty years of direct British colonial hegemony and over seventy-five years of missionary activity, at the time of independence in October, 1964, Zambia could count just over one hundred university degree holders, 1,200 secondary school graduates and less than one percent of its population of 3.5 million as primary school graduates. In the whole government service there were four Zambians in professional posts and twenty-five in higher administrative posts. The debilitating effects of colonialism upon the ability of Zambians to gain the skills necessary to cope with their changing socio-economic environment were compounded by the "underdevelopment" of the rural areas. Not only were colonial extension services geared to the interests of white settler commercial agriculture, but the imposition of the "hut tax" represented a conscious effort to force a significant number of the most able-bodied males off the farms and into the wage economy as unskilled mine labor. As a consequence, Zambians for the most part were not afforded the opportunity to receive education or training appropriate for the future while the system which had sustained the population traditionally was deprived of a vital portion of the manpower necessary for it to prosper.

In the short period since independence, Zambia has devoted a large proportion of its budget to the expansion of

education and has had impressive results in terms of the number of graduates at all levels, the development of the physical infrastructure and the rate of Zambianization at all but the most senior technical levels. The following few pages provide an overview of that progress and the difficulties which remain for manpower development in Zambia in both the formal and non-formal areas. As a preface to this discussion, the following table presents a brief profile of Zambia's current manpower situation.

Table XXIV
Zambia Manpower Profile

1. Population (1978 est.)	5,200,000*
2. Population Growth Rate (1974)	2.9%*
3. Urban Wage Sector Labor Force	604,000**
4. Total Wage Sector Employment (1976)	466,200
5. Of Which Female Wage Employment (1976)	82,200

Note: *Source: World Bank estimates; **Source: Transition in Southern Africa, Zambia (AID), Table IV-53.

(a) Manpower Supply and Demand

Several recent analyses of Zambian manpower requirements have noted the poor data base available for planning (with the exception of tertiary level formal sector needs)^{1/} and the concomitant virtual absence of manpower planning within the government. Rather than the absolute manpower constraints

^{1/} The University of Zambia "Tracer Project" which was supported in part by UNESCO has recently published a book on Higher Education and the Labor Market in Zambia. See bibliography for this and other citations.

experienced at independence, Zambia is now producing adequate numbers of graduates in many fields but continues to experience shortages in specific categories.

The most recent statistics are drawn from the May 1978 draft report of the Sub-Committee on Manpower and Employment which is responsible for drafting the text for Zambia's Third National Development Plan (1979-1983). The report notes that supply and demand figures are not strictly comparable, are incomplete and frequently out of date because surveys have not been undertaken regularly and there is no continuous review or coordination of this information within government.^{2/} As such, the conclusions are "severely limited" and generalized in nature. The Sub-Committee has, however, made the following key observations:

1. Total demand for trained manpower will probably not exceed 5,000 per year while supplies average 6,000 per year with specialist training or 25,000 per year at the Junior Secondary level or above.
2. Major occupational categories for manpower shortages are professional, technical, administrative, managerial and clerical. Professional and technical personnel are in shortest supply in education, health and engineering.
3. Demand for primary teachers is likely to be met during the TNDP but there will be a shortage of about 1,200 secondary teachers as of 1983.
4. In health, doctors, dentists and pharmacists are in short supply while in engineering if the target for Zambianization is set at 50%, the Report expects a shortfall of 1,000 persons by 1983.

^{2/} Report of the Sub-Committee, pg. 23.

5. Administrative, managerial and clerical workers is less pressing than the above fields but at least 1,500 Zambian administrators and over 2,000 accountants and auditors are needed.
6. "...the lack of a coherent manpower policy and... an effective agency to undertake the implementation of manpower policy" is seen as a major constraint. This is viewed as caused by a sparse data base, a lack of coordination and authority to coordinate between ministries and the rapidly changing economic conditions in the country.

Following are the parameters of Zambia's present manpower supply/demand situation:

TABLE XXV
Projected Formal Sector Outputs for
Employment during the TNDP

	1979	1980	1981	1982	1983	TOTAL TNDP OUTPUT
UNZA DEGREE	326	373	410	415	517	2041
OVERSEAS DEGREE	57	41	38	43	34	213
DIPLOMAS	450	509	523	620	606	2794
SECONDARY TEACHERS	592	604	645	630	652	3131
PRIMARY TEACHERS	1420	1420	1770	1770	1890	9270
ADVANCED CERTIFICATES	500	610	620	790	690	3410
NURSES/MIDWIVES/TUTORS	1322	1322	1322	1322	1322	6610
CERTIFICATES	1270	1540	1570	1990	2230	8600
SENIOR SECONDARY	7000	6300	6500	6300	6400	33500
JUNIOR SECONDARY	12000	12000	22000	11000	13000	70000
TOTAL (rounded)	25000	25000	35400	25400	27600	130600

Source: Report of the Sub-committee, pg. 8.

TABLE XXVI
High-level Outputs (University and
Overseas) during TNDP period

	1979	1980	1981	1982	1983	TOTAL TNDP OUTPUT
SCIENCE	32	22	18	19	14	105
AGRICULTURE	23	13	25	32	43	141
FORESTRY	2	0	1	0	12	15
VETERINARY	1	4	1	0	4	10
ENGINEERING	26	26	31	26	29	140
MINING	20	20	22	19	20	101
BUILDING/ARCHITECTURE	7	6	8	30	35	88
BUSINESS/ACCOUNTING	3	2	9	28	72	113
MEDICAL (including Pharmacy and Dentistry)	35	33	36	30	29	165
HUMANITIES	78	137	89	79	77	430
LAW	32	45	32	27	29	165
EDUCATION (Science)	45	36	40	44	46	211
EDUCATION (Arts)	77	98	135	124	136	570
TOTALS	383	414	448	458	551	2254

Source: Report of the Sub-Committee, pg. 9.

Table XXVII

Zambia's Demand by Sector for
Trained Manpower During the TNDP

SECTOR		1978	1979	ANNUAL INCREMENT DEMAND	1983
GOVERNMENT	I	3,307	3,419	122	3,908
	II	4,691	5,129	183	5,862
	III	9,921	10,258	367	11,725
PARASTATALS	I	3,283	3,355	76	3,660
	II	4,925	5,033	114	5,490
	III	9,850	10,000	229	10,981
PRIVATE	I	356	374	21	457
	II	534	561	31	685
	III	1,069	1,123	62	1,371
TOTALS	I	6,947	7,149	219	8,026
	II	10,420	10,723	329	12,039
	III	20,842	21,447	658	24,078

Source: Report of the Sub-Committee, pg. 16.

Table XXVIII

Zambia's Manpower Demand by
Industry during TNDP Period

INDUSTRY		1975/76 STOCK	1979	ANNUAL INCREMENT DEMAND	1983
AGRICULTURE	I	75	319	37	468
	II	230	431	50	632
	III	430	846	99	1,241
MINING	I	1,505	1,693	33	1,824
	II	2,000	2,124	61	2,366
	III	3,500	3,649	221	4,532
MANUFACTURING	I	180	200	50	400
	II	300	350	88	700
	III	454	925	50	1,125
CONSTRUCTION	I	250	285	16	350
	II	575	625	56	850
	III	760	850	112	1,300
ELECTRICITY/WATER	I	150	200	12	250
	II	300	350	25	450
	III	450	580	30	700
FINANCE	I	200	250	25	350
	II	350	360	35	500
	III	600	850	62	1,100
TRANSPORT/COMMUNICATIONS	I	80	86	9	120
	II	200	220	57	450
	III	1,000	1,140	165	1,800

Source: Report of the Sub-Committee, pg. 10.

Table XXIX
Zambia's Manpower Demand by Spec-
ialization during TNDP period

		1978	1979	ANNUAL INCREMENT	1983 DEMAND
NATURAL SCIENCE	I	804	817	15	675
	II	1,107	1,226	22	1,312
	III	2,413	2,453	42	2,624
ENGINEERING/TECHNOLOGY	I	2,101	2,149	51	2,353
	II	3,151	3,223	77	3,530
	III	6,302	6,440	153	7,060
HEALTH/MEDICINE	I	1,386	1,433	51	1,638
	II	2,079	2,150	77	2,457
	III	4,159	4,300	153	4,915
SOCIAL SCIENCE	I	1,024	1,049	21	1,153
	II	1,537	1,573	39	1,730
	III	3,074	3,147	79	3,461
BUSINESS/COMMERCE	I	840	986	53	1,098
	II	1,260	1,329	79	1,647
	III	2,521	2,659	209	3,294
AGRICULTURE	I	205	210	5	228
	II	308	315	7	343
	III	617	630	14	666
OTHER	I	471	483	12	532
	II	706	724	19	796
	III	1,412	1,448	37	1,597

Source: Report of the Sub-Committee, pg. 11.

The educated and trained manpower output projected in the above tables is being achieved through an educational system built in just a dozen years from a minimal base. From 1964 to 1974, enrollment in university education has increased by 737% (from 312 to 2,612), that in secondary teacher training by 838% (from 56 to 525) and in secondary education by 375% (from 13,853 to 65,764). The Department of Technical Education and Vocational Training now has a nation-wide series of fourteen vocational institutes which provide training in virtually all trades from clerk typist to aircraft maintenance.

(b) Principal Anomolies in Zambia's Education and Training System

Although, as the World Bank points out, "there are no major inequalities in education opportunities in Zambia,"^{1/} the recent ILO study^{2/} has pointed out several anomolies which bear the attention of government in planning for an improved formal sector system. These are summarized and enlarged upon below:

1. The progression rate from grade IV to grade V during the SNDP was to be 100% for urban areas while efforts were being made to raise the rural rate to about 75%. As of 1973, these rates were below 60% for the three most rural provinces. Thus there is a rural-urban imbalance of educational opportunity.
2. There is a continuing - though limited- disparity between male and female education. During 1973 enrollments in Form I were 37% female and in Form IV females were about 25% of the total.

1/ Zambia - A Basic Economic Report, Annex 3, pg. 3.

2/ Narrowing the Gaps, esp. pp. 159-194 & pp. 277-287.

3. The World Bank Report on squatter housing in Lusaka noted that whereas in medium and high income areas of the city about 87% of school-age children attended primary schools, the figure was as low as 18% in one squatter area surveyed and was 57% in a site-and-service scheme area. Thus there is an imbalance within urban areas which reflects income differentials.
4. Zambia's success in developing its education system has created the "unemployed school-leaver problem." The government's Sub-Committee on manpower has called this "one of the most critical problems" of the TNDP period and the ILO stated that in 1973 alone 63,000 grade VII school leavers entered the job market with no vocational or technical education and no places at secondary schools. These pupils have raised expectations and many tend to drift toward the urban areas in what is already one of Africa's most highly urbanized countries.
5. Imbalance between needs and outputs for middle and high level manpower. Tertiary education and vocational training require further expansion in specific areas as outlined above and this requires further physical expansion of both the university and the trades training institutes system.

(c) Zambian Expenditures on Education and Training

The 1977 budget of the Ministry of Education was K92,811,000 which is more than double the 1970 figure and an increase of K27 million over 1973.^{1/} This represented about 16.5% of total government recurrent expenditure is used for salaries and boarding and lodging costs. In Zambia there are no school fees and boarding, lodging and travel costs are borne by the state. As of 1974, approximately 95% of government

^{1/} Monthly Digest of Statistics, Feb. 1978, pg. 30.

expenditures on education were channelled through the Ministry of Education while the remainder was expended by the Ministries of Agriculture (K1.1 million) and Health (K0.98 million).

(d) Non-formal Education and Training

In May, 1976 the government issued a draft report titled "Education for Development" which it wanted to have considered in a "national dialogue" on the purposes and priorities of Zambian education. The report - which to the consultant's knowledge has not yet been adopted as official government policy - proposes what it calls a radical departure in order to focus on the needs of the rural poor. In this latest strategy for rural development, one of the driving forces for educational reform and improved rural productivity would be the village teacher. The government recognizes the urgent needs of the rural areas which, during the first decade of Zambian independence, have not shared equally in Zambia's economic progress. Despite numerous strategies (Intensive Development Zones, Rural Growth Poles, Rural Rehabilitation Camps, etc.), even more numerous reports on the rural condition and passionate speeches by President Kaunda, manpower development to improve rural productivity has remained an elusive goal. There are many historical, economic, policy, and cultural reasons for this which cannot be elaborated in this brief report. There are, however,

specific constraints on rural productivity which have been identified repeatedly and which could be ameliorated with the proper type and level of donor assistance when combined with sound government planning and consistent policies.

These are summarized below:

1. Inability to provide school leavers with relevant training to permit them to live productive and self-reliant lives in the rural areas. The ILO study stated that "the foremost goal, in our view, should be to ensure primary education to all children and equip them with suitable technical and vocational skills so that they are more employable than at present or are able to settle down in self-employment." (pg. 172)
2. In-service training for key Ministry of Rural Development (MRD) personnel occurs in Farm Institutes (FIs). Courses for commodity demonstrators, agricultural technicians and other MRD field personnel take place at FIs which usually "lack water, electricity and demonstration equipment and have poor accommodations for both trainees and instructors.^{1/} Vehicles for field trips are virtually nonexistent, the availability of fuel is a constraint when there are vehicles and the instructors themselves are often poorly trained and motivated.
3. Farmer Training Centers (FTCs) provide short courses in crop and animal production and related subjects at 27 centers (1974) for an average of five days. As of 1977, the lack of adequate teaching facilities, equipment, accommodations, transport and facilities for women continued to represent major constraints on the operation of these centers.
4. The agricultural extension service has been confronted by constraints which are quite similar to those facing the FIs and FTCs. A thorough discussion of this can be found in the SADAP piece on agricultural manpower in Zambia and in the World Bank's Agricultural Sector Survey

^{1/} World Bank, Zambia Basic Economic Report, Annex 3, pg. 15.

for Zambia (1976) but, in short, the organizational infrastructure has significant potential which is lost through poorly trained personnel, the inadequate participation of women, inappropriate and inadequate training of most personnel including the training of trainers and as a result of a continuing cultural bias in favor of urban employment.^{1/}

5. Adult Education is provided by the Ministry of Education and their centers are reported to have had some success in training school leavers for employment. As a consequence, government is attempting to expand them to help more of the 150,000 primary school leavers p.a. who do not continue formal education. (IBRD figure, 1974)

2. Critical Areas for Priority Attention

From the available, limited and sometimes dated documentation, it would appear that the following initiatives could be taken to assist Zambia lessen its manpower constraints:

1. Technical Assistance - to strengthen the Central Statistics Office, the manpower planning capability of the Ministry of Labour and Social Services and the secretariat to the proposed Manpower Advisory Committee. The latter is proposed by the Sub-Committee on Manpower developing the TNDP position on manpower and would serve to collect and analyze statistics on manpower supply and demand, rationalize and coordinate occupational specialties offered by educational institutions and develop specific programs to implement national manpower policies.

^{1/} The situation should be improving since the World Bank is involved in upgrading FIs, FTCs and the Extension Service through assistance to improve both facilities and the quality of training. No recent report on the success of these efforts was available at the time of writing of this synthesis, however.

2. Technical Assistance - in adult literacy and farmer training to determine whether government would be prepared to consider a scheme using Peace Corps Volunteers possibly together with UN Volunteers in a multi-bi project to train the trainers. This should be integrated with World Bank and other donor efforts and be supplemented with the provision of suitable equipment.
3. Technical Assistance - to upgrade math and science instruction at secondary and teacher training levels to enable Zambia to meet its Zambianization targets for middle level manpower, government-donor discussions could be held to determine the preferred means to this end and the character of US assistance which might be most appropriate.
4. Capital Assistance - for the construction of expanded university facilities at Ndola to ensure that this becomes a second full-fledged campus of the University of Zambia. High level manpower remains Zambia's most severe manpower constraint and this would assist Zambia to develop the long term institutional capacity to provide its own manpower trained in-country. In the near term, however, discussions could be held to develop a project of...
5. Technical Assistance which would involve cooperation with the ILO Management Development Advisory Services program to identify students who could benefit from scholarships tenable in the United States in the areas of business management, public administration and commerce.
6. Technical Assistance - to upgrade the School of Medicine at the University of Zambia and increase the capacity of the school to produce doctors, dentists and pharmacists. This assistance could usefully be tied to a refugee training program whereby additional facilities and perhaps staff would succeed in creating places for refugees at the school as well. Perhaps 25% of the places could be so reserved.

7. Technical Assistance - as recommended in the SADAP paper on mining to upgrade the School of Mines at the University and provide visiting lecturers from the US in mining to address the staff recruitment problem.
8. Technical Assistance - A major effort is needed in the field of transport and telecommunications management and administration. Zambia's geopolitical position makes this a critical area and donors should consider expanding the railway training institute at Kabwe to provide such instruction together with scholarships for training through railway systems such as Canadian or British Rail (who have been involved previously.)
9. A review of all SADAP recommendations with government should yield a sense of Zambia's interest in the above and give an indication of their priorities. Most of the above seem consistent with expressed needs and will probably appear in the TNDP when published.

H. ZIMBABWE

It hardly needs to be pointed out that in the absence of a recognized government able to set priorities and plan for future development, in the midst of war and under conditions where the first independent government is likely to follow policies which will be markedly different from those of the previous minority dominated racist regime, conclusions with respect to manpower will be relatively speculative. Unlike the case of Namibia where the Institute for Namibia has been established by the legal administering authority (the United Nations), has issued development oriented papers for consideration by donors and has worked closely with the U.N. to develop a variety of project proposals which have also been endorsed by the nationalist movement recognized by the U.N., Zimbabwe suffers from greater factionalism and the legal authority (Great Britain) has not evolved a similar institution within which planning and training might occur.

The present characteristics of the manpower pool in Zimbabwe have been reviewed by numerous reports emanating from a wide variety of organizations as demonstrated in the bibliography for this section. Internally, the Justice and Peace Commission of the Rhodesia Catholic Bishop's Conference has financed a number of manpower related studies while the business-supported Whitsun Foundation in Salisbury has

attempted to draft project proposals and surveys on various development issues. The Commonwealth Fund for Technical Cooperation is engaged in a survey of skilled Zimbabwean manpower resident outside the country, the Rockefeller Foundation and the United Nations were contemplating similar surveys over the past year and the ILO recently completed a study on the effects of discrimination on Zimbabwe labor. The Overseas Development Ministry in London has produced documentation from time to time and there have been two major and recent studies of the country financed by AID (Transition in Southern Africa - Zimbabwe and the Namibia/Zimbabwe study of the African-American Scholars Council). Finally, all studies must review information provided by the present regime in Salisbury and decide whether it is accurate or has been altered to serve propaganda needs. Particularly sensitive in the manpower area are the figures for white emigration and those that would indicate the effect of the war on the economy in terms of creating manpower constraints.

The following statistics provide an overview of the present scale and composition of the population and labor force.

Table XXX
Zimbabwe Manpower Profile

1. Population (1975 est.)	6,418,900
2. Of Whom Whites (1975)	278,000
3. White Population (Aug., 1978 est.)	230,000
4. Population Growth Rate (African)	3.6%
5. Population Growth Rate (Whites)	0.9%
6. Adult African Males Aged 16-60 (1977)	1,548,233
7. Foreign Africans Employed in Zimbabwe (1973)	221,100
8. Estimated African Workforce (1973)	889,000
9. Est. Average Annual Increase in African Workforce (1973)	27,000
10. Est. Number Zimbabwean Nationals Employed in South African Mines (Aug., 1977)	26,000

Sources: Transition in Southern Africa, Zimbabwe; World Bank Atlas; Leistner, Rhodesia; D.G. Clarke, "Contract Labour from Rhodesia to the South African Gold Mines;" ILO, "Labor and Discrimination in Southern Rhodesia (Zimbabwe)

Skilled manpower requirements are not being met principally because the war for independence and majority-rule has drawn many skilled whites into the military and has motivated others to leave the country. Due to the racial discrimination practiced by the regime, relatively few Africans have obtained the skills to occupy the places of the departing whites but this should not be exaggerated.

Once the present regime is replaced, thousands of Zimbabweans now living in exile will be able to return to their country and many of them have been receiving education and training over the past decade or more. Together with trained Zimbabweans currently inside the country, they will form a substantial core of a future skilled manpower pool. In this respect, Zimbabwe is in a better position than Zambia or many other developing countries were at the time of independence in the 1960s.

Although only about 15% of the African labor force is in wage employment, it has been estimated that 50-60% of the African population is dependent on wage income as its principal source of livelihood.^{1/} Just as African employment in the wage sector has a disproportionate effect on the welfare of large numbers of dependent people, so the loss of wage sector employment has adverse consequences for larger numbers of people than is usually the case with European workers in the country. This is important to be aware of in order to have a full understanding of the priority African families attach to formal education and of the degree of deprivation which will result from widespread disruption of the economy. It also points to a priority for the international community once the conflict is resolved:

^{1/} Harris, Peter, "Black Industrial Workers in Rhodesia," pg. 11.

to restore the productive capacity of the economy through reconstruction and training of African personnel in managerial and administrative areas. The multiplier effect of wage employment in Zimbabwe will be considerable and the state of the present economy would suggest that there will be significant opportunities in manufacturing, commerce and the civil service among other areas.

To provide skilled manpower through the indigenous education system will require major modifications since it is now geared to serve the white minority first. As of 1974, the World University Service quoted per capita expenditure for education of \$27 for African and \$322 for European pupils in Zimbabwe. Of those graduating from secondary school in 1974, places were available for vocational-technical and teacher training for 10.46% of European students but only 0.43% of Africans.

By 1976, about 80% of African seven year olds began primary school (as opposed to being enrolled as a percentage of their 6-13 year old cohorts) for a total enrollment of 158,000. Of these, about half would complete the seven year cycle and attempt to obtain one of 13,000 places in secondary schools (Form I). There were, therefore, about 65,000 school leavers in 1976. By Form IV there are about 6,500 pupils but there are places for only one in fourteen of them at Form V level (for a total of 464).^{1/}

^{1/} Estimate from a British government document (mimeo), n.d.

From this number, those who pass "A" level exams may then apply to enter the University of Rhodesia. The number of Zimbabweans who completed secondary school with qualifications to enter the university in 1976 is roughly equal to the number Zambia (with a smaller population) expects to graduate at degree level this year.

On the technical level, there were places for about 100 Africans in 1976. By comparison Swaziland, with less than one tenth the population of Zimbabwe, was graduating four times than many technical students in the same year. As pointed out by the ODM report, there are few such opportunities because "there are few skilled jobs for which industry is prepared to accept Africans." This has changed somewhat out of necessity due to war induced manpower shortages but the skilled Africans who may now be required probably do not exist in many cases because of such previous restrictions.

Discrimination at the university level has been eliminated officially and there are now slightly more African than European students enrolled. Job discrimination limits what a university graduate may do and many were forced into secondary teaching as one of the few professional fields (aside from religion) that would admit them. The

recent claim by the Smith regime to have eliminated all statutory discrimination may have some effect, but the overall situation in the country is in such flux that it cannot be determined whether this will have any effect on economic and job related discrimination.

For the production of skilled manpower, a future government will have to focus on the production of secondary graduates (GCE Certificate holders), the expansion of technical training and an increase of university graduates.

Greatly expanded opportunities for teacher training will be urgently required since it is practically certain that a large proportion of the middle-level and upper-level civil service will be composed of those Africans who are now teachers while government will simultaneously be attempting to expand the educational system in terms of quantity, raise quality and spread the benefits more to the rural areas. This pattern has occurred in Zambia and many other African countries so there are firm grounds for assuming this.

With the coming of majority rule and a genuinely independent government, the question of land distribution will be of paramount importance. The present white oriented extension service will have to be expanded to provide assistance to what are now known as the TTLs (Tribal Trust Lands) and also cope with settlers on the 50% of the country which has

previously been reserved for whites. This will require massive investments for agricultural training, adult literacy, livestock protection, etc.

The rate at which these needs will be felt depends in part upon the nature of the new government, however, even a conservative African government concerned about retaining the white expertise in commercial agriculture will be under intense popular pressure to expand education and build an agricultural service responsive to the majority.

It has been conventional wisdom that without all or most of the present white population Southern Rhodesia would "collapse," or would become "another international basket case." Many African nationalists and more impartial observers do not share this view. While it is true that the sudden exodus of the white population will result in an economic downturn during a period of adjustment, it is also true that the country has more than ten times the number of trained Africans as did Zambia at the time of Zambia's independence in 1964. A new government will also likely begin with a great deal of world sympathy and be able to attract expatriate personnel from friendly countries to reverse the economic downturn and maintain a floor of economic production while the economy is thoroughly restructured to serve the interests of the majority. A majority rule

government may be willing to pay this price if the result after five or ten years is an economy and society controlled and managed by Zimbabweans in their own interests.

With the exception of a few technical assistance recommendations which could be explored with a future independent government, the SADAP analyses did not make recommendations for Zimbabwe. The nationalist leadership is sensitive to attempts by non-Zimbabweans to suggest the preferred nature of their post-independence economy or the types of programs and projects they should adopt. The nationalist leadership has stated that it will be prepared to discuss technical assistance with interested donors once the political struggle has resolved itself. This is an understandable position which reflects the desire of Zimbabweans to shape their own future. The design of manpower development schemes and the priorities placed upon them are particularly sensitive in this regard and should await the installation of an internationally-recognized government.

ANNEX I

REVIEW OF 44 PRINCIPAL AVAILABLE NON-SADAP REPORTS
WITH A SIGNIFICANT MANPOWER FOCUS

REVIEW OF 44 PRINCIPAL AVAILABLE NON-SADAP REPORTS WITH A SIGNIFICANT MANPOWER FOCUS

TITLE OF REPORT (date) *	OVERALL ASSESSMENT MANPOWER	ANALYSIS GOVT. MANPOWER PLANNING CAPACITY	FORECAST OF REQUIRE- MENTS FOR LOCALLY EXPATRIATE MANPOWER	MANPOWER SURVEY & NEEDS ASSESSMENT (1) FORMAL/NONFORMAL EDUCATION	MANPOWER SURVEY & NEEDS ASSESSMENT (2)	NATURAL RESOURCES MANPOWER SURVEY & NEEDS ASSESSMENT (3) TRANSPORT/TELECOMM.	MANPOWER SURVEY & NEEDS ASSESSMENT (4) FINANCE & DEVELOP- MENT PLANNING	MANPOWER SURVEY & NEEDS ASSESSMENT (5) HEALTH	MANPOWER SURVEY & NEEDS ASSESSMENT (6) AGRICULTURE	MANPOWER SURVEY & NEEDS ASSESSMENT (7) Private Sector	ASSESSMENT NATIONAL TRAINING CAPACITY	PROGRAMS AND PROBLEMS PARTICI- PULARLY FOR WOMEN	MANPOWER ASSESSMENT RURAL DEVELOPMENT	MANPOWER ASSESSMENT INFORMAL SECTOR -- URBAN	MANPOWER ASSESSMENT INFORMAL SECTOR -- RURAL	Description of Training Program of or Recommen- dations to Donor where Report is Donor Originated	MAJOR RELEVANT STATISTICS AVAILABLE IN REPORT
				← FORMAL SECTOR						→ INFORMAL/ADDITIONAL SECTOR							
1. Botswana Manpower Review (Nov. 1976)	X	X	X (Expat.)	X (Expat.)	X (Expat.)	X (Expat.)	X (Expat.)	X (Expat.)	0	0	0	0	0	0	0	X	1. OFAS Requirements 1977-81 2. OSAS Requirements by Ministry 3. Sectoral Distribution of Training Requirements 4. Sectoral Training Targets 1977-1980 5. Proposed 1977/78 Training Program
2. Presidential Commission Report on Localisation and Training in Botswana Public Service (1977)	X (in public service)	0	X	X	X	X	X	X	X	0	0	0	0	0	0	0	1. Localisation Picture, June 1977 2. Trainees in local institu- tions - 1977 3. Botswana Students abroad and at UBS 4. Number of established posts by ministry & % occ. by Botswana citizens.
3. OAU/APCAC Civil Aviation Train- ing Report (June 1978)	0	0	0	0	0	X (Aviation)	0	0	0	0	0	0	0	0	0	X (ICA)	1. List of additional fel- lowships that require funding 2. Description current ex- patriate personnel in aviation
4. NTI: Human Resources Develop- ment for Botswana (May 1976)	X	0	0	X	0	0	0	X	X	X	X	X	X	X	X	X	1. Demand and supply of skilled employment- 1972/1978/1988. 2. Recommendations to AID, with particular detail in formal & non-formal education
5. Education and Human Resource Dev. Sector Assessment- Botswana (USARAC-Dec. 1974)	0	X	0	X	0	0	0	0	0	0	0	X	0	0	0	X	1. Recommendations listed in descending order of priority.
6. Report of the National Commis- sion for Educa- tion (April 1977) and National Policy Statement (August 1977)	0	X	X (in edu- cation)	X	0	0	0	0	0	0	0	0	0	0	0	0	Comprehensive 2-volume analysis of Botswana edu- cation and a strategy for development of the sector. Contains a 116 page bibliography on Botswana education and numerous statistical appendices.

* For complete citations
see bibliography.

X YES

0 NO

REVIEW OF 44 PRINCIPAL AVAILABLE NON-SADAP REPORTS WITH A SIGNIFICANT MANPOWER FOCUS

TITLE OF REPORT (date)	OVERALL ASSESSMENT MANPOWER	ANALYSIS GOVT. MANPOWER PLANNING CAPACITY	FORECAST OF REQUIRE- MENTS FOR LOCAL/ EXPATRIATE MANPOWER	MANPOWER SURVEY & NEEDS ASSESSMENT (1) FORMAL/NONFORMAL EDUCATION	MANPOWER SURVEY & NEEDS ASSESSMENT (2) NATIONAL RESOURCES	MANPOWER SURVEY & NEEDS ASSESSMENT (3) TRANSPORT/TELECOMM.	MANPOWER SURVEY & NEEDS ASSESSMENT (4) FINANCE & DEVELOP- MENT PLANNING	MANPOWER SURVEY & NEEDS ASSESSMENT (5) HEALTH	MANPOWER SURVEY & NEEDS ASSESSMENT (6) AGRICULTURE	MANPOWER SURVEY & NEEDS ASSESSMENT (7) Private Sector	ASSESSMENT NATIONAL TRAINING CAPACITY	PROGRAMS AND PROBLEMS PARTICI- PULARLY FOR WOMEN	MANPOWER ASSESSMENT RURAL DEVELOPMENT	MANPOWER ASSESSMENT INFORMAL SECTOR -- URBAN	MANPOWER ASSESSMENT INFORMAL SECTOR -- RURAL	Description of Training Program of or Recommen- dations to Donor where Report is Donor Originated	MAJOR RELEVANT STATISTICS AVAILABLE IN REPORT
				FORMAL SECTOR							INFORMAL/ADDITIONAL SECTOR						
1. Leaotho Man- power Review (Dec. 1976)	X	X	X (Expat.)	X	0	X (Expat.)	X (Expat. 1 para.)	X (Expat. 1 para.)	X (Expat. 1 para.)	0	0	0	0	0	0	X	1. Recommended OSAS levels 1977 2. Sectoral Distribution Req. Requirements 1977-80 3. Proposed Training Program 1977-78
2. World Bank- 1) Education Sector Memorandum (1976) 11) Appraisal of a Second Education Project (Nov. 1977)	X	X (Partial)	X (1) appendix 2	X	0	0	0	0	X (Partial)	0	0	0	0	0	0	X	1. Discusses gaps in educ. system (formal/nonformal educational finance & links to manpower & employment 2. Teacher supply/demand; enrollments 1972, 1975 & projections 1980 & 1985 3. Projected employment growth by sector 4. General education system statistical profile, 1975.
3. Donor Confer- ence Paper of GUL (Sept. 1977)	X	0	0	X	0	0	0	0	0	0	0	0	0	0	0	0	1. GUL capital expenditures by project in education, 1975-1980. 2. Expatriate personnel pro- vided for education sec- tor by donors 1975-80. 3. Education Sector Fellow- ships provided by donors, 1975-1980.
4. Projection of Civil Aviation Manpower and Training Re- quirements (August 1977)	0	0	X	0	0	X (Air)	0	0	0	0	0	0	0	0	0	X	1. Details of Ongoing & Pipe- line Fellowships in Civil Aviation, 1976-1981. 2. Training Costs for Civil Aviation Directorate & Leaotho Airways. 3. Summary of External Funds Required, 1977-1981.
5. Education and Human Resources Sector Assess- ment OSARAC (Dec. 1974)	X	X (brief)	0	X	0	0	0	0	X	0	0	X (brief)	0	0	0	X	Reviews constraints/priorities in formal/nonformal education sector; suggests possible role/strategy for U.S.
6. RTI: Human Resources Devel- opment Study (May 1976)	0	0	0	X	0	0	0	X	X	X	0	X (brief)	X	0	X	X	1. Student Enrollment Pro- jections to 1981. 2. Review of Major Projects in Sectors Assessed & Govt. Ministries. 3. Some discussion of gov- ernment manpower needs: clerical, technical, managerial, & professional.

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For complete citations
see bibliography.
X YES
0 NO

REVIEW OF 44 PRINCIPAL AVAILABLE NON-SADAP REPORTS WITH A SIGNIFICANT MANPOWER FOCUS

TITLE OF REPORT (date)	OVERALL ASSESSMENT MANPOWER	ANALYSIS GOVT. MANPOWER PLANNING CAPACITY	FORECAST OF REQUIRE- MENTS FOR LOCAL/ EXPATRIATE MANPOWER	MANPOWER SURVEY & NEEDS ASSESSMENT (1) FORMAL/NONFORMAL REGISTRATION	MANPOWER SURVEY & NEEDS ASSESSMENT (2)	NATIONAL RESOURCES (3)	MANPOWER SURVEY & NEEDS ASSESSMENT (3) TRANSPORT/TELECOMM.	MANPOWER SURVEY & NEEDS ASSESSMENT (4) FINANCE & DEVELOP- MENT	MANPOWER SURVEY & NEEDS ASSESSMENT (5) HEALTH	MANPOWER SURVEY & NEEDS ASSESSMENT (6) AGRICULTURE	MANPOWER SURVEY & NEEDS ASSESSMENT (7) Private Sector	ASSESSMENT NATIONAL TRAINING CAPACITY	PROGRAMS AND PROBLEMS PARTICU- LARLY FOR WOMEN	MANPOWER ASSESSMENT RURAL DEVELOPMENT	MANPOWER ASSESSMENT INFORMAL SECTOR -- URBAN	MANPOWER ASSESSMENT INFORMAL SECTOR -- RURAL	Description of Training Program of or Recommen- dations to Donor where Report is Donor Originated	MAJOR RELEVANT STATISTICS AVAILABLE IN REPORT	
				←		FORMAL SECTOR								INFORMAL/ADDITIONAL SECTOR					
1. Skills for the Future: GOS (May 1978)	X	0	X (to 1990)	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1. Summary of National Manpower Survey, 1977 2. Over 100 pages of statistical annexes, covering: (1) population & employ- ment, (2) skilled & educa- ted (S&E) manpower; (3) demand projections for S&E manpower; (4) earn- ings & (5) education & trg.
2. Manpower Re- quirement Study USAID (Sept. 1977)	0	0	0	0	0	0	X (related to rural devlp.)	0	X	X (Agriculture & Small Scale Industry)	X (Rural Dev.)	0	0	X	0	X	0	0	1. Section excellent projections to 1985 2. Summary tables of rural projec- tions to 1985 3. Detailed notes to create maps & carry out existing recommend 4. Formal sector employment man- power tables
3. Reducing De- pendence-JASPA/ ILO (June 1976)	X (employ- ment per- spective)	X (brief)	X (to 1982)	X	0	0	0	0	0	0	0	0	0	0	0	0	0	Recommendation plentiful but very general.	1. Annual output estimated man- power by specialty 2. Requirements of labor and a Trend Report 1975-82 3. Some discussion basic statistical methods for employment/needs policy & planning 4. Some of principal em- ployment/needs statistics
4. RTI Human Resources Devel- opment Stud- (May 1976)	X	0	0	X	0	0	0	0	X	X	X	0	X (Brief)	X	0	X	0	0	1. Summary of critical Man- power Areas. 2. Relevance of Middle & Upper-Middle Manpower Dev. for AID objectives 3. Recommendations for AID programs.
5. Education and Human Resources Dev. Assessment OSARAC (Dec. 1974)	X	0	0	X	0	0	0	0	0	0	0	0	X (Brief)	0	0	0	0	X	Assesses constraints & priorities primarily in education sector--no tables or annexes.
6. Manpower Review (ODM) Mar. 1977)	X	X	X	X (Expat.)	0	X (Expat.)	X (Expat.)	X (Expat.)	X (Expat.)	X (Expat.)	0	X (Brief) (U.K. Training)	0	0	0	0	0	X	1. Future levels of U.K. technical cooperation 2. Sectoral breakdown tech. cooperation 3. Modern sector employ- ment by skill levels 4. Outputs of education/ training system to 1980 5. Review of programs of other donors

For complete citations see bibliography.
X YES

REVIEW OF 44 PRINCIPAL AVAILABLE NON-SADAP REPORTS WITH A SIGNIFICANT MANPOWER FOCUS

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III. SWAZILAND (continued)						FORMAL SECTOR							INFORMAL/T	ADDITIONAL SECTOR			
7. Second Educa- tion Project Appraisal. IBRD (May 1977)	X	0	X	X	0	0	0	0	X	0	0	0	X	0	0	X	1. Appendices analyzing (a) "Manpower & Employ- ment; and (b) "Educa- tion & Training Sector" 2. Basic education statistics for Swazi- land in tables.
8. Survey of District Voca- tional Train- ing Centers Needs (Oct. 1977)	X (brief)	0	X (to 1986)	0	0	0	0	0	X	X (some trades)	X	0	0	X (Trades)	X (Trades)	0	1. Project Costs & Equipment Needs 2. Details Training Center Capacities and Activities
9. Training Needs of Roads Branch (Min. Transport) (Nov. 1977)	X (brief)	0	0	0	0	X (Roads)	0	0	0	0	0	0	0	0	0	0	1. Detailed information govern- ment organization & org. needs this department.
10. Study on re- quirements for Trained Man- power (June 1967)	X	0	X	X (NEEDS ARE FORECAST BY SECTOR, BUT WITH MINIMAL ANALYTICAL TEXT)	X	X	X	X	X	X	0	0	0	0	0	0	Occupational summaries & forecast of manpower needs to 1975 in 25 pages of tables provide historical data base from which to measure progress.
11. Manpower Sur- vey 1971: Re- quirements to 1980 (1971)	X	0	X	X (NEEDS ARE FORECAST BY SECTOR, BUT WITH MINIMAL ANALYTICAL TEXT)	X	X	X	X	X	X	0	0	0	0	0	0	Contains 72 pages of tables and statistics, including occupational/education details.
12. Manpower Review 1977- (Jan. 1978)	X	0	X	X (SURVEY OF NEEDS IN EXPAT. MARKET)	X	X	X	X	X	0	0	0	0	0	0	X	1. Profile of U.K. personnel in Malawi by sector 2. Malawi Govt. estimates of overseas training re- quirements, 1978-1981. 3. Formal education input/ output projections to 1981.

* For complete citations see bibliography.

X YES

0 NO

REVIEW OF 44 PRINCIPAL AVAILABLE NON-SADAP REPORTS WITH A SIGNIFICANT MANPOWER FOCUS

TITLE OF REPORT (date)	OVERALL ASSESSING MANPOWER	ANALYSIS GOVT. MANPOWER PLANNING CAPACITY	FORECAST OF REQUIRE- MENTS FOR LOCAL/ EXPATRIATE MANPOWER	MANPOWER SURVEY & NEEDS ASSESSMENT (1) FORMAL/NONFORMAL EDUCATION	MANPOWER SURVEY & NEEDS ASSESSMENT (2) NATIONAL RESOURCES	MANPOWER SURVEY & NEEDS ASSESSMENT (3) TRANSPORT/TELECOMM.	MANPOWER SURVEY & NEEDS ASSESSMENT (4) FINANCE & DEVELOP- MENT PLANNING	MANPOWER SURVEY & NEEDS ASSESSMENT (5) HEALTH	MANPOWER SURVEY & NEEDS ASSESSMENT (6) AGRICULTURE	MANPOWER SURVEY & NEEDS ASSESSMENT (7) PRIVATE SECTOR	ASSESSMENT NATIONAL TRAINING CAPACITY	PROGRAMS AND PROBLEMS PARTICI- PALITY FOR WOMEN	MANPOWER ASSESSMENT RURAL DEVELOPMENT	MANPOWER ASSESSMENT INFORMAL SECTOR -- URBAN	MANPOWER ASSESSMENT INFORMAL SECTOR -- RURAL	Description of Training Program of or Recommen- dations to Donor where Report is Donor Originated	MAJOR RELEVANT STATISTICS AVAILABLE IN REPORT
IV. MALAWI (continued)				←		FORMAL SECTOR									INFORMAL SECTOR		
4. Malawi Education Sector Survey (Feb. 1978)	X	0	0	X	0	0	0	0	0	0	X	0	X	X	X	X	1. Statistical appendices provide data on formal education and training; technical education; teacher training, population, employment & manpower and educational efficiency and distribution. 2. Outlines an educational investment program 1978-1985.
5. Education in Malawi 1976-1990 (O.M.) (Sept. 1976)	X	X	X	X	0	0	0	0	0	0	X	0	X	X	X	0	Supplements to main document detail needs in specific education sub-sectors. For example, technical vocational educ. supplement includes appraisal of institutions, needs, current supply by occupation and programs required to close gap. Bibliog.
6. Effects of Apartheid on Education (UNESCO, 1977)	X	0	0	X	0	0	0	0	0	0	0	0	0	0	0	0	1. Available population and employment figures 2. Over 70 tables profile education: pupils/teachers/expenditures/institutions/drop out rates/ethnicity/etc.
7. Towards Development Strategies for Independent Namibia (Nov. 1977)	X	0	0	X	0	0	0	0	0	X	X	0	0	0	0	X	1. Manpower structure 1969-75 2. White manpower structure 1975 3. School enrollments & educational level of black teachers 4. Public Sector employment & white civil service structure 5. 50 tables and charts
8. Namibia Institute Report on Manpower Seminar (Dec. 1977)																	A 30-minute summary of seminar discussions, this document offers general insights into areas of concern to SWAPO and the Institute for Namibia. The key manpower survey done in June 1978 by Dr. R. Green (O.S. - Sussex, U.K.) was not available to the mission on request.
9. Labour and Discrimination (ILO, 1977)	X	0	0	X	0	0	0	0	0	0	0	0	X	0	0	0	1. Education & Training Stats. 2. Labor force projections 3. Employment pattern by sector 4. Impact of racial discrimination on manpower skill levels 5. Differential wages & working conditions

* For complete list of reports see Bibliography.
X YES

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TITLE OF REPORT (date)	OVERALL ASSESSMENT MANPOWER	ANALYSIS GOVT. MANPOWER PLANNING CAPACITY	FORECAST OF REQUIRE- MENTS FOR LOCAL/ EXPATRIATE MANPOWER	MANPOWER SURVEY & NEEDS ASSESSMENT (1) FORMAL/INFORMAL EDUCATION	MANPOWER SURVEY & NEEDS ASSESSMENT (2) NATURAL RESOURCES	MANPOWER SURVEY & NEEDS ASSESSMENT (3) TRANSPORT/TELECOM.	MANPOWER SURVEY & NEEDS ASSESSMENT (4) FINANCE & DEVELOP- MENT PLANNING	MANPOWER SURVEY & NEEDS ASSESSMENT (5) HEALTH	MANPOWER SURVEY & NEEDS ASSESSMENT (6) AGRICULTURE	MANPOWER SURVEY & NEEDS ASSESSMENT (7) Private Sector	ASSESSMENT NATIONAL TRAINING CAPACITY	PROBLEMS AND PROBLEMS PARTICU- LARLY FOR WORKER	MANPOWER ASSESSMENT RURAL DEVELOPMENT	MANPOWER ASSESSMENT INFORMAL SECTOR - URBAN	MANPOWER ASSESSMENT INFORMAL SECTOR - RURAL	Description of Training Program of or Recommen- dations to Donor where Report is Donor Originated	MAJOR RELEVANT STATISTICS AVAILABLE IN REPORT
				← FORMAL SECTOR						INFORMAL/TRADITIONAL SECTOR							
1. Zambia Man- power Reviews OEM (Dec. 1976) Nov. 1977)	X	X	X	X	X	X	X	X	X	X	0	0	0	0	0	X	Numbers of expatriates recom- mended to be supplied by U.K. with ministerial priorities and training needs.
2. Narrowing the Gaps ILO/JASPA (Jan. 1977)	X	0	0	X	0	0	0	0	0	0	X (Brief)	X (Brief)	0	0	0	X	1. Manpower and education chapter presented as chapter within a basic needs strategy for development 2. Statistics on population, employment, education, etc.
3. Zambianiza- tion in the Mining Industry UNZA (Aug. 1977)	0	X (brief)	0	0	X (mining)	0	0	0	0	X (Mining (General))	X	0	0	0	0	0	1. Zambian Technical Graduates: Projected mining industry strengths 2. Number of "0" level candi- dates with grades 1-3 in math and science, 1975 3. Discussion of career de- velopment in the industry
Report of the Sub-Committee on Manpower of the Dev. Plan- ning Committee on Manpower & Employment (May 1978)	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	1. Projected supply & demand of manpower for Third NDP: high & medium levels, trained teachers & nurses, technical, agriculture, etc. in formal sector 2. INDP demand by industry, sector, & for education, health, and mining 3. Zambianization statistics
5. Basic Economic Report - Annex 3: Education & Training IBRD (Oct. 1977)	X (brief)	0	0	X	0	0	0	X (brief)	X	0	X	0	0	0	0	0	1. Fourteen appendices provide basic education & training data and costs, 1970-1975 2. Total manpower requirements by occupation, 1974-1984 3. Wage employment projections to 1984, by occupation and sector 4. Education policy discussion
6. Higher Educa- tion and the Labour Market in Zambia UNESCO (1976)	X	0	0	X	X	X	X	X	X	X	0	0	0	0	0	0	1. Higher education & the labor market - 83 tables 2. Appendices include input- output projections for all fields higher education

(ANALYSIS COMBINED TO POST SECONDARY TRAINING
AND EDUCATION - FORMAL SECTOR)

* For complete citations
see bibliography.

REVIEW OF 44 PRINCIPAL AVAILABLE NON-SADAP REPORTS WITH A SIGNIFICANT MANPOWER FOCUS

TITLE OF REPORT (date)	OVERALL ASSESSMENT MANPOWER	ANALYSIS GOVT. MANPOWER PLANNING CAPACITY	FORECAST OF REQUIRE- MENTS FOR LOCAL/ EXPATRIATE MANPOWER	MANPOWER SURVEY & NEEDS ASSESSMENT (1) FORMAL/NONFORMAL EDUCATION	MANPOWER SURVEY & NEEDS ASSESSMENT (2) NATURAL RESOURCES	MANPOWER SURVEY & NEEDS ASSESSMENT (3) TRANSPORT/TELECOMM.	MANPOWER SURVEY & NEEDS ASSESSMENT (4) PRIVATE & DEVELOP- MENT PLANNING	MANPOWER SURVEY & NEEDS ASSESSMENT (5) HEALTH	MANPOWER SURVEY & NEEDS ASSESSMENT (6) AGRICULTURE	MANPOWER SURVEY & NEEDS ASSESSMENT (7) Private Sector	ASSESSMENT NATIONAL TRAINING CAPACITY	PROBLEMS AND PROBLEMS PARTICI- PALLY FOR WOMEN	MANPOWER ASSESSMENT RURAL DEVELOPMENT	MANPOWER ASSESSMENT -- FORMAL SECTOR -- URBAN	MANPOWER ASSESSMENT -- FORMAL SECTOR -- RURAL	Description of Training Program of or Recommen- dations to Donor where Report is Donor Originated	MAJOR RELEVANT STATISTICS AVAILABLE IN REPORT
1. Assistance to Mozambique UN/ECOSOC (May 1976)	0	0	X	←						0	0	0	0	0	0	0	List of emergency projects needing support
2. Agricultural Development Report UNDP/FAO (July 1976)	X (brief)	0	0	0	0	0	0	0	X	0	0	0	X (in part)	0	0	X	Twenty pages of statistics of which a limited number relate to manpower
Manpower Survey CFTC (dated 1979)	X	0	?	SURVEY OF EXPATRIATE ZIMBAWEANS SPIES TO DETERMINE EDUCATION AND SKILL LEVELS AND PREFERRED AREA OF EMPLOYMENT IN A FUTURE INDEPENDENT COUNTRY.								0	0	0	0	Essentially a compilation of standardized curricula vitae to be placed at disposal of first legitimate Zimbabwean government	
Observations on Labor Force in Zimbabwe AASC (Dec. 1976)	0	0	0	0	0	0	0	0	0	X (Mfg.)	0	0	0	0	0	0	1. Numbers employed by type of manufacturing, 1972 2. Membership in Labor Unions, by Blacks 3. Composition of African skilled workforce in manufacturing 4. Bibliography
3. Labour Condi- tions and Dis- crimination in Zimbabwe ILO (1978)	X (effect of dis- crimination on)	0	0	X	0	0	0	0	X	X	0	0	0	0	0	0	1. Basic economic and population figures 2. Education, employment, and wage statistics 3. African agricultural labor supply, earnings, and productivity estimates
4. Skilled Labour and Future Needs (1978)	X	0	X (esp. indigen- ous)	X	X	X	0	X	X	X	0	0	0	0	0	0	1. Wages & employees, by race & sector 2. Graduates in the Civil Service, 1972 3. Education enrollment statistics and employment status by educ. level 4. Apprenticeships 1972-76 & 1977-81 5. Statistical Appendix includes avg. no apprentices by skill 1976 + qualifications of school leavers by last grade enrolled

REVIEW OF 44 PRINCIPAL AVAILABLE NON-SADAP REPORTS WITH A SIGNIFICANT MANPOWER FOCUS

TITLE OF REPORT (date)	OVERALL ASSESSMENT MANPOWER	ANALYSIS GOVT. MANPOWER PLANNING CAPACITY	FORECAST OF REQUIRE- MENTS FOR LOCAL EXPATRIATE MANPOWER	MANPOWER SURVEY & NEEDS ASSESSMENT (1) FORMAL/NONFORMAL EDUCATION	MANPOWER SURVEY & NEEDS ASSESSMENT (2) NATURAL RESOURCES	MANPOWER SURVEY & NEEDS ASSESSMENT (3) TRANSPORT/TELECOMM.	MANPOWER SURVEY & NEEDS ASSESSMENT (4) FINANCE & DEVELOP- MENT PLANNING	MANPOWER SURVEY & NEEDS ASSESSMENT (5) HEALTH	MANPOWER SURVEY & NEEDS ASSESSMENT (6) AGRICULTURE	MANPOWER SURVEY & NEEDS ASSESSMENT (7) PRIVATE SECTOR	ASSESSMENT NATIONAL TRAINING CAPACITY	PROGRAMS AND PROBLEMS PARTICI- PALY FOR WOMEN	MANPOWER ASSESSMENT RURAL DEVELOPMENT	MANPOWER ASSESSMENT INFORMAL SECTOR -- URBAN	MANPOWER ASSESSMENT INFORMAL SECTOR -- RURAL	Description of Training Program of or Recommen- dations to Donor where Report is Donor Originated	MAJOR RELEVANT STATISTICS AVAILABLE IN REPORT
				←	FORMAL	SECTOR	INFORMAL/ADDITIONAL SECTOR										
VIII. ZIMBABWE (continue)																	
5. Rhodesian Manpower & Planning CEM (1978)	X	X <small>(possible planning lab man)</small>	0	X	0	0	0	0	0	0	0	0	0	0	0	0	No tables. General and recent re- view of conditions, 11 pages.
6. Black Indus- trial Workers in Rhodesia (1974)	0	0	0	0	(DISCUSSES MANPOWER POSITION OF BLACK INDUSTRIAL WORKERS IN PRIVATE SECTOR AND INCLUDES AGRICULTURE/MANUFACTURING AND OTHER FORMAL SECTORS FROM THIS DEPENDENTIVE)					0	0	0	0	0	0	0	1. Numbers employed and avg. earn- ings 1972 2. Country of origin of African employees by sector 3. Geographic distribution of black industrial & commercial employees, 1969 4. Socio-economic plight and typology of black industrial workers 5. Detailed wage statistics & dis- cussion of economic structure af- fecting workers

* for complete citations
see Bibliography.
X YES

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NOTES TO ANNEX I

I. Botswana

1. Many of the manpower projections for the formal sector produced in the last five years are based upon a comprehensive manpower study conducted in 1972-73 which surveyed all employees and classified them according to nationality, skill level, education, experience, etc. Estimates were made of the growth of the economy through 1988 and the occupational composition that such an economy would require. Educational or training needs were then identified and output levels calculated. The report also provides 85 statistical tables on manpower, education, and wages.
2. In addition to the reports listed in the table, the CSO monthly bulletin and numerous reports which focus more on employment and other related topics provide complementary and supplemental information and analysis.

II. Lesotho

1. Manpower surveys were completed in 1964 (Elkan, W., Report to the Government of Basutoland on the manpower situation), 1971, and in May 1976. Much of the World Bank analyses and subsequent discussions are based upon this data. The SNDP expected to prepare a manpower plan with projections to 1985, which is probably the one from May 1976. A private sector employment survey was conducted in July 1975 by the GOL Bureau of Statistics and the information was to be used to set sectoral employment targets.

III. Swaziland

1. Manpower surveys were conducted in 1965 (Tottle, A.V., Report to the Government of Swaziland on manpower assessment), 1970 (Manpower Planning Unit, Swaziland's survey of manpower resources and requirements, April 1969-March 1974), and in early 1977 when the Ministry of Finance and Economic Planning conducted a National Manpower Survey. Much of the subsequent analyses have been based upon the data in these reports.

IV. Namibia

1. The South African Department of Labor prepares bi-annual Manpower Surveys which include information on Namibia. The results appear in Table 21 of the Thomas Report.

V. Zambia

1. Manpower surveys were conducted in 1964 (Taylor, W.L., and Pearson, D.S., The requirements and supplies of high-level manpower in Northern Rhodesia, 1961-70) and 1966 (Office of National Development and Planning, Manpower report--a report and statistical handbook on manpower, education, training and Zambianization, 1965-66).

In May 1976 the Zambian government produced a policy paper, titled "Education for Development," setting out future goals.

VI. Malawi

1. In 1967 a manpower survey was prepared, titled Report on the survey of requirements for trained manpower in Malawi. The report was authored by R. Brown.

VII. Zimbabwe (S. Rhodesia)

1. A manpower study was prepared in 1964, titled The requirements and supplies of high-level manpower in Southern Rhodesia, 1961-70. This report was co-authored by W. L. Taylor and D. S. Pearson.

ANNEX II

SUMMARY OF MANPOWER-RELATED RECOMMENDATIONS DERIVED
FROM SADAP SECTOR APPRAISALS

- (A) BY SECTOR
- (B) BY COUNTRY

ANNEX II (A)

SADAP RECOMMENDATIONS FOR AGRICULTURAL MANPOWER

BOTSWANA	LESOTHO	MALAWI	MZAMBIQUE
<p><u>Primary Education</u></p> <p>1) Introduction of agriculture into primary teachers' training curriculum.</p> <p>2) Provision of primary teachers with knowledge of agriculture.</p> <p>3) Staffing of central office responsible for primary school garden program and associated capital costs.</p> <p><u>Secondary Education</u></p> <p>1) Staffing of office of School Inspector Agriculture and associated capital costs including vehicles.</p> <p>107 Teachers of agriculture.</p> <p>Agriculture curriculum design and preparation of teaching materials.</p> <p>4) Provision of school buildings and teaching material.</p> <p><u>Degree Program</u></p> <p>1) Training in subject matter areas not available at UBS.</p> <p><u>Informal Education</u></p> <p>1) Development of a program for designing and testing educational curricula for adult agricultural education.</p> <p>2) Transport for Field Staff of the Ministry of Agriculture.</p>	<p>Not available as of completion of this report.</p>	<p>1) Establish first-rate research capability within central services of Min. Agriculture. Five-year project recommended with infrastructure/recurrent budget support and stress training research personnel. Report cautions cost estimates too low and lack of social science component is of concern.</p> <p>2) Continued support for Bunda Agricultural College.</p> <p>3) Develop National Resources College (NRC) (Colby) with CIDA.</p> <p>4) Expand/upgrade women's training program at NRC with CIDA/OXFAM.</p> <p>5) Leave in-service training to UNDP and UK.</p> <p>6) Establish full-time AID presence in Malawi.</p>	<p>No recommendations made.</p>

ANNEX II (A)

SADAP RECOMMENDATIONS FOR AGRICULTURAL MANPOWER

NAMIBIA	SWAZILAND	ZAMBIA	ZIMBABWE
<p>No recommendations made.</p>	<p>1) GOS institute regular program manpower planning to avoid excess supply of trained agriculturalists.</p> <p>2) To reduce unemployment of school leavers in urban areas, public investments should be redirected to rural areas. Wage structures should be reviewed to reduce rural-urban income disparities.</p> <p>3) AID and GOS consider project to strengthen extension services. Among elements which might be included are: (a) expansion UBS certificate course; (b) expansion public information office of extension service & provision necessary equipment and staff; (c) more film mobiles and similar equipment; (d) integrate all extension programs and coordinate better with research; (e) improvement in-service extension workers training program.</p> <p>4) GOS and AID consider program to strengthen formal ag education, including: (a) expansion diploma program in ag education through provision additional staff and equipment; (b) provide necessary resources for adequate preparation of primary teachers at teachers colleges; (c) provide needed personnel and equipment for preparation/delivery of</p>	<p><u>A. Delivery of Svcs. to Farmers</u></p> <p>1) Support and/or augment FAO in-service training programs--concentrate upon extension service throughout Ministry Lands/Agriculture. Management, accounting, research, technical and communication skills critical--U.S. could provide extensive assistance and link to World Bank project to upgrade physical facilities.</p> <p>2) Curriculum review assistance to make FTC's and FI's more effective. These units provide same material to farmers regardless of region and are "one shot" affairs.</p> <p>3) Support crash program to increase number of women serving in extension services.</p> <p>4) Improvement in training of cooperative officers through in-service training and at NRDC. Emphasis upon management, credit, accounting & development skills.</p> <p><u>B. Formal Agric. Education</u></p> <p>1) Greater education for youth officers overseeing young farmers clubs and relevant teacher training.</p> <p>2) Improvement of teacher training capabilities at NRDC.</p> <p>3) Curriculum review and revision at NRDC & ZCA--more attention to practical courses, com-</p>	<p>Not available as of completion of this report.</p>

ANNEX II (A)

SADAP RECOMMENDATIONS FOR AGRICULTURAL MANPOWER

NAMIBIA	SWAZILAND	ZAMBIA	ZIMBABWE
	<p>teaching materials and supplies for ag education; (d) assist individual schools to build physical facilities for ag education.</p>	<p>4) Upgrading physical facilities at NRDC & ZCA's. Library, equipment, kitchen & dormitory facilities.</p> <p>5) Provide graduate training opportunities to assist Zambianization.</p> <p>6) University level curriculum review needed along with staff assistance. Emphasis upon relevant and practical should be focus. A new campus proposed at Solwezi. AID should avoid involvement in this until further clarified by GRZ.</p> <p>7) Assistance to Ndola business school requested. This should be undertaken along with introduction agriculturally-related courses there.</p> <p><u>C. Coordination</u></p> <p>1) AID should lead in establishing a mechanism for greater coordination among donors and GRZ. Perhaps UNDP least objectionable to head such.</p> <p>2) Greater multilateral assistance should be made.</p> <p>3) A thorough management and coordination study should be undertaken to determine how disparate units within GRZ might better coordinate and focus activities.</p> <p>4) Planning & research units must be upgraded. Training and technical assistance extremely beneficial here.</p>	

ANNEX II (A)

SADAP RECOMMENDATIONS FOR HEALTH MANPOWER

BOTSWANA	LESOTHO	MALAWI	MZAMBIQUE
<p>1) Bilharzia Control Program; manpower constraints identified--no trained microscopists/lab technicians; shortage trained environmental sanitarians/community health educators. Lack of nonmedical senior scientific and management staff; no trained clinical expertise. "Team recommends assistance to Min. of Health to account for these shortages."</p> <p>2) Development of a Demographic Research Unit: Assistance to Min. of Finance and Dev. Planning to develop such a unit is recommended as technical personnel and training for Botswana to run unit eventually.</p> <p>3) The SADAP health sector profile points out World Bank conclusion that for Botswana to meet its NDP targets it will need to double number of expatriates in country, yet other recommendations made by report do not mention manpower implications of proposed actions and it appears most are to be carried out by technical assistance personnel provided by international donors. It can be assumed GOB and report's authors would welcome training in areas required to carry out</p>	<p>SADAP team concludes there is overproduction of some types of health personnel and underproduction of others.</p> <p>Recommendations:</p> <p>a) Health and Nutrition Education--report urges incorporation of health and nutrition education at all levels of school system; this not yet part of primary school curriculum. No specific recommendation for donor action.</p> <p>b) Recommends health exams for migrant workers on return to Lesotho to stop spread of TB and VD and provide health information but does not draw any conclusions regarding manpower implications of this. How many people would be needed to examine 100,000 miners a year and are they available?</p>	<p>1) Health Planning Training--recommended in statistics, health information systems, and evaluation and planning.</p> <p>2) Support Basic Health Services: training community-based workers; training clinical officers, public health nurses, and district medical officers. Also fund health education request and provide professional health education assistance at center to improve health education delivery at field level.</p> <p>3) Specific Government Requests for Training to SADAP team (p. 105)--</p> <p>a) improve medical auxiliary facilities at Lilongwe Training School--classrooms, lab, etc.;</p> <p>b) equipment: self-instruction materials and audio-visual aids;</p> <p>c) tutors: public health nurses at Clinical Officers School;</p> <p>d) fellowships: for participant training for public health nurses, planning, and health education;</p> <p>e) health education: as in submission already made to AID plus a professional health educator to assist at central level.</p> <p>Obviously Malawi had specific proposals ready for the health team, knows what it needs, and has requested the above. The SADAP team has stressed training as of central importance to Malawi in this sector.</p>	<p>Not available as of completion of this report.</p>

ANNEX II (A)

SADAP RECOMMENDATIONS FOR HEALTH MANPOWER

BOTSWANA	LESOTHO	MALAWI	MZAMBIQUE
<p>SADAP recommendations which follow:</p> <ul style="list-style-type: none"> a) Development of National Health Planning Capacity; b) Expanded Immunization Program; c) Provision of Adequate and Clean Water Supplies; d) Environmental Sanitation; e) Comprehensive Health Sector Assessment; f) National Health Services Expenditure Study. <p>Each of the above proposals will quickly confront indigenous manpower constraints and some cannot be accomplished properly without capable local personnel. The precise manpower implications of these activities and linkage to available personnel needs to be made clear.</p>			

ANNEX II (A)

SADAP RECOMMENDATIONS FOR HEALTH MANPOWER

NAMIBIA	SWAZILAND	ZAMBIA	ZIMBABWE
<p>Not available as of completion of this report.</p>	<p>The SADAP appraisal recommended:</p> <p>a) <u>Health Education</u> to be built into all projects of community development and based on health education capacity of the Min. of Health. There was no indication whether this was sufficient and for how many projects of what type.</p> <p>b) <u>Disease Control</u>: provide further training to Chief Malaria Control Section at Malaria Unit at London School of Tropical Medicine; assess need for training in-country for workers to carry out malaria control program.</p> <p>c) <u>Mental Health</u>: report recommends that "short- and long-term training needs should be identified" as well as training approaches. A comprehensive program package should be prepared to include training of Ministry of Health personnel.</p> <p>d) <u>Health Manpower</u>: increase supply of new health workers and extend skills of existing workers as follows:</p> <p>1) <u>Rural Health Visitors</u> - coordination needed among them but no AID aid needed, as other donors involved.</p>	<p>Principal recommendation is that efforts be directed to maximize effectiveness of current facilities and staff.</p> <p>a) <u>Health Planning & Administration</u>: advisory assistance and fellowships in health planning, public health administration and evaluation recommended.</p> <p>b) <u>Training Health Personnel</u>: accelerate Zambianization of physicians, pharmacists, dentists and training staff through fellowships; also expand clinical internships and field training for medical and health assistants; general support for training nurses, mid-level providers and technicians recommended; public health personnel training through overseas study for Zambians and U.S. health personnel assigned to University of Zambia needed in epidemiology, biostatistics, environmental health, nutrition, health education, and community medicine.</p> <p>c) <u>Transport</u>: for health personnel a severe constraint, and training of mechanics and drivers needed.</p> <p>d) <u>Upgrading traditional healers</u> and mid-wives and a possible pilot scheme to promote cooperation with modern medicine.</p>	<p>A draft of the SADAP paper on health in Zimbabwe was reviewed however, no recommendations were made by the report.</p>

ANNEX II (A)

SADAP RECOMMENDATIONS FOR HEALTH MANPOWER

NAMIBIA	SHAZILAND	ZAMBIA	ZIMBABWE
	<p>ii) Environmental Health Workers - Swazi Government indicated need for 60 additional health assistants this area;</p> <p>iii) Physicians - lack of specialists; need identify gaps and provide expatriate aid until Swazis trained. Long-term training plan for Swazis should be developed and medical education supported.</p> <p>iv) Nurses - need to train more and retain more in govt. service; in-service skills upgrading needed in: clinic and community health management, diagnostic and prescriptive skills, integration of preventive and curative care at primary level. Also need to modify nursing curriculum to be more aligned with above.</p> <p>v) Training of Trainers and Supervisors - especially important for nurses training.</p> <p>e) <u>Training Architects</u>: to design/plan health facilities and assess health implications housing patterns.</p> <p>f) <u>Central Laboratory</u>: need staff training - this can be met partly at Institute of Health Sciences but senior technician training also needed.</p>	<p>c) <u>Health Education</u>: expansion of health education programs will permit wider impact of health programs and constitute manpower development at village level.</p>	

ANNEX II (A)

SADAP RECOMMENDATIONS FOR HOUSING MANPOWER

BOTSWANA	LESOTHO	MALAWI	MZAMBIQUE
The SADAP analyses in this sector were not available at the time this report was completed.			

ANNEX II (A)

SADAP RECOMMENDATIONS FOR HOUSING MANPOWER

NAMIBIA	SHAZILAND	ZAMBIA	ZIMBABWE
The SADAP analyses in this sector were not available at the time this report was completed.			

ANNEX II (A)

SADAP RECOMMENDATIONS FOR LABOR MIGRATION/MANPOWER

BOTSWANA	LESOTHO	MALAWI	MZAMBIQUE
<p>I. <u>LABOR MIGRATION</u></p> <p>1) <u>AID Projects Be Examined in Terms of Employment Creation Potential for Returning Migrants.</u> This would be important as part of an overall government effort to assess its development activities from this perspective. (p. 111)</p> <p>2) <u>Consider Pilot Labor Intensive Construction Unit based on Lesotho model for employment & nonformal manpower training.</u> (p. 112)</p> <p>3) <u>Training of Batswana for positions in Office of Labour Commissioner, Central Statistical Office etc. to strengthen institutions required to implement dev. programs affecting migrant labor.</u> (p. 116)</p>	<p>I. <u>Labor Migration</u></p> <p>1) <u>US Private Investment Stimulation in Lesotho</u> would help create jobs & if well planned would provide industrial experience (p. 126)</p> <p>2) <u>Consider Assistance Extend Pilot Labor Intensive Construction Unit</u> for which no funds available after July, 1979. Initial results appear encouraging and continued donor aid is recommended strongly. (p. 128)</p> <p>3) <u>Discuss Employment Impact UN project for road construction to determine if modifications could result more employment/training in rural target area using construction as vehicle for this</u> (p. 129)</p> <p>4) <u>Training for Labor Department and possible upgrading to ministerial level in view central role migrant labor in Lesotho</u> (p. 132).</p>	<p>I. <u>Labor Migration</u></p> <p>1) <u>Skills Inventory of Former Migrant Laborers to assess existing skills which might be further developed through training.</u> Results could be linked to the UNDP project in trades training.</p> <p>2) <u>Hostel Construction for Women Students at trades training site since mission informed program restricted to males due to lack of accommodation for women.</u> (p.138)</p>	<p>I. <u>Labor Migration</u></p> <p>1) <u>Skills Survey - similar to Malawi, the 80,000 returned migrant laborers might be more efficiently trained & deployed if there was a survey of their skills to facilitate their job & training placement.</u> (p. 140)</p>

ANNEX II (A)

SADAP RECOMMENDATIONS FOR LABOR MIGRATION/MANPOWER

NAMIBIA	SHAZILAND	ZAMBIA	ZIMBABWE
<p>I. <u>Labor Migration</u></p> <p>1) <u>Expand Capacity of Namibia Institute to Examine post-Independence Problems of Manpower Development.</u> This could be accomplished by funding through the UN posts at the Institute for a Labor Economist and a Sociologist to be selected by the Institute. (p. 146)</p>	<p>I. <u>Labor Migration</u></p> <p>In event Swaziland government wishes to seek options to labor migration, the following could be considered regarding manpower</p> <p>1) <u>Develop Small-Scale Enterprises in Shiselweni District as Pilot Scheme</u> to motivate migrant workers with investible surplus to remain at home & work with SEDCO to become self-employed (p. 155)</p> <p>2) <u>Employment through Small Holder Sugar Scheme</u> if Swaziland can be guaranteed a market for sugar exports & program is part of overall package for employment (p. 156)</p> <p>3) <u>Training in Statistics</u> for the CSO to replace expatriates who would be recruited in interim to strengthen department. (p. 159)</p>	<p>I. <u>Labor Migration</u></p> <p>There are no labor migrants from Zambia in South Africa and thus there are no recommendations here.</p>	<p>I. <u>Labor Migration</u></p> <p>Paper contains a discussion of position of labor migrants but makes no specific recommendations pending the emergence of an independent government.</p>

ANNEX II (A)

SADAP RECOMMENDATIONS FOR MANUFACTURING MANPOWER

BOTSWANA	LESOTHO	MALAWI	MOZAMBIQUE
<p>1) <u>Business & Management Training.</u> Recommends training through a regional Institute for Business & Managerial Training which would have to be established. Suggests it be based in Botswana or Malawi with branches in other states. Program to include advanced training in US and in-service training possibly with US firm.</p> <p>2) <u>Aid to Small-Scale Industries in Rural Areas</u> <small>170</small> Implied in such aid would be training component for local entrepreneurs.</p>	<p>No specific recommendations with manpower development content were made.</p>	<p>1) <u>Assist in Establishing a Degree Program in Engineering.</u> AID has conditionally agreed to support with technical aid & equipment for library, science building, etc.</p> <p>2) <u>See item one for Botswana.</u></p> <p>3) A general recommendation for support to Small-Scale Enterprises may have manpower training implications which should be examined in context of development of this area.</p>	<p>1) <u>Assistance in Providing Skilled Manpower.</u> The report recommends that US "provide Mozambique with the means to obtain trained manpower" to overcome short term shortages caused by departure of Portuguese to continue until next recommendations bear fruit. This does NOT recommend provision of American personnel but aid to permit Mozambique to recruit its own personnel from its preferred sources.</p> <p>2) <u>Training Assistance.</u> Report stresses training managers for industries, however, it may be preferable for US to focus on technical training & leave more sensitive training areas to multilaterals.</p> <p>3) <u>See item one for Botswana.</u></p>

ANNEX II (A)

SADAP RECOMMENDATIONS FOR MANUFACTURING MANPOWER

NAMIBIA	SWAZILAND	ZAMBIA	ZIMBABWE
<p>1) <u>Assist Establish a Namibia Enterprises Development Corp. & this to be followed by developing staff and management capability.</u></p> <p>2) <u>Management and Business Training Institute</u> See item one for Botswana regarding this. Namibians could be trained in Botswana.</p>	<p>1) <u>Swaziland Enterprises Development Corp. needs to strengthen "on-site training" but has only three people doing this. Report recommends US assistance to expand this training capacity.</u></p> <p>2) <u>Natl. Industrial Dev. Corp. similarly needs training capacity strengthened.</u></p> <p>3) <u>Establish Business Training Program Geared to Swaziland's Needs.</u> This would lessen need for expatriate managerial & business skills.</p>	<p>1) <u>Training Assistance to Facilitate Zambianization in Industry.</u> The training provided thus far has not achieved localization at a satisfactory pace so the report recommends a branch of the Institute proposed under item one for Botswana be opened in Zambia. It might usefully be attached to existing training programs at the university or through the Ministry of Education.</p>	<p>1) <u>Provision of Marketing Consultants to teach marketing techniques in an independent Zimbabwe and to reorient manufacturing sector towards needs of majority.</u></p> <p>2) <u>On-the-job Training in Zimbabwe after independence for management, technicians, bookkeepers secretaries, accountants etc. to prevent a severe decline in production as occurred in Mozambique after independence. Training for management personnel in US also recommended for one year courses.</u></p> <p>3) <u>Recruitment of Zimbabweans Overseas.</u> Help identify Zimbabweans in US who wish return, pay passage & consider an incentive plan to facilitate initial resettlement in Zimbabwe.</p>

ANNEX II (A)

SADAP RECOMMENDATIONS FOR MINING MANPOWER

BOTSWANA	LESOTHO	MALAWI	MOZAMBIQUE
<p>a) Establish an Institute of Mining Economics either in Botswana or Namibia. The Institute would be of a regional character, as would the others recommended for other countries. The general recommendation that Botswana be assisted in training skilled manpower for the mining industry also implies possible provision of fellowships to overseas institutions.</p>	<p>The GOL wishes to staff its Geological Survey and Mines Department with Basotho but has been unable to arrange sponsored training of personnel for these areas.</p> <p>Lesotho also needs personnel who are trained to assist in negotiations with transnational mining corporations and to improve the efficacy of representation on boards of Lesotho mining companies in which government has an equity interest. It will also need personnel to organize and manage the small-scale mining operations proposed for the the less rich diamond pipes. At present Lesotho has three geologists, one mining engineer, and two chemists, plus 21 Basotho on fellowships taking courses relevant to the work of the Department of Mines. Technical assistance is recommended in the form of sponsorship at U.S. universities.</p>	<p>No recommendations were made relevant to manpower needs in what is for Malawi a very minor sector.</p>	<p>a) Establish a School of Geology in either Mozambique or Swaziland.</p> <p>b) Report recognizes the manpower shortages in Mozambique in this sector in terms of technicians, government personnel for the Geological Survey and Mines Department and for the transport sector which must move mineral products for export. No specific recommendations for donor assistance to ameliorate these shortages are made beyond the regional institution creating projects, all of which would be available to train Mozambican manpower.</p>

ANNEX II (A)

SADAP RECOMMENDATIONS FOR MINING MANPOWER

NAMIBIA	SWAZILAND	ZAMBIA	ZIMBABWE
<p>Establish an Institute of Mining Economics in either Namibia or Botswana.</p> <p>Recommends that Namibia cooperate with neighboring Botswana in manpower development since both countries have small populations, large mining sectors, and critical need for training.</p> <p>Recommended that U.S. make funds available to independent Namibian government to train necessary personnel.</p>	<p>a) Establish a School of Geology in either Swaziland or Mozambique.</p> <p>b) Report recommends that U.S. help train local mining technicians, engineers, geologists, and metallurgists at local and possible future regional institutions as well as through scholarship assistance for training in the U.S.</p>	<p>Expand the Department of Mines at the University to include Mining Engineering.</p> <p>Report notes that Geological Survey Department is 95% expatriate since Zambian geologists tend to work in mining companies for higher pay.</p> <p>Report makes no other recommendations with respect to Zambian manpower development.</p>	<p>Establish a School of Metallurgy in Zimbabwe after independence.</p> <p>Likely need noted for U.S. assistance in training Zimbabwean geologists and engineers.</p>

SADAP RECOMMENDATIONS FOR TRANSPORT/TELECOMMUNICATIONS MANPOWER

BOTSWANA	LESOTHO	MALAWI	MOZAMBIQUE
<p>1) Training Project for Roads Dept. trainees in road construction and maintenance, vehicle operation, inventory control, etc. (66)</p> <p>2) Study short-, medium- and long-term manpower requirements for railway and generally to identify specific bottlenecks and plan to overcome them. (100)</p> <p>3) Expand regional training school for railway personnel which EEC supporting to include coordinated aid to related schools in Kenya and Malawi.</p> <p>1) Promote coordination for training in civil aviation among BLS States. (113)</p> <p>5) Posts & telecommunications training component to a technical assistance project for P.T. (123)</p>	<p>1) Training in road maintenance phased to coincide with expansion of road network. (140)</p> <p>2) Promote regional coordination of civil aviation training (160) to be funded through ICAO. (161)</p>	<p>1) Consider establish a school at Limbe for diesel-electric technicians with possible regional capacity later. (191)</p> <p>2) Consider funding a school for ships' crews on lake vessels in Malawi due to past problems with international fellowships for this. (200)</p> <p>3) Assist Malawi Polytechnic to expand to provide degree instruction in accounting. (206)</p> <p>4) Possible aid to multinational civil aviation training centers. (206)</p> <p>5) Training in telecommunications engineering and maintenance--examine existing programs and support operational costs and capital equipment training costs. (212)</p>	<p>1) Consider establishing regional training school at Limbe, Malawi at which Mozambicans could attend. (229)</p> <p>2) Consider aid to IMCO for training facility for port and ship workers in Mozambique or option of training at the Rio de Janeiro facility (229)</p>

SADAP RECOMMENDATIONS FOR TRANSPORT/TELECOMMUNICATIONS MANPOWER

NAMIBIA	SWAZILAND	ZAMBIA	ZIMBABWE
<p>1) Establish working committee between S. African Railways and international organizations to obtain detailed information regarding training thus far accomplished and estimate of total training needs. (242)</p>	<p>1) Road maintenance training at Roads Branch of Ministry to expand crews. (260)</p> <p>2) Aid to Central Transport Organization to train personnel in vehicle and equipment maintenance. (261)</p> <p>3) Statistics, Management Training, and Staff Development at Roads Branch to expand professional personnel. (261)</p> <p>4) Training in airport management and operations in Civil Aviation Branch for 45 staff; training to include refresher courses and advanced training. (290)</p>	<p>1) National Transport Corporation management training to upgrade organizational and managerial skills. (311)</p> <p>2) Aid for regional railway training center at Limbe, Malawi with fellowships for Zambians. (348)</p> <p>3) Study of division of training load between ZASTI and ICAO regional center. (352)</p> <p>4) Training in telecommunication system operation and maintenance (362)</p> <p>5) Management training for PTC through survey of staff needs and provision housing/office space. (362)</p> <p>6) Telecoms. engineering training through Ndola school. (362)</p>	<p>1) Possible training through Freight Vehicle Operators' Cooperative. (373)</p> <p>2) Support ICAO/UNCTAD analyses of civil aviation training needs through a management and training survey. (280)</p> <p>3) Manpower Training in telecommunications, keyed initially to system maintenance after independence. (381)</p>

ANNEX II (A)

SADAP RECOMMENDATIONS FOR REFUGEE MANPOWER

(Note: Categories below are keyed to report)

RELATIVELY WELL EDUCATED LIKELY TO RETURN TO HOME COUNTRY WITHIN THREE YEARS	RELATIVELY WELL EDUCATED UNLIKELY TO RETURN TO HOME COUNTRY WITHIN THREE YEARS	LESS OR UNEDUCATED LIKELY TO RETURN OR STAY IN ASYLUM COUN
<p>1) <u>Nkumbi International College</u> has been a favored site for refugee training and donor assistance for some time & recommending aid to refugees through Nkumbi is hardly new. The school's capacity could be expanded - even doubled - with proper aid and good staffing. The problems at Nkumbi are outlined briefly in the report-see p. 46.</p> <p>2) <u>Institute for Namibia</u> could be used as a vehicle through which US could support UN recommended & SWAPO approved projects for manpower training of Namibian refugees. Much more can be done now without waiting for eventual political denouement in Namibia. p.49.</p> <p>3) <u>Urban Refugee Center</u> recommended for support outside Lusaka where vocational skills to be taught mostly to urban refugees.</p> <p>4) <u>Development Management Training</u> follow-up suggested to AID raised idea of US providing scholarships for refugees to attend Tanzania's Institute for Development Management. (p. 50)</p>	<p>1) <u>Nkumbi International College</u> could benefit this type refugee as well.</p> <p>2) <u>Employment Oriented</u> i) Center for South African Conflict Resolution - assist UN to convene conference of RSA exiles to discuss possible creation of institution to develop alternatives for South Africa problems which would come from refugees. ii) South African Studies Programs for selected universities in region to provide useful work for educated refugees which relates to their country's problems & strengthens majority ruled states knowledge of situation there re: trade etc. (p. 59)</p> <p>3) <u>Training Oriented</u> i) Management Training in Private Sector - using US transnationals as vehicles (p. 60) ii) Administrative Training for Relief, Rehabilitation & Development - help refugees to receive training so they can help resolve problems in refugee settlements & administer & plan them. (p. 61)</p> <p>4) <u>UN Volunteer Program</u> - finance UNV posts for refugees to work in development. (p. 62)</p>	<p>1) <u>Botswana Refugee Vocational Training Scheme</u> to provide skills training at Selibi Pikwe for Zimbabweans.</p> <p>2) <u>Assistance to Zimbabweans in Mozambique</u> - provide relief & rehabilitation aid to refugees in Mozambique consistent with UN assessment of needs. (p. 76) Manpower development would be non-formal & related to improved farming practices for self-sufficiency, nutrition education, etc.</p> <p>3) <u>Comprehensive Training Program for Refugees in Zambia</u> (p. 82) focusing on basic literacy, vocational skills, agricultural education, etc. and carried out in areas secure from S. Rhodesian attack</p> <p>4) <u>Assistance to Namibian Refugees in Zambia</u> - establish a minimum education target for Namibian education at 12 month intervals & see how much aid needed to achieve this & which donors can combine greatly accelerate pace of education.</p>

SADAP RECOMMENDATIONS FOR EDUCATION AND TRAINING OF WOMEN FOR DEVELOPMENT

*Note: The SADAP Report on this topic included only the three countries listed below.

(Page references are in parentheses)

B O T S W A N A	L E S O T H O	Z A M B I A
<p>1) <u>Explore assistance possibilities for a rural multipurpose training center</u> which focuses on training for women & school leavers. (p. 35) Day care facilities would be included to motivate women to attend & instruction would be offered in functional literacy for agric., home economics, basic farming skills and leadership training.</p> <p>2) <u>Explore need for aid in training community development extension workers & expansion of present program.</u></p> <p>3) <u>Assist in Development of Women Extension Officer Program & provide extra training for women now in service.</u></p> <p>4) <u>Increase number and proportion of women in AID financed programs.</u> In FY 1977 no women were included in SAAST program.</p> <p>5) <u>Diversification of Agricultural Activities, including piggery, poultry etc. & provide personnel to train women in these areas.</u></p>	<p>1) <u>Appropriate Technology with relevant training for women</u> Report suggests this be undertaken with African Training & Research Center of UNECA.</p> <p>2) <u>Employment in Small Scale Labor-Intensive Enterprises</u> to promote income generation for women recommended in expanding mohair production, blanket production, etc.</p> <p>3) <u>Training with AID assistance</u> recommended for: mid-level training, teacher-training-Lesotho Agricultural College to increase number of women; refresher training for staff at FTCs & train additional staff since most training of rural women is done here; training for doctors & pharmacists.</p> <p>4) <u>Assist Lesotho National Council of Women</u> which provides training in canning & drying fruits, crafts and nutrition. Train trainers & help finance.</p>	<p>1) <u>Provide training for trainers & extension workers, including upgrading of skills of existing staff & training in communication techniques.</u> This to address lack of sufficient female extension workers to have an impact in villages; use Min. of Agric's female extension section & aid its organization.</p> <p>2) <u>Increase number and proportion of women in AID training & scholarship programs, esp. the Southern Africa Academic & Skills Training Program for FY 1979. (SAAST)</u> There is no special focus on women at present in AID programs according to this report and in Zambia in 1970 only 15% of nationals receiving tertiary training were women.</p> <p>3) <u>Assist with Appropriate Technology & Training for its Use by Women;</u> training for women must be made convenient for them & well established training programs often are not due to distance from farms & inability of women to leave their families for lengthy periods.</p>

Annex II (A)

SADAP RECOMMENDATIONS FOR EDUCATION AND TRAINING OF WOMEN FOR DEVELOPMENT

*Note: The SADAP Report on this topic included only the three countries listed below.

B O T S W A N A	L E S O T H O	Z A M B I A
<p>6) <u>Assist Women's Groups.</u> Institution building and training can be combined through the Red Cross, Botswana Council for Women, Girl Guides YWCA etc.</p>		<p>4) <u>Assistance to Maternal & Child Health Project</u> at hospital by providing skills training to mothers spending additional time at hospital. This involves nutrition education, family planning & related activities.</p> <p>5) <u>Support efforts of local women with respect to training, research & appropriate technology.</u> Presumably this refers to local women's groups which would involve both training and institution building.</p>

SADAP MANPOWER RECOMMENDATIONS FOR BOTSWANA

AGRICULTURE	HEALTH	TRANSPORT/TELECOMMUNICATIONS	MINING
<p><u>Primary Education</u></p> <p>1) Introduction of agriculture into primary teachers' training curriculum.</p> <p>2) Provision of primary teachers with knowledge of agriculture.</p> <p>3) Staffing of central office responsible for primary school garden program and associated capital costs.</p> <p><u>Secondary Education</u></p> <p>1) Staffing of office of School Inspector Agriculture and associated capital costs including vehicles.</p> <p>Teachers of agriculture.</p> <p>3) Agriculture curriculum design and preparation of teaching materials.</p> <p>4) Provision of school buildings and teaching material.</p> <p><u>Degree Program</u></p> <p>1) Training in subject matter areas not available at UBS.</p> <p><u>Informal Education</u></p> <p>1) Development of a program for designing and testing educational curricula for adult agricultural education.</p> <p>2) Transport for Field Staff of the Ministry of Agriculture.</p>	<p>1) Bilharzia Control Program; manpower constraints identified--no trained microscopists/lab technicians; shortage trained environmental sanitarians/community health educators. Lack of nonmedical senior scientific and management staff; no trained clinical expertise. "Team recommends assistance to Min. of Health to account for these shortages."</p> <p>2) Development of a Demographic Research Unit: Assistance to Min. of Finance and Dev. Planning to develop such a unit is recommended as technical personnel and training for Botswana to run unit eventually.</p> <p>3) The SADAP health sector profile points out World Bank conclusion that for Botswana to meet its NDP targets it will need to double number of expatriates in country, yet other recommendations made by report do not mention manpower implications of proposed actions and it appears most are to be carried out by technical assistance personnel provided by international donors. It can be assumed GOB and report's authors would welcome training in areas required to carry out</p>	<p>1) Training Project for Roads Dept. trainees in road construction and maintenance, vehicle operation, inventory control, etc. (66)</p> <p>2) Study short-, medium- and long-term manpower requirements for railway and generally to identify specific bottlenecks and plan to overcome them. (100)</p> <p>3) Expand regional training school for railway personnel which EEC supporting to include coordinated aid to related schools in Kenya and Malawi. (101)</p> <p>4) Promote coordination for training in civil aviation among BLS States. (113)</p> <p>5) Posts & telecommunications training component to a technical assistance project for P.T. (123)</p>	<p>a) Establish an Institute of Mining Economics either in Botswana or Namibia. The Institute would be of a regional character, as would the others recommended for other countries. The general recommendation that Botswana be assisted in training skilled manpower for the mining industry also implies possible provision of fellowships to overseas institutions.</p>

ANNEX II (B)

SADAP MANPOWER RECOMMENDATIONS FOR BOTSWANA

AGRICULTURE	HEALTH	TRANSPORT/TELECOMMUNICATIONS	MINING
	<p>SADAP recommendations which follow:</p> <ul style="list-style-type: none"> a) Development of National Health Planning Capacity; b) Expanded Immunization Program; c) Provision of Adequate and Clean Water Supplies; d) Environmental Sanitation; e) Comprehensive Health Sector Assessment; f) National Health Services Expenditure Study. <p>Each of the above proposals will quickly confront indigenous manpower constraints and some cannot be accomplished properly without capable local personnel. The precise manpower implications of these activities and linkage to available personnel needs to be made clear.</p>		

ANNEX II (B)

SADAP MANPOWER RECOMMENDATIONS FOR BOTSWANA

MANUFACTURING	HOUSING	LABOR MIGRATION	OTHER
<p>1) <u>Business & Management Training.</u> Recommends training through a regional Institute for Business & Managerial Training which would have to be established. Suggests it be based in Botswana or Malawi with branches in other states. Program to include advanced training in US and in-service training possibly with US firm.</p> <p>2) <u>Aid to Small-Scale Industries in Rural Areas</u> Implied in such aid would be training component for local entrepreneurs.</p>	<p>The SADAP analyses in this sector were not available at the time this report was completed.</p>	<p>I. <u>LABOR MIGRATION</u></p> <p>1) <u>AID Projects Be Examined in Terms of Employment Creation Potential for Returning Migrants.</u> This would be important as part of an overall government effort to assess its development activities from this perspective. (p. 111)</p> <p>2) <u>Consider Pilot Labor Intensive Construction Unit based on Lesotho model for employment & nonformal manpower training.</u> (p. 112)</p> <p>3) <u>Training of Botswana for positions in Office of Labour Commissioner, Central Statistical Office etc. to strengthen institutions required to implement dev. programs affecting migrant labor.</u> (p. 116)</p>	<p><u>Women in Development</u></p> <p>1) <u>Explore assistance possibilities for a rural multipurpose training center which focuses on training for women & school leavers.</u> (p. 35) Day care facilities would be included to motivate women to attend & instruction would be offered in functional literacy for agric. home economics, basic farming skills and leadership training</p> <p>2) <u>Explore need for aid in training community development extension workers & expansion of present program.</u></p> <p>3) <u>Assist in Development of Women Extension Officer Program & provide extra training for women now in service.</u></p> <p>4) <u>Increase number and proportion of women in AID financed programs.</u> In FY 1977 no women were included in SAAST program.</p> <p>5) <u>Diversification of Agricultural Activities, including piggery, poultry etc. & provide personnel to train women in these areas.</u></p> <p>6) <u>Assist Women's Groups. Institution building and training can be combined through the Red Cross, Botswana Council for Women, Girl Guides, YWCA etc.</u></p>

(note: numbers in parentheses refer to pages in the text of the sector report.)

ANNEX II (B)

SADAP MANPOWER RECOMMENDATIONS FOR LESOTHO

AGRICULTURE	HEALTH	TRANSPORT/EL COMMUNICATIONS	MINING
<p>Not available as of completion of this report.</p>	<p>SADAP team concludes there is overproduction of some types of health personnel and underproduction of others.</p> <p>Recommendations:</p> <p>a) Health and Nutrition Education--report urges incorporation of health and nutrition education at all levels of school system; this not yet part of primary school curriculum. No specific recommendation for donor action.</p> <p>b) Recommends health exams for migrant workers on return to Lesotho to stop spread of TB and VD and provide health information but does not draw any conclusions regarding manpower implications of this. How many people would be needed to examine 100,000 miners a year and are they available?</p>	<p>1) Training in road maintenance phased to coincide with expansion of road network. (140)</p> <p>2) Promote regional coordination of civil aviation training (160) to be funded through ICAO. (161)</p>	<p>The GOL wishes to staff its Geological Survey and Mines Department with Basotho but has been unable to arrange sponsored training of personnel for these areas.</p> <p>Lesotho also needs personnel who are trained to assist in negotiations with transnational mining corporations and to improve the efficacy of representation on boards of Lesotho mining companies in which government has an equity interest. It will also need personnel to organize and manage the small-scale mining operations proposed for the the less rich diamond pipes. At present Lesotho has three geologists, one mining engineer and two chemists, plus 21 Basotho on fellowships taking courses relevant to the work of the Department of Mines. Technical assistance is recommended in the form of sponsorship at U.S. universities.</p>

ANNEX II (B)

SADAP MANPOWER RECOMMENDATIONS FOR LESOTHO

MANUFACTURING	HOUSING	LABOR MIGRATION	OTHER
<p>No specific recommendations with manpower development content were made.</p>	<p>The SADAP analyses in this sector were not available at the time this report was completed.</p>	<p>I. <u>Labor Migration</u></p> <ol style="list-style-type: none"> 1) <u>US Private Investment Stimulation in Lesotho</u> would help create jobs & if well planned would provide industrial experience (p. 126) 2) <u>Consider Assistance Extend Pilot Labor Intensive Construction Unit</u> for which no funds available after July, 1979. Initial results appear encouraging and continued donor aid is recommended strongly. (p. 128) 3) <u>Discuss Employment Impact UN project for road construction</u> to determine if modifications could result more employment/training in rural target area using construction as vehicle for this (p. 129) 4) <u>Training for Labor Department</u> and possible upgrading to ministerial level in view central role migrant labor in Lesotho (p. 132). 	<p><u>Women in Development</u></p> <ol style="list-style-type: none"> 1) <u>Appropriate Technology with relevant training for women.</u> Report suggests this be undertaken with African Training & Research Center of UNECA. 2) <u>Employment in Small Scale Labor-Intensive Enterprises</u> to promote income generation for women recommended in expanding mohair production, blanket production, etc. 3) <u>Training with AID assistance</u> recommended for: mid-level training, teacher-training-Lesotho Agricultural College to increase number of women; refresher training for staff at FTCs & train additional staff since most training of rural women is done here; training for doctors & pharmacists. 4) <u>Assist Lesotho National Council of Women</u> which provides training in canning & drying fruits, crafts and nutrition. Train trainers & help finance.

SADAP MANPOWER RECOMMENDATIONS FOR MALAWI

AGRICULTURE	HEALTH	TRANSPORT/TELECOMMUNICATIONS	MINING
<p>1) Establish "first-rate research capability within central services of Min. Agriculture. Five-year project recommended with infrastructure/recurrent budget support and stress training research personnel. Report cautions cost estimates too low and lack of social science component is of concern.</p> <p>2) Continued support for Bunda Agricultural College.</p> <p>3) Develop National Resources College (NRC) (Colby) with CIDA. Expand/upgrade women's training program at NRC with CIDA/ OXFAM.</p> <p>5) Leave in-service training to UNDP and UK.</p> <p>6) Establish full-time AID presence in Malawi.</p>	<p>1) Health Planning Training-- recommended in statistics, health information systems, and evaluation and planning.</p> <p>2) Support Basic Health Services training community-based workers; training clinical officers, public health nurses, and district medical officers. Also fund health education request and provide professional health education assistance at center to improve health education delivery at field level.</p> <p>3) Specific Government Requests for Training to SADAP team (p. 105)--</p> <p>a) improve medical auxiliary facilities at Lilongwe Training School--classrooms, lab, etc.;</p> <p>b) equipment: self-instruction materials and audio-visual aids;</p> <p>c) tutors: public health nurses at Clinical Officers School;</p> <p>d) fellowships: for participant training for public health nurses, planning, and health education;</p> <p>e) health education: as in submission already made to AID plus a professional health educator to assist at central level.</p> <p>Obviously Malawi had specific proposals ready for the health team, knows what it needs, and has requested the above. The SADAP team has stressed training as of central importance to</p>	<p>1) Consider establish a school at Limbe for diesel-electric technicians with possible regional capacity later. (191)</p> <p>2) Consider funding a school for ships' crews on lake vessels in Malawi due to past problems with international fellowships for this. (200)</p> <p>3) Assist Malawi Polytechnic to expand to provide degree instruction in accounting. (206)</p> <p>4) Possible aid to multinational civil aviation training centers. (206)</p> <p>5) Training in telecommunications engineering and maintenance--examine existing programs and support operational costs and capital equipment training costs. (212)</p>	<p>No recommendations were made relevant to manpower needs in what is for Malawi a very minor sector.</p>

ANNEX II (B)

SADAP MANPOWER RECOMMENDATIONS FOR MALAWI

MANUFACTURING	HOUSING	LABOR MIGRATION	OTHER
<p>1) <u>Assist in Establishing a Degree Program in Engineering.</u> AID has conditionally agreed to support with technical aid & equipment for library, science building, etc.</p> <p>2) <u>See item one for Botswana.</u></p> <p>3) A general recommendation for support to Small-Scale Enterprises may have manpower training implications which should be examined in context of development of this area.</p>	<p>The SADAP analyses in this sector were not available at the time this report was completed.</p>	<p>I. <u>Labor Migration</u></p> <p>1) <u>Skills Inventory of Former Migrant Laborers to assess existing skills which might be further developed through training.</u> Results could be linked to the UNDP project in trades training.</p> <p>2) <u>Hostel Construction for Women Students at trades training site since mission informed program restricted to males due to lack of accommodation for women.</u> (p.138)</p>	

ANNEX II (B)
SADAP MANPOWER RECOMMENDATIONS FOR MOZAMBIQUE

(Note: Numbers in parentheses refer to pages in the text of the sector report.)

AGRICULTURE	HEALTH	TRANSPORT/ELECTROCOMMUNICATIONS	MINING
<p>o recommendations made.</p>	<p>Not available as of completion of this report</p>	<p>1) Consider establishing regional training school at Limbe, Malawi at which Mozambicans could attend. (229)</p> <p>2) Consider aid to IMCO for training facility for port and ship workers in Mozambique or option of training at the Rio de Janeiro facility. (229)</p>	<p>a) Establish a School of Geology in either Mozambique or Swaziland.</p> <p>b) Report recognizes the manpower shortages in Mozambique in this sector in terms of technicians, government personnel for the Geological Survey and Mines Department and for the transport sector which must move mineral products for export. No specific recommendations for donor assistance to ameliorate these shortages are made beyond the regional institution creating projects, all of which would be available to train Mozambican manpower.</p>

ANNEX II (B)

SADAP MANPOWER RECOMMENDATIONS FOR MOZAMBIQUE

MANUFACTURING	HOUSING	LABOR MIGRATION	OTHER
<p>155</p> <p>1) <u>Assistance in Providing Skilled Manpower.</u> The report recommends that US "provide Mozambique with the means to obtain trained manpower" to overcome short term shortages caused by departure of Portuguese to continue until next recommendations bear fruit. This does NOT recommend provision of American personnel but aid to permit Mozambique to recruit its own personnel from its preferred sources.</p> <p>2) <u>Training Assistance.</u> Report stresses training managers for industries, however, it may be preferable for US to focus on technical training & leave more sensitive training areas to multilaterals.</p> <p>3) <u>See item one for Botswana.</u></p>	<p>The SADAP analyses in this sector were not available at the time this report was completed.</p>	<p>I. <u>Labor Migration</u></p> <p>1) <u>Skills Survey</u> - similar to Malawi, the 90,000 returned migrant laborers might be more efficiently trained & deployed if there was a survey of their skills to facilitate their job & training placement. (p. 140)</p>	

SADAP MANPOWER RECOMMENDATIONS FOR NAMIBIA

AGRICULTURE	HEALTH	TRANSPORT/TELECOMMUNICATIONS	MINING
No recommendations made.	Not available as of completion of this report.	<p>1) Establish working committee between S. African Railways and international organizations to obtain detailed information regarding training thus far accomplished and estimate of total training needs. (242)</p>	<p>Establish an Institute of Mining Economics in either Namibia or Botswana.</p> <p>Recommends that Namibia cooperate with neighboring Botswana in manpower development since both countries have small populations, large mining sectors, and critical need for training.</p> <p>Recommended that U.S. make funds available to independent Namibian government to train necessary personnel.</p>

ANNEX II (B)

SADAP MANPOWER RECOMMENDATIONS FOR NAMIBIA

MANUFACTURING	INDUSTRY	LABOR MIGRATION	OTHER
<p>1) <u>Assist Establish a Namibia Enterprises Development Corp.</u> & this to be followed by developing staff and management capability.</p> <p>2) <u>Management and Business Training Institute</u> See item one for Botswana regarding this. Namibians could be trained in Botswana.</p>	<p>The SADAP analyses in this sector were not available at the time this report was completed.</p>	<p>I. <u>Labor Migration</u></p> <p>1) <u>Expand Capacity of Namibia Institute to Examine post-Independence Problems of Manpower Development.</u> This could be accomplished by funding through the UN posts at the Institute for a Labor Economist and a Sociologist to be selected by the Institute. (p. 146)</p>	

SADAP MANPOWER RECOMMENDATIONS FOR SWAZILAND

AGRICULTURE	HEALTH	TRANSPORT/TELECOMMUNICATIONS	MINING
<p>1) GOS institute regular program manpower planning to avoid excess supply of trained agriculturalists.</p> <p>2) To reduce unemployment of school leavers in urban areas, public investments should be redirected to rural areas. Wage structures should be reviewed to reduce rural-urban income disparities.</p> <p>3) AID and GOS consider project to strengthen extension services. Among elements which might be included are: (a) expansion UBS certificate course; (b) expansion public information service of extension service & provision necessary equipment and staff; (c) more mobile and similar equipment; (d) integrate all extension programs and coordinate better with research; (e) improvement in-service extension workers training program.</p> <p>4) GOS and AID consider program to strengthen formal ag education, including: (a) expansion of a program in ag education through provision additional staff and equipment; (b) provide necessary resources for adequate preparation of primary teachers teachers colleges; (c) provide needed personnel and equipment for preparation/delivery of</p>	<p>The SADAP appraisal recommended:</p> <p>a) <u>Health Education</u> to be built into all projects of community development and based on health education capacity of the Min. of Health. There was no indication whether this was sufficient and for how many projects of what type.</p> <p>b) <u>Disease Control</u>: provide further training to Chief Malaria Control Section at Malaria Unit at London School of Tropical Medicine; assess need for training in-country for workers to carry out malaria control program.</p> <p>c) <u>Mental Health</u>: report recommends that "short- and long-term training needs should be identified" as well as training approaches. A comprehensive program package should be prepared to include training of Ministry of Health personnel.</p> <p>d) <u>Health Manpower</u>: increase supply of new health workers and extend skills of existing workers as follows:</p> <p>1) Rural Health Visitors - coordination needed among them but no AID aid needed, as other donors involved.</p>	<p>1) Road maintenance training at Roads Branch of Ministry to expand crews. (260)</p> <p>2) Aid to Central Transport Organization to train personnel in vehicle and equipment maintenance. (261)</p> <p>3) Statistics, Management Training, and Staff Development at Roads Branch to expand professional personnel. (261)</p> <p>4) Training in airport management and operations in Civil Aviation Branch for 45 staff; training to include refresher courses and advanced training. (290)</p>	<p>a) Establish a School of Geology in either Swaziland or Mozambique.</p> <p>b) Report recommends that U.S. help train local mining technicians, engineers, geologists, and metallurgists at local and possible future regional institutions as well as through scholarship assistance for training in the U.S.</p>

ANNEX II (B)

SADAP MANPOWER RECOMMENDATIONS FOR SWAZILAND

AGRICULTURE	HEALTH	TRANSPORT/TELECOMMUNICATIONS	MINING
<p>teaching materials and supplies for ag education; (8) assist individual schools to build physical facilities for ag education.</p>	<p>ii) Environmental Health Workers - Swazi Government indicated need for 60 additional health assistants this area;</p> <p>iii) Physicians - lack of specialists; need identify gaps and provide expatriate aid until Swazis trained. Long-term training plan for Swazis should be developed and medical education supported.</p> <p>iv) Nurses - need to train more and retain more in govt. service; in-service skills upgrading needed in: clinic and community health management, diagnostic and prescriptive skills, integration of preventive and curative care at primary level. Also need to modify nursing curriculum to be more aligned with above.</p> <p>v) Training of Trainers and Supervisors - especially important for nurses training.</p> <p>e) <u>Training Architects:</u> to design/plan health facilities and assess health implications housing patterns.</p> <p>f) <u>Central Laboratory:</u> need staff training - this can be met partly at Institute of Health Sciences but senior technician training also needed.</p>		

ANNEX II (B)

SADAP MANPOWER RECOMMENDATIONS FOR SWAZILAND

MANUFACTURING	INDUSTRY	LABOR MIGRATION	OTHER
<p>1) <u>Swaziland Enterprises Development Corp.</u> needs to strengthen "on-site training" but has only three people doing this. Report recommends US assistance to expand this training capacity.</p> <p>2) <u>Natl. Industrial Dev. Corp.</u> similarly needs training capacity strengthened.</p> <p>3) <u>Establish Business Training Program Geared to Swaziland's Needs.</u> <small>200</small> This would lessen need for expatriate managerial & business skills.</p>	<p>The SADAP analyses in this sector were not available at the time this report was completed.</p>	<p>I. <u>Labor Migration</u></p> <p>In event Swaziland government wishes to seek options to labor migration, the following could be considered regarding manpower</p> <p>1) <u>Develop Small-Scale Enterprises in Shiselweni District as Pilot Scheme</u> to motivate migrant workers with investible surplus to remain at home & work with SEDCO to become self-employed (p. 155)</p> <p>2) <u>Employment through Small Holder Sugar Scheme</u> if Swaziland can be guaranteed a market for sugar exports & program is part of overall package for employment (p. 156)</p> <p>3) <u>Training in Statistics</u> for the CSO to replace expatriates who would be recruited in interim to strengthen department. (p. 159)</p>	

ANNEX II (B)

SADAP MANPOWER RECOMMENDATIONS FOR ZAMBIA

AGRICULTURE	HEALTH	TRANSPORT/TELECOMMUNICATIONS	MINING
<p>A. <u>Delivery of Svcs. to Farmers</u></p> <p>1) Support and/or augment FAO in-service training programs--concentrate upon extension service throughout Ministry Lands/Agriculture. Management, accounting, research, technical and communication skills critical--U.S. could provide extensive assistance and link to World Bank project to upgrade physical facilities.</p> <p>2) Curriculum review assistance to make FTC's and FI's more effective. These units provide the material to farmers regardless of region and are "one shot" affairs.</p> <p>3) Support crash program to increase number of women serving in extension services.</p> <p>4) Improvement in training of cooperative officers through in-service training and at NRDC. Emphasis upon management, credit accounting & development skills.</p> <p>B. <u>Formal Agric. Education</u></p> <p>1) Greater education for youth officers overseeing young farmers clubs and relevant teacher training.</p> <p>2) Improvement of teacher training capabilities at NRDC.</p> <p>3) Curriculum review and revision at NRDC & ZCA--more attention to practical courses, com-</p>	<p>Principal recommendation is that efforts be directed to maximize effectiveness of current facilities and staff.</p> <p>a) <u>Health Planning & Administration</u>: advisory assistance and fellowships in health planning, public health administration and evaluation recommended.</p> <p>b) <u>Training Health Personnel</u>: accelerate Zambianization of physicians, pharmacists, dentists and training staff through fellowships; also expand clinical internships and field training for medical and health assistants; general support for training nurses, mid-level providers and technicians recommended; public health personnel training through overseas study for Zambians and U.S. health personnel assigned to University of Zambia needed in epidemiology, biostatistics, environmental health, nutrition, health education, and community medicine.</p> <p>c) <u>Transport</u>: for health personnel a severe constraint, and training of mechanics and drivers needed.</p> <p>d) <u>Upgrading traditional healers and mid-wives</u> and a possible pilot scheme to promote cooperation with modern medicine.</p>	<p>1) National Transport Corporation management training to upgrade organizational and managerial skills. (311)</p> <p>2) Aid for regional railway training center at Limbe, Malawi with fellowships for Zambians. (348)</p> <p>3) Study of division of training load between ZASTI and ICAO regional center. (352)</p> <p>4) Training in telecommunication system operation and maintenance (362)</p> <p>5) Management training for PTC through survey of staff needs and provision housing/office space. (362)</p> <p>6) Telecoms. engineering training through Ndola school. (362)</p>	<p>Expand the Department of Mines at the University to include Mining Engineering.</p> <p>Report notes that Geological Survey Department is 95% expatriate since Zambian geologists tend to work in mining companies for higher pay.</p> <p>Report makes no other recommendations with respect to Zambian manpower development.</p>

ANNEX III

*Note on Donor Assistance and Enumeration of
Manpower Programs and Projects with Donor Support*

ANNEX 111

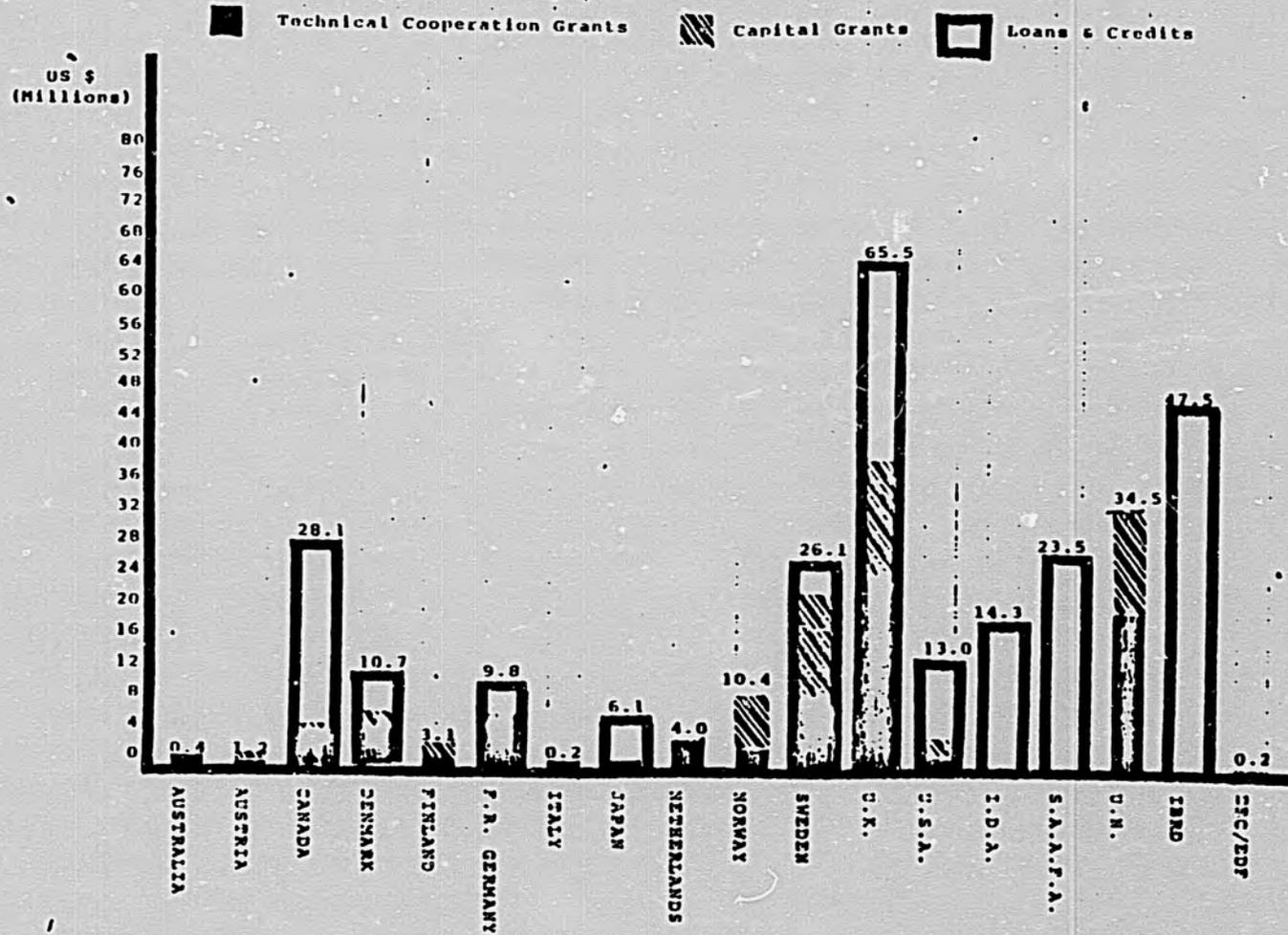
Note on Donor Assistance and Enumeration of Manpower Programs and Projects With Donor Support

In December 1977 as a preliminary part of the overall SADAP project, Pacific Consultants submitted to USAID an enumeration of ongoing and planned technical assistance projects in the southern Africa region classified by sector. At that time, over 1,000 projects from more than sixty donors, plus a list of World Bank loans and IDA credits were divided according to the following categories: Rural Development, Human Resources, Natural Resources and Industry, Infrastructure and Trade, and Other. A series of tables were then constructed depicting the aggregate net official development assistance flow to the region for 1975 and, where data were available, for 1976.

Those wishing to review ongoing and planned activities for manpower development in the region should refer to the documentation mentioned above and peruse each category. Key summary tables are reproduced here for ease of reference.

ANNEX III - EXHIBIT I

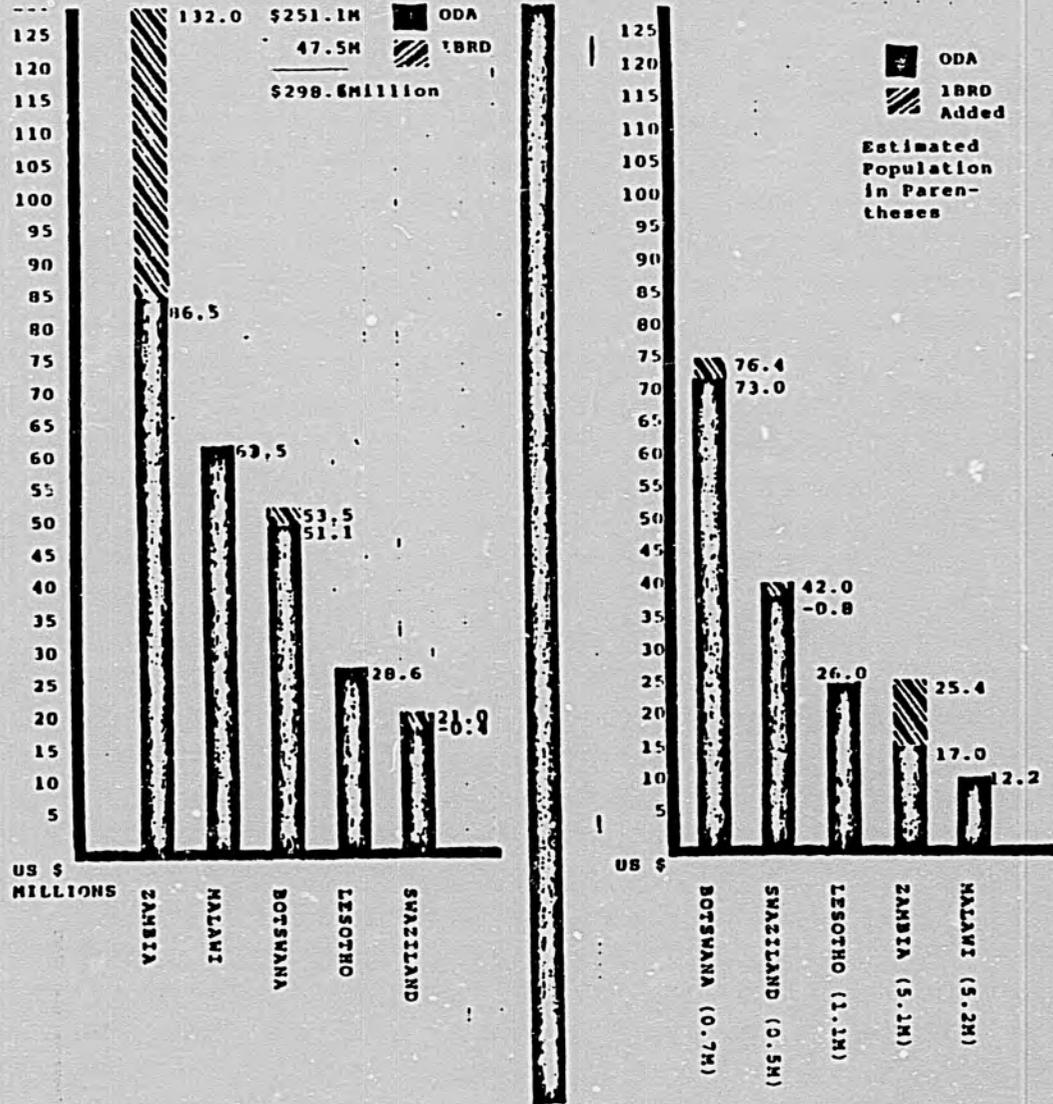
TOTAL NET OFFICIAL DEVELOPMENT ASSISTANCE FOR SOUTHERN AFRICA REGION (BOTSWANA, LESOTHO, SWAZILAND, MALAWI, & ZAMBIA) BY DONOR - 1975 (\$251.1 Million ODA Plus \$47.5 Million IBRD = \$298.6 Million)



ANNEX III - EXHIBIT II

NET OFFICIAL DEVELOPMENT ASSISTANCE FOR SOUTHERN AFRICA REGION
(BOTSWANA, LESOTHO, SWAZILAND, MALAWI, AND ZAMBIA) DISBURSED IN

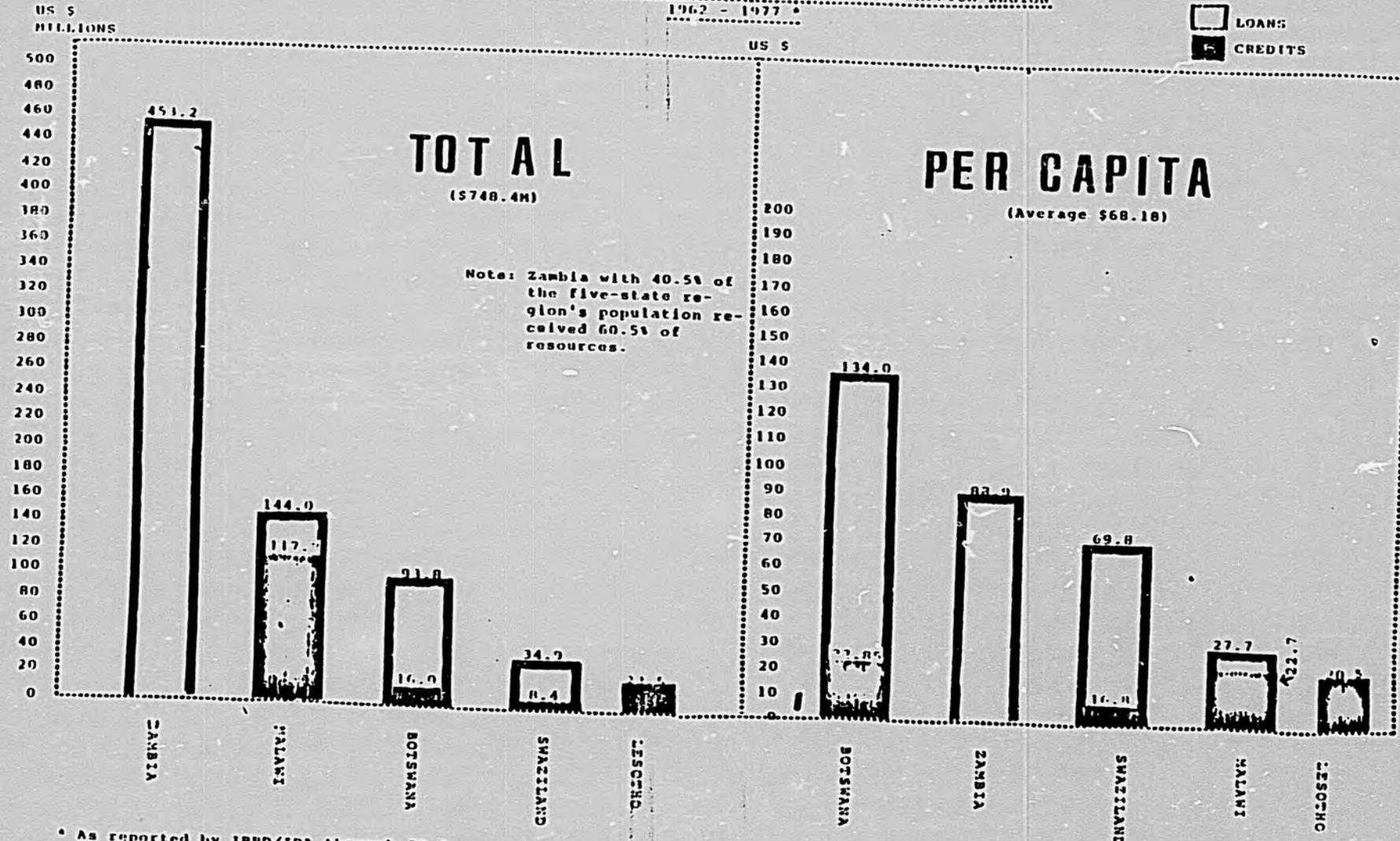
1975: TOTAL AND PER CAPITA



505

WORLD BANK AND IDA LOANS/CREDITS TO SOUTHERN AFRICA REGION
1962 - 1977*

□ LOANS
■ CREDITS



* As reported by IBRD/IDA through 30 June, 1977 and including US \$14M to "Zambia" (then Northern Rhodesia) in 1961, but excluding Kariba power loans to Federation listed as "joint" to S. Rhodesia and Zambia prior to Zambian independence in 1964.

	% of Pop. (12.6 million)	% of Resources (\$748.4M)
Lesotho	8.7%	1.0%
Botswana	5.5%	12.5%
Swaziland	4.0%	4.7%
Malawi	41.3%	19.2%
Zambia	40.5%	60.5%

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