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**Women and Infant Nutrition Field Support Project (WINS)**

**Assessment of the Nutrition  
Situation and Activities in  
Botswana, Egypt and Swaziland**

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## **INTRODUCTION TO ASSESSMENTS OF THE NUTRITION SITUATION AND ACTIVITIES IN BOTSWANA, EGYPT AND SWAZILAND**

This document was prepared for the WINS project as the first step in determining:

- if there are informational or programmatic gaps in the provision of services to improve the health and nutritional status of women and children in the three countries, and
- if so, the types of activities WINS could suggest to the country governments, U.S.A.I.D. missions and others to close those gaps.

The information presented in these reviews was collected through an examination of secondary data (e.g., research reports, project and agency documents) and through interviews with persons knowledgeable about health and nutrition activities in Botswana, Egypt and Swaziland. The final section presents suggestions for activities the WINS Project might want to follow-up with in approaching the host country governments and U.S.A.I.D. missions.

All three countries have made credible progress in improving the delivery of health care services to their people, and as a consequence, health and nutrition indicators show a general upward trend. These indicators, however, paint a superficial picture of the quality of life for the Botswanans (the correct spelling when referring to the people), Egyptians and Swazis, and need to be tempered by interpretation within each country's general context.

In each case, fiscal constraints caused by currency devaluations, an unremitting increase in population that has led to an parallel rise in the demand for goods and services, decreased cash earnings for exports have contrived to create a situation in which none of the three governments can meet the needs of their people.

As local food production has fallen in all three countries, they have become increasingly dependent on imported and/or donated food to fill the widening gap between supply and demand. As food prices climb, more families need to earn an ever increasing amount of money to purchase an adequate supply of food to maintain themselves. As the economies weaken and have not been able to diversify enough to provide sufficient cash earnings and generate new jobs for an increasing population, people's earning power is lessened and they become more and more vulnerable to events that directly impact their health and nutrition.

There were varying amounts of information available for each of the countries regarding the health and nutritional status of their populations, and particularly for women and children.

While Botswana has had two "Family Health Surveys", in 1984 and 1988, there appeared to be little in-depth information on food availability, food consumption patterns and feeding practices. On the other hand, there was a veritable wealth of information on just those nutrition-related issues in Swaziland and Egypt. Egypt also has had two major surveys, the DHS and Egypt Service Availability Survey, as well as a host of other health surveys and studies.

Each country's government has adopted policies and developed legislation to encourage a supportive climate for improving conditions for their population, including promotion of breast feeding. For the most part, the implementation of these policies appears to have been successful, although, in some cases, demands that fall on public sector employees often are more than they can reasonably expect to meet without additional commitments from the governments for the materials, equipment and training. On the other hand, while legislation has set the tone for an environment that enhances attempts to improve the quality of life of each country's citizens, the means to enforce these laws are not always in place.

Public sector support for health service delivery varies among the three countries, with Swaziland providing the least amount of support for government provided services. Interestingly, 50% of all health care services in Swaziland are provided by the private sector, and, in Egypt, the government has begun to develop incentives to stimulate private sector involvement in health care service delivery, to maintain the government's policy of universal access to health services. On the other hand, Botswana's health care structure remains primarily in the hands of the government, with little diversification.

In conclusion, while Botswana, Egypt and Swaziland have made enormous strides in improving their peoples lives, they still have far to go in ensuring that these gains are not lost to the onslaughts of an ever-shrinking economic base, unbridled population growth, and the menacing increase in the prevalence of AIDS and other life-threatening illnesses.

# **A Preliminary Review of the Nutrition Situation and Activities in BOTSWANA**

## **I. COUNTRY BACKGROUND**

Despite the progress Botswana has made in socioeconomic conditions since achieving independence in 1966, the improvements have not been equally distributed among all segments of the population. The rural and urban poor continue to lag behind other segments of the population, and women and children remain particularly vulnerable to chronic sources of inequities and to events that acutely effect their health and well being.

Botswana presents a classic example of the multitudinous factors that have led it to the position it now occupies in terms of long term food security, and its citizens health. With only 5% of its land being arable and being located in an area prone to chronic droughts, Botswana has become dependent on both food imports and donors to ensure an adequate food supply. Unfortunately, this has created an artificial system that has undercut internal food production activities. At the same time, Botswana has invested less in the agricultural sector and depended more on cash earnings from mineral exports. Money earned from those mineral sales may have peaked and an increasing amount of Botswana's profit is spent on providing basic services to its burgeoning population and for debt servicing and other recurrent costs.

Not only is Botswana dependent on food provided from outside the country, it also is dependent on trained human resources from other countries. Despite a rapidly expanding population, the Government of Botswana (GOB) has not been able to provide an adequate education to meet its own human resource needs. Even if more Batswanans were educated and trained, the public sector could not afford to employ this new cadre of personnel. On the other hand, the private sector has not yet been able to diversify to the point where it could provide jobs for those trained persons. Thus, not only does Botswana need to invest in training and educating its citizens, it also needs to invest in creating employment opportunities that do not put additional burdens on a shrinking public sector.

As a result of all these inter-related factors, a close look at the life in Botswana reveals its weak underpinings, even while statistics point to the progress Botswana has made in its development.

### **A. Country Setting**

Botswana is a land-locked country about the size of Texas. Its total land area is 581,730 square kilometers, and its population density is estimated at 2 persons per square kilometer. Botswana is bordered by South Africa, Namibia, Zambia and Zimbabwe. The Tropic of Capricorn passes

through Botswana, and temperatures vary greatly from high (over 90 in the summer to close to freezing during the winter nights. The Kgalagodi (Kalahari) Desert is located in the central and northern regions of Botswana and accounts for 84% of Botswana's land area. Less than 5% of the total land area is considered arable. Rainfall is seasonal, beginning in late October and ending in April; rivers, too, are seasonal, except in the northwest, where the Okavango River is perennial. Botswana currently is suffering from one of its periodic droughts, with the most recent extensive drought having ended in 1987.

87% of the population lives in the eastern region, where rainfall is more regular, ground water is available, and the soil is relatively fertile. 78% of Botswana's people still live in rural areas, and have been historically dependent on livestock and agriculture for their livelihood. Gaborone (Ha-bo-ro'-neh, population: 95,000) is the capital and is located in southeast Botswana.

A former British protectorate, Botswana became independent September 30, 1966. The people of Botswana (1.3 million) are generally homogeneous and of the Batswana ethnic group. Setswana is the predominant language, although English is the language of government and commerce. The major religions are traditional beliefs (50%) and Christianity (50%).

Botswana's income is largely based on diamond and copper mining, with smaller amounts of nickel, manganese, coal, zinc and uranium also being produced. These minerals contributed 47% to the 1986 gross domestic product (GDP). Botswana also is the largest beef producer and exporter in Africa; however, agriculture (including animals) production has fallen from 25% of the GDP in 1973-74 to 5% in 1986. At the same time, per capita annual income has risen from \$300 in 1967-68 to nearly \$1600 in 1989, while 60% of households still live at or below the effective minimum income level.

World Bank figures ("Social Indicators of Development") indicated that, as of 1990: 14.8% of the GDP was spent on food; 137,000 metric tons of cereals were imported, and 53,000 metric tons of cereals were donated as food aid. The per capita food production index for Botswana was 88 in 1980 and had fallen to 70 by 1987 (based on 100 in 1979-81).

At the household level, in 1980, 29% of household expenditures were for food (nonspecific) and half of those were for cereals alone. By 1986, total food purchased had increased to 35% of a household's expenditures, with only 13% of that being used for cereals. This decrease in amount spent on cereals could be attributed to the increase in food aid, typically cereals, oil and milk, during the drought, thereby, decreasing the need for households to purchase that commodity.

Botswana has a fairly well-established private sector, and the government has encouraged diversification. However, while significant improvements have been made in its macro-economic situation, these tend to mask some underlying development problems. More than 70% of the population lives at or near the subsistence level; there is a 25-30% unemployment rate, with 20,000 persons entering the market every year. The country has become dependent on imported food, and the bulk of its fuel, chemicals, machinery and clothing also are imported.



Total economic aid received per year averages \$185 million. US aid for the period of 1965-90 totaled \$302 million, with the annual per capita US aid averaging \$1.74 (1986-89). In 1990, US aid totaled \$14.3 million. The US is the third largest donor, contributing 13% of the total aid received. Norway, Sweden, Canada and the UK also are major donors. The European Economic Community (EEC), World Bank, African Development Bank, World Food Program and United Nations Development Program, among others, also contribute to and/or are active in Botswana.

## **B. Health/Demographic Profile**

Estimates of the infant mortality rate (IMR) range from a low of 37 per 1000 live births (Family Health Survey II, 1988) to a high of 63/1000 (Child Survival Reports, 1985-90). The FHS II reported a childhood (less than 5 years of age) mortality rate (CMR) of 16/1000; 44.5/1000 was the figure cited by the World Bank ("Social Indicators of Development, 1990), and the Child Survival Reports noted a CMR of 85 in 1990.

Despite individual differences, there is a marked improvement in these child health indicators over the past 10 years. According to UNICEF statistics (1989), the CMR had fallen steadily from 110 in 1980 to 95 in 1987, and the IMR had dropped from 79 (1980) to 63.4 (1988).

The 1988 FHS attributed the relatively low IMR and CMR to long periods of breast feeding, widespread immunization coverage, general access to clean water, and the high use rate of QRT. It also noted that the GOB Maternal and Child Health/Family Planning program had made considerable progress since the 1984 Family Health Survey in providing health services to women of childbearing age and that use of MCH services had increased considerably. These factors appeared to have negated some of the potentially damaging effects of the 1982-87 drought.

Botswana's annual population growth rate is estimated at 2.7% (1992), with 45.4% of its people being between the ages of 0-14 years. Life expectancy at birth is 62 years (1991), with women living to 64.7 years and men to 58.6 years.

The total fertility rate was 5.0 (FHS II), and 33% of married women (15-44 years) reported that they used contraceptives. Women with a secondary or higher education were expected to have a total of 3.3 births in their lifetime, while women with no formal education could expect to have 6 births (FHS II).

A 1984 Ministry of Health (MOH) survey found that 29.3% of 15-19 year old girls had been pregnant at least once. This represented a significant increase over 1981 census data which showed that 22% of teenage girls were either pregnant (at the time of the census) or had had at least one child. The 22% was, in its turn, a significant increase from the 15.4% found in the 1971 census.

The GOB spent 3.3% of its GDP on providing health care services for its people. 48% of total health expenditures occurred in the primary health care sector. (WHO, 1984)

The GOB's Primary Health Care system is decentralized, and the Maternal/Child Health and Family Planning Service is well integrated at all levels of the health care system. There are 6445 persons per physician (1985), 605 persons per nurse and 600 persons per family welfare educators. Approximately 90% of the population lives within 15 kilometers of a health facility, and 54% of the population has access to safe water (1985).

85% of the population has access to oral rehydration salts (ORS), and there is a 66% reported use of oral rehydration therapy (ORT) during diarrneal episodes. ORS access has remained stable from 1984 to 1988; whereas, use of ORT has climbed consistently over the same period. Immunization rates for children 12-23 months are:

BCG	-	92%	measles	-	78%
DPT 3	-	86%	polio (3)	-	82%
tetanus	-	62%.			

These rates peaked in/around 1987, then began to fall off slightly in the case of polio 3 and BCG, more precipitously in the case of measles. DPT 3 has remained stationary from 1987 to 1990.

93% of school-aged children attend school, and the literacy rate for women is 69%, and 73% for men. (WHO, "Maternal Mortality: A Global Factbook, 1991) The World Bank, on the other hand, cites much lower literacy rates--these being, a 29.2% overall rate and 30.5% for women. Over 75% of teenage girls in Botswana have had 5 or more years of formal education, and there are more girls than boys enrolled in the elementary and junior high school levels. Because most boys are needed for cattle raising, they typically don't start school until they are 12 years of age. (Tlou, Sheila Dinotshe, "Child Survival in Botswana: Influencing Factors", 10/88) Trends in primary school enrollment (for both genders) do show a consistent improvement since the late 1960s.

### **C. Nutritional Status/Major Nutritional Diseases**

A National Nutritional Surveillance Programme (NNSP) began collecting data in 1978. Preschoolers are weighed and measured at well-baby clinics, health centers, food distribution centers and other points of entry to the health care system. Data from the NNSP indicated that, from 1981 to 1986, approximately one out of every four children attending under five clinics was underweight. This represented 20% of urban and 30% of rural children.

Although these years coincided with the last sustained period of drought, health specialists attributed the relatively high prevalence rate not only to reduced levels of food intake (a direct and immediate effect of the drought and crop failures), but also to the complicating effects of diarrhea, malaria, measles and parasitic infections.

Another source of nutrition information data is the "Continuous Household Integrated Programme of Surveys" (CHIPS). These surveys were conducted by the "National Household Survey Capability Programme" (UN-supported) and the "Primary Health Care Survey". Analysis of their data indicated that, after adjusting for age, the prevalence of low weight-for-age peaked during the "weaning period" and was higher in rural areas. Prevalence correlated positively with distance to water sources, number of persons per room in the household, and lack of toilet facilities.

Despite the 1982-87 drought's effects on food production, UNICEF statistics showed that rates in malnutrition fell from an estimated 30% in 1982 to 15% in 1989. The drop from the NNSP's average rate of 25% for the drought period to 15% in 1989 (2 years after the drought had ended) could reflect the delayed positive effects of drought relief food aid, as well as the accrued benefits of the GOB's development priorities and strategies.

Complementing the NNSP and CHIPS data is the in-depth health and nutrition information collected in the Botswana Family Health Survey (1984) and Family Health Survey II (1988) series. These surveys focussed primarily on fertility and contraceptive practices, although some health and nutrition-related information was collected.

The FHS II's results showed that approximately 39% of children 0-4 months of age were exclusively breastfed; 81.9% of children older than 6 months were still being breastfed but also received complementary feedings, and 77% of children older than 1 year continued to be breastfed. On the average, women breastfed for 19 months. The survey also found that bottle-feeding was on the rise, with 24% of children 0-4 months receiving the bottle. 40% of urban infants were bottlefed, and 20% of rural infants.

In addition to the national-level (NNHS and CHIPS) surveys, there have been a number of regional nutritional surveys. By author or title and date, they are: Kgatleng, 1987; Twana, 1978 (in the Kalahari region); Rural Malnutrition, 1985; Gantsi, 1984; Mogobane, 1988; Moshaneng, 1980; Kgalahari, 1989; Iodine Deficiency Disorders, 1989. The national censuses provide a statistical framework for many of these research studies, with the most recent census having been completed in 1991.

An example of the field research that has been done is a December 1987 survey conducted in Chobe, a northern section of the country (n=1413 children < 5 years). Data analysis found a 27.5% prevalence rate for moderate under-nutrition (weight-for-age) with 1.6% being severely under-nourished. The 12-23 month old age group had the largest percentage of moderately under-nourished children (34.6%); whereas, the highest percentage of severely under-nourished children was in the 24-35 month old group (2.8%).

Chronic malnutrition (low height-for-age) also was elevated with 15.3% of the children less than 5 years being chronically malnourished or stunted. 6% of the children were wasted (<80% referenced weight-for-height), with 4% of the boys and 7% of the girls being wasted. The survey also found that mothers' educational level had a direct relationship with the nutritional

status of their children, and that the BaSwara children were nutritionally worse off than other ethnic groups. (The BaSwaras are commonly known as the "Bushmen".)

The report concluded that girls were more nutritionally at-risk than were the boys, although some of the disparity in statistics was attributed to the inherent problems in using the Harvard scale for reference points. (This scale combines girls and boys in the reference population; thereby, causing the reference point to be somewhat higher than it might be otherwise.)

Recommendations made by the survey authors included the need to: identify socio-economic and other related causes (e.g. worm infestation) of nutritional status; conduct a longitudinal study to examine growth patterns of girls and boys; investigate current feeding and weaning practices of which there was little information.

The clinic-based 1986 "Malnutrition of Children in Rural Botswana" study (n = 230 children less than 5 years) found that:

1. survey children had comparable weights to US children up to 9 months of age; thereafter, their weights began to falter;
2. children older than 1 year were shorter and weighed less than US children;
3. 15% of boys & 28% of girls were less than 80% Harvard standard weight-for-age; 16% of boys and 17% of girls were less than the 5th percentile of NCHS standard height; 24% of boys and 27% of girls were less than the 5th percentile of NCHS for weight; 18% of boys and 14% of girls were less than the 5th percentile of weight/height.

Using 1983-84 breast and bottle feeding data, and household, mother and child characteristics from the Primary Health Care Survey, OMondi, et. al., reported that:

1. median breast feeding duration was 19 months, with urban mothers breast feeding for a shorter length of time than rural women;
2. better hygiene, higher maternal education and wage employment of the mother correlated positively with shorter breast feeding duration;
3. the risk of starting bottle feeding was higher in those households having better hygienic conditions; however, a "substantial" proportion of bottle feeding was found in households without piped water.

This report concluded that the shift from traditional feeding patterns, leading to shorter duration of breast feeding and earlier introduction of bottle feeding, as first noticed in higher income families, was beginning to be seen in other socio-economic groups. For programming purposes,

the study suggested that there needed to be more promotion of breast feeding and a concomitant improvement in working and living conditions for women.

**On the whole, however, the nutrition studies which were reviewed focused on children, and only tangentially, on women. Mothers' nutritional status is not discussed specifically, and any reference to mothers generally is related to infant or childhood feeding practices.**

**A second knowledge gap appears to be in the areas of micronutrients. The only study that was reviewed looked at iodine deficiency disorders (IDD). The survey found that there were significant levels of IDD in the north-central and western areas of Botswana, and that an estimated 200,000 persons (16% of the total population) were at-risk of developing IDD.**

One factor, however, that might effect micronutrient status is that imported and/or donated food is heavily fortified with A and B vitamins, and iron. Consequently, this artifact may be masking deficiencies in those vitamins and mineral. As donors begin to consider dismantling their food aid programs (e.g., World Food Program), "natural" underlying deficiencies might begin to come to light. (Note: The Vitamin A Field Support Project, VITAL, conducted a reconnaissance visit to Botswana earlier this year and, after meeting with Batswanan nutritionists, proposed that a sub-national survey be conducted to: assess vitamin A-rich foods consumption patterns, identify local foods rich in beta-carotene, and look into dietary consumption of other micronutrients, including iron.)

Finally, while some general statistics on daily food consumption were available , including:

- daily caloric intake per person was reported as 2348 (1988);
- daily per capita caloric intake (as a percent of requirements) was estimated at 94 in 1980 and 98 in 1986;
- approximately, 69 calories of protein are consumed per person each day, **there was no evidence that detailed work had been done on food consumption, dietary patterns and feeding practices.**

Although various studies and surveys indicated that the diet of most Batswanans generally was varied and included both meat and milk, one consultant noted that few fresh vegetables and fruit were consumed on a daily basis. (J. Sullivan, May 20, 1992 interview) No work was found that had looked at the amounts of imported or donated foods, particularly cereals, milk and oil, as a proportion of daily intake, or the effects that the apparent dependency on food from the exterior had had on local food production. While the GOB is conscious of the increasing role imported and donated food plays in the diet of Batswanans, some field research is needed to defining the scope and implications of that dependency.

In conclusion, despite indications of improvement, the health and nutritional situation for women and, consequently, children remains precarious. Given continued high fertility rates and illiteracy, lack of trained human resources and diminishing availability of capital resources, limited employment opportunities, as well as cultural attitudes which continue to work against improvement in the quality of women's lives, the GOB continues to emphasize the need to target activities to these vulnerable groups.

## **II. FOOD AND NUTRITION POLICY CONTEXT**

The GOB has made some creditable progress in directly addressing the health needs of its population. It has committed itself to dealing with the increasing incidence of AIDs in Botswana and its expanding population that threatens to jeopardize the gains made in the health and well being of its people. The GOB has adopted and/or developed policies to support these concerns, and has enacted legislation to hold fathers accountable for their children's financial security, and to standardize training and the quality of care in public and private day care settings.

### **A. Health and Nutrition Priorities**

The GOB's National Development Plan for 1985-91 cited the following as its health priorities:

1. primary health care;
2. training and manpower development;
3. planning and statistics;
4. hospital-based service delivery;
5. technical support.

Its targeted outcomes were:

1. an IMR of less than 50/1000;
2. 25% of women of reproductive age use modern methods of family planning;
3. 98% of pregnant women attend antenatal clinics;
4. 70% of deliveries supervised by technical trained person;
5. 90% of newborn babies with a birth weight > 2500 gms;
6. 75% of children less than 1 year fully immunized.

To assist in achieving these targets, the GOB has initiated several mechanisms to lead and coordinate the attack on specific problems that threaten the health of its Batswanans. Two of these initiatives include the establishment of a "Mid-term Plan for Prevention and Control of AIDS in Botswana" (1988), and the "Interministerial Programme Steering Committee on Population and Development" (January 1989). The latter committee was instructed to develop and implement a national population policy, with assistance from UNFPA and U.S.A.I.D./Gaborone.

Other GOB actions which are supportive of its NDP are: the Primary Health Care Strategy (adopted in the early 1980's), and a policy that allows women in all employment sectors to have an extra hour at lunch to breastfeed their children up to 1 year of age.

## **B. Food Security Issues**

When considering Africa Region countries, Botswana may be in a unique position regarding food supplies. As its economic base has shifted from subsistence agriculture to a cash economy, less attention and investment has been made in the agricultural sector. This factor, complicated by Botswana's chronic problem with periodic droughts, has begun to undercut the agricultural sector. More and more people buy imported, expensive food, rather than grow their own. At the same time, unemployment rates are climbing and fewer people have sufficient cash to purchase adequate food supplies. As a result, a significant portion of the Botswanan population is increasing vulnerable to sudden and/or long-term shortfalls in food supplies and are limited in their abilities to access the supplies that are available.

The GOB's "National Food Strategy" explicitly cites concern with the "large gaps between food production and basic nutritional requirements" at the household level. ("The Situation of Children and Women in Botswana", 6/86) Activities that address this concern include: development and implementation of early warning systems to prevent catastrophic food shortages; attempts to link food aid to development; restructuring food aid programs, and developing incentives to encourage the private sector to become involved in food aid distribution.

Concern with food shortages as a result of natural calamities is an unending issue for the government. The GOB's "Early Warning Technical Committee" developed an early warning system to prevent predictable food crises. Using agricultural indicators, this system is able to foresee in May what drought relief activities would need to be in place before the peak period for malnutrition-related problems, that is, July-January.

Another plan for dealing with acute food shortages was developed as a result of the 6 year drought ending in 1987. Labor-based relief projects were designed to link relief efforts with the GOB's development strategy. The objective was to improve the nutritional status of needy populations by creating rural employment opportunities and by providing donated foods to meet 1/3 of an adult's monthly nutritional needs. Activities were not targeted to any particular segments of the population, but were provided in a "blanket" coverage policy. Effects of the program included: increased use of health services; increased availability of water, and decreased prevalence of malnutrition.

In the post-drought years, the GOB's focus has shifted from **national** to **household** food security concerns, that is, from getting and providing food on a mass scale to assuring access to food on a local scale. It also has restructured its food distribution program to target those who are

medically-needy, including pregnant and lactating mothers and children identified as, or at-risk of, being under-nourished. It has provided incentives to encourage the private sector to move into the food distribution system, and has begun to slowly withdraw public sector support for that system. Some cash-for-work programs continue from the drought years with the emphasis shifting from payment in food (e.g., "food for work") to payment in hard currency.

Finally, because Botswana has a fairly well-developed road and railroad system and because of its strategic position relative to other African countries, the GOB also has begun to play a role in serving as a central point for distributing food to surrounding countries. While this could provide new sources of revenue, the increase in cross-border traffic clearly would have implications on the government's efforts to control the AIDS epidemic.

### **C. Donor Support**

All major donors have responded to the GOB's concerns with AIDS, population growth and food security by tailoring their input to support the government's objectives. UNICEF's support structure concentrates on expanded program for immunizations (EPI); control of diarrheal diseases, acute respiratory infections and malaria; promotion of "safe motherhood" and perinatal care; self education, and household food and economic security.

The U.S.A.I.D. mission in Gaborone seeks to support the GOB by focusing on education, the environment and private sector development. The mission's CDSS priority issues target the problems of inadequate diversification of economic growth, uncontrolled population growth, and deficiencies in the rural sector (particularly in natural resource management) and in basic education and skills development.

U.S.A.I.D.'s strategy is to:

1. increase employment and improve students' abilities to acquire the skills needed to fill available jobs;
2. assist in the improvement and expansion of family planning service delivery;
3. to emphasize natural resource management, regional agricultural research and training activities through the Southern Africa Regional Program (SARP);
4. encourage private sector development, and
5. to support primary and secondary education through in-service training, curriculum development and improved student assessment and evaluation.

Its health sector activities are concentrated in family planning and AIDS. In a telephone interview with the Acting HPN Advisor, it was reported that the mission is aware of a growing sentiment for looking into micronutrient deficiencies, and that U.S.A.I.D./Gaborone might provide support for discrete activities in that sector. He did not anticipate, however, that the mission would get into any larger scale nutrition activities, except as they might relate to its current health sector inputs.

### **III. DELIVERY OF FOOD AID, NUTRITION SERVICES AND RELATED PROGRAMS**

#### **A. Institutions Involved in the Delivery of Health and Nutrition Services**

Government-provided nutrition services fall within the Ministry of Health, Family Health Division. Some nutritionists also work for the Ministry of Agriculture. The health service delivery system's most basic care center is the "health post", of which there were 305 in 1989. There also were 336 mobile "stops" at which the most isolated populations can receive health care. Health services are also provided at: clinics (164--62 of which have maternities), health centers (14), district hospitals (12), and referral hospitals (3). "Family Welfare Educators", those that provide most of the health and nutrition education services, work at the "health post" level.

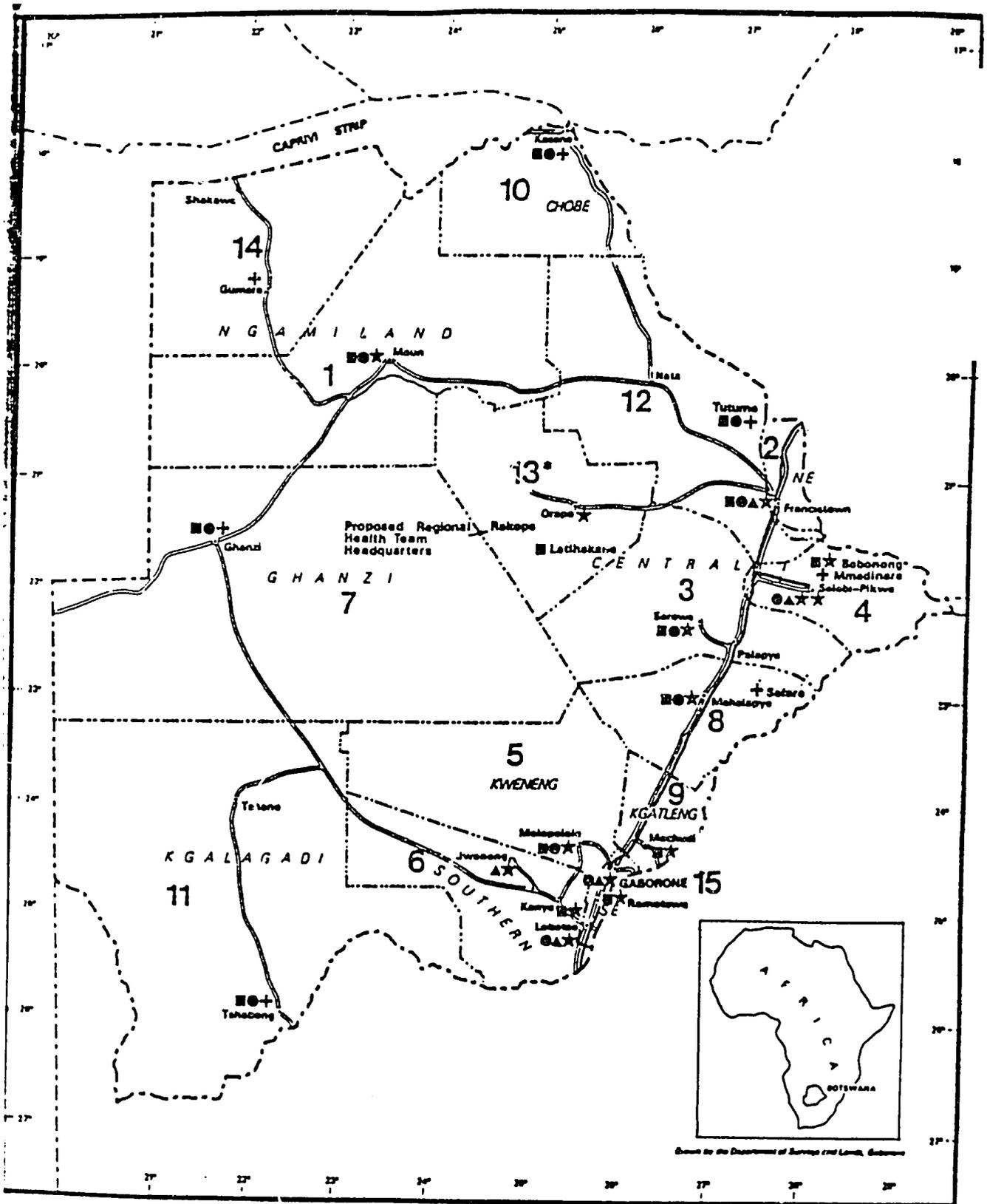
The Health Education Unit (MOH, P.O. Box 992, Gaborone), formed in 1974 within the Family Health Division of the Ministry of Health, is quite active in developing materials and training personnel. This unit began training its own students in health education and nutrition in 1981. The Unit has developed several pamphlets on breastfeeding, including "Beat the Drought by Breastfeeding" and "A Breastfed Baby is a Health Baby".

Research activities and bibliographic services are provided through the National Institute of Development Research and Documentation at the University of Botswana.

#### **B. Non-Governmental Institutions Engaged in Nutrition Activities**

1. PVOs/NGOs: According to a list provided by the Botswana Embassy, there are numerous registered indigenous NGOs, although only seven are health-related, and of those, three are professional membership organizations (Nurses Association of Botswana, Hospital Fellowship of Botswana and Public Health Inspectors Association). The others include: Botswana Medical Aid Association, Botswana Council of Disabled, Association for Parents of Mentally Handicapped, and the Botswana Red Cross. (Annex 3, Non-Governmental Organizations) No information was available as to their activities and if any were involved in providing and/or supporting health services.

A local NGO that was not included in the officially-prepared list is "Thusano Lefatsheng" (Help of the Country). This NGO is committed to promoting production and use of indigenous plant species ("veld products"). Its long-term objective is to create an increased demand for these plants, thereby, enhancing the income of the rural growers. Thusano Lefatsheng operates a small research farm at Thusego, 50 kilometers from Gaborone.



**LEGEND**

- District & Sub-District Headquarters
- Regional Health Team Headquarters
- ▲ Town Council
- ★ General Hospital
- ⊕ Health Centre
- 7 Regional Health Team
- Regional Health Team-District Council & Sub-District Boundaries.

13 a

U.S.A.I.D.'s Acting HPN Advisor thought that there were 2-3 other local NGOs that might be working on family planning issues, including service delivery, education, and youth programs; however, he was not sure of their names or of their specific activities.

2. Confessional Organizations: No information was available on these types of organizations, although it is known that Catholic Relief Services' in-country affiliate, CARITAS, is not working in the health and nutrition sectors in Botswana.

### **C. Current Activities and Programs**

Most of the activities supported by external donors focus on population (including family planning), and AIDS prevention and control. Maternal/child health and nutrition activities may be implemented as components within these priority-issue projects.

1. Government Programs: In addition to the nutrition education and nutrition surveillance activities, the GOB's health system has been described above. That system is used as the implementing mechanism for most, if not all, of the external donors' health and nutrition sector support. A weakness of this system, however, is its shortage of trained personnel. As a result of this, the health care delivery system, as with other public sector activities, is heavily dependent on expatriate personnel, thereby weakening sustainability efforts.

2. A.I.D.-funded Projects: U.S.A.I.D.'s FY 91 budget for Botswana included \$49,000 in Development Assistance and \$7,610,000 from the Development Fund for Africa, of which \$1 million was for Botswana Population Program Assistance. FY 92's estimated needs included \$7 million from DFA, and FY 93's request was for \$6.3 million of DFA money. (No funds from "development assistance" were estimated or requested for FYs 92 and 93.) U.S.A.I.D./Gaborone's Acting HPN Advisor reported that there were \$7 million in direct mission funds available for FY 92 needs. Child Survival monies included support for HIV/AIDS Prevention (HAPA) and Operations Level Management Development (MEDEX). Other activities included buy-ins to AIDSTECH, DHS, WASH and HBCU Research Grants.

U.S.A.I.D./Gaborone supports the GOB priorities by focussing on family planning and population growth, and AIDS prevention activities. The mission is currently in the process of redesigning its population program with the objective being to strengthen service delivery through training of health care providers. Its AIDS program activities are based on education services through private sector work places, with the objective of increasing this sector's investment in AIDS prevention. The mission also supports some operation research with women's organizations, currently being conducted by the University of Illinois/Chicago.

U.S.A.I.D. does not provide any PL-480 food at this time, although, during the 6-year drought in the 1980's food aid was a major part of the mission's program.

Current U.S.A.I.D. projects include:

- a. \$5 million - Population Sector Assistance (FY88-93), to effect population policy reform and implementation;
- b. \$250,000 to the American Friends of Maru a Pula School, Inc., for laboratories and school construction;
- c. \$2,469,633 to Florida State University, to enhance the GOB's education and human resources system.

Regional projects which have/had activities in Botswana include:

- d. a subproject of the HIV/AIDS Prevention in Africa (FY91-96), to develop and disseminate an educational program on HIV/AIDS prevention for use in the workplace;
- e. support from the Family Health Initiatives (FY80-89), to expand family planning information, education and communication activities.

U.S.A.I.D. also has provided \$100,000 for short-term technical assistance to support the GOB's AIDS policy development. Other short-term assistance has been provided by Dual and Associates (\$140,231) to conduct a midterm evaluation of the Population Sector Assistance Project, Tennessee State University (\$100,000) to analyze postnatal care, and \$34,000 of DFA funds were allocated to Population Sector Program Support (development and implementation of a national population policy, including high risk birth management). (Annex 2, "Projects: Bilateral, Regional and Centrally-Funded Projects")

3. U.N. Agencies' Projects: There are a number of United Nations agencies working in Botswana, including UNDP, UNFPA, UNHCR, UNICEF, WFP and WHO. UNDP provides direct technical support to the MOH's primary health care program through UN volunteers. UNFPA is just beginning a new 5-year country program, which includes "Safe Motherhood", IEC, and women in development activities, as they relate to population issues. UNFPA also is assisting the GOB in using 1991 census data to formulate a "population policy".

UNHCR provides support for refugees from South Africa and other surrounding countries, while UNICEF continues to support immunization, diarrheal disease control and other child health campaigns, and household food security activities through the "Household Food and Economic Security Programme". This latter program is implemented through the local NGO, Thusano Lefatsheng. UNICEF also provides technical assistance to the "Safe Mother Initiative". WFP has been integral in providing food for drought-related assistance, but is currently reassessing the need for continuation of this program. Finally, WHO has a presence in Botswana and

provides personnel for the positions of District Medical Officers. WHO also is involved in some structural assistance (e.g., hospital construction).

4. Other Donors' Projects: Beginning in 1984, the World Bank provided support to the 10 year "Comprehensive Family Health Project". This project dealt with a wide range of health care issues, including reorganization of the health care delivery system, strengthening financial management and rural health care structures, and provision of manpower training. There also are maternal and child health care, family planning, and IEC components. The Bank does not have any new projects projected for the next 5-year lending period.

The EEC provides support to the GOB national AIDS control program through participant training and development of treatment protocols.

Other donors present in Botswana include UK, CIDA (Canada), Dutch Development Agency, the Netherlands Foundation for the Advancement of Tropical Research and the Netherlands Universities Foundation for International Cooperation. Also working in Botswana are IDRC, the ILO, Norwegian Agency for Development, The Swedish Agency for Research Cooperation with Developing Countries and the Swedish International Development Agency.

5. PVOs' Activities and Projects: Of the U.S. private voluntary organizations contacted by the consultant, none (CARE, Catholic Relief Services, Helen Keller International, Save the Children) have any activities, health, nutrition or otherwise, in Botswana. Peace Corps currently has five volunteers who work as teachers in the national nursing school. This program, however, will be phased out with these volunteers, as Peace Corps was not able to provide higher-level technicians (e.g., radiologists, ophthalmologists) that the GOB had requested. SOS is present in Botswana and works with a local organization that provides training for deaf and blind persons.

#### **D. Existing Human Resources**

At the village level, nutrition education services are provided by the "Family Welfare Educator". In addition to these village-based providers, there are 12 Regional Health Teams (RHT) which are based at the district-level. These teams are composed of a Medical Officer, a Public Health Nurse, a Health Inspector, a Social Welfare Officer and a Health Education Officer. This team provides support and supervision for the village health and nutrition workers.

Apart from these personnel in the formal health care system, there was no information available on other non-formal care providers (although fleeting mention was made of traditional birth attendants, TBAs) or of personnel in other sectors who might support health and nutrition activities. Rural extension agents work with the Ministry of Agriculture; however, their relationship, if any, to the Ministry of Health and to health care delivery is not known.

However, the fact that many of the technical and administrative positions are held by expatriates (other Africans as well as Europeans), clearly points to a problem in the ability of Botswana to provide services and support to its health and nutrition sector activities.

#### **E. Existing Support Mechanisms and Systems for Community Outreach and Mobilization for Nutrition Promotion**

In Botswana, there are some day care programs for children less than 7 years of age (that is the age at which children start school). In 1980, the Government of Botswana launched its national policy on day care centers, and there currently are training programs in Botswana for day care providers. The national community service program--compulsory for all secondary students who intend to go on for further study--also provides personnel for these centers.

In 1980, the GOB also adopted the "Affiliation Proceedings Act". This legislation makes it mandatory for a father who does not live with his family to provide \$30/month/child. The weakness in this progressive effort to hold fathers accountable for support of their children is its lack of enforcement.

There are an increasing number of women's organizations. These tend to focus on income generation. Women also are a traditional source of non-formal health care, e.g., TBAs.

#### **F. Funding Available for Nutrition Services**

Other than the general statistics which indicate GOB funding for health activities (within which nutrition would be included) as a percent of the GDP, and the level of funding from U.S.A.I.D., there were no other available estimates for capital input from other donors for nutrition activities.

### **IV. OPPORTUNITIES AND CHALLENGES FOR IMPROVING WOMEN AND INFANT NUTRITION IN BOTSWANA**

While Botswana has a fairly well-established and functioning health care system, and while its health and nutrition statistics paint a less than gloomy picture for women and children, there is a range of needs that should be addressed.

1. Research into Women's Health and Nutrition: Another apparent need is to develop an in-depth picture of women's health and nutrition. While the Family Health Surveys (1984, 1988) have focussed on fertility and family planning issues, the nutrition surveys to-date typically center on children and do not deal directly with women's nutritional and health needs. While one could suppose that the elements that affect women's health and nutrition in Botswana are

similar to those in other countries, that assumption would need to be tested within the context of Botswana. There needs to be not only sociological and anthropological research, to develop a situational analysis of women's nutrition, but applied and operations research to determine the best way to provide support to women and to involve them in improving their health and nutritional well being.

2. Dietary Intake and Feeding Practices: Related to the apparent lack of information on women's nutrition, there also appears to be a knowledge gap concerning food availability, and food consumption and feeding practices of women and children. Not only is this basic information lacking, but its effects on the health and well-being of both children and women is unknown. The WINS project might consider proposing to support a dietary assessment activity targeted at women and children, which would provide a critical knowledge base on which to develop programming efforts. This could dovetail with the VITAL project's proposal and be coordinated by Mrs. Maribé, MOH nutritionist.

3. Development of Human Resources to Meet Health Needs: A critical need in Botswana is training for its people. Not only is Botswana dependent on imported food and other commodities, it also is dependent on human resources from outside Botswana. A sizeable percentage of its trained care providers are from Malawi, South Africa, Uganda and other English-speaking countries.

One potential cause for this dependence on expatriate personnel is the relatively few number of women in the higher educational levels. Although there has been an improvement from 27% (women as a percent of total number of students) in 1974 to 40% in 1983, these women are less likely to find employment once they complete their studies. Only 35% of the total formal employment sector is women, and most of them work in low-paying service sector jobs. Women's health and well-being are strongly influenced by economics, and the relationships between mothers' education and their children's health are well documented. If women were able to find employment that would allow them to meet their and their families' needs, not only would the women's physical and psychological health improve, so would that of their families. Employment for women also is critical given Botswana's growing dependence on purchasing, rather than local production, of food.

Given the GOB's concern with its shortage of human resources, given U.S.A.I.D.'s emphasis on training and basic education, and given the traditional "employment" of women as "care providers", the WINS Project might want to look into different means to provide appropriate training in health service tasks to women, while also developing employment opportunities for those women once they have acquired these skills. Day care settings might be an entry point for training women in child care, including appropriate feeding practices, and as sites for their later employment. This too would be an opportunity to assist in strengthening the private sector, if day care centers were created by, linked with and/or received support from private sector businesses.

4. Improving Services for Teenagers: Related to the problem of education and employment are school dropout rates for pregnant teenagers. Although there is little accumulated evidence of the extent and causes of this problem, the statistics indicate that it is at this point in a young woman's life that she leaves the formal education system. To help women keep in school, even while pregnant or after having a child, WINS might want to propose that the GOB look into investigating the appropriateness and feasibility of providing comprehensive support services to its pregnant teenagers and young mothers in a "one-stop center" approach. These services could include not only academic education, but also on-site day care, direct health care, education in child care practices and nutrition education.

Again, as the private sector increases in size and diversity, and with the GOB's and U.S.A.I.D.'s interest in supporting this growth, WINS might want to look into testing different means to provide support services to these vulnerable Batswanans through private sector groups. Employment opportunities also need to be linked to the teenagers' education curriculum. Again, this could be tied to private sector needs for strengthening its pool of in-country human resources.

## CONTACT PERSONS IN BOTSWANA

### Ministry of Health

1988 Names: P.O. Molosi, Permanent Secretary  
K. Gobotswang, Vice Chairman (nutritionist)  
W.G. Manyeneng, Assistant Director of Health Services, Primary Health  
Care

### Nutrition Division

The principal person to contact is Mrs. Tshire Olivia Maribé. She is a nutritionist and Chief of the Nutrition Section, within the Family Health Division, MOH. Tel: 267-30-19-02 (o) or 37-11-01 (h); Fax: 267-35-31-00 or 267-30-20-92.

Others within the Nutrition Division include: Ms. Baatshwana (nutritionist) and Mr. Joseph Jagwar (food technologist).

### Statistics

Mr. Pilote Kulumani (worked on the 1984 Family Health Survey)

### Health Research Unit

L. Owour Omondi

### National Institute of Development Research & Documentation (U. of Botswana)

Ansu Datta, Director  
Kate Phake and Mbulawa Mugabe (implementers of "Teenage Pregnancies in Botswana:  
How Big is the Problem and What are the Implications?" 1988)

### U.S.A.I.D.

Howard Handler, U.S.A.I.D. Country Director  
Scott Stewart, Acting HPN Advisor  
Tel: 267-35-33-82  
Fax: 267-31-30-72

### Others

UNICEF      Dr. Ndombi, Project Officer  
WHO          Dr. Nambozi, Country Representative

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Interviews were conducted with:

Mrs. Tapiwa Mongwa, Third Secretary, Botswana Embassy  
Mr. Scott Stewart, Acting HPN Advisor, U.S.A.I.D./Gaborone  
Ms. Joan Sullivan, Africa Region Coordinator, VITAL Project

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JUNE, 1991

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BOTSWANA

VALUES FOR DEMOGRAPHIC AND HEALTH INDICATORS

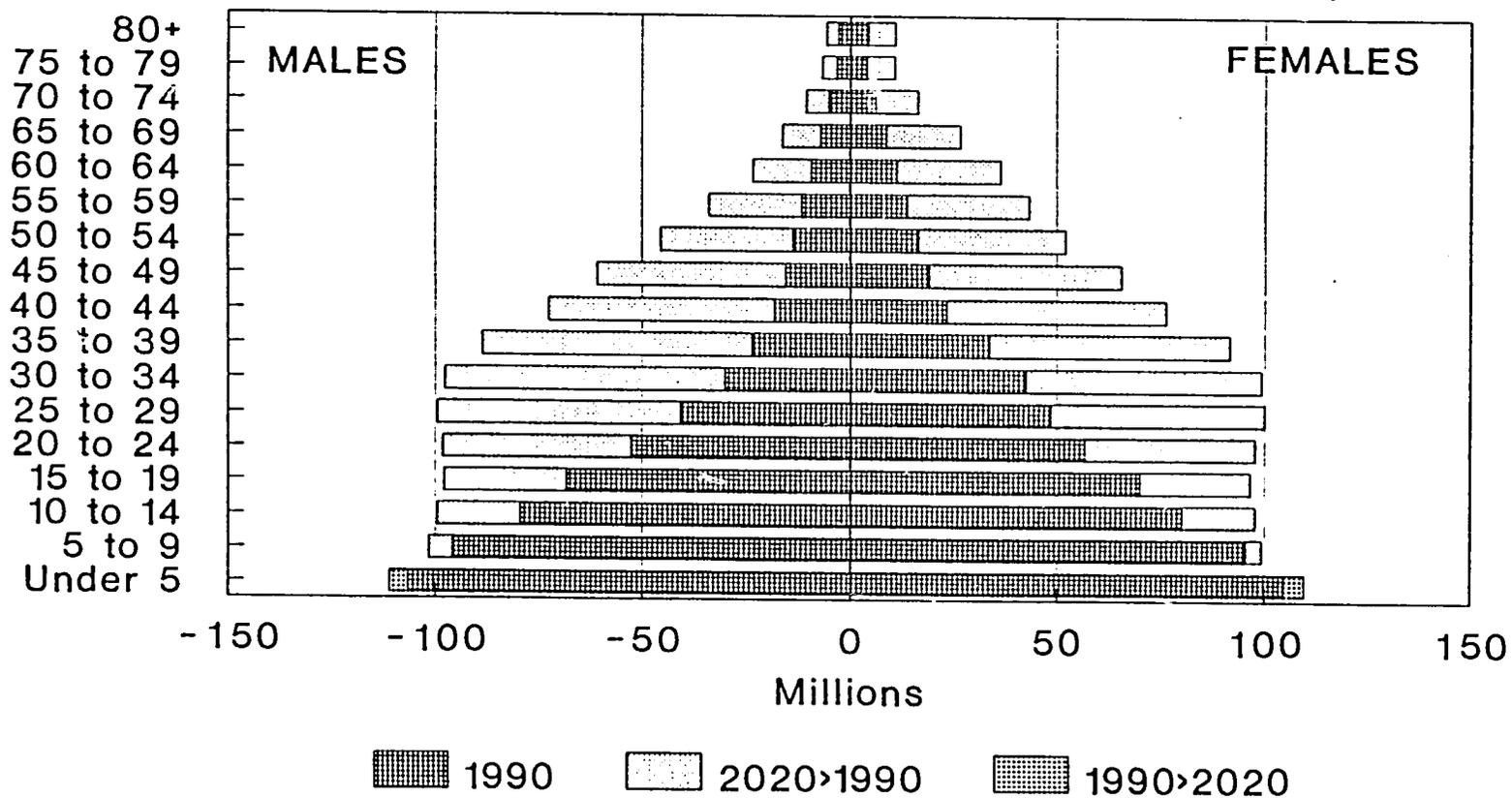
Demographic Indicators	Value	Year	Source
Total Population	1,303,548	1990	A
Infant Mortality Rate	63	1990	A
Under 5 Mortality	85	1990	B
Life Expectancy At Birth	60	1990	A
Children Under Age 1	57,620	1990	A
Annual Infant Deaths	3,766	1990	A
Total Fertility Rate	6.7	1990	A
Child Survival Indicators			
Immunization Coverage			
BCG	92.0%	1990	C
DPT 3	86.0%	1990	C
Measles	78.0%	1990	C
Polio 3	82.0%	1990	C
Tetanus 2	62.0%	1990	C
Oral Rehydration Therapy			
ORS Access Rate	85.0%	1989	D
ORT Use Rate	66.0%	1989	D
Contraceptive Prevalence			
All Methods (15-49)	32.9%	1988	E
Modern Methods (15-49)	31.6%	1988	F
Nutrition			
Adequate Nutritional Status	N/A		
Appropriate Infant Feeding			
a) Exclusive Breastfeeding	37.0%	1988	G
b) Introduction Of Solids	73.0%	1988	G
Breastfed 1 Year Or Longer	79.0%	1988	G

- 
- A World Pop. Prospects, 1990: U.N. Tape #PRO206
  - B Mort. of children under age 5 (ST/ESA/SER.A/105)
  - C WHO/EPI/CEIS/91.1, April, 1991
  - D WHO/CDD Facsimile, 7/15/91
  - E DHS as cited in World Population Profile, 1989
  - F DHS as cited on World Population Profile, 1989
  - G Family Health Survey II, 1988

BEST AVAILABLE DOCUMENT

# BOTSWANA: CURRENT AND PROJECTED POPULATION BY AGE AND GENDER: 1990 - 2020

Total Population: FY 1990: 1,224,439; FY 2020: 2,180,903



U.S. Bureau Of The Census, 10/91

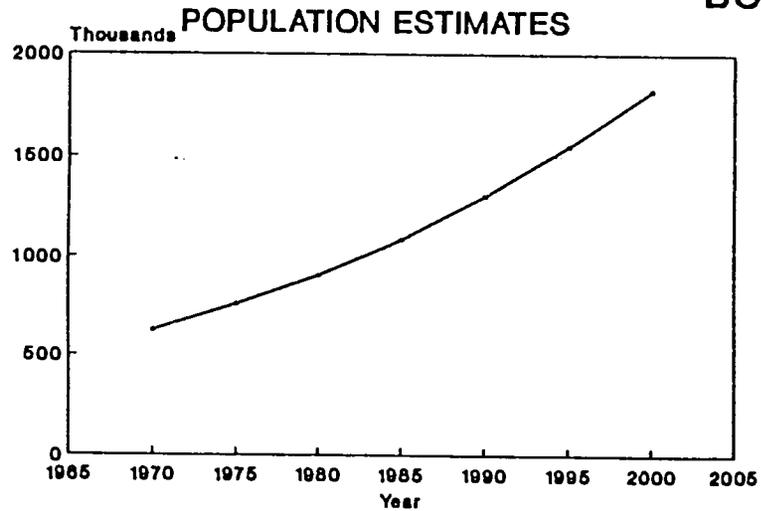
CIHI/ISTI, 11/91

**Trends: Selected Demographic Indicators  
Botswana: 1950-2000**

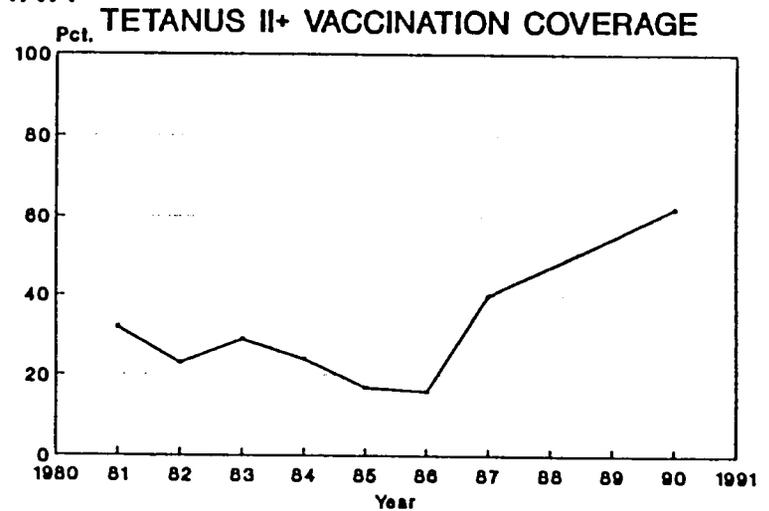
	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000
<b>Total Population (000)</b>											
UN/POP/1990	389	433	481	549	623	755	902	1,083	1,304	1,549	1,822
BUCEN/1990	430		497		584		903		1,224		1,554
	<b>1950-55</b>	<b>1955-60</b>	<b>1960-65</b>	<b>1965-70</b>	<b>1970-75</b>	<b>1975-80</b>	<b>1980-85</b>	<b>1985-90</b>	<b>1990-95</b>	<b>1995-00</b>	
<b>Infant Mortality Rate</b>											
UN/POP/1990	130.0	122.0	115.0	110.0	95.0	82.0	76.0	67.0	58.0	50.0	
<b>Under 5 Mortality Rate</b>											
UN/POP/105	193.0	179.0	168.0	160.0	136.0	115.0	106.0	92.0	78.0	65.0	
<b>Total Fertility Rate</b>											
UN/POP/1990	6.5	6.7	6.9	6.9	6.9	7.0	7.1	7.1	6.4	5.7	
<b>No. Of Births Per Year (000)</b>											
UN/POP/1990	20	23	27	31	36	44	49	58	63	68	
<b>Annual Infant Deaths (000)</b>											
UN/POP/1990	9	10	10	11	12	13	14	14	14	13	
<b>Crude Birth Rate</b>											
UN/POP/1990	48.9	51.0	52.6	53.7	52.1	52.9	49.2	48.5	43.9	40.2	
<b>Crude Death Rate</b>											
UN/POP/1990	22.7	21.3	19.6	18.1	16.8	15.5	13.9	11.6	9.5	7.9	

CIHI/ISTI, January 1992

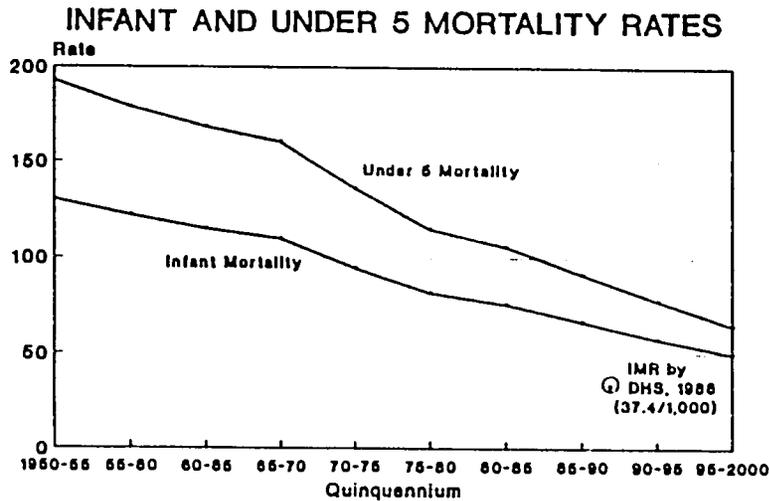
# BOTSWANA



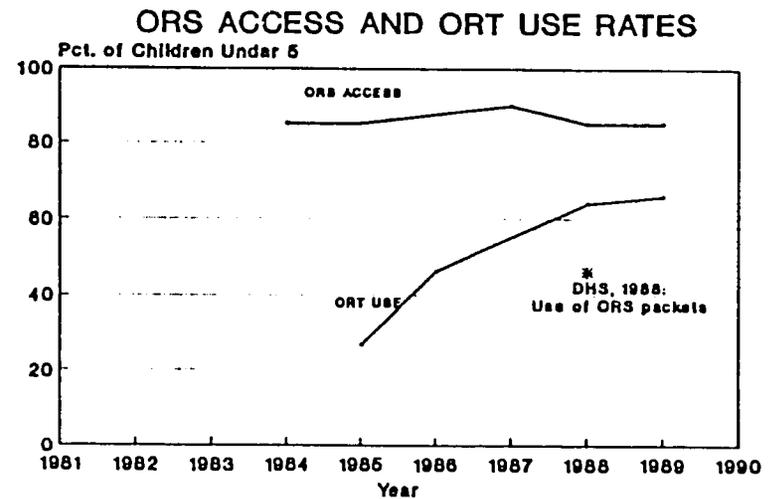
SOURCE: United Nations, World Population Prospects, 1990



SOURCE: World Health Organization Annual Reports of the EPI Programme



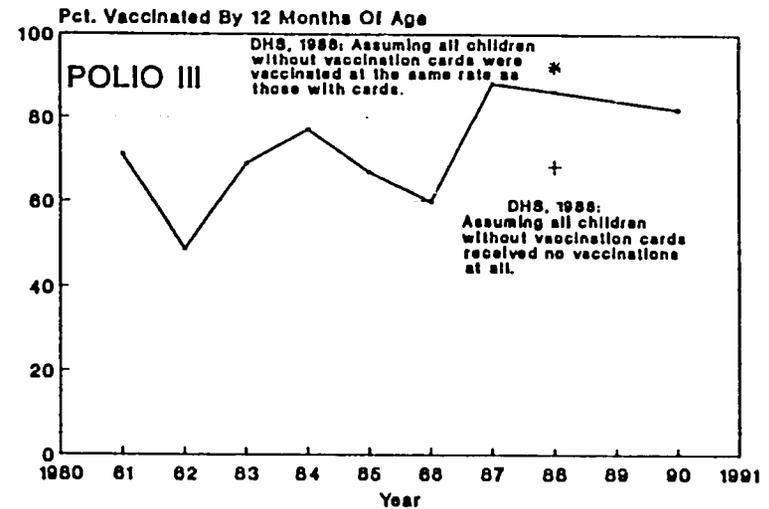
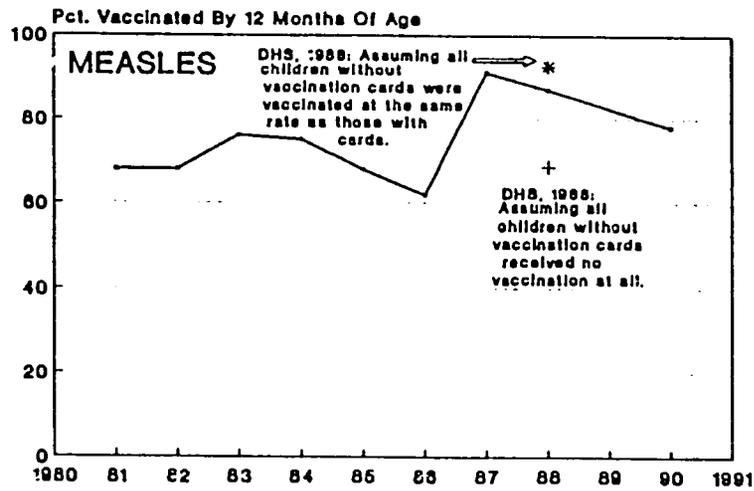
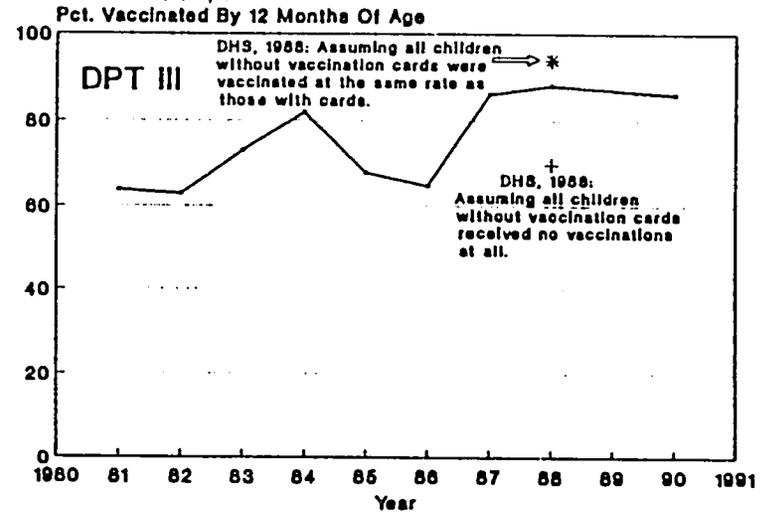
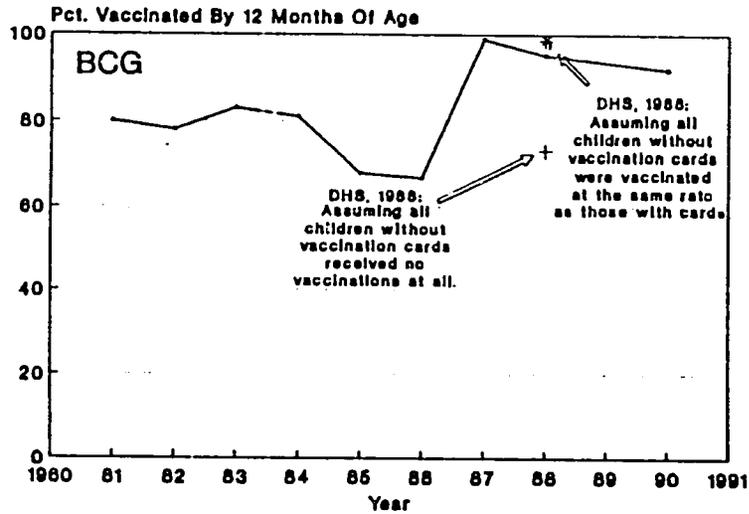
SOURCE: United Nations; 1 World Population Prospects, '90, and 2 Mortality of Children Under Age 5 (89)



SOURCE: World Health Organization, Reports of the Programme for Control of Diarrhoeal Diseases

CIHI, ISTI; 6/91

# VACCINATION COVERAGE RATES IN BOTSWANA



SOURCE: WHO, Annual Reports of the EPI Programme  
DHS 1988

CIHI, ISTI; 6/91

**Trends: Selected Health and Child Survival Indicators  
Botswana 1980-1990**

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>Vaccination Coverage</b>											
WHO/EPI, DHS/1988											
a. BCG.....	70.0	80.0	78.0	83.0	81.0	68.0	67.0	99.0	95.3	--	92.0
b. DPT 3.....	--	64.0	63.0	73.0	82.0	68.0	65.0	86.0	88.0	--	86.0
c. Measles.....	63.0	68.0	68.0	76.0	75.0	68.0	62.0	91.0	87.0	--	78.0
d. Polio 3.....	--	71.0	49.0	69.0	77.0	67.0	60.0	88.0	86.0	--	82.0
e. Tetanus 2.....	--	32.0	23.0	29.0	24.0	17.0	16.0	40.0	--	--	62.0
<b>ORS Access and ORT Use</b>											
WHO/CDD											
a. ORS Access.....	--	--	--	85.0	85.0	85.0	--	89.9	85.0	85.0	95.0
b. ORT Use.....	--	--	--	--	--	27.0	46.0	--	64.0	66.0	64.0
<b>Contraceptive Prevalence (15-49)</b>											
1984-CPS cited by BUCEN/1991; 1988-DHS											
a. All Methods.....	--	--	--	--	27.8	--	--	--	32.9	--	--
b. Modern Methods.....	--	--	--	--	18.6	--	--	--	31.6	--	--
<b>Nutrition and Infant Feeding</b>											
DHS/1988											
a. Adequate Nutritional Status.....	--	--	--	--	--	--	--	--	--	--	--
b. Appropriate Infant Feeding.....	--	--	--	--	--	--	--	--	--	--	--
c. Exclusively Breastfed.....	--	--	--	--	--	--	--	--	41.3	--	--
d. Complementary Feeding.....	--	--	--	--	--	--	--	--	81.9	--	--
e. Continued Breastfeeding.....	--	--	--	--	--	--	--	--	77.0	--	--
<b>Water Supply Coverage (% Served)</b>											
WHO/1990											
a. Urban Areas.....	--	--	--	98.0	--	84.0	--	--	28.0	--	--
b. Rural Areas.....	--	--	--	47.0	--	46.0	--	--	--	--	--
<b>Adequate Sanitation Coverage (% Served)</b>											
WHO/1990											
a. Urban Areas.....	--	--	--	90.0	--	93.0	--	--	98.0	--	--
b. Rural Areas.....	--	--	--	23.0	--	28.0	--	--	20.0	--	--

CIHI/ISTI, May 1991

See Data Notes



**Timeline: USAID-Funded Activities Related to Health in Botswana (continued)  
FY 1980 to Present**

Project Number	Fiscal Year															
	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
<b>Regional Projects</b>																
African Child Survival (UNDP) 1985 - 89 LOP \$344,000																
Operations Level Management Development (MEDEX) 1987 - 91 LOP**																
<b>Centrally-Funded Projects</b>																
Demographic and Health Surveys 1984 - 89 LOP**																

Centrally-funded health and nutrition projects known to have worked in Botswana but for which timeline data are not currently available in CIHI include:

AIDSTECH  
Historical Black Colleges and Universities Research Grants  
WASH II

\* Fiscal Year of Final Obligation

\*\* Country-specific funding information is currently not available in the Center's Health Projects Database.

SOURCE: Center for International Health Information/ISTI, USAID Health Information System, May 1992.

# **A Preliminary Review of the Nutrition Situation and Activities in EGYPT**

## **I. COUNTRY BACKGROUND**

Of the three countries reviewed, the Arab Republic of Egypt is the only one which is part of A.I.D.'s new Europe and Near East (ENE) Region, Arabic in culture, ethnicity and language, and predominantly Moslem in religion. It is one of two countries (Israel is the other) which receive the largest amount of US aid on an annual basis. In 1990 alone, its total aid package (economic, development and military assistance) totalled nearly \$2.4 billion. This represented 7.58% of Egypt's GNP or a per capita investment of \$2.07.

Partly as a result of this massive level of assistance, Egypt has been able to record the largest percentage decrease in infant mortality rates among all U.S.A.I.D. child survival emphasis countries. National campaigns for the control of diarrheal diseases (CDD) and expanded program of immunizations (EPI) have led to dramatic decreases in deaths attributed to related causes.

In spite of this, many of the health and nutrition indicators for Egypt are significantly worse than they are for either Botswana or Swaziland. A large part of this is due to the fact that Egypt's population is forced to live on very little land, resulting in extreme overcrowding and relentless pressure on an infrastructure. In addition, its population is growing at such a rate that it has nearly reached the point of overwhelming all efforts to meet Egyptian citizens' basic human needs.

Complicating this picture of an over-stressed infrastructure are Egypt's policies of providing universal free access to public health services, hiring nearly all medical school graduates, and subsidizing food, housing and other basic commodities--practices begun when its cash earnings from oil and other exports, and cash remittances were significantly more than they are now. To ease the financial burden caused by maintaining these high-cost policies at a time when resources are shrinking, the Government of Egypt (GOE ) has had to rely heavily on foreign subsidies.

As in most developing countries, the lives of women and children are particularly difficult. Recent improvements have been made in women's social support and services; however, because Egypt is a predominantly Moslem culture, conservative attitudes and institutional barriers often restrict the choice of options for improving the conditions within which women live.

Women are less educated than men (literacy rate for women is only 38% compared to 62% for men). They lack marketable skills and have limited access to any sizeable capital, and while fertility rates have fallen, women can still expect to have 4.4 births by their 45th birthday.

In order to relieve the increasing pressures for delivery of goods and services resulting from a rapidly-expanding population, a shrinking economic base and a reduction in food produced in Egypt, the GOE has begun to rethink its social support services system. To its credit, the government is using this as an opportunity to explore and test alternative means to provide for its people, including expanding private sector involvement and developing cost-recovery programs for health care delivery.

## A. Country Setting

With a total land area of over 1 million square kilometers (slightly smaller than Texas, Oklahoma and Arkansas combined), Egypt is located in the northeastern corner of the African continent. It is bordered on two sides by the Mediterranean Sea and the Red Sea, and by Libya on its west, and Sudan in the south.

With a population of 54 million, Egypt is the most populous country in the Arab world and the second most populous on the African continent. 99% of its people live in either Cairo, the capital, with over 12 million inhabitants, or Alexandria (4 million inhabitants), along the banks of the Nile, in the Nile Delta or along the Suez Canal. These areas have a population density of nearly 1450 people per square kilometer. (Egypt's overall population density is 49 people per square kilometer.) The remaining 1% of the Egyptian population live in oases and along traditional trade routes in the desert interior. 45% of the population are urban dwellers.

The vast majority of Egypt is desert, with only 2.6% of its total land area used for agriculture. All of its arable land is located along the Nile River and its Delta. Egypt's climate is dry, with hot summers and moderate winters, with little variation between its two regions, Lower Egypt (that land area adjacent to the Mediterranean, including the Nile Delta) and Upper Egypt. The Nile River, flowing from south to north, is a major artery for travel between the two regions. Completed in 1971, the Aswan Dam (located in Upper Egypt) generates hydroelectric power, provides water for irrigation of over 1 million acres of land, and contains the annual floods that previously inundated Lower Egypt.

The Egyptians are fairly homogeneous, with Arab and Mediterranean cultures predominating in the northern areas, and Nubians (Sudanese) in the south. 90% of Egyptians are Sunni Moslems, with Coptic Christians making up most of the remaining 10%. Arabic is the official language, but English and French also are spoken.

With a republican form of government, Egypt's FY 1989-90 central government budget was \$30.3 billion, and its gross domestic product (GDP) for 1987-88 was \$34.5 billion. Egypt's per capita gross national product (GNP) was \$630 (1989). This is less than both Botswana (\$1600) and Swaziland (\$900).

Its principal natural resources are petroleum and natural gas, iron ore, phosphates, manganese, limestone, gypsum and some lesser minerals. Food processing, textiles, chemicals, construction



and light manufacturing are the major industrial activities. In FY 89, Egypt exported \$2.5 billion worth of products, including petroleum, cotton, manufactured goods, fruit, onions, potatoes and rice. It imported \$10.1 billion in foodstuffs, machinery and transport equipment, paper and wood products.

Egyptians produce cotton, millet, corn, sorghum, and rice in the summer, and clover and wheat in the winter. Egypt is self-sufficient in fruits, vegetables, roots and tubers, but produces only 49% of its needs in cereals, and meets only 55% of its total food needs. Nearly 30% of all imports in 1984 were food products, with wheat being the largest food commodity acquired from the exterior. In 1989, 9 million metric tons of cereals were imported, and nearly 2 million metric tons were received in food aid. Since the early 1960s, wheat imports have tripled, imports of sugar have increased by 15 times, and imported vegetable oils have risen 10 fold, while rice exports have dropped to 16% of their initial volume.

In the mid-1970s, Egypt began a program of subsidizing many goods and services, including public education, health services, housing and food. By 1990, nearly 75% of the population are able to purchase food (wheat, rice, corn beans, lentils, frozen meat, sugar and oil) at reduced rates. Recently, however, with the reduction in revenues and increases in population, Egypt has started a process of reviewing its subsidy system to determine how to maintain these supports without increasing the costs to the public sector.

44% of the population is engaged in agriculture activities, 36% are employed by the public sector, and approximately 20%, in the private sector and manufacturing enterprises. Nearly 15% of Egyptians are unemployed; as many as a third more are chronically "underemployed", and only 8.3% of women are employed.

## **B. Health/Demographic Profile**

Egypt, like Swaziland, benefits from a wealth of information on the health and nutritional status of women and children. Two major health surveys have been conducted in Egypt within the past 5 years. These are the 1988 Demographic and Health Survey (DHS), and the 1989 Egypt Service Availability Survey (ESAS).

Information collected by these and other surveys and studies show that over the past two decades, Egypt's education and health statistics have shown some general improvements. Preschool enrollment is up; infant and childhood mortality rates have decreased steadily, and the population growth rate has begun to slow down. Immunizations rates are all on the rise, and use of ORT and access to ORS is nearly universal.

In 1990, Egypt's infant mortality rate (IMR) was 57 per 1000 live births (compared to 150 in 1970), and its childhood mortality rate (CMR) was 100/1000 live births (240 in 1970). Children of very young mothers and of those reaching the end of their reproductive lives were the most at-risk of premature deaths. There were differences in these rates for the two regions, with

children living in rural and Upper Egypt having higher IMRs and CMRs than the children living in Lower Egypt. Overall life expectancy at birth is 61 years, with women living an average of 61 years, and men, 60 years.

The major causes of childhood mortality and morbidity are preventable illnesses, including diarrheal diseases, acute respiratory infections (ARI), tetanus and measles. After the massive program for control of diarrheal diseases (CDD), deaths due to these illnesses plummeted. Unfortunately, there was a simultaneous rise in mortality rates from ARI. The 1988 DHS found that the most commonly-reported symptoms prior to a child's death were difficulty breathing, diarrhea, watery stools and coughs.

Preventable infant and childhood deaths also have been linked to demographic factors (e.g., overcrowding and poor infrastructure), as well as to socio-economic factors. While nearly 90% of Egyptians have access to safe water, including 82% of the rural population, only 34% of rural dwellers have access to adequate sanitation services. One author (Aly, H.Y., 1990) concluded that improving the housing in urban and sewerage in rural areas would have dramatic effects on reducing infant mortality rates.

Egypt's population is growing at an annual rate of 2.4%, with 40% of its 54 million people being less than 14 years old, and half of that, less than 6 years of age. Even though this is a somewhat lower rate than is seen in either Botswana or Swaziland, Egypt's population will double in another 25 years, if this rate continues. Women's total fertility rate is estimated at 4.4 (a decrease from 5.2 births noted in 1980), and, although 98% of married women know at least one contraceptive method, less than 40% (an increase from 24% reported in 1980) of these women say they use any birth control methods (traditional and modern).

The 1988 Demographic and Health Survey found that many women received no prenatal care--only half of the births during the 5-year period before the survey had been preceded by a prenatal visit. 75% of births took place at home, and only one-third were assisted by a doctor or trained nurse/midwife.

The GOE provides free medical care to all its citizens, and spends 9.6% of its GDP in providing medical care for its citizens. Nearly 90% of that was for preventive, or primary health care, services. (This is a marked contrast to Swaziland, where only 12% of its expenditures for health were for preventive services.) Its health care system is decentralized, and nearly 85% of all health care facilities are publicly supported. (Another interesting juxtaposition is that only half of the available health services in Swaziland are provided by the government; whereas, Botswana's public health sector is more on the scale of Egypt's.)

The Ministry of Health (MOH) employs 95,000 physicians, and there are 520 persons per physician (one of the best ratios among developing countries), and 781 per nurse. Despite these encouraging provider/client ratios and the fact that 99% of Egyptians live within 3 kilometers of a health care facility, the primary health care units, those that provide the most basic services, are grossly underutilized. One author (Krieger) noted that many women do not use the formal

medical care system. He attributed this to two interrelated facts: (1) most physicians are men, particularly in the rural areas, and (2) women must have their "male guardian's" permission to see a male physician. Both factors complicate women's "accessibility" to these services.

The 1989 Egypt Service Availability Survey found that 2 of 3 married rural women have a source of family planning in the village in which they live, and 96% live within 5 kilometers of a source. 90% of women live within 5 kilometers of a pharmacy and 70% live within the same distance from a public sector family planning clinic. 55% live in villages covered by a community-based family planning worker and 66% have access to a family planning nurse.

Immunization rates are similar to those in Botswana and Swaziland, with over 90% of children being fully vaccinated with BCG, DPT series, measles, and polio 1-2-3. On the other hand, data from the Demographic and Health Survey brings into question this high coverage rate. It found that only one-third of the children in its survey had been fully immunized based on controls of their immunization records. This survey also found that 12-23 month old children living in urban areas (in either Upper or Lower Egypt) were more likely to be fully immunized than were children living in rural areas. The smallest percentage of fully immunized children lived in rural areas in Upper Egypt.

Although child survival statistics indicate that ORT usage rates are nearly universal (98% in 1987), the DHS found that, of those children with diarrhea, the most common treatment was medication (56.7%), followed by ORT (28.7%). It also reported that nearly 97% of mothers knew about ORT, while 14% had ORS packets in their homes.

Despite these somewhat conflicting statistics for childhood immunizations, there is little doubt that, while coverage rates for maternal tetanus 2 immunizations are slowly rising, they remain extremely low (28%). (Over 60% of women in both Botswana and Swaziland had received their tetanus 2.) The 1988 DHS found that only 11% of the women who were pregnant during the course of the survey had received their tetanus toxoid injections. The GOE, with UNICEF assistance, conducted two campaigns (1988 and 1989) to increase the coverage rate for tetanus toxoid, but no data was available to assess the effects of the campaigns.

The literacy rate in Egypt is about 45%, with 62% of men being able to read and write, but only 38% of women. Education is compulsory for children 6-12 years, and is free through the university level. Approximately 87% of all Egyptian children enter primary school, but nearly half have dropped out by their sixth year. There are 16,000 elementary and secondary schools serving nearly 10 million students, 12 major universities and 67 teacher colleges.

### **C. Nutritional Status/Major Nutritional Diseases**

A range of surveys and studies have painted a bleak picture of the nutritional health of rural children living in Upper Egypt, and a not-so-rosy picture for others.

The 1985-90 "Child Survival Report" noted that the highest rates of low weight-for-age (20%) were for children in the 15-17 month range, with the lowest rates being for 3-5 month olds (6%) and 27-29 month olds (8%).

The 1988 DHS found that nearly 30% of children 3-36 months were stunted or had low height-for-age (an indicator of chronic malnutrition), and it was more common in rural (35%) than urban (25%) children, and in Upper than in Lower Egypt. Children 1 year and older, children with mothers having little or no formal education, and children less than 4 years younger than their next older sibling were much more likely to be stunted than other children.

Prior to start-up of the national control of diarrheal diseases project in 1983, a baseline survey found that 20% of preschool children were "malnourished" (unspecified); that there was perceptible faltering in growth for children 4-6 months, with no demonstrable catch-up periods. Breastfeeding was prevalent, although there was a tendency for late supplementation, and these supplements generally were of little nutritional value.

A 1980 survey conducted by Cairo University and MIT found that 44% of children in Lower Rural Egypt and 35% in Upper Rural Egypt were stunted, as opposed to the 14% and 27% as reported by the Nutrition Institute (NI) in 1981.

The 1978 National Nutrition Status Survey portrayed a similarly dismal picture of children less than 5 years old. An average of 38.8% of the surveyed children (6965) were stunted (>2 s.d. below the median for height-for-age) and 16.6% had low weight for age.

Nearly half (49%) of the 1 year olds (12-23 months) were stunted (low height for age), with the lowest rate (30.7%) being for 4 year olds (48-59 months). In addition to the 1 year olds having the highest prevalence of stunting, they also were the age-group to have the highest rates of low weight for age (29.3%) and for wasting (2.6%). Stunting varied from region to region, with the highest rates in the rural zones.

Anemia is a common problem among pre-school aged children throughout Egypt, although it is more prevalent in the rural areas. In a study of children living in the Beheira Governorate, the highest prevalence of severe anemia was found among children 0-24 months old. Another study in Edfou also found that the highest prevalences of moderate and severe anemia were in the same age group, that is, less than 2 years old. These studies' results concur with those found in the 1978 survey, which also noted that the prevalences tended to decrease as age increased. The elevated rates of iron-deficient anemia among the young children suggested reduced availability of iron to breastfed children (prevalence of anemia among pregnant and lactating mothers was 22% and 25%) and weaning-aged children. It also was related to parasitic infections and other illnesses which drew down children's iron resources.

Rickets continues to be a problem (12%), although it has decreased in recent years. Goiter (iodine-deficiency) has been documented in the New Valley; zinc deficiencies leading to dwarfism and hypogonadism are still found in Egypt. Vitamin A status is relatively

uninvestigated in Egypt, although studies have not reported clinical signs of this deficiency to be common.

According to FAO's 1987 "Nutrition Country Profile", the majority of Egyptian infants are breastfed, and most of them, up to 2 years of age. 85-96% of children are exclusively breastfed up to the first 6 months of life. In the following six months, 68% of children receive supplements, and only 8% are no longer breastfed. 34% of children have been totally weaned by the end of their second year.

The DHS survey found that by the 20th month of age, less than 50% of children were still being breastfed. Most children were breastfed for 17 months, with little variation between rural (18.6 months) and urban (15.5 months) children. Children of mothers with little or no formal education were breastfed longer than were children of educated mothers.

A 1989 report prepared for the ANE Bureau (Baumslag) noted that rural women were consistently more likely to initiate breast feeding, give supplements at a later age and less often, and breastfeed for longer periods of time. Despite this, it was reported that there appeared to be a trend towards decreased breastfeeding and the practice of early supplementation was becoming more widespread.

Daily caloric intake for the average Egyptian was 3213 calories, with 78 calories/person of protein consumed on a daily basis. Egyptians' daily per capita caloric supply is 132% (of that required), yet FAO statistics noted that 13.3% of Egypt's children less than 5 years of age were "malnourished." (This compares to 15% in Botswana and 9.7% in Swaziland.) The lowest energy and protein intakes were found in the low income zones of Alexandria, followed by the Beheira Governorate. (Nutrition Institute, National Food Consumption Survey, 1982) 57% of rural and 54% of urban families receive less than 2000 kcal/day, and 16-36% of rural households are undernourished. Intra-household maldistribution patterns favored the male head-of-household, particularly for meats and fruits, and income was the most influential factor in food maldistribution. (Nutrition Country Profiles FAO, 1987)

61.5% of a typical Egyptian's daily caloric consumption is in the form of cereals, followed by 12% in oils and fats, and 11.6% in sugars and honey. The remaining 15% is in other high-calorie foods. Cereals account for 66.6% of total daily food intake. 17.8% is in meat, fish, dairy products and eggs, followed by pulses, nuts and oilseeds (7.3%), and fruits and vegetables (6.2%).

Rice is the major staple consumed in the Delta Valley, but is rarely seen in Upper Egypt. Fresh and frozen fish is seen in the urban communities, although, again, not in Upper Egypt. The National Food Consumption Survey found that wheat bread consumption was higher in the urban than in rural areas, while bread made from a mixed wheat and corn flour was rarely seen in urban areas.

## **II. FOOD AND NUTRITION POLICY CONTEXT**

While the GOE is still committed to providing universal access to health care for all its citizens, it has recognized that it can no longer do this without charge to the care receiver. To that end, it, with assistance from the major donors, is making a two-pronged approach to reduce central support for these services. These include developing health care financing systems that would enhance cost-recovery and encouraging private sector service delivery systems.

### **A. Health and Nutrition Priorities**

The GOE has long given high priority to assuring universal access to free medical care to its citizens, and employing the majority of medical school graduates. Because of the government's emphasis on decentralization for all public sector services, the major objective of the Ministry of Health's (MOH) policies in the 1960s and 1970s was to increase health care coverage by forming new rural health units, building general and specialized hospitals, and renovating public hospitals and technical institutes.

While curative care delivery remains inequitable in its distribution (primarily found in urban areas), the government has made significant improvements in strengthening its primary health care service delivery system. This has been done in spite of fluctuating rates of investment for preventive care services: 46% in 1960-65, 54% (1977-82), and 46% in the 1982-87 plan.

The MOH's priorities for the 1980s included:

- an emphasis on preventive care
- reduction of morbidity and mortality rates through prevention of childhood and endemic diseases, and excess fertility expansion of national health care financing system, emphasizing cost-recovery mechanisms and greater participation by the private sector
- emphasis on biomedical research on maternal and child health problems.

The GOE also has enacted legislation to promote breastfeeding and discourage use of substitutes. A 1980 law (Decision No. 514) prohibits advertising of breast milk substitutes in health care facilities, as well as demonstrations and distribution of these products to new mothers. The law stipulates that breast milk substitutes samples can only be provided by physicians or other professional care providers.

A 1986 report prepared by the Nutrition Department of the High Institute of Public Health (Darwish) emphasized the importance of establishing nutrition intervention programs within the

public health care structure, and the need to implement existing policies, rather than creating new ones.

## **B. Food Security Issues**

Agriculture's share of the economy has shrunk from 32% in 1961-63 to 19% in 1981-83 (FAO, 1987). Food subsidies, begun in the mid-1970s, continue, despite the GOE's decreasing ability to maintain them. External donor assistance has provided some restricted levels of support, although U.S.A.I.D./Cairo, among others, is working with the GOE to try to extricate the government from this unbearable burden.

An A.I.D. review of the food policy programming from 1977-88 found that the subsidies were not well targeted, and that the middle and upper classes were enjoying a significant share of the benefits. Despite this, the lower income classes did participate in the programs, and the review concluded that the nutritional goals of the agricultural policies project were being met.

A 1988 report prepared by the Cornell Food and Nutrition Policy Program (1988) found that there were few problems with food supply or its quality as a result of the food subsidy programs; however, it did note that the critical problem was the "education, modernization and empowerment of women if they are to make informed decisions for themselves and their children..."

## **C. Donor Support**

U.S.A.I.D./Cairo's goal in Egypt is to promote long-term economic growth by increasing productivity in strategic economic sectors and of human resources. Its emphasis is on developing the private sector and democratic institutions; its focus is on broad-based economic growth, improved quality of life, promotion of democratic pluralism and protection of Egypt's natural resource base. The mission's strategy is to increase economic productivity and stimulate economic growth by encouraging efforts to remove price controls, and restrictions on economic incentives and market forces. Of the \$815 million requested for FY 93, \$515 million is for economic policy reform supports; \$135 million for increased productivity activities; \$110 million for sustaining improvements in the quality of life, and \$55 million is for expansion and improvement of urban public utilities.

The mission has worked with the GOE to encourage relaxation of agricultural price controls and decreasing of subsidies through U.S.A.I.D.'s rapid disbursement of sector assistance monies, commodity financing and policy-based projects. Its major project activities are centered on strengthening Egypt's fragile infrastructure, including power generation and telephone service, and water and sewage disposal systems. The mission has assisted with the construction of 1800 schools, and has contributed to joint research projects, particularly in the agriculture sector.

U.S.A.I.D./Cairo has shifted its macroeconomic policy emphasis from the demand- to supply-

side measures to encourage the reform process, and has developed a greater flexibility in programming its funds to respond to urban infrastructure needs. It also is supporting GOE efforts to introduce health care financing reforms that will result in decreasing the support currently provided from the GOE's central budget.

In the early 1980s, U.S.A.I.D. assistance shifted from general health assistance to targeted child survival interventions. U.S.A.I.D./Cairo, UNICEF and WHO worked closely with the GOE in developing a child survival policy approach. Oral rehydration therapy and the expanded program of immunizations were the first two child survival interventions to be supported by U.S.A.I.D./UNICEF/WHO/GOE. U.S.A.I.D. continues to be the leader in maintaining forums for collaboration and sharing of information with other donors and the GOE.

To assist with the GOE's legislative efforts to promote breastfeeding practices, a U.S.A.I.D. funded project (1983-85), implemented through the MOH and the Egyptian Society of Breastmilk Friends, developed mass media and poster campaigns to encourage the government's position on promoting breastfeeding practices. It also developed "lactation clinics," trained mothers and health professionals, and developed breast feeding curriculum for medical schools.

#### **IV. DELIVERY OF FOOD AID, NUTRITION SERVICES AND RELATED PROGRAMS**

##### **A. Institutions Involved in the Delivery of Health and Nutrition Services**

The GOE has promoted a decentralization policy for all public sector activities, including administrative, economic and health service delivery systems. The health system is comprised of 400 hospitals, 3000 urban health centers, 2600 rural health units and 10,000 pharmacies.

Nutrition services are provided by the Nutrition Institute, Nutrition Laboratory and Child Health Laboratory of the National Research Center, Nutrition Department of the High Institute of Public Health, and Nutrition Departments at all major universities. (See "Contact Persons" list for addresses.)

There is a lactation management center at the Al Hussein University Hospital, with satellites in Tanta and the Alexandria University Hospital. (This is an outcome of the U.S.A.I.D.-supported project as described above.)

The State Information Service's Information, Education and Communication Center (SIS/IEC) was created with funds from U.S.A.I.D. to promote family planning activities. It has developed its internal capabilities to select media themes, produce TV spots using private contractors, and has strengthened its financial management system.

## **B. Non-Governmental Institutions Engaged in Nutrition Activities**

1. PVOs/NGOs: To the knowledge of the U.S.A.I.D./Cairo staff, only one of the Egyptian PVOs/NGOs registered with U.S.A.I.D. is working in the health sector, and that is the Coptic Evangelical Service. (see below) The Egyptian Society of Breastmilk Friends received U.S.A.I.D. assistance for a promotional project in 1983-85 which focussed on mass media and poster campaigns.

The Institute for Research and Training in Family Planning has received assistance from the Pathfinder Fund and APHA to train women leaders to promote family planning in their communities. The GOE has provided encouragement and support to the formation of a PVO/NGO membership organization, to improve their capabilities for providing services; however, there was no information available as to which of these members (or non-members) might be working in the health and nutrition sector.

2. Confessional Organizations: The only confessional organization reported as being involved in the health and nutrition sector is the Coptic Evangelical Service. This group is providing health and population (family planning) services through a comprehensive health development approach in Upper Egypt.

3. Others: There was mention of the "Arab Women Solidarity Association" in reference to family planning activities. It was not clear what, if any, other activities this organization might be involved.

## **C. Current Activities and Programs**

1. Government Programs: Nutrition education is provided by nurses in 500 health centers located throughout Egypt. Rural health centers provide a range of maternal/child health services, but there is no comprehensive nutrition education program. In addition to the public sector primary health care system, there appear to be some private sector and parastatal organizations that might provide some nutrition services; however, there was little specificity (in the documentation) as to the type of programs with which they are involved.

2. A.I.D.-funded Projects: U.S.A.I.D. support to Egypt was put on parity with that given to Israel as a result of the Camp David Accords. While US assistance totaled over \$17 billion for the period beginning in 1946 and ending in 1990, FY 91's actual expenditure of US economic assistance totalled \$780 million, with an estimated FY 92 expenditure of \$815 million. FY 93's request was for \$815 million.

In the 1970s, U.S.A.I.D./Cairo's health sector concentrated on strengthening the MOH's primary health care delivery system. The Urban Health Delivery System (\$45.6 million) improved primary health care in poor neighborhoods in Cairo and Alexandria through

infrastructure and human resources development. At the cost of \$13.7 million, the Strengthening Rural Health Delivery System project developed health and family planning service delivery approaches to extend service delivery to the most rural and isolated communities. Primary health care physicians were trained for the Suez Canal area in a \$15.9 million project, and pilot nutrition education and growth monitoring services were provided to ~ 30% of the public health centers in a \$300,000 Nutrition Education project.

The Child Survival Project (1985-1993), funded at \$67,941,000, supports services and research related to the major child survival interventions. Although it initially focussed on CDD and EPI, as deaths attributable to ARI increased, the project shifted its attention to that intervention.

The Cost Recovery for Health Project (1988-96), funded at \$95 million, provides assistance to the GOE to explore different cost recovery mechanisms. Fee-for-service, health insurance, and an expanded private sector role are some of the options being explored. Abt Associates has provided assistance to the MOH for the development of a directorate to study selected basic health care systems (\$1 million, 8/90-4/92). U.S.A.I.D. also supported Egypt's "Cairo Curative Care Association" to evaluate and upgrade the MOH's management information system. Population and Family Planning project activities were supported by \$96 million in input through 1990, and spent over \$22 million in FY 91. FY 92 expenditures were estimated at nearly \$22 million.

U.S.A.I.D./Cairo's Health Sector Aggregate Analysis showed that funds were provided to support child spacing and high risk births, CDD/ORT, immunizations, women's health, ARI, health systems development, vector control, water quality, growth monitoring and weaning foods, and family planning contributions (commodities), service delivery and program development activities in FYs 91, 92 and 93. Of these, over 20% (\$424 million for the 3 years) of the total health aid package was for water quality interventions (water supply and sewage disposal). Health systems development activities were funded at \$22 million for FYs 92 and 93, representing approximately 1.3% of the aid package.

\$19.3 million was used for the supply of family planning commodities, and \$18 million for family planning service delivery. This latter input showed a marked decrease over the 3 reporting years (FY 91=\$11.9 million; FY 92 and 93=\$3 million each year) as a result of US Congress limitations on family planning assistance. Immunization activities received \$13 million, and ARI, \$7.3 million. Less than 0.1%, or \$3.7 million, of the total aid package for health was spent on growth monitoring and weaning foods activities.

FY 93's planned programs include \$210 million for Sector Policy Grants, \$25 million in Public Sector Commodity Imports, \$50 million for telecommunications assistance (LOP total of \$250 million), and \$10 million for Strengthening Governance Programs (total LOP of \$35 million).

Buy-ins to centrally-funded projects included: HealthTech--local production of weighing scales and refrigeration unit and WIN--training at Wellstart's campus in San Diego. The "Historical Black Colleges and Universities Research Grants" program supports a Clark University (Atlanta)

project for CDD activities. Short term assistance has been provided by AIDSTECH, CSAP Support (impact evaluation of child survival programs), DHS, Health Financing and Sustainability (privatization of health sector service delivery), and WASH.

3. U.N. Agencies' Projects: Nearly all the UN agencies are present in Egypt, although only UNFPA, UNICEF and WHO are working in the HPN sector. Working with U.S.A.I.D./Cairo, UNICEF and WHO have assisted the GOE in developing a child survival policy approach, and provided necessary technical and financial resources to implement the CDD and EPI interventions. UNICEF received \$1 million (FYs 90 and 91) from U.S.A.I.D./Cairo to conduct applied research on the health impacts of health education and water supply activities.

UNFPA has just finished preparing its 1992-96 Country Program. Its major activities will target youths and late-age marriage groups in Upper Egypt for family planning message development and dissemination; train health professionals in MCH/FP service delivery, and provide contraceptives and support local production of IUDs. UNFPA also will continue the progress made with U.S.A.I.D. assistance in developing and strengthening an MIS for the MOH, including use of statistics for population planning purposes. Finally, it will support research on contraceptive prevalence and discontinuation rates, and the use of health services by women.

4. Other Donors' Projects: The World Bank provides support for improving health program management in the "Schistosomiasis Control Project." It is funded at \$43 million over a 4-year period, with approximately \$27 million provided by the Bank, \$10 million in co-finance monies and \$6 million from the Government of Egypt.

The Bank is working with NGOs in Egypt to develop a project in primary health care, particularly for improving the quality of MCH services. Start-up of field work is projected for 1994. The World Bank also is assisting the GOE in preparation of a health sector reform package that would include reallocating resources for all service delivery settings, including preventive, primary, secondary and tertiary. Formal negotiations with the MOH began this month (June 1992), but no funds to support any field interventions would be available until July 1993.

Other bilaterals working in Egypt include the Canada, EEC, Finland, France, Germany, Japan, the Netherlands and the UK. From the documentation available, it appeared that only Finland, France and the Netherlands support health sector activities, and then, only on a small scale.

5. PVOs' Activities and Projects: There are no Peace Corps volunteers in Egypt and, according to the U.S.A.I.D./Cairo PVO Officer, the only American PVOs working in the health sector are Catholic Relief Services (CRS), Project HOPE and Save the Children (SCF). Both CRS and SCF work in Upper Egypt in fairly small, discrete areas. CRS has a health and sanitation project which uses a Catholic youth organization to provide health education lessons through a door-to-door campaign. This activity has been fairly successful and CRS expects to extend their service area. Its other project, an attempt to develop a health insurance program

based on an HMO-type model, has not done as well, primarily because there was strong resistance to any "fee-for-service" component.

SCF has a 3-year child survival project in Minya. It began with environmental sanitation and is expanding into other CS activities. Project HOPE is involved with training nurses in institutes of higher learning. CARE is also present in Egypt but is involved in non-health-related projects, including fisheries and agro-forestry. It also manages a project designed to upgrade the institutional and outreach capabilities of local NGOs. Helen Keller has no project activities in Egypt.

#### **D. Existing Human Resources**

The numbers of medical care providers are noted elsewhere in this report. There was no detailed information on the size of the private sector for service delivery and support, or the number of other care providers, i.e., midwives ("dawa") or traditional healers. The only information that was available for village-based care providers indicated that the most basic health service center is the "health unit." This unit (2555 serving 4000 rural villages) is staffed by a doctor, nurse and paramedic. Each unit serves approximately 6000 persons, with a nurse serving 3000.

#### **E. Existing Support Mechanisms and Systems for Community Outreach and Mobilization for Nutrition Promotion**

The government health "units" and maternal/child health centers appear to be the frontline service centers for Egypt's primary health care system. Information on family planning outreach services available to women and children in their communities, and the types of family planning and health facilities within a 30 kilometer radius of those communities was collected by the 1989 Egypt Service Availability Survey. While it appears, from that data, that at least a majority of women have ready access to family planning providers (be that community-based family planning worker or a nurse) and family planning service centers, including pharmacies and clinics, it is difficult to make any inferences regarding accessibility to other health and/or nutrition outreach services from that survey's statistics.

#### **F. Funding Available for Nutrition Services**

As was the case with Botswana and Swaziland, U.S.A.I.D. expenditures were readily available and are included above. World Bank input also was noted in the section describing its activities. Other than that, no information was available to describe other donors' inputs. The GOE budget for health and nutrition also is reported above; no breakdown was available that ascribed specific costs to nutrition services ONLY.

## **V. OPPORTUNITIES AND CHALLENGES FOR IMPROVING WOMEN AND INFANT NUTRITION IN EGYPT**

Despite the GOE's legislation supporting the promotion of breastfeeding and activities generated by U.S.A.I.D.'s 1983-85 breastfeeding promotion project, there appears to be a lack of comprehensive nutrition education services in Egypt. While the GOE has tried to decentralize its service delivery system and to encourage private sector investment, and while the major donors, working with the GOE, have focussed their efforts on child survival interventions, it appears that less attention has been given to nutrition and its effects on mothers and children's quality of life.

### **A. Nutrition Service Delivery by the Private and Public Sectors**

While there was a large number of reports on nutrition and health-related surveys, there was very little documentation available on actual nutrition service delivery, by either the public or private sector. A first step for WINS to consider would be to develop comprehensive inventories of:

1. available nutrition services, particularly those targeted at women and children, and
2. public and private sector persons who could serve as means to provide services in an out-reach effort to the intended clients.

Formative research could be conducted to determine women's preference of care providers, sources of education and other critical information needed before programmatic interventions are designed. It may be that service delivery to women would be most appropriately provided by other women (due to possible cultural constraints on women seeing men care providers). As the "dawas" have already received some training for high-risk births and other pregnancy-related issues, their skills could be further upgraded by in-service training in nutrition as it relates to pregnant and lactating mothers, and their children.

Based on these inventories and formative research, WINS, working with U.S.A.I.D. and the GOE, could develop a set of appropriate nutrition interventions for implementation in both the public and private sectors. These interventions could focus on developing the public sectors' village-level (i.e., rural) and urban centers' capacities to provide these basic services, and to develop private sector providers as alternative sources for nutrition services. Linking education to service delivery through dawas, or other care providers, could provide the incentive needed to attract and maintain mothers' attendance rates, and, based on the large number of operations research studies of growth monitoring, this tool could be included in program efforts for educational purposes as well as for early detection of malnutrition or growth faltering.

WINS also might want to discuss with the World Bank how this type of planned nutrition intervention strategy might be included with or complement the Bank's new MCH programming efforts.

### **B. Development of Nutrition Messages for the Mass Media**

Related to direct nutrition service delivery is the need to re-enforce that delivery with continued exposure to the key messages. Most of the reviewed nutrition and health surveys noted that good breastfeeding practices (for instance, exclusive breastfeeding the first 4 months of life, gradual weaning with appropriate foods, and longer durations of breastfeeding before complete weaning) were seen less often in the urban areas. Given the extreme over-crowding in the urban zones and the limited ability of the urban poor to provide food for their families, there is a clear need to target appropriate messages to these mothers.

As a first step, WINS might meet with the Egyptian Society of Breastmilk Friends to learn of its experiences with developing campaigns to promote breastfeeding. WINS might also approach the GOE's State Information Service, which has had experience working with private sector contractors for the development of family planning messages and use of mass media for their projection, to determine its interest in and capabilities of developing nutrition education messages for use in the mass media. These messages could target urban mothers, as well as those living in the rural areas. It may be necessary to conduct some social marketing research to determine listenership patterns, if none has been done to-date or recently. Based on this strategy, a set of nutrition-related messages could be developed and tested for mass media dissemination.

### **C. Specific Health Interventions for Women**

As noted in the data, there are at least two specific interventions that are needed to address women's, and consequently, their children's, health. These are the low coverage rates for tetanus toxoid immunizations, and relatively high levels of iron-deficient anemia. Although two tetanus toxoid campaigns have recently been conducted, WINS might want to follow-up on determining the effects of these campaigns on actual coverage rates. As is the case with all immunizations, increasing and maintaining coverage remains a constant need. Given that the infrastructure exists for EPI activities, WINS could investigate the means to develop an on-going outreach effort to improve tetanus toxoid coverage rates, and look into piggy-backing onto the immunization campaigns, micro-nutrient services to address anemia among pregnant and lactating women, and possible vitamin A deficiencies, should they exist.

## CONTACT PERSONS IN EGYPT

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## **A Preliminary Review of the Nutrition Situation and Activities in SWAZILAND**

### **I. COUNTRY BACKGROUND**

Like Botswana, Swaziland has little land available for agricultural production, but, unlike Botswana, this is because its total land area is only 17,360 square kilometers. Although it would appear that there would not be sufficient land for agricultural production, Swaziland's largest exports are agricultural products. Conversely, while corn is the major food commodity grown and consumed in Swaziland, nearly half of the amount needed to meet internal demands is imported or donated.

Unlike Botswana, Swaziland is not endowed with a vast supply of minerals or other commodities that it can sell in the world market place. As a result, it must rely not only on agricultural production, but also on cash remittances that Swazi men send home from their work sites in other countries. That these remittances represent a major portion of the cash earnings in Swaziland, and that these earnings are subject to each individual ability's to remain employed and send their earnings home, contributes to the unstable basis from which to provide services to meet the needs of the Swazi population.

Complicating this picture of a shrinking economic base is the constant devaluation of the Swazi currency since the mid-1980s that has led to inflation and eroded household incomes. Food prices have risen sharply, and the lower income households, who spend a larger proportion of their income on food, are falling further behind in meeting their food needs.

At the same time, Swaziland's population is growing at an annual rate of 3.5%. This increase, coupled with Swaziland's limited economic base, has led to corresponding rises in unemployment and pressure on natural resources, and placed additional stress on the health and nutrition sector to meet the growing demands for those services.

Despite this somewhat unstable economic picture, Swaziland has made strides in improving the health and nutrition of its citizens. Rates for childhood immunizations and use of ORT have increased. The Government of Swaziland (GOS) also has received recognition for its progressive promotion of breastfeeding and was chosen as the new site for the "International Baby Food Action Network" (IBFAN) office.

At the same time that these improvements were being achieved, health expenditures by the government have failed to meet the level of investment needed to provide preventive, that is, primary health care, services to all of its citizens. Not only is there an insufficient level of capital investment, but the minimal level of investment in human resources has led to a public sector health service delivery system that has a far higher proportion of citizens to medical professionals than either Botswana or Egypt.

As a result of all these forces, the health and nutrition situation in Swaziland remains vulnerable to any sudden changes that could disrupt the fragile equilibrium that exists for the moment.

### A. Country Setting

Swaziland is a small country, about the size of New Jersey, bordering on Mozambique in northeastern South Africa. The total population is 788,476, with approximately 41 people per square kilometer. 32% of Swazis live in urban areas, and 48.6% are less than 14 years of age. Mbabane, the capital city, has 44,000 inhabitants.

Swaziland is divided into four ecological zones. These are: highveld (30% of total surface area), middleveld (25%), lowveld (37%) and the rocky Lubombo Plateau (8%). Although 76.8% of Swaziland's surface area is arable, only 15% is under cultivation. The most agriculturally productive area is the middleveld.

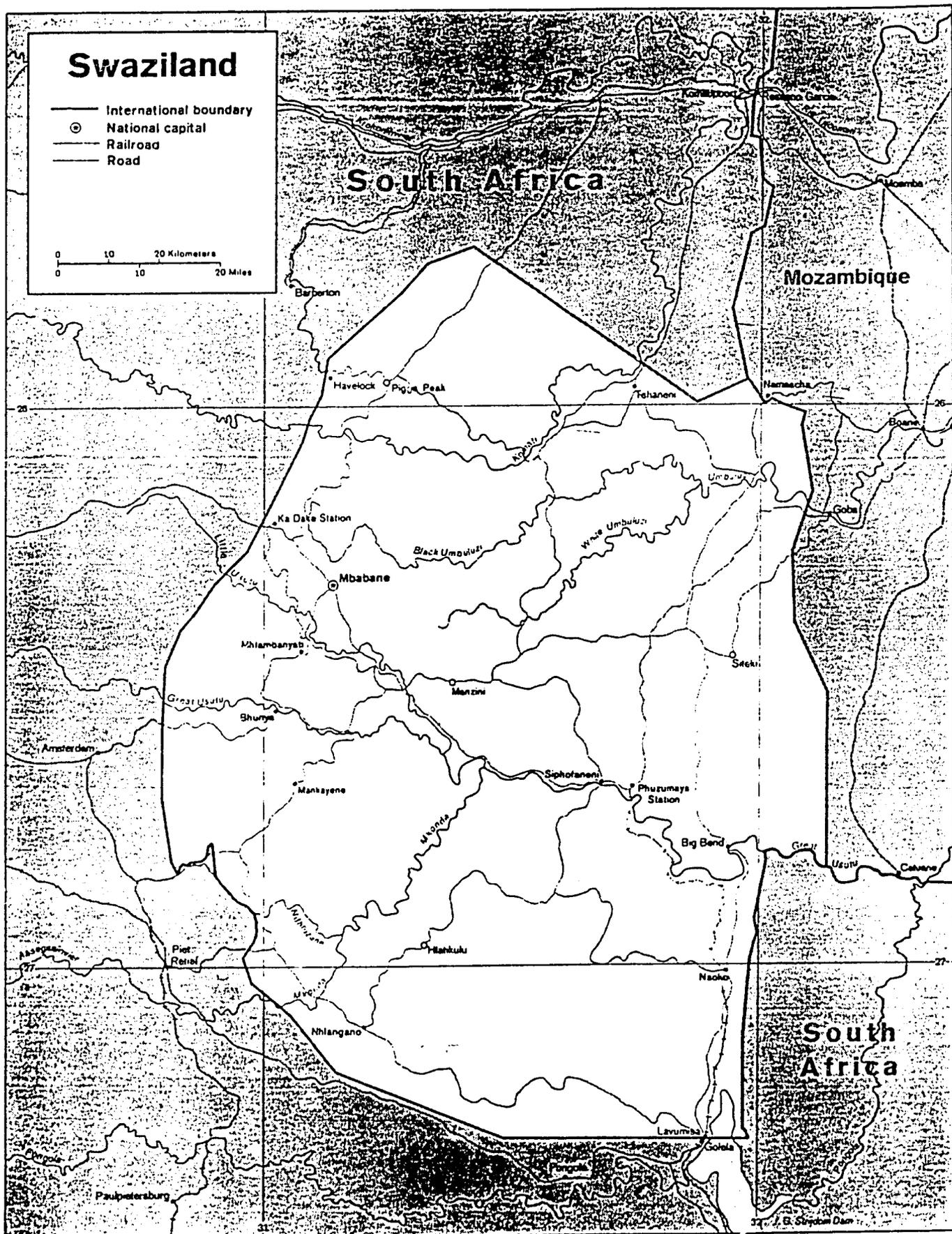
Climatically, Swaziland has temperate, subtropical and semi-arid zones. High temperatures range from the mid-70's (highveld) to the mid-80's in the lowveld. It can often get below 50° in the winter in the higher elevations, although it rarely is below 60° in the lowveld and plateau. Swaziland has four seasons: a rainy spring (Sept.-Oct.), hot and rainy summer (Nov.-Feb.), moderate fall (March and April), and a cold and dry winter (May through August).

Swaziland received independence from Britain September 6, 1968. The current form of government is a monarchy, and it has no written constitution. Most Swazis (93%) are from the same ethnic group (Swazi), although there are some Zulu inhabitants. English and SiSwati are the official languages, and Christianity is the largest religious denomination. Swazis generally have maintained many of their traditional practices, and the GOS has tried to respect these traditions while encouraging development and diversification.

There are no "villages" per se in Swaziland. The rural population lives in clusters of dispersed, and often isolated, "homesteads." A homestead normally is comprised of several households or smaller mother-child units. Child bearing outside of marriage is a common occurrence, and fathers are often obliged to support an average of 8.2 children. In a survey of 621 mother/child pairs living in rural Swaziland (Tyobeka, 1991), nearly half of the sample's (47.5%) mothers were unwed.

Per capita GNP in 1987 was estimated at \$700, but had increased to \$900 by 1990 (approximately half that of Botswana, but one-third more than Egypt). While Swaziland has a per capita food production index of 92.5 (1979-81=100), 27.9% of its GDP is spent on food. Corn is the main staple crop, followed by pumpkins, ground nuts and (unspecified) "legumes."

In 1990, the World Bank estimated that Swaziland imported 44,000 metric tons of cereals (Botswana imported 137,000, and Egypt, 9.3 million), and received 8000 metric tons in food aid (primarily, cereals). Another source reported that, of the 130,000 tons of corn needed in 1985, only 85,000 was produced. (National Nutrition Council of Swaziland, Literature Review,



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1987) Finally, UNICEF's Situational Analysis found that only half of nearly all rural homesteads who tried to grow their annual supply of corn were able to do so.

Swaziland has some natural resources, in the form of asbestos, coal, clay, gold, diamonds, timber and hydroelectric power. In addition to corn, its major agricultural products include sugar cane, citrus fruit, livestock, wood, cotton and tobacco. These products account for 24% of Swaziland's GDP and 70% of its exports. There is some manufacturing (sugar refining, light manufactured goods, wood pulp, ginned cotton, beverages and processed food). 80% of Swaziland's GDP come from exports, while 91% of its imported goods, including machinery, are from South Africa.

The United States is the largest donor to Swaziland, contributing 29% of all assistance. (See Sections II and III C for more detailed breakdowns of U.S.A.I.D. assistance.) US aid to Swaziland totalled \$9.3 million in 1990, representing 1.37% of Swaziland's GNP. FY 93's request was for \$7.2 million to be programmed for family planning, small business development and commercial agriculture activities, reflecting a general trend in reduction in aid from foreign donors. Unfortunately, this decrease comes at the same time that the GOS is increasingly unable to meet its own capital commitments for development plans.

## **B. Health and Demographic Profile**

Trends in Swaziland's health and demographic profile indicate a general improvement in its people's quality of life. Preschool enrollment has been on the rise since the 1960s, and infant mortality rates have fallen. Swaziland has surpassed all child survival targets for immunization rates, and use of ORT is nearly universal. On the other hand, except for the low-to-middle income group, the population growth rate has continued to rise.

1983 Ministry of Health statistics showed that the major health problems in Swaziland fell into three categories: maternal and child health, communicable and environmental diseases, and nutrition-related illnesses. Gastroenteritis, respiratory illnesses, tuberculosis and problems associated with childbirth were leading causes of morbidity and mortality. Schistosomiasis and typhoid were said to be endemic, and in the middleveld and lowveld, 60-90% of the population were affected by schistosomiasis. The leading causes of childhood mortality were: perinatal problems, malnutrition, diarrhea, and respiratory tract infections. Diarrhea, colds, measles and fever were the major childhood illnesses.

The infant mortality rate (IMR) in Swaziland is 113 per 1000 live births, and childhood mortality rate (CMR) is estimated at 164/1000. (Annex 1, 1990 CIHI Statistics) Estimates of life expectancy at birth range from 50 (WHO, 1980-85) to 56.1 years (World Bank, 1990) for the population in general, and 47 (WHO) to 57.9 years (World Bank) for women specifically. In either case, Swazi statistics are not as favorable as are those for Egypt (overall life expectancy of 61 years, and 61 for women) and Botswana (overall, 62 years; women, 64.7 years).

Although 36.3% of Swazis have access to safe water, this is heavily weighted in favor of those living in urban settings, with nearly all urban dwellers having ready access to potable water. Conversely, only 24.4% of the rural population fall into this category. Information collected by the 1988 Swaziland Family Health Survey indicated that rural families with access to piped water systems had lower diarrhea rates than those without, and that health personnel had observed a definite decrease in childhood diarrhea.

Swaziland's population growth rate was 3.5% in 1990 (Botswana's is 2.7% and Egypt's is 2.4%). Women's fertility rate is 6.5, with only 19.8% of women of child-bearing age (15-44 years) reporting that they use contraceptives. (This is approximately half the user rate reported in Botswana.)

There are 100 persons per health facility bed in the urban areas, and 1450, in the rural parts of Swaziland. There are 18,848 citizens per physician; 1054, per nurse, and 110 persons per traditional healer, with 80-85% of Swazis using the 5000 traditional healers as their primary source of health care. 70% of pregnant women use health services for antenatal visits, and 50% of births are in hospitals.

The GOS spends 3.7% of its gross domestic product for provision of health and nutrition services. (This is nearly identical to Botswana's investment, but less than half what Egypt spends on an annual basis, 9.6%). Only 12% (Botswana, 48%; Egypt, 90%) of government health expenditures are for primary health care. 50% of health care services are provided by the GOS, with missions and private sector companies providing the balance.

15% of the population lives in urban areas and have access to 35% of the available health services.

In addition to the lack of financial support needed for primary health care service delivery, a 1990 report (Rutabanzibwa-Ngaiza) on women's participation in primary health care noted that there were additional inputs needed to make that service delivery system accessible to all. Among its suggestions were the need to:

1. develop an operational definition of "primary health care";
2. examine "community participation" and determine how it could be implemented within the context of Swazi cultural norms;
3. collaborate with women's groups to develop appropriate and effective means to provide services;
4. strengthen and redefine the role of the national women's organization, *Lutshango Lwaka Ngwane*, vis a-vis community women's needs;

5. target men, as well as women, for health education programs, particularly for maternal and child health issues.

Swaziland's immunization and use of ORT rates are equal to or better than those of Botswana and Egypt. 96% of the children have been immunized with BCG; 85% of children less than 12 months of age have had measles vaccinations, 89% are protected by the DPT series, and 89% are fully vaccinated against polio. On the other hand, only 63% of mothers have had their tetanus II vaccination. 85% of mothers said they had used oral rehydration therapy for the treatment of their children's last episode of diarrhea, and there is a 90% access rate for oral rehydration salts.

Incidence of drug-resistant malaria has increased in the lowveld zone, and malarial control efforts use a dual stage-strategy, that is, presumptive treatment and vector control.

Overall illiteracy rates indicate that 32% of Swazis cannot read or write, and 34% of women are illiterate. 43% of the population attends secondary schools, with a nearly equal percentage (42%) of them being young women.

A final indication of the status of women's health and the quality of their lives is found in a 1985 survey conducted by the Social Science Research Unit at the University of Swaziland. This study investigated factors in women's lives which restricted their economic, domestic and social roles. Among the identified constraints were: lack of cash; lack of time; attitudes and beliefs that inhibit women's earning, political and decision-making powers, and lack of education and training opportunities to learn the skills needed for wage employment. The authors concluded that the most significant constraint was the lack of information on women which led to difficulties in developing appropriate policies and programs.

### **C. Nutritional Status/Major Nutritional Diseases**

Swaziland benefits from a wealth of information on children's nutritional status, infant/childhood feeding practices and food availability. Beginning with the 1983 "National Nutrition Survey" (NNS), there have been a number of surveys, conducted by the Ministries of Health and Agriculture, and research-oriented organizations, that have defined the scope and range of nutrition-related aspects of life in both peri-urban and rural families.

Unfortunately, while this extensive data base exists for children's nutrition and feeding practices, the same level and depth of information is lacking for women, particularly those who are pregnant and/or lactating. For the most part, the surveys also did not invest as much time identifying causes as they did in enumerating the problems.

The most extensive nutritional survey was the NNS, conducted in 1983, with support from A.I.D. and the C.D.C.. This survey collected anthropometric data on over 4000 children, 3 to 59 months of age living in peri-urban and rural areas.

Among the NNS' findings were:

1. a relatively high overall rate of stunting (chronic malnutrition), with 1 out of 3 rural Swazi children under the age of 5 being stunted and the most severe cases among those living on the Swazi Nation Land (lowest rates were in administrative towns and individual tenure farms);
2. 23% of surveyed children living in peri-urban areas were stunted;
3. age-specific rates found that 13% of rural children 3-6 months were stunted, with the highest rate (42%) among rural children, 18-23 months;

There was little evidence of wasting (less than 1%), and stunting was directly related to poverty, inadequate and poor quality water supply, no latrines, low parental education level, extended distances to the nearest health facility, and incidence of infections.

In the rural areas, 10% of children had low weight for age ("under-nutrition"), with 8.2% of peri-urban children exhibiting this characteristic. Children over 6 months of age were more likely to have a low weight for age than were younger children, with the prevalence peaking for 18-23 month old rural children (13%).

The 1983 survey also investigated child feeding practices and found that 94% of rural and 92% of peri-urban children received breastmilk. The average duration of breastfeeding was 15 months, and 80% of rural children and 70% of peri-urban children were still breastfed at 9 months of age.

Introduction of supplements began at an early age. Over 25% of children less than 1 month had received milk other than breastmilk. By the third month of life, 75% of the children were receiving supplements. Baby formula or powdered milk were most commonly used, although cows' milk was given to 13% of rural and 3% of peri-urban children.

Solids were introduced to 14% of infants less than 3 months of age, increasing to 63% for children 3-6 months old. Only 4% of children, 6-12 months of age, had not been introduced to any solid food.

The most commonly served weaning food was made from corn flour; however, it often was so diluted so as to make its nutritional value negligible. One-third of 3-6 month olds received soft porridge, and another third received commercial baby cereals. 67% of children 6-12 months old were fed indigenous cereals, with only 20% of these children receiving commercial cereals.

The survey concluded by saying that, in order to decrease stunting as a result of inadequate nutritional intake, the GOS would have to decrease poverty rates. Other recommendations were to: increase the use of growth monitoring as a preventive tool; decrease the effects of diarrhea

by use of rehydration methods and increase feeding during episodes; increase the prevalence of exclusive breastfeeding through the first 3 months of life, and improve the quality and quantity of feedings for children older than 6 months.

Following the publication of the NNS, a national nutrition workshop was held in late June of 1985. The objectives of the workshop were to discuss the survey findings and determine appropriate interventions to reduce the problems identified in the survey. (No information was found that provided any follow-up to this workshop.)

In early 1987, UNICEF provided funding for a two and a half year project to develop appropriate messages to improve current young child feeding practices. This project collected much the same type of information as the 1983 survey, with the exception of anthropometric indicators. (NNC, Literature Review, 1987, and Summary Report: Project for Promotion of Improved Young Child Feeding, 1988)

Data from the formative research phase indicated that "over time":

1. there had been an increase in the reliance on commercial baby foods;
2. fathers had become more involved in child care practices;
3. illnesses were treated by a combination of modern and traditional methods.

This study concurred with the 1983 NNS in finding the average duration of breastfeeding was 15 months.

The study also noted that water with sugar was "slightly more prevalent" than breastmilk as the first fluid offered after birth; women who gave birth at home threw away colostrum and gave water to their newborns, and few children were exclusively breastfed past the first month of life. It also was noted that nearly all 3 to 6 month old children were receiving supplements (formula and/or powdered milks) plus cereals. By the time children had reached their sixth month and they were still being breastfed, these feedings usually lasted less than four minutes.

There was little variety in the food given the 6-9 month old children, and while they were fed 4-5 times a day, the feedings were generally small and inadequate to meet the child's nutritional needs. Food restrictions ("taboos") were most severe for 4-11 month old children and quite probably led to the poor quality of their dietary intake.

G. J. Eale's 1989 "Household Food Security" study found that almost 75% of households had a per capita income below the national mean. Data also indicated that nearly half of the total income for households rested with the upper 5% on the economic ladder, with the poorest 40%, having just 5% of the available income.

Daily protein intake per capita is less than in Botswana (59 calories vs 69 calories), although this is not a significant difference. A 1991 study, "Child Health, Feeding and Nutrition in Rural Swaziland (J. Tyobeka), found that there was "fairly extensive protein deprivation if milk and milk products were excluded from the diets of young children in rural Swaziland." Tyobeka noted that while children consumed more "legumes" as they grew older, the value of their daily protein intake did not increase. This apparent inconsistency reflected the relatively small increase in consumption of protein-rich "legumes" as a proportion to total dietary intake, due to inadequate supplies of these legumes, primarily, peanuts and beans. Families' cash earnings were not sufficient to make up the deficit by purchasing protein-rich foods; therefore, children's, and other family members', nutritional status was undermined by this reduced level of protein in their daily diets.

In contrast to protein consumption figures, Swazis' daily caloric supply is higher (2548 calories per person) than Botswana's (2269 calories). Tyobeka attributed this to the relatively large amount of carbohydrates in individuals' diets. The 1985 National Income and Expenditure Survey reported that the largest allocation of food expenditure among rural Swazis was for purchase of corn, the most common element in the Swazi diet.

Other nutrition-related studies that have been conducted include: 1987, the "Cropping Systems Research and Extension Training Project" (Huss-Ashmore)--collection of food consumption information for the February-May period; 1982 study of 150 households in 6 peri-urban areas of Mbabane (Gabatshilwe F. Motshabi); 1963 nutrition survey of 93 families (Sonya Jones); undated study of edible wild plants (Ogle and Grivetti); 1978-79 Swaziland Rural Homestead Survey (Department of Economics, U. of Swaziland)--assessment of household level resource allocation and income derivation.

A commonly-shared outcome of these surveys was the need to promote a varied and balanced diet. However, increasing consumption of these foods was not a straight forward issue, but was complicated by economic constraints and food availability.

As was the case in Botswana, no information was found on micro-nutrient deficiencies.

## **II. FOOD AND NUTRITION POLICY CONTEXT**

The fact that the GOS has either directly or indirectly supported the large number of studies that have been done on nutritional status, dietary intake and feeding practices would appear to indicate a level of appreciation of the important role food and nutrition has in the health and well-being of its people. This inference is supported by the government's commendable efforts to promote breastfeeding and other appropriate child feeding practices.

Despite this, public sector support for the provision of health care services, particularly primary health care, is significantly less than in either Botswana or Egypt. While there are some policies that are supportive of children's health and development, the GOS has no official policies for

women per se, and there are few public statements of policy mentioning women as a specific target group. One author (Armstrong) characterized this as "benign neglect."

#### **A. Health and Nutrition Priorities**

The MOH's main policy objective is to "improve the health status of its citizens by providing access to appropriate preventive, promotive, rehabilitative and curative health services for all." (Rutabanzibwa-Ngaiza) To meet this objective, the GOS adopted the primary health care strategy and formed the Primary Health Care Committee, whose responsibility was to oversee implementation of that strategy. In 1990, the MOH stated that the biases toward urban and curative care should be redirected to preventive health care activities in the rural areas. Unfortunately, as noted elsewhere, the GOS has yet to commit the means needed to implement their policies.

Within the realm of these well-intentioned, but poorly supported, efforts to improve the health situation in Swaziland, the government has an acclaimed record for promoting appropriate child feeding practices. In recognition of this, Swaziland was chosen in 1991 to be the new site of the "International Baby Food Action Network" IBFAN office.

The "Swaziland Infant Nutrition Action Network" (SINAN) also has been active in policy formulation and program development. One of SINAN's successes was the issuance of the policy on infant feeding, which was based on SINAN's "Ten Steps to Successful Breastfeeding." The "Policy on Infant Feeding in Health Care Practices: Breastfeeding Promotion and Protection", issued July 25, 1991, targeted health care workers and health service centers for promotion of breastfeeding practices. Its objectives were to increase the percentage of infants exclusively breastfed for 4 months from 8% (1983/84) to 20% by 1993, and to increase the percentage of children still breastfed at 18-24 months to 60% by 1993 (from a 1983-84 rate of 31%).

At the same time this policy was issued, the GOS also established the "Growth Monitoring and Promotion of Nutrition Task Force." This group's responsibility was to coordinate and assure the implementation of the breastfeeding policy. The National Nutrition Council was made responsible for monitoring the progress made towards achieving the policy's stated objectives.

Finally, in 1991, the GOS issued a national policy on "growth monitoring and promotion (GMP)." The key components of this policy included:

1. mandatory access by every child to a health card to be used at every contact that child has with the health system;
2. mandatory implementation of GMP activities in all health facilities;

3. extension of GMP activities to the community level using a multi-sectoral approach;
4. use of salter scales by all GMP services to ensure standardized measurements.

#### **B. Food Security Issues**

While no information was found on policies regarding food security, a number of studies have looked at the land tenure system and its relationships with child health and nutrition.

The land tenure system in Swaziland is divided into three components:

1. the "Swazi Nation Land" which encompasses 63% of all cropland (small holders);
2. "Freehold Title Land" (individual tenure farms), and
3. "Crown Lands".

This system is a derivative of the colonial distribution of land that deeded nearly two-thirds of the land and mineral rights to non-indigenous citizens in the 1907 "Concessions Proclamation." After independence, this land was reclaimed by the Swazi government and transferred to the "Swazi Nation". It was broken up into small parcels, few of which were large enough to produce adequate supplies of food for the landholders. In fact, the 1983 NNS found that the highest levels of malnutrition were found in children living in the Swazi Nation Land, and the lowest, among children living in administrative or company towns.

#### **C. U.S.A.I.D. Support**

The goal of U.S.A.I.D./Mbabane's CDSS is to assist with the expansion of the accelerating economic growth of Swaziland in order to develop a "process of equitable and sustainable development that enhances the quality of life for all Swazis". Its subgoals are to reduce the current population growth rate; to increase Swazi management of and participation in the economic growth process through educational and training interventions, and to accelerate the creation of employment possibilities, particularly in the private sector, through policy reform, skill training and increased access to markets and credit.

The mission's strategy is to focus on increasing the demand for and access to family planning services, developing human resources, and expanding the small and micro-enterprise sector (SME). SME activities are relatively new, and they concentrate on commercial credit programs, developing linkages between large and small-scale firms, and improving small scale horticulture production.

Family planning support includes contributions to the Family Life Association of Swaziland (FLAS), a local PVO, which provides family planning services through industrial clinics, social marketing and community-based distribution systems. The mission also is making final preparations for a \$5 million project in "Family Planning, Maternal and Child Health", with technical assistance to be provided by Columbia University. Start-up dates have been delayed pending final decisions as to funding mechanisms.

The mission also supports activities that develop management skills, particularly in the private sector, and improving primary-level students' achievements by strengthening teacher training capabilities.

FY 93's request of \$7.2 million from the Development Fund for Africa (DFA) was to support family planning, education, small business development and commercial agriculture activities. Out of an \$8 million budget for FY 92, approximately \$1.2 million was for family planning and child survival activities, including \$482,000 for child spacing and family planning service delivery activities. CDD/ORT, immunizations, acute respiratory infections, health systems delivery, family planning contraceptives, and family planning program development each received \$120,000.

Two PIDs and two PPs were prepared for FY 92 review. The PIDs were for the "Swaziland Training and Institutional Development (STRIDE)" Project and the "Swaziland Business Development" Project. PPs were ready for the STRIDE Project and the "Educational Policy Management and Technology (EPMT)" Project.

### **III. DELIVERY OF FOOD AID, NUTRITION SERVICES AND RELATED PROGRAMS**

#### **A. Institutions Involved in the Delivery of Health and Nutrition Services**

The MOH's rule-of-thumb is that Swazi citizens should be no farther than 8 kilometers from the nearest health center. These public sector centers include: 9 hospitals, 9 health centers, 6 public health units and 118 clinics. 35% of these are located in urban areas. There are 400 "Rural Health Motivators" active at the village (homestead) level.

In addition to the government-supported centers, there are 7 company and 3 mission hospitals; 36 private, 32 mission and 20 company health clinics. Over 80% of all health clinics (public and private) are in the rural areas and represent the core of Swaziland's primary health care system.

In addition to the MOH's primary health care structure, two other services within the MOH are directly involved in the provision of health, and by extension, nutrition, services. These are the Health Education Unit (HEU) and the Institute of Health Services (IHS). Growth monitoring

and promotion activities fall under the aegis of the HEU and the National Committee for Growth Monitoring and Promotion of Nutrition Task Force. The IHS is responsible for technical manpower training. As noted earlier, the Primary Health Care Committee is responsible for overseeing the implementation of the PHC strategy in Swaziland.

A third officially-recognized "committee" is the National Nutrition Council. This committee rests in the Ministry of Agriculture, with the Home Economics Section playing a leading role, but is responsible to the Ministry of Health. It began as an ad hoc effort on the part of nutritionists to share information and to coordinate nutrition-related activities, but has developed into a quasi-department with officially assigned responsibilities.

There are several nurses' training schools, including the "Swaziland Institute of Health Sciences" (see above) and several church-supported institutions. Clinical nursing is the focus of their training programs, although there is some course work in nutrition. It is generally less community-oriented and more reflective of nutrition as a scientific field.

Although not involved in direct service delivery, the Social Science Research Unit at the University of Swaziland has been active in conducting nutrition and health-related studies.

## **B. Non-Governmental Institutions Engaged in Nutrition Activities**

1. PVOs/NGOs: Because the public sector provides only half of the available health care services, indigenous NGOs/PVOs and the private sector (including nonformal care providers) have had opportunities to play a more integral role in service delivery than may be the case in other countries.

A key actor in providing family planning services in Swaziland is the "Family Life Association of Swaziland" (FLAS). This organization has received U.S.A.I.D. support to strengthen its management and administrative capacities, and training in the technical aspects of family planning, including counseling and clinical outreach services. FLAS provides leadership and resources for addressing issues that affect families' lives and well-being, and has collected information on the status of and existing legislation for marriage, divorce, children, property, inheritance and other related family topics.

The "Swaziland Infant Nutrition Action Network" (SINAN) also actively promotes breastfeeding practices through training and IEC activities. The "Swazi Population Council" has received some limited (and unspecified) support from the "Primary Health Care" project. It was not clear from the reviewed documentation what this council's tasks and responsibilities were.

The Traditional Healers Association has over 5000 members. It is these care providers who are the primary source of care for the vast majority of Swazis. The GOS has explored the possibility of integrating the modern and traditional system, and in one project, a group of traditional healers and modern health workers were trained in malaria and malnutrition

workshops, and methods of diagnosis and prevention of childhood diarrhea, measles and whooping cough. (Annex 3, NGO Association membership lists)

2. Confessional Organizations: There was little information available on the existence and activities of these types of organizations. Sources at Catholic Relief Services in Baltimore reported that, to their knowledge, CARITAS/Swaziland was not involved in any health sector activities. The one group that was mentioned in the literature was the "Council of Swaziland Churches." This group received a U.S.A.I.D. grant to implement a program to construct water systems using community labor and encourage construction of pit latrines to reduce the prevalence of rural water-borne diseases.

### **C. Current Activities and Programs**

1. Government Programs: As noted above, the GOS' primary health care structure provides services to only half of the Swazi population; the remaining health and nutrition services are provided by the private sector and by PVOs/NGOs.

2. A.I.D.-funded Projects: The most recent major health projects supported by A.I.D. are the Primary Health Care Project (MSH and Drew University) and Family Health Services Project. (A new 3-year family planning and maternal/child health project, funded at \$5 million, and scheduled for start-up in 1992, is awaiting final funding decisions before beginning field work.) The former project developed a national plan to integrate immunizations, ORT, growth monitoring and child spacing activities into the formal health care delivery system. Its implementation period was FY 85 - FY 91, with a funding level of \$8.4 million.

The Family Health Services Project began in FY 88 and focussed on working with US (Project Hope) and local PVOs (primarily, Family Life Association of Swaziland) to promote high-risk birth management as an essential part of family health service delivery, and to increase the prevalence of the use of modern contraceptives and practice of child spacing. It is funded at \$2.6 million and is expected to complete its work in FY 93.

In addition to the Family Health Services and the Primary Health Care projects, A.I.D. regional projects that have been active in Swaziland include the ASCI/CCCD project. This project focused on strengthening the health infrastructure and expanding immunization coverage, use of oral rehydration therapy and control of malaria. The ORT campaign was managed by the "Mass Media for Health Practices" project. The CCCD project also provided on-site technical assistance through April 1991.

U.S.A.I.D./Gaborone also has provided buy-in funds to various centrally-funded projects including: AIDSCOM, AIDSTECH, Health Financing and Sustainability, Nutrition Education and Social Marketing, PRITECH II, REACH, Vector Biology and Control, WASH, WHO/Global Programme on AIDS, and Women Infant Nutrition centrally-funded projects. Johns Hopkins University's "Family Health Initiatives" project conducted a needs assessment

for family planning information, education and communication activities. WELLSTART trained Swazi health professionals in breastfeeding promotion at its San Diego center.

AED's HEALTHCOM project provided support for the design and implementation of a marketing system to promote the use of SSS for rehydration during episodes of diarrhea. After this marketing system was established, it expanded its efforts to develop messages for immunization campaigns. The GOS was impressed enough by the results of this project's activities that it began to develop a full scale communication program for all major ministries, including health, agriculture and education. It opened a [radio] broadcast channel for messages developed by these programs, and created a "development communication center" for use by all GOS ministries.

SUSTAIN project activities included a 1989 visit to Swaziland to investigate local resources for marketing sprouted sorghum as a weaning food additive. Other objectives were to assess the possibilities for blending flours to improve their nutritional value and the potential for expanding the food processing industry. The team members focussed on tying together U.S.A.I.D./Mbabane's interest in creating jobs with stimulating the private sector's diversification into food technology.

3. U.N. Agencies' Projects: The most active U.N. agency in Swaziland is UNICEF. It provided funds for an in-depth survey of women's and infants' feeding practices, with technical assistance from Manoff Associates. (See section IC, "Nutritional Status/Major Nutritional Diseases") This research activity fell within the larger domain of The Netherland's Committee for UNICEF's assistance to the "Swaziland Young Child Feeding Programme". This programme focussed on: promotion of breastfeeding and growth monitoring, income generation activities for women, and capacity building (training). \$541,855 was pledged to support this project.

UNDP does not have any activities in Swaziland. UNFPA is just ending its current country program, and is in the process of developing a new program to focus on contraceptive needs of youths and males, integrating family planning services into the health delivery system, increasing its support for supply of contraceptives (U.S.A.I.D. no longer provides this service), and human resource development. WFP is in the process of phasing-out its work, and while WHO has no direct input in Swaziland at the moment, it has provided financial support to various child survival campaigns.

4. Other Donors' Projects: The Government of Israel's Division of International Cooperation has supported training in Israel for Swazi medical, agricultural and regional development personnel. Training costs were supported by a grant from A.I.D. for \$1.5m during FYs 86-88.

The World Bank currently has no activities in Swaziland, but will begin work this year on its country "Population, Health and Nutrition Review." This review, to be completed by July 1993,

will be the baseline document on which the Bank will make decisions for inputs needed to support in-country activities.

Other donors that are active in Swaziland, although not necessarily in the health and nutrition sector, are the E.E.C., IDRC, NORAD (Norway's development agency), SAREC (Sweden's development agency) and the U.K..

5. PVOs' Activities and Projects: According to the U.S.A.I.D./Mbabane HPN Officer, there are no U.S. PVOs working in the nutrition sector. The most active American PVO working in health is Project Hope. The project's primary objectives are to: (a) improve the maternal/child health and community health components of the basic nursing curriculum at the Nazarene College; (b) design and implement a one-year postgraduate community health nursing program at SIHS; (c) develop and implement a training program in basic primary health care skills for nursing assistants at Good Shepherd Hospital; (d) develop a cost-effective materials management program to establish an appropriate and reliable drug and medical supply system in Swaziland, and (e) provide assistance to the "Traditional Healer Organization" in increasing knowledge of healers in selected child survival interventions and HIV/AIDS (Its activities fall within the "Family Health Services" project, scheduled for completion in FY 93.) Project Hope also provides assistance to the AIDS Support Center.

The Salvation Army World Services Organization (SAWSO) also works in Swaziland and received central funds from A.I.D. in FYs 87 and 88 for grants to strengthen the organization's human and institutional resources in 16 countries, including Swaziland. SAWSO trained trainers, improved local management and administrative processes, and taught technical skills in community development, primary health care, income generation and agriculture to its local affiliates.

There are no Peace Corps health volunteers working in Swaziland. Neither CARE, Catholic Relief Services, Helen Keller International nor Save the Children do any health-related work. Save did provide logistical support for the National Nutrition Council's "Promotion of Improved Child Feeding" project.

#### **D. Existing Human Resources**

80-85% of the population use the 5000 traditional healers as their primary source of health care. These nonformal care providers have their own "professional" organization, Traditional Healer Organization, and as such, may provide an organizational structure for strengthening and expanding access to health delivery services.

In addition to these "nonformal" health care providers, the frontline workers in the PHC system are the 400 "Rural Health Motivators" (RHM). A 1986 evaluation of the RHM system, however, found that these care providers rarely saw members of their communities on a routine basis.

While nurse-midwives make up over 70% of the health cadres that provide direct patient care, recent studies indicated that these professionals might not be perceived as being the source of care women would most prefer. This perception appeared to be a result of class and economic barriers that inhibited women from feeling comfortable with the nurse-midwives.

#### **E. Existing Support Mechanisms and Systems for Community Outreach and Mobilization for Nutrition Promotion**

Theoretically, community-based health and nutrition services are provided by the RHMs; however, as just noted above, these care providers have little contact with their clients. While one of the official tasks of clinical nurses is to make community visits, these rarely occur. Thus, the most reliable means of outreach is the traditional healers, who provide direct entry to the health care system for most rural citizens. There was no information available that would indicate that there were other mechanisms to support and/or provide outreach services.

#### **F. Funding Available for Nutrition Services**

Funding specifically for nutrition services was not available. GOS and U.S.A.I.D. funding levels for health services, of which nutrition is assumed to be a part, are reported elsewhere. There was no other donor-specific funding information available.

### **IV. OPPORTUNITIES AND CHALLENGES FOR IMPROVING WOMEN AND INFANT NUTRITION IN SWAZILAND**

Given the picture of health and nutrition services as they exist in Swaziland, and given the clear needs for expanding service delivery to all Swazi citizens, three potential areas of intervention might be explored by the WINS project. These are: investigating means to strengthen health and nutrition service delivery by the private sector, improving service delivery to women, and determining ways to improve accessibility to a variety of foods.

#### **A. Private Sector Health and Nutrition Service Delivery**

Public sector support for and provision of health and nutrition services delivery has not been able to keep up with the increased demands of the Swazi population. While some indicators have shown an improvement over time in the health and nutrition status of vulnerable Swazis, that is, its women and children, there clearly needs to be an increase in investment in providing services in settings that are accessible and appropriate to those who would use them. The low access rate for public sector services, the high user rate (80-85%) for traditional healers, the GOS' inability to increase its input into public sector service delivery, and U.S.A.I.D.'s commitment to encouraging small and private enterprise development clearly indicate directions to be explored in extending the service delivery area.

The WINS project might approach the mission and the GOS with the suggestion of investigating use of several alternatives as health care sources as means to extend service delivery beyond its current limits. One of these alternatives are the "traditional healers." That these care providers are accessible to most homesteaders and are, in fact, the provider of choice in many instances, make them a viable means to extend quality services to all citizens. Both UNICEF and U.S.A.I.D. have provided funds to strengthen these care providers' abilities, thus making it somewhat likely that they would be willing to continue to support their original investments.

Another structure that might prove to be a reliable alternative is the "Family Life Association of Swaziland." This PVO is well-known to the U.S.A.I.D. mission and has had mission support to strengthen its management, administrative and technical capabilities.

A third alternative is the "Rural Health Motivators." Although support to these public sector health workers apparently has not been sufficient to make them as effective as they might be, a range of means to strengthen their capabilities and increase their motivation could make these front-line care providers more effective and efficient.

Applied or operations research could be used as methods to compare these alternative sources of service delivery, and formative research could fill in the gaps in developing services that are culturally appropriate and responsive to the needs of the Swazi people.

## **B. Women's Health Care Service Delivery**

Related to the need to determine effective means to expand appropriate health and nutrition services is the need to specifically target and strengthen services to meet women's health and nutritional needs.

Preferences for health care services can be influenced by a range of factors, including accessibility, affordability, and attitudes, perceptions and behaviors of care providers and care seekers. While some surveys and studies have collected information on women's attitudinal and cultural perspectives of professional care providers, it does not appear that these have been used to make improvements in the quality of service delivery to these women. This may be due, in part, to the lack of information regarding health care providers' (both formal and nonformal) attitudes and beliefs vis-a-vis women, their concerns and constraints, and how these might affect women's perceptions of those providers.

Complicating these attitudinal factors is the strong role that tradition plays in Swazi society. The effects this conservative context has on influencing choice and delivery of health care clearly needs exploration before efforts to redesign or strengthen existing care options begin.

One possible consequence of the traditional tenor of Swazi culture is the relative lack of research on family planning issues, including health and nutritional status of pregnant and lactating women, prenatal and post-natal care, and incidence and prevalence of pregnancy-related health problems. This incomplete picture of key events in women's lives exists at a time when the

GOS has pledged itself to efforts to increase the number of women seeking antenatal and postnatal care (Department of Economic Planning and Statistics, 1990).

Both Project Hope and UNICEF have provided assistance to strengthen the skills of formal (nurses) and nonformal (traditional healers) care providers. These initiatives could serve as a spring board for additional inputs to include skill training, including counseling techniques, of the RHMs and medical personnel.

Finally, by linking the efforts to make women's health services responsive and sensitive to women's needs with those to extend health and nutrition service delivery areas by enhancing the private sector and alternative providers as viable sources of care, WINS, the U.S.A.I.D. mission and the GOS might find the right path to develop a model for comprehensive care that would have long term benefits for Swazi women.

### **C. Improved Accessibility to and Promotion of Balanced Dietary Intake**

A third avenue that appears to need support is follow-up on the broad range of recommendations issuing from existing studies, surveys, and reports. A central theme that runs through these documents is the need to increase accessibility to and consumption of a varied and balanced diet. This is particularly true for children (and one would assume, women) living in the Swazi Nation Land.

Food accessibility touches on a range of factors, some of which can be influenced and changed; others are less amenable to change, if at all. WINS could use the need to identify influencing factors and to arrive at solutions to increase accessibility to a variety and adequate supplies of foods as an opportunity to propose some "collaborative research" studies. Using systems analysis for problem identification, analytical techniques then could be used to "weigh" the relative value of these factors and possibilities of their being changed. Various solutions (including improved food technology and agri-business promotions) could be designed, tested and evaluated, leading to action-oriented recommendations to improve the quality of diet particularly for women and children.

## CONTACT PERSONS IN SWAZILAND

The following persons are key contacts in Swaziland. Also attached are participant lists from the National Nutrition Workshop and the Workshop on Communications Planning.

The principal host country contact person could be: Mrs. Juliet Aphané. She is a nutritionist, working in the Food and Nutrition Section of the Ministry of Agriculture. She has been involved in all major nutrition sector activities over the past 10-15 years, and often represents Swaziland in international meetings. She can be reached at:

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Appendix I-A

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Planning Committee:

LEMMA MFNOUTA (Chairman), MARTIN BYRAM, ELLIOT GINIDZA, TED  
GREEN, BILL HOADLEY, T. MAKAMA, M. E. MDZINISO, and W. M. NXUMALO

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## APPENDIX A

## PARTICIPANT LIST

NATIONAL NUTRITION WORKSHOP

June 17 - 22, 1985

MINISTRY OF EDUCATION

Mrs. B. . . Nxumalo - Pre-school  
District Education Office  
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Post Office Box 73  
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Mrs. D.J. Dube  
Home Economic Inspector  
Post Office Box 190  
Manzini

Miss K.T. Vilakati  
Home Economic Inspector  
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Dr. Huppert  
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Mr. Musa Dlamini  
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Hlathikhulu Government Hospital  
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Nhlangano

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Ministry of Agriculture  
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Ministry of Agriculture  
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Mrs. Katamuzi  
Department of Economic Planning  
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NUTRITION COUNCIL

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Ministry of Agriculture  
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 Ministry of Agriculture  
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 Mbabane

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Atlanta, GA 30333

The following individuals, who constituted the core working group, are gratefully acknowledged. Without their considerable donation of time and diligent effort, this workshop would not have been possible.

Juliet Aphané  
Sibongile Kunene  
Vernon Mngomezulu  
Matron Ntiwane  
Lombuso Nxumalo  
and  
Thokozile Sibiya

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JUNE, 1991

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SWAZILAND

VALUES FOR DEMOGRAPHIC AND HEALTH INDICATORS

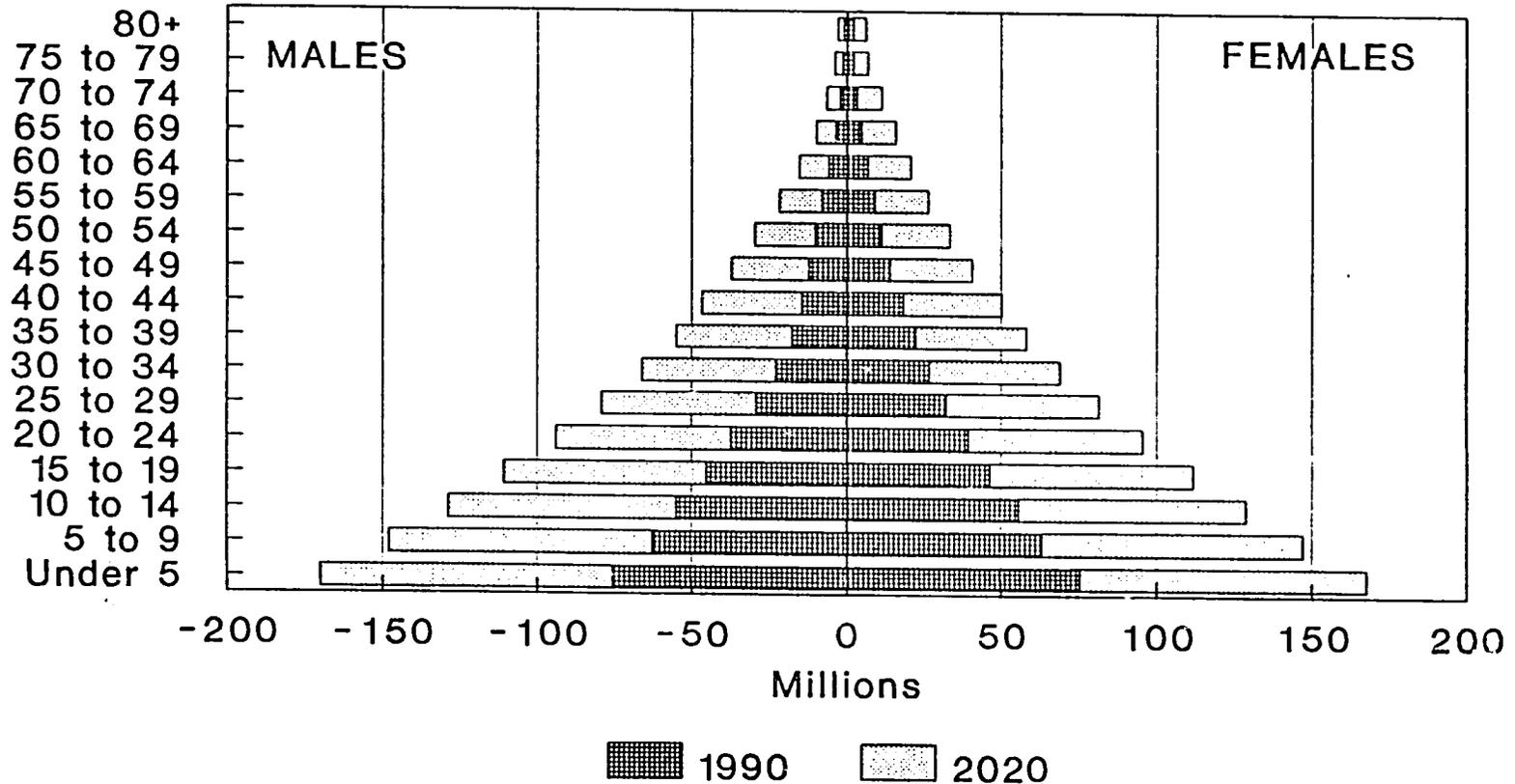
Demographic Indicators	Value	Year	Source
Total Population	788,476	1990	A
Infant Mortality Rate	113	1990	A
Under 5 Mortality	164	1990	B
Life Expectancy At Birth	57	1990	A
Children Under Age 1	33,966	1990	A
Annual Infant Deaths	4,148	1990	A
Total Fertility Rate	6.5	1990	A
Child Survival Indicators			
Immunization Coverage			
BCG	96.0%	1989	C
DPT 3	89.0%	1989	C
Measles	85.0%	1989	C
Polio 3	89.0%	1989	C
Tetanus 2	63.0%	1989	C
Oral Rehydration Therapy			
ORS Access Rate	90.0%	1989	D
ORT Use Rate	85.0%	1989	D
Contraceptive Prevalence			
All Methods (15-44)	19.8%	1988	E
Modern Methods (15-44)	17.0%	1988	E
Nutrition			
Adequate Nutritional Status	N/A		
Appropriate Infant Feeding			
a) Exclusive Breastfeeding	N/A		
b) Introduction Of Solids	N/A		
Breastfed 1 Year Or Longer	N/A		

- 
- A World Pop. Prospects, 1990: U.M. Tape #PRO206
  - B Mort. of children under age 5 (ST/ESA/SER.A/105)
  - C WHO/EPI/CEIS/91.1, April, 1991
  - D WHO/CDD Facsimile, 7/15/91
  - E Survey as cited in World Population Profile, 1989

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# SWAZILAND: CURRENT AND PROJECTED POPULATION BY AGE AND GENDER: 1990 - 2020

Total Population: FY 1990: 836,630; FY 2020: 2,095,402



U.S. Bureau Of The Census, 10/91

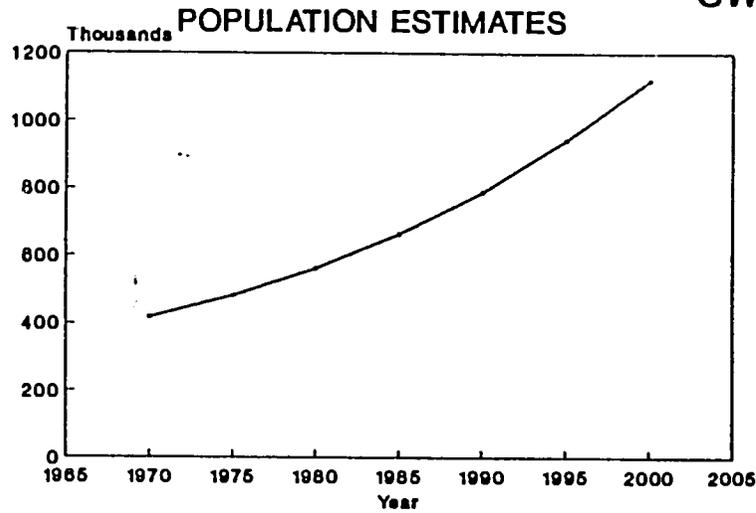
CIHI/ISTI, 11/91

**Trends: Selected Demographic Indicators  
Swaziland: 1950-2000**

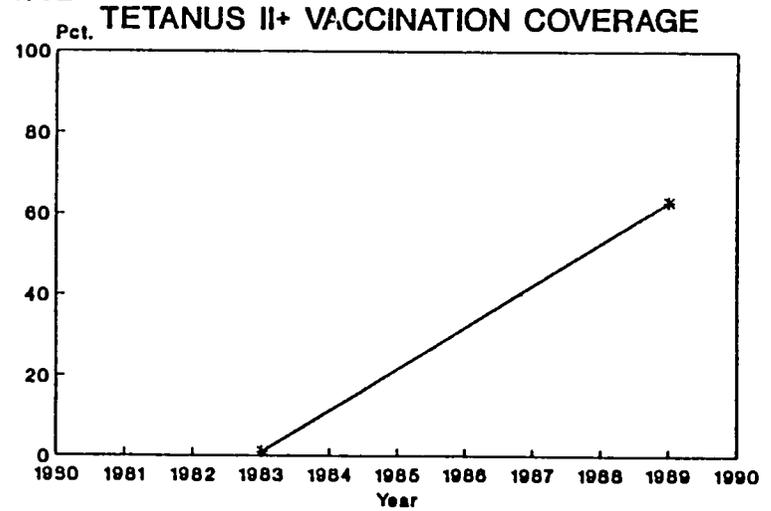
	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000
<b>Total Population (000)</b>											
UN/POP/1990	264	291	326	370	419	482	563	664	788	943	1,121
BUCEN/1990	277		352		455		607		837		1,124
	1950-55	1955-60	1960-65	1965-70	1970-75	1975-80	1980-85	1985-90	1990-95	1995-00	
<b>Infant Mortality Rate</b>											
UN/POP/1990	160.0	154.0	150.0	147.0	144.0	140.0	129.0	118.0	107.0	97.0	
<b>Under 5 Mortality Rate</b>											
UN/POP/105	240.0	230.0	224.0	220.0	215.0	209.0	191.0	173.0	155.0	139.0	
<b>Total Fertility Rate</b>											
UN/POP/1990	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.1	
<b>No. Of Births Per Year (000)</b>											
UN/POP/1990	14	15	17	19	21	25	29	34	40	46	
<b>Annual Infant Deaths (000)</b>											
UN/POP/1990	8	8	8	8	8	8	9	9	10	10	
<b>Crude Birth Rate</b>											
UN/POP/1990	50.0	49.4	48.5	47.9	47.5	47.3	47.1	46.9	46.7	44.2	
<b>Crude Death Rate</b>											
UN/POP/1990	28.2	25.2	22.5	20.2	18.0	16.1	14.1	12.5	11.1	9.5	

CIHI/ISTI, January 1992

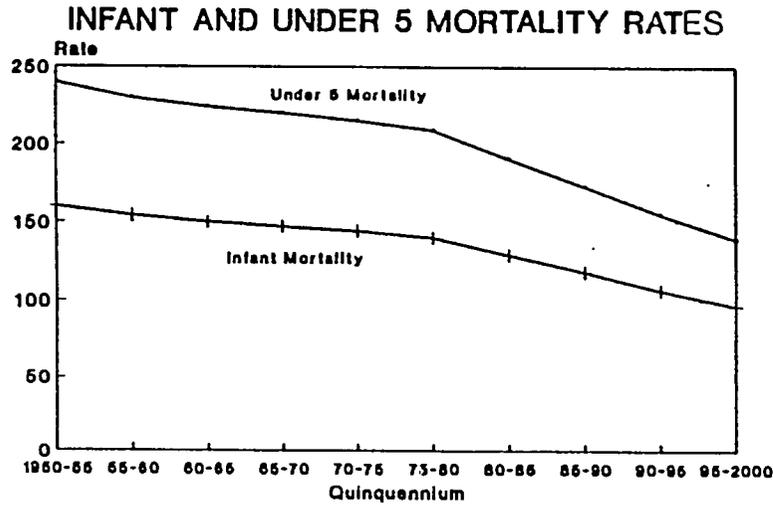
# SWAZILAND



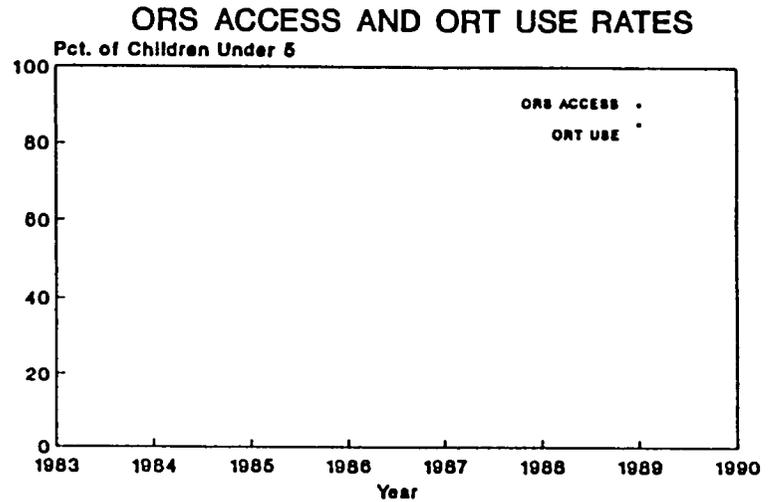
SOURCE: United Nations,  
World Population Prospects, 1990



SOURCE: World Health Organization  
Annual Reports of the EPI Programme



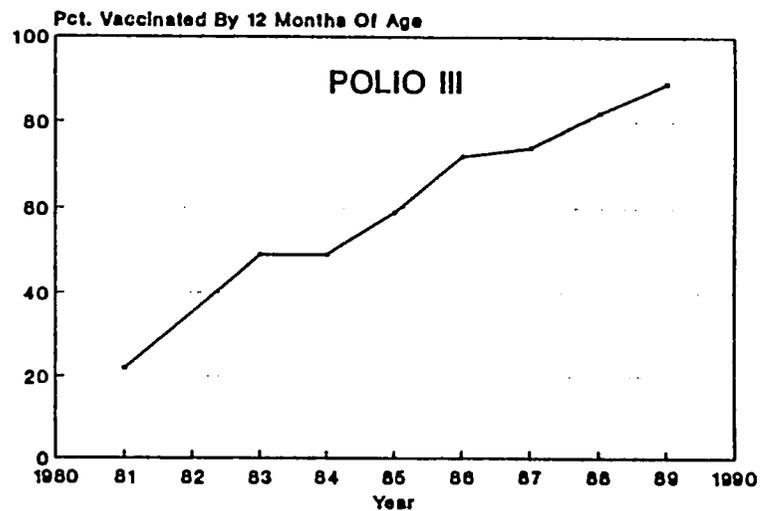
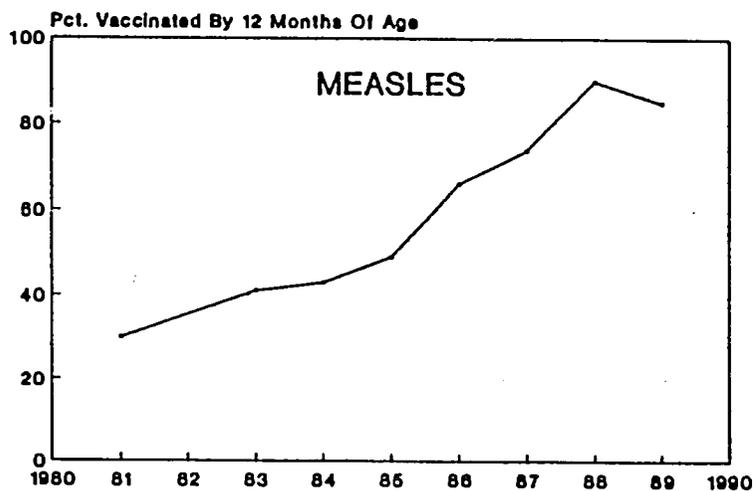
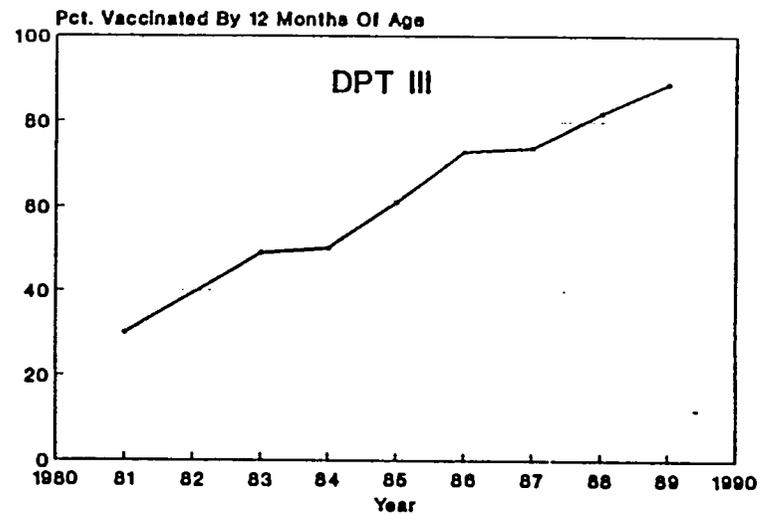
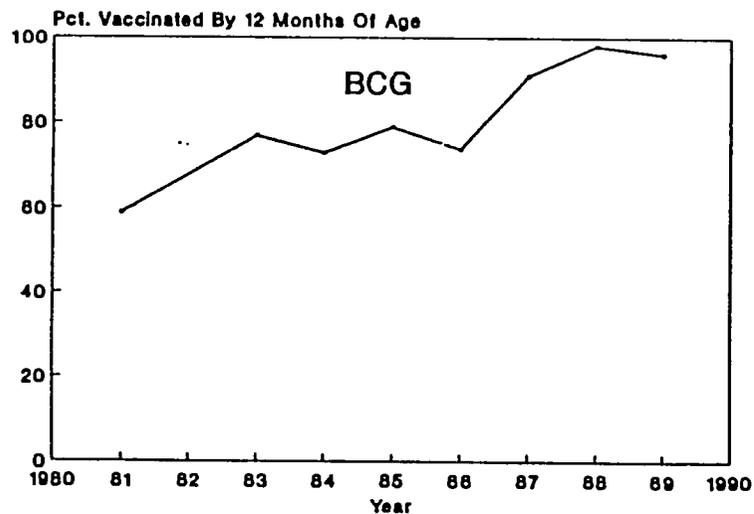
SOURCE: United Nations;  
1) World Population Prospects, '90, and  
2) Mortality of Children Under Age 5 '89



SOURCE: World Health Organization  
Reports of the Program for Control of  
Diarrhoeal Diseases

CIHI, ISTI; 6/91

## VACCINATION COVERAGE RATES IN SWAZILAND



SOURCE: WHO, Annual Reports of the EPI Programme 1986, National Family Health Survey

CIHI, ISTI; 6/91

**Trends: Selected Health and Child Survival Indicators**  
**Swaziland 1980-1990**

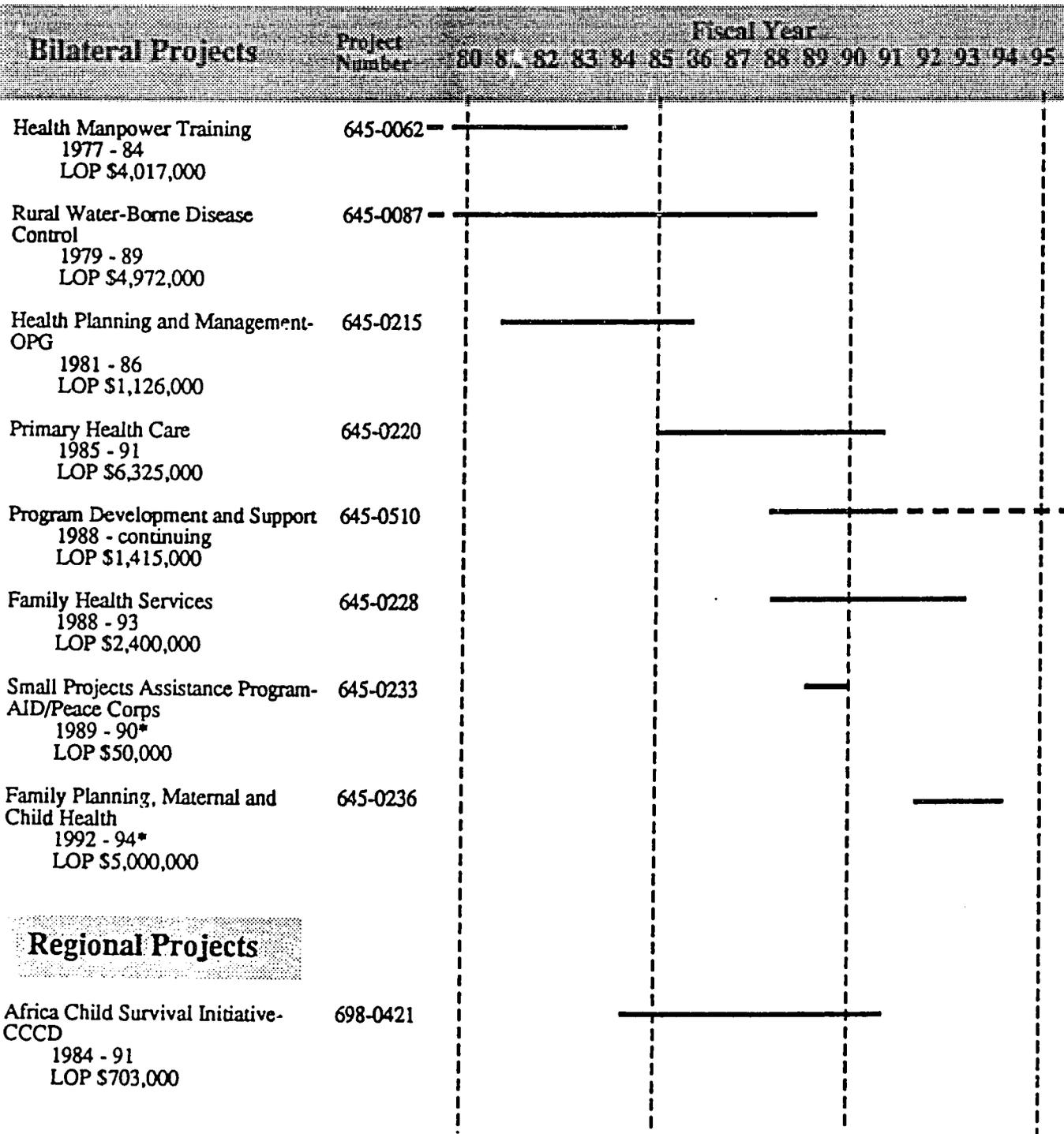
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>Vaccination Coverage</b>											
WHO/EPI, 1988-Fam. Health Sur.											
a. BCG.....	--	59.0	--	77.0	73.0	79.0	74.0	91.0	98.0	96.0	--
b. DPT 3.....	--	30.0	--	49.0	50.0	61.0	73.0	74.0	82.0	89.0	--
c. Measles.....	--	30.0	--	41.0	43.0	49.0	66.0	74.0	90.0	85.0	--
d. Polio 3.....	--	22.0	--	49.0	49.0	59.0	72.0	74.0	82.0	89.0	--
e. Tetanus 2.....	--	--	--	1.0	--	--	--	--	--	63.0	--
<b>ORS Access and ORT Use</b>											
WHO/CDD											
a. ORS Access.....	--	--	--	--	--	--	--	--	--	90.0	--
b. ORT Use.....	--	--	--	--	--	--	--	--	--	85.0	--
<b>Contraceptive Prevalence (15-44)</b>											
1988-Survey cited by BUCEN/1991											
a. All Methods.....	--	--	--	--	--	--	--	--	19.8	--	--
b. Modern Methods.....	--	--	--	--	--	--	--	--	17.0	--	--
<b>Nutrition and Infant Feeding</b>											
a. Adequate Nutritional Status.....	--	--	--	--	--	--	--	--	--	--	--
b. Appropriate Infant Feeding.....	--	--	--	--	--	--	--	--	--	--	--
c. Exclusively Breastfed.....	--	--	--	--	--	--	--	--	--	--	--
d. Complementary Feeding.....	--	--	--	--	--	--	--	--	--	--	--
e. Continued Breastfeeding.....	--	--	--	--	--	--	--	--	--	--	--
<b>Water Supply Coverage (% Served)</b>											
1985-WHO/1990, 1988-WASH Sector Profiles, Africa											
a. Urban Areas.....	--	--	--	--	--	100.0	--	--	100.0	--	--
b. Rural Areas.....	--	--	--	--	--	7.0	--	--	7.0	--	--
<b>Adequate Sanitation Coverage (% Served)</b>											
WHO/1990											
a. Urban Areas.....	--	--	--	--	--	100.0	--	--	100.0	--	--
b. Rural Areas.....	--	--	--	--	--	25.0	--	--	25.0	--	--

CIHI/ISTI, May 1991

See Data Notes

## Timeline: USAID-Funded Activities Related to Health in Swaziland FY 1980 to Present

This chart contains USAID-funded projects active since 1980 known to contain a health, child survival, population or nutrition component. The project's beginning year and project completion date (PACD) appear after the project title. Dollar amount is the total life-of-project (LOP) funds for the entire project and not an amount allocated to a specific component of the project. Regional and central LOP's are for Swaziland specifically. Please see Data Notes.



\* Fiscal year of final obligation  
\*\* Total LOP is not available.



CENTER FOR INTERNATIONAL HEALTH INFORMATION/ISTI  
USAID Health Information System

**Timeline: USAID-Funded Activities Related to Health in Swaziland:  
FY 1980 to Present**

Central Projects	Project Number	Fiscal Year															
		80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
Improvement of Maternal and Infant Diet Project 1987 - 87* LOP **	931-1010									—							
Wellstart: Location Management Training 1988 - 89* LOP **	931-1010												—				
Maternal and Infant Nutrition/Health Research Grant-International Center for Research on Women 1988 - 89* LOP **	931-1010												—				
WHO/Global Programme on AIDS 1988 - 89* LOP \$17,000	936-5965												—				

Other, usually short-term, health and nutrition projects known to have worked in Swaziland include:

AIDSCOM  
 AIDSTECH  
 HEALTHCOM  
 Health Financing and Sustainability  
 Nutrition Education and Social Marketing  
 PRITECH I & II  
 REACH

\* Fiscal year of final obligation  
 \*\* Total LOP is not available.

*Not exactly*  
MEMBERSHIP LIST 1992/93

1. SWAZILAND WORKCAMP ASSOCIATION
2. NATIONAL COUNCIL ON SMOKING ALCOHOL AND DRUG DEPENDENCE (COSAD).
3. EMANTSI ESIVE - *Not*
4. LEPROSY CONTROL PROGRAMME
5. REHABILITATION INTERNATIONAL
6. FAMILY LIFE ASSOCIATION (FLAS)
7. SALVATION ARMY
8. MANTENGA FOUNDATIONS
9. MALKERNS WOMEN'S INSTITUTE
10. SWAZILAND FARMER DEVELOPMENT FOUNDATION
11. EMKHUZWENI HEALTH CENTRE
12. ZONDLE WOMEN'S ORGANIZATION
13. SWAZI RETIRED CENTRE
14. SWAZILAND INFANT NUTRITION ACTION NETWORK (SIMAN)
15. CARE INTERNATIONAL - *SED*
16. SWAZILAND HOSPICE AT HOME
17. TRADITIONAL HEALERS OF AFRICA
18. SWD. ASSOCIATION FOR CRIME PREVENTION AND THE REHABILITATION OF OFFENDERS (SACRO).
19. RALEIGH FITKIN MEMORIAL HOSPITAL (R.F.M.H.)
20. BAPHALALI SWAZILAND RED CROSS SOCIETY
21. SAVE THE CHILDREN FUND - *no title*
22. TONGONTONGO RURAL TRAINING CENTRE
23. YONGE NAVE - *Nature Conservation*
24. SKILLSHARE AFRICA
25. — ~~SWAZILAND NATIONAL SOCIETY FOR THE HANDICAPPED (S.N.S.H.)~~
26. SWD. FAMILY BURIAL SOCIETY
27. SWEDISH ALLIANCE MISSION
28. WORLD UNIVERSITY SERVICES (CANADA)
29. AFRICA CO-OPERATIVE ACTION TRUST (ACAT)
30. LUTHERAN WORLD FEDERATION (L.W.F.)
31. WORLD UNIVERSITY SERVICES IN SWAZILAND
32. SWD. NATIONAL EX-MINERS CO-OPERATIVE SOCIETY (SNEMCOS)
33. SWAZILAND NATIONAL ASSOCIATION OF THE DEAF. (SNAD)
34. IFBAN AFRICA
35. COUNCIL OF SWAZILAND CHURCHES

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awareness of what others are doing.

Proposals have been submitted to international donors for short-term technical and financial assistance to allow the considerable initial work in establishing a fully-fledged resource centre to be carried out, streamlined information systems set-up, and training undertaken with a view to the maintenance and up-dating of the system being integrated into the routine work of the existing Assembly staff.

*The Management Training and Advisory Programme*

The Management Training and Advisory Programme is a new programme recently established (July 1991) using donor grants. It is designed to give NGOs access to appropriate management

## Membership List 1991

Zond's Women's Organisation  
Leprosy Control Programme  
World University Services of Canada (WUSC)  
Swaziland Family Burial Society  
Emanti Esave  
Manzini Industrial Training Centre (MITC)  
Swi. Hospice at Home  
World University Services (Swaziland) (WUS)  
Swi. Association for Crime Prevention and the Rehabilitation of Offenders (SACRO)  
Occupational Health Services  
Good Shepherd Hospital  
Chochire Homes of Swaziland  
Save the Children Fund  
Africa Co-operative Action Trust (ACAT)  
Emkhuzweni Health Centre  
Salvation Army  
National Council on Smoking, Alcohol and Drug Dependence (COSAD)  
Fitzhugh Fitch Memorial Hospital  
School of Appropriate Farm Technology (SAFT)  
Swaziland Marriage Counsellor Association  
Rehabilitation International  
Project Hope AIDS  
Business Management Extension Programme (BMEP)  
Tongontongo Rural Training Centre  
Swedish Alliance Mission  
Skilshano Africa  
Mankoma Women's Institute  
Mantenga Foundation  
Youth Brigades of Swaziland  
Swi. Infant Nutrition Action Network (SINAN)  
Swaziland Farmer Development Foundation (SFDF)  
Swaziland Conference of Churches  
Yonga Nawe  
Swazi Retired Centre  
Council of Swaziland Churches  
Family Life Association of Swaziland (FLAS)  
Baptist Red Cross  
National Consumers Association  
Swaziland National Society for the Handicapped

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TELEGRAMS: BOTSEM, WASHINGTON, D.C.  
TELEX: 64221 BOTWASH  
FAX: (202) 244-4164

OUR REF: BW/OP 5/79  
YOUR REF:

June 15, 1992

Mme C. Johnson-Welch  
10501 Procter St.  
Silver Spring, MD 20901

Dear Ms. Johnson-Welch.

Enclosed is some of the information you requested on local NGO's in Botswana, on our meeting on May 29th. Sorry for the delay, it took quite a while to receive the information.

We are always grateful to be of any assistance, so please do not hesitate to contact us if you need more information.

Yours sincerely,

Tapiwa Mongwa  
Third Secretary

Enc:  
TSM/htm



12

10/06'92 16:24

313584

HOMES

P.02

Non-Governmental Organisation

These Fall Under Health

Nurses Association of Botswana

Hospital Fellowship of Botswana

Public Health Inspectors Association

Botswana Medical Aid Association

Botswana Council of Disabled

Association for Parents of Mentally Handicapped

Human Development

Botswana Young Women's Christian Association

Christian Women's Fellowship

Botswana Family Welfare Association

American Women's International Association

Emang Basadi Association

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### PROFESSIONALS

Association of Accounts In Botswana  
Association of Training Development Officers  
Botswana Engineers Society  
Dental Therapists Association of Botswana  
Botswana Physiotherapy Association  
Botswana Primary Teachers Association  
Botswana Geo-Scientists Association  
Botswana Institute of Architects  
Botswana Institute of Development professionals  
Botswana Science Association  
Botswana Teachers Union  
Botswana Veterinary Association  
Groundwater Association of Botswana  
The Mathematical Association of Botswana  
University of Botswana Alumni Association of Botswana  
SADCC Regional Business Council Geography Association of Botswana

### SOCIETY RESEARCH

Botswana Society  
Botswana Animal Health Assistant Association  
Botswana Educational Research Association  
Hotel and Tourism Association of Botswana  
The Botswana Society for prevention cruelty to animals.

### Natural Resources Developments

Natural resources conservation society  
Kalahari Conservation Society

### Disaster Relief Organisation

Botswana Red Cross Society

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