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AGENCY FOR
INTERNATIONAL
DEVELOPMENT

# RWANDA

# COUNTRY DEVELOPMENT STRATEGY STATEMENT

# FY 83

BEST AVAILABLE

January 1981

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
WASHINGTON, D.C. 20523

UNCLASSIFIED

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# COUNTRY DEVELOPMENT STRATEGY STATEMENT

FY 1983

RWANDA

AID Affairs Office/Rwanda

January, 1981

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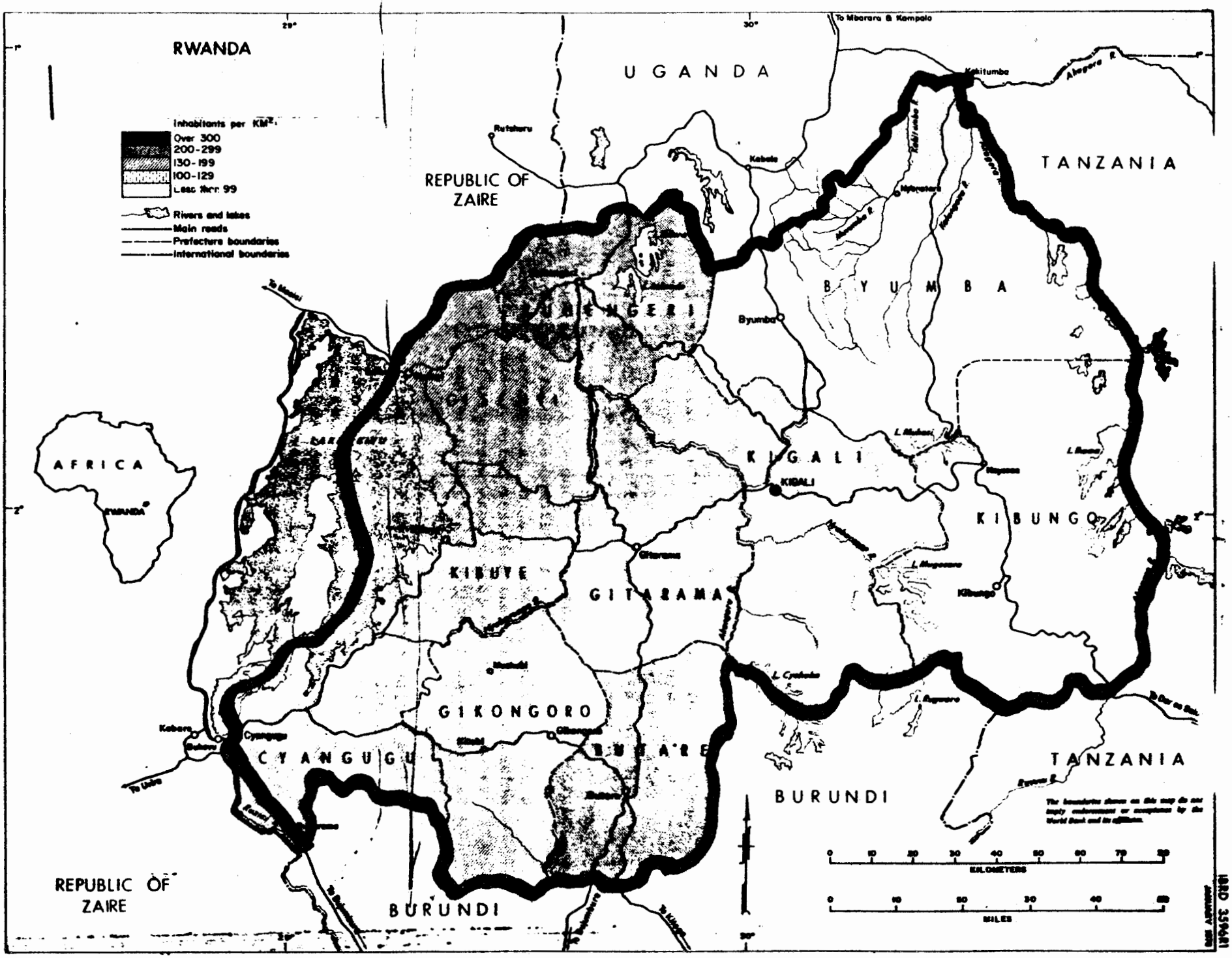
RWANDA
Inhabitants per KM².
Over 300
200-299
130-199
100-129
Less than 99
Rivers and lakes
Main roads
Prefecture boundaries
International boundaries
UGANDA
TANZANIA
REPUBLIC OF ZAIRE
BURUNDI
AFRICA
RWANDA
BYUMBA
KIGALI
KIBUNGO
KIBUYE
GITARAMA
GIKONGORO
CYANGUGU
RUHENGERI
GISENYI
Kabale
Kakitumba
Byumba
Kigali
Kibungo
Kibuye
Gitarama
Gikongoro
Cyangugu
Kabare
Butare
To Mbarara & Kampala
To Mwanza
To Usumbura
To Kitega
To Dar es Salaam
KILOMETERS
MILES
IBRD 3596R1

# RWANDA COUNTRY DEVELOPMENT STRATEGY STATEMENT

## PART I. MACRO-ECONOMIC OVERVIEW

The Rwandan economy is heavily dependent upon the agricultural sector which provides a livelihood for about 90% of the population and centers mostly around subsistence and market-gardening agriculture as well as the production of coffee and tea for export. Agriculture's share of GDP has fallen from 76% in 1964 to 49% in 1976 and is expected to fall further to 40% in 1980. The services sector has grown rapidly from 28% of GDP in 1975 to over 33% in 1979 as a result of the rapidly developing tourist industry and from the increase in government services. Manufacturing and construction industries are the third most important contributors to GDP and their share has risen from about 17% of GDP in 1975 to 19% in 1979. A major earner of foreign exchange, the mining sector continues to provide 2% a year to GDP.

The disruptions caused by the conflict in Uganda in 1978-79 had severe repercussions on the economy of Rwanda. The closure of the border between the two countries resulted in the inaccessibility of the primary land route to Mombasa in Kenya, through which about 90% of Rwanda's international trade passes. Essential inputs for most of the economic sectors were affected and, consequently, outputs declined. It is estimated that the equivalent of 1% and 2% of GDP in 1978 and 1979, respectively, were lost as a direct result of the border closure in 1978 and during the first four months of 1979. Real GDP, growing at an average of about 6% in 1976-77, slowed down to about 5% in 1978 and just over 4% in 1979. Per capita GDP stood at about $200 in 1979.

Prospects for 1980 are not favorable. Real GDP growth is expected to remain approximately equal to the 4% achieved in 1979. Such a rate is barely above the population growth rate. The value added by agriculture (both domestic and export crops) is projected to decline by about 2% in real terms due to the dry weather that prevailed during the first half of the year, and which reduced the harvest. The expected recovery in the mining sector, with a projected real growth rate of 13%, is based entirely on the replacement of dilapidated machinery in 1979. Investment in the transport

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sector should increase sharply, due to additional incentives provided by new regulations requiring importers and exporters to give preference to the local transport companies. Performances in the other sectors are projected to be modest.

## AGRICULTURE

Agriculture remains the most important economic activity in Rwanda. Roughly 95% of the cultivated area is devoted to a fairly diversified production of foodcrops (bananas, sorghum, peas, beans, maize, cassava and sweet potatoes). Production of foodcrops barely kept pace with population growth over the period 1975-79 due to unfavorable weather conditions and decreasing soil fertility. For 1980, indications are that the growth rate of agricultural production for domestic consumption is unlikely to exceed the 4% rise in real terms recorded in 1979.

The development of the agriculture sector has received paramount consideration in the economic development strategy, with the government's overriding objectives being to attain relative self-sufficiency in foodstuffs in the medium term and the diversification of the country's export base. The next Five-year Development Plan will emphasize the continuation of the present policies in agriculture.

Coffee continues to be the largest source of export earnings, accounting for about 60% of total export proceeds in recent years. In addition, coffee constitutes the primary source of monetary incomes for a large proportion of the population, and the revenue derived from taxes on coffee exports represents a significant element in total budgetary receipts. Production is undertaken mainly by individual farmers, numbering more than half a million in 1980, on small holdings with an average of 120 coffee trees. Production in 1980 is projected to be down by 21% from last year to 20,400 tons.

Tea production continues to increase and is expected to reach 7,500 tons in 1980, an increase of 32% over 1979. Most tea is produced on large plantations in which the government holds a 49% interest. The government is continuing to encourage the extension of tea cultivation through incentives to the farmers. Tea exports contribute 10% of Rwanda's foreign exchange earnings.

Less important export crops are pyrethrum and cinchona (quinine). Production of both crops have dropped recently but the opening of an insecticide refinery in 1980 should help revitalize pyrethrum production.

## MINING

Cassiterite and wolfram, the principal mineral products, are still important sources of export earnings (together accounting for about 20% of merchandise export receipts in 1979) but production has stagnated over the last decade due to resource depletion and rising production costs. On-going mineral exploration has so far produced no significant new finds.

The main problem with the mining sector in Rwanda has stemmed from the landlocked position of the country, which has made both the exploitation of minerals and the importation of the necessary inputs cumbersome and relatively expensive. All mineral exports have to be air freighted, and shortages of essential inputs, such as those that occured during the closure of the Uganda border in late 1978-early 1979, have resulted in severe slowdowns in mining operations.

## MANUFACTURING

The growth of output in manufacturing has been relatively rapid over the past decade with gradual enlargement of the range of manufacturing activities to a present level of almost 100 modern manufacturing firms. In 1979, manufacturing accounted for about 14% of GDP with agro-industry and food processing activities being the most important. Development of manufacturing in Rwanda has been limited for a number of reasons. First, there is limited demand due to the small domestic market and the limited possibilities of exports to neighboring countries. Second, investment costs are high due largely to transport cost. Low public and private savings limit the possibilities of industrial investment by either Rwandan nationals or the government and finally, there is serious lack of local entrepreneurs and skilled manpower.

## ENERGY

Although the importation of petroleum products accounts for 10% of

total imports and has increased somewhat during the recent years, Rwanda still obtains the major part of its energy from wood. The energy policy being pursued is one of diversification of the energy sources so as to lessen the dependence on imported oil. Hydroelectric power plants have been installed, both in association with neighboring countries and independently, and hydroelectric power now accounts for an appreciable proportion of the total energy requirements of the country. Energy conservation measures are also being taken, including the government policy of immediate and full transmittal of increases in the import costs of petroleum products to the consumers. Imports of petroleum products are, however, subject to preferential customs duties.

## PRICES

In recent years price movements in Rwanda have been strongly influenced by disruptions in the external supply routes and by the inadequacy of the internal transportation network. After having risen by 7% in 1976, the general price index rose by 14.7% in 1977 due to transport problems through Uganda. The rise of 12.5% in 1978 was due largely to poor banana and potato crops as well as internal transportation bottlenecks. The closure of the route to the coast was largely the cause of the 15.8% rise in 1979. It is anticipated that the rate of inflation will decrease somewhat in 1980 due to the re-opening of the route to the sea.

## EMPLOYMENT AND WAGES

Only fragmentary data are available on the size and composition of the labor force. While formal sector employment has increased rapidly, it has not kept pace with the growth in the labor force. The increasing pressure on available land resources has led to continued rural to urban migration and an increase in urban unemployment.

A recent increase in public sector wages in September 1980 raised salaries in senior grades by 10% and by up to 25% for lower grades. Similar increases were urged for the private sector, for which there is a minimum wage scale, except where the wage increases would affect a company's financial viability. In practise, prevailing wages in the private sector are higher than both the established minima and government wages.

PUBLIC FINANCE AND RECURRENT COSTS

The government has produced "budgetary surpluses" in the current budget for each year from 1976-80. It should be noted, however, that a significant amount of recurrent as well as capital costs are financed by donors and do not transit through the budget.

The revenue base is narrow and depends strongly on taxes on international trade (58% of revenues in 1979 and estimated 44% in 1980). Receipts on taxes from coffee exports exceeded expectations and alone accounted for 32% of revenues in 1979, but the importance of coffee varies widely from year to year. Coffee receipts are expected to be only 13% of revenues in 1980 due to an expected poor harvest and a sharp decline in Rwanda's export of coffee from neighboring countries. Other important sources of revenue are taxes on incomes and profits and an excise tax on beer, each contributing 20% to total revenues.

While revenues increased 84% between 1976 and 1979, they are expected to decrease by 6% in 1980 due to the anticipated decrease in coffee revenues.

In the period 1976-79 current expenditures grew rapidly from 5 billion RWF to 10.2 billion RWF* and in 1980 are equivalent to 10% of GDP. The largest single item in current expenditures is community and social services (largely education) which accounted for 33% of total outlays in 1980. General public services constitute the second largest category of current expenditures with 26%. This was followed by economic services (transportation and agriculture) 21% and by defense 17%.

Although interest payments on the public debt more than doubled between 1976 and 1979, they represented less than 3% of total expenditure in the latter year.

Wages and salaries accounted for 50% of total current expenditures during 1976-79 followed by maintenance, equipment and supplies at 18%.

The actual development budget approximately doubled between 1976 and

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* 91.48 RWF = $1 US

1979, and it is expected to increase another 54% in 1980 to 2.3 billion RWF. The government contribution of counterpart funds to foreign-financed projects accounts for 60% of the budget with the remaining 40% going to government-financed projects. Surpluses from the 1979 current and development budgets as well as profits from the National Bank and the customs warehouse account for 44% of the financing of the 1980 development budget. The balance is financed through development bonds. The largest share of the 1980 development budget will go to the energy sector (25%), followed by transport/communications (15%) and rural sector (10%).

Due to the structure of the GOR budget, it is impossible to estimate recurrent costs. According to the IMF, data relating to foreign aid and loans do not transit through the budget and, hence, do not appear in the government account. Therefore, the levels of donor assistance and the present breakdown of that assistance into capital and recurrent expenditures is not known, thus making it impossible to forecast the future impact of development projects or the government ability to cover recurrent costs. Additionally, it is not known what proportion of present donor assistance is used to cover existing recurrent costs and what proportion goes for capital expenditures. Without this data, there is no way to analyze the recurrent cost burden of the government.

The IMF points out the above data constraints and states only that "information obtained from the balance of payments suggests, however, that these transactions (foreign aid and loans) may be of sizable magnitude."* It would appear that detailed information regarding Rwanda's recurrent costs would entail nothing less than a full-scale analysis by the IMF.

Even lacking sufficient data, though, there are several indications that Rwanda does have or will have a recurrent cost problem: (1) current expenditures in 1980 are likely to rise 21% with more than one third of the additional expenditure going for the wages and salaries stemming mainly from recent recruitment, (2) development outlays for 1981 will rise 54% and (3) the IMF has approved a stand-by arrangement for Rwanda.

## THE EXTERNAL SECTOR

The trade balance shifted from a deficit of 3 billion RWF in 1978 to

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* Rwanda--Recent Economic Developments. IMF Document No. SM/80/190, dated July 30, 1980.

a surplus of over 4.3 billion RWF in 1979 due to an almost three-fold increase in coffee export receipts. Non-coffee exports remained stable while expenditures for imports increased by 7.5%. The trade balance is expected to revert in 1980 to a deficit of approximately the same magnitude as in 1978, largely on account of a 39% decline in the volume of coffee exports.

In 1979, consumer goods accounted for the bulk of imports (CIF) with 41%, followed by capital goods 34%, intermediate goods 15% and petroleum products 10%. Freight alone accounted for 31% of the CIF value of recorded imports in 1979.

Rwanda's largest trading partners are the United States on the export side (32%) and France and Belgium on the import side (30%).

The overall balance of payments situation has moved from near equilibrium in 1978 to a surplus of 6.4 billion RWF in 1979. The prediction for 1980 is a deficit of 2.5 billion RWF due to a large decline in coffee exports.

Net official reserves are estimated to be equivalent to 5 months of 1980 imports.

Rwanda's external debt is estimated to be 11.4 billion RWF at the end of 1979 or 12.8% of GDP. Most increases in foreign indebtedness are directed towards financing development projects. Most loans are made on very concessional terms averaging 40 years with an 8-year grace period and a 1.7% interest rate. The debt service ratio is expected to be 3% in 1980. (See Annex 1, Table 1. Selected Economic Indicators.)

## REGIONAL ASPECTS OF THE MACRO-ECONOMIC SITUATION

When dealing with regional macro-economic problems, one must differentiate between problems endemic to the whole of the third world (i.e., recurrent costs, unemployment, lack of skilled manpower, lack of infrastructure, etc.) and problems which are truly regional due to the area's geographical location and its particular natural resource endowment.

Being a landlocked country, Rwanda is necessarily affected by and shares the problems of its neighbors. The recent elections in Uganda should help to stabilize the situation, but the current shortage and rationing of petrol in Uganda does not bode well for trucks transiting that country. This northern route through Uganda and Kenya to Mombasa, at present, carries about 90% of Rwanda's and 20% of Burundi's external traffic. Goods are shipped all the way by road, although a partial rail link between Kampala and Mombasa also

exists. The Uganda section of the railroad is no longer operational and the Kenya railways lack capacity. Although the northern route is longer and more expensive than the southern route to Dar es Salaam, it is considerably more reliable and it takes less than a third the time owing to its greater capacity.

A recent IBRD study* recommends that several regional actions be taken to improve access to Rwanda and Burundi. These include improved transport planning, simplification of transit procedures, international transport coordination, paving a stretch of the Ugandan road, establishment of a customs office at Gatuna, maximization of rail use, and provision of adequate warehouse facilities. Further recommendations will be provided by a very comprehensive UNCTAD study of all international transport connections to Rwanda, Burundi, Uganda and eastern Zaire.

The economies of Rwanda, as well as its neighbors, are not well diversified, and they depend heavily upon coffee for their government revenues and foreign exchange. Dependence upon a single export earner such as coffee makes it difficult to project future government finances since the countries have little or no control over widely fluctuating world prices. The lack of diversity in the economies also exacerbates the common food/population dilemma facing the region.

The area does possess some resources which several regional organizations are trying to tap. The Communaute Economique des Pays des Grands Lacs (CEPGL) with member states of Burundi, Rwanda and Zaire has been organized as "an instrument for regional collaboration and problem-solving," with Lake Kivu as a unifying point of interest. A recent CEPGL agro-industries study identified several regional projects--a slaughterhouse/tannery complex and dairy, a plant for small farm tools, and a fertilizer plant using methane from Lake Kivu. Studies are also being undertaken to assess the feasibility of a methanol, urea or gasohol plant. Theoretically, these regional projects will allow for economies of scale, will provide larger market areas, and will provide greater access to raw materials. There are also fish and transportation resources associated with the lake. There is talk of setting up a common customs policy to allow for the free movement of goods within the area. A regional development bank (BDPGL) has already been established, but as yet the quotas have not been paid up by the three member countries.

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* "A Report on the International Transportation Bottlenecks Affecting Rwanda and Burundi," World Bank Report No. 3224-EAF, dated December 1980.

The organization for the management and development of the Kagera River Basin which involves Tanzania, Burundi and Rwanda has received support primarily from the U.N. This organization has identified priority projects which include hydropower, irrigation, power transmission, peat, tsetse fly eradication, rural water supply, afforestation, industrial surveys and training. The organization sees food sufficiency as the first objective of regional development, and it views hydropower as an important undeveloped economic asset in the region.

## PART II. ANALYSIS

A. ANALYTICAL DESCRIPTION OF THE RURAL POOR. In the face of serious obstacles, Rwanda has been able to maintain relative self-sufficiency in food supply, largely by putting new lands, albeit marginally productive, into crops, by terracing of the hilly land to increase farming area and by double cropping and inter-cropping. It is the conclusion of virtually every study recently completed, however, that the population/land ratio has reached alarming proportions and that without strong measures to decrease population growth rate and to increase crop production, Rwanda faces serious food and nutrition deficits.

The vast majority of Rwandans are at poverty level. The country, densely populated, landlocked and ranking among the poorest in the world, can offer only agriculture as a means of subsistence for 95% of the people. While rainfall is abundant and soils remain relatively fertile, the increasingly intense pressure on cultivable land by an expanding population is resulting in an ever diminishing farm size.*

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* A study in Byumba prefecture in 1975** indicated that land holdings are distributed bimodally, with a large number of farmers below 1 ha and a smaller number above 1 ha. If this pattern pertains country-wide, the approximate breakdown would be one-third of farmers more than 1 ha (including the paysannats which cannot be less than 1.5 ha); one-third of farmers between 0.5 and 1.0 hectares; and one-third of the farmers with less than 0.5 hectares. Paysannats are organized settlements on which the tenants hold plots of 1.5 - 2.0 hectares, including a cash crop, by lease from the state. Extension services, social services, water supply, roads, etc., are usually much denser than elsewhere.

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** Etude Socio-economique de la Prefecture de Byumba, SEDES, 1975.

The standard of living in rural areas generally does not differ from one geographic region to another. The more environmentally favored areas are those of the most extreme population density. Out-migration has resulted to other, less favorable regions where more land is available but also where more land is needed to subsist (Annex 1, Table 2).

Urban dwellers are better off than the rural population. Social services are obviously more readily available in the urban areas and the diet is more adequate. While there is serious urban under and unemployment and the majority of those with jobs are subsistence laborers, small merchants, etc., there is no indication that present rural development growth will serve to reduce rural exodus. The pattern of rural to urban migration is already established and is likely to increase. Discounting the bottom 10% and the top 5% on the economic scale, income distribution of the remaining 85% of the population differs by only 3 to 5%.

Regional differences in poverty levels can be discussed in terms of the 12 ecological zones which have been identified in Rwanda.* The zones are based primarily on three variables -- soils, rainfall and altitude. Within each ecological zone, there is a different crop mix (food/cash/industrial crops), different pattern of animal husbandry (chickens, cows, sheep, goats, pigs) and different population density. Directly related to ecological differences are differences in the nutritional standards of the population. In the higher areas where grains and pulses predominate over tubers, the nutritional standard is better, particularly vis-a-vis levels of protein intake. There is no significant difference in poverty levels among the different zones, however, and while nutrition levels may be better in the higher areas, they remain below minimum standards and the lack of other essential social services, notably education and health infrastructure, evens it all out.

While the standard of living of the Rwandan population can be characterized as relatively homogeneous through the country, there are factors ex-

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* Delepierre, G. "Les Regions Agricoles du Rwanda", Note Technique No.13 ISAR, 1974

tant which in recent years have begun to result in relative degrees of poverty -- with promise that, unless some attention is brought to bear in the immediate future, general levels of standard of living will decrease and poverty will be polarized. These factors are:

1. adequate productive land and labor;
2. alternative means of livelihood; and
3. infrastructure of social services.

The description of the rural poor will focus on the access to these factors as a measure of poverty.

1. Those Without Access to Land. Increasing pressure on land must inevitably lead to the point where no more land is available for cultivation. According to the study, "Availability and Use of Land" completed for the Ministry of Plan and Cooperation in 1973*, all usable land will be under cultivation by around 1990, given a population growth rate of 3.1%. If the population growth rate is closer to 3.5%, as the 1978 census indicates, land availability is likely to reach crisis proportions prior to 1990. This rapid reduction of available arable land will inevitably lead to a substantial class of landless in the coming decade. Without the development of alternatives to farming to absorb this growing segment of the population, most of this group will expand the bottom ranks of the poor.

There are approximately 1,250,000 hectares of land available for cultivation, of which 904,000 was being cultivated in 1977. Assuming a continued 4% growth in new land cultivated each year, all available cultivable land will be farmed in less than 10 years. Moreover, the farm land remaining is very marginal from the point of view of soil fertility and water availability. While increased productivity on existing land is possible through improved cultural practices, the primary problem of retarding the growth of a landless class is not met. The agricultural exploitation of marshes and dry valleys remains a possibility if questions concerning potential ecological changes wrought by marsh drainage, techniques for irrigation and for farming in heavy soils, and social dislocation can be met and if financing can be found.

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* Delepierre, G.; Prefol, G & B
"Disponibilite et Utilisation des Terres au Rwanda," ISAR and SEDES for Ministry of Plan 1973

At the homestead level the prime sources of the potentially landless group are the young men and young women who do not have access to land on the hillside (colline) in which they were born. Traditionally, farm land is an inherited right (inzu) allotted through the father or other member of the lineage. It is estimated that 25-30,000 young men and women enter the job market every year. If the agricultural sector is to absorb the percentage of the population now in agriculture, more than 20,000 jobs would have to be created every year in that sector. Only about 5% of the economically active population were estimated to be in the wage earning sector in 1977.

Traditional migration patterns which, in times past, would have absorbed young farmers from the areas of population pressure no longer act in this way. The emerging patterns of migration and how they effect the landless, those with too little land, and the availability of social and technical services, is further discussed in Section A.4. below.

2. Families Lacking Access to Adequate Productive Land and Labor. The size of his farm, along with the ecological zone in which a farmer finds himself, largely determines his ability to rise above subsistence and poverty level farming* and determines whether his sons will receive adequate land to support a family. The ecological zone also largely determines the selection of crops and thus also determines, along with farm size, the ability to grow food crops and/or realize income from cash and industrial crops.

While there are no firm data available on relative differences in income/standard of living which can be directly traced back to farm size and soil quality, there are several firm observations which can be made relating to these factors.

The effect of soil quality on the outcome of farming is clearly shown in Sylvestre's report on the paysannat at Icyany.** Only 48.6% of the land

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* The availability of off-farm employment looms larger in the subsistence/above subsistence equation. This factor has no bearing on the ability of the farmer to fulfill his traditional "inzu" obligations, however.

** Sylvestre: "Differentiations Socio-economiques dans une Vocation Equalitaire Masaka, dans le Paysannat de l'Icyany" Cahiers d'Etude Africaines 53, 1975

plotted is of good or very good quality; 33.3% is of moderate to poor quality and the rest, 18.1%, was so bad that it was supposed to have been left under its natural cover or used for forestry. The farmers on the poorer land, even after 20 years of work, were making a poor living, having less developed housing and fewer consumer goods than their fellow settlers on the good or average soils.

Farm Size. The crucial variable distinguishing community difference in poverty levels within each of the 12 ecological zones remains farm size. Unlike many countries, an equal distribution of land among farm families does exist in Rwanda. Although the nation-wide average is about 1 ha per family of 4.7 persons, this statistic is very misleading. In fact, only 6% of the 880,000 Rwandan farm families cultivate more than 1.5 hectares, 30% cultivate between 1 and 1.5 hectares and 55% cultivate less than 1 ha.

It is generally believed that in areas of moderate to good soil and adequate rainfall, 1 ha of land is the minimum necessary to support a family of five. This would permit a relatively good crop mix, would allow some (though inadequate) fallowing practices, and would support one cow-calf unit. It must be understood that the Rwandan farmer has neither the resources nor the opportunity to buy feed stuffs, farm machinery or equipment. Except for certain export crops such as coffee, tea and pyrethrum, and to some extent, rice, chemical fertilizers are not used. Imported fertilizers are cost prohibitive and until an indigenous industry is developed (methane based or lime) increased production through fertilizer application is not an option open to the Rwandan farmer. Yields are difficult to estimate due to unreliable data on hectarage under production for particular crops and inadequate measuring of yields, etc.

Family Composition. The second most important factor determining relative levels of poverty within an ecological zone is the family composition (i.e., the sex of the head of household and, related to that, the presence or absence of older children, particularly girls, living and working as members of the farm family), and the ability of one member of the farm family to obtain off-farm employment. In both the Byumba and the

Butare studies,* households headed by women (widows, divorcees, wives of polygamous men and/or migrants) were found to be consistently among the poorest members of a community. Comprising between 15-25% of the totals in the various samples, these women-headed households lack adequate labor to meet even subsistence needs. A further distinction between those women who have daughters in the 15 year old range and those with only young children was also found to be related to poverty levels. Those lacking teenagers were predominant among the poorest and most hardpressed.

This factor of family composition also determines the ability of a man-headed household to attain an adequate living. A farmer and his wife can produce more with the aid of their children, but it appears that the greatest returns to labor are after children have attained the age of 15 and that girls provide more assistance in crop production than boys. Sylvestre found (1972)** that the presence of a daughter over 15 years of age can account for an increase of over 50% in the area cultivated. A farmer and his wife in their early 30's have a hard time to produce enough for themselves and their 4 or 5 young children. This suggests that labor supply can be a constraint on the area that can be farmed and that supplemental labor (hired) may be required. This finding is corraborated further by a study in southwest Ouganda*** which found the maximum stress and lowest living standard of farm families in Kigezi district to be among those who have 5 children. This is the period in the family cycle when the dependency ratio within the family is the highest, that is, when the family lacks the labor of teenage children who can help the farm to meet the daily family subsistence requirements. This does not suggest that the family is advantaged in having many children, only that as the children mature, the family finds itself in an increasingly better position.

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* Societe d'Etudes pour le Developpement Economique et Social (SEDES) Etude Socio-economique de la Prefecture de Byumba, Vol. 1 & 2, for Ministry of Plan (Louis Berger, East Orange N.J., USA), 1975

** The Sylvestre study was conducted on paysannats where every family was allotted 2 hectares of land. The benefits of females over 15 on the smaller farms are vastly more prevalent in the country, but not as dramatic.

*** Schutheis, M. - Ph.D. Dissertation for Cornell on Regional Development in Kigezi District, Southwest Ouganda, 1973.

Off-farm Income. A further important variable which determines a family's ability to rise above subsistence level farming is the ability of at least one member of the family to earn off-farm income. The wages of one worker are generally greater than the value of production of the typical farm family (Sylvestre, Tondeur).*

3. Families Lacking Access to Adequate Social Services/Infrastructure. Rural Rwanda is virtually without villages. The topography is hilly and the population has been historically widely dispersed. Each family lives on its hillside farm and each house sits next to a banana plantation, with a series of terraces or fields sculpted to reduce erosion. Whatever the advantages of this pattern of living relative to personal independence, it has implications for access to health and education services and provision of agricultural extension.

(A) Health and Nutrition. A comprehensive overview of the health status of the Rwandan people cannot be given at this time. Apart from a U.N.-sponsored nutrition survey now being conducted, the only available data are those on noticeable diseases and on hospital inpatients. From the available data, and that coming from the 1978 population census and the U.N. nutrition survey, a disturbing picture of the rural health situation emerges. The most striking problems are all related directly or indirectly to maternal and child health (nutrition, immunization and family planning). The three leading causes of hospital deaths (presumably the same holds for non-hospital deaths as well) are diseases heavily concentrated in the under five age group -- measles, malaria, perinatals -- all are largely preventable. Eighty-four percent of the measles deaths occur in the under five age group and 99% in the under fifteen age group. All of these deaths are unnecessary since an effective measles vaccine exists. The high infant mortality rate for the country as a whole (128/1,000 births) and for hospital deaths in particular, could be significantly reduced by an effective MCH program. Classic implications of high infant mortality on fertility rates are borne out in Rwanda and underline the necessity to pair MCH programs with strong efforts at family spacing.

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* Sylvestre, U.; Tondeur, G. - Evaluation des Projets de Developpement Rural Integre. Les Paysannats de Mayaga-Bugesera, FED/MINIPLAN, Kigali, Rwanda, 1971

Malnutrition is also a major health problem in Rwanda and is related to its population and agricultural situation. It is estimated that Rwandans receive only 70-80% of their basic protein requirements and the trend is downward. Again, it is the under five age group that is most affected. Since only the most severe cases of malnutrition ever reach the hospital, records understate the morbidity and mortality associated with malnutrition.

Health care focus, up to recently, has been on curative rather than preventive medicine. Facilities below hospital level (i.e., those which would provide primary health care in rural areas) are varied in size and capacity for service, but less than half of the 143 communes are served by health centers and less than 200 dispensaries serve the entire country. No workable system for primary health care exists in the country. In fact, there is little health planning of a national, comprehensive nature. Two health systems "public and private" are not well coordinated though most private institutions do receive some assistance from public funds.

(B) Education. A surprisingly large number (50%) of Rwandan school age children are counted as being enrolled in school. If the data are correct, then the schools represent a significant focal point for reaching Rwandan children with a variety of education, health, etc., services.

There remains, however, a bias toward secondary education for males to the neglect of females. This bias exists both in formal and non-formal education. Moreover, until the Education Reform decree of 1977, primary education prepared all students for further formal education, when the possibility to continue more classical studies through secondary school and beyond exists for only 10% of the primary school completers. This situation will continue to exist until the reform, which stresses a rural oriented curricula, is fully financed and implemented.

(C) Rural Agricultural Infrastructure. Marketing of export crops and other commercial crops for export poses relatively few problems though this is largely because the quantities produced are not large. The marketing of food crops, however, is characterized by the low volume marketed (15-30% of total production) and the wide price fluctuations, both seasonally and regionally. While price levels for all major crops are set by the National

Price Commission, lack of weights and measures control and lack of staff to man a market supervision staff puts the geographically isolated farmers in a bad position.

The proximity to storage facilities is another factor determining relative levels of poverty of rural farmers. The farmer who can store his beans and sorghum in a cooperative or mission silo reduces his loss due ti insects and to humidity and, with the right to repurchase at a nominal fee for storage, is spared paying private traders exhorbitant prices at the planting season. There are less than 100 such silos now in operation out of a need estimated to number approximately 1,500. It is estimated that national or local storage/marketing centers reach out to farmers living within a radius of only 10 kms.

Because of the pattern of cropping cycles, the farmer traditionally sells 30% of the major January harvest of beans (the staple food) so that he can pay his taxes to the government, pay school fees for his children and have money to purchase necessary items for his family. Because of the heavy supply in January and February, the farmer receives a price for his beans which is very low. Later in the same year, the farmer must buy beans from the market at high prices to feed his family and to have seed with which to sow his fields.

One study* indicates that the average quantities of beans stored in mid-November was not very high. At the time of the study, a little over one month after the bean harvest and six months before the sorghum harvest, over half the families in the study commune (Muganya) had no beans and 20% had no sorghum; 12% had neither beans nor sorghum. In the comparison paysannat, the situation was only slightly better, with 34% having no beans; 13% no sorghum and 9% with neither.

4. Migration as a Factor of Poverty. The migratory patterns of Rwandans within the country as well as to neighboring countries (and those who move into and out of Rwanda with regularity) make it difficult to plan for social services needs. Migration in response stress situations is becoming more and more prevalent. Migration from the home of birth is

* Sylvestre, U.; Tondeur, G. - op.cit.

increasingly emerging as an undesirable but inexorable solution to dwindling farmland; the direction and pattern of this off-farm movement is responding to a variety of push and pull factors, and is thus multi-directional and multi-faceted.

According to recent studies,* migration patterns have undergone substantial changes in the past three to five decades. Prior to the 1960's, there was substantial migration of male laborers to the mines and plantations of the neighboring countries of Zaire, Zambia and Tanzania. More recently, these migration streams have dried up; in 1959 the rural absentee population was 5%, in 1970, it was 0.5%. In 1970, 73% of the population lived on the homestead in which they were born. Of the 27% who had moved, 12.5% remained in the same commune; 8.1% remained in the same prefecture; 5.4% remained in-country, and only 1% had travelled outside Rwanda. An estimated 17% of the total moving off the homestead were estimated to be married women moving to their husbands' residence; these reduce the truly mobile group to 10% of the total population. More recent data indicate an increasing trend in within-country migration primarily to areas where land is still available, and to a lesser extent to urban areas, particularly Kigali. The same study (Nsanzabagamwa, Back) found that family ties are so strong as to prevent most youths from leaving their farm except for exceptional reasons. Table 2, Annex 1, documents cross-prefectural movement; there has also been considerable movement within the prefectures.

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* Prioul, C. - "Pour une Problematique de l'Amenagement de l'Espace Rural au Rwanda" in l'Informateur IX - 3, 1976

Nsanzabagamwa, F.; Back, L. - "Enquete Pilote sur la Migration des Jeunes vers les Villes au Rwanda" Ministere de la Jeunesse, GOR, 1977

Niyibizi, S. - "Population et Developpement" Paper presented at the First Inter-African Seminar on MCH/FP sponsored by Ministry of Social Affairs and Cooperatives and the Pathfinder Fund, October 16-21, Kigali, 1978

From the fact that very little arable land remains, that most of the remaining land is in those areas more removed from infrastructure, and that virtually all social and economic studies point to a marked reluctance to leave the hillside of one's ancestors, one should be able to conclude that, generally, it is the poorest of the poor who are being driven off their natal farms to find more suitable land elsewhere. Given the lack of current socio-economic data on rural households, however, no firm verification of this inference can be made.

There are recent data on rural to urban migration, however, which suggest that it is the youth with better educational preparation who leave their family to try their luck in the city, while the less well-educated stay and work on the family farm (umwihaliko) for as long as possible.* Overall rural to urban migration is still increasing far beyond even the most recent estimates. For example, in 1976 Prioul** estimated urban growth rate to be 4.19% in 1975 and predicted a 6% growth rate by 1985. Sirven's*** estimate of the current urban population growth rate based on the 1978 census is 9.5-10% with Kigali making up an increasingly larger share of the national total (from 45% in 1979 to 54% in 1978).

Most of the migrants to Kigali were male between 20-35 years; 52% of the total population in the city of Kigali were born in other prefectures. The most recent estimate of urban unemployment (12%) is derived from the 1970 census; this figure is probably low under contemporary conditions. It should be emphasized, however, that even in urban areas more than half the households are mainly occupied in agriculture.****

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* Nzanzabaganwa, F. - op.cit.

** Prioul, C. - op.cit.

*** Sirven, P. - "Note sur la Croissance Urbaine de Kigali" Etude Rwandaise Vol. XII Special Edition Histoire et Geographie du Rwanda, 1979

**** Prioul, C. - op.cit

In sum, the poorest of the Rwandans are those with relatively little land -- often less than .5 hectares, women household heads with relatively large, young families, and the young adults who have not yet gained access to their own farmland and/or who are seeking the very limited employment opportunities off the farm. Regionally, the distribution of these poorest of the poor groups is somewhat skewed, particularly in relation to current population density vis-a-vis agricultural productivity of the land. There is also a skewed ethnic distribution as the very small percentage of Twa and Hima herders generally lack access both to productive land and social services. Finally, there is the perhaps inevitable class of abatindla, those who are currently landless, poverty stricken, infirm, invalid and/or aged without family support.

Overall, however, it is essential to stress that because the Rwandan people make up a largely homogeneous, integrated and increasingly mobile rural society, they are likely to continue to share relatively equally in any increases or decreases in a general living standard. Current within-country similarities in agricultural land use, production and consumption levels, distribution of infrastructure and current migration trends will point to the likelihood that the generally poor population of Rwanda will progress or regress as a single society.

B. CAUSES OF POVERTY AND CONSTRAINTS TO THE IMPROVEMENT OF THE WELL-BEING OF THE RURAL POOR. Four interrelated factors constitute the principal causes of poverty and the leading constraints to accelerating development in Rwanda. These are (1) high population pressure on available land and lack of off-farm employment opportunities; (2) low level of agricultural technology and inability to transmit known technology; (3) geographic isolation, first of the country vis-a-vis world markets, and second of the population vis-a-vis internal markets and available social services; and (4) low absorptive capacity due to limited manpower and physical infrastructures and inability to bear increasing recurrent costs.

1. Population Pressure. Already the most densely populated country in Africa, Rwanda has a population growth rate at about 3.5% and thus the necessity to increase food production by at least that amount, a rate that has not been possible in the past. If present production levels are maintained, i.e., if there are no increases in production but the current decline is halted, domestic production will only meet 40 to 45% of food needs in the year 2001 and will require imports of over one million tons of food. Rwanda will probably use 100% of its land suitable for cultivation in the 1990's, with smal-

ler farms, decreased fallowing practices and lessened soil fertility emerging. The urban-based commercial sector cannot be expected to help reduce pressure on the land since migration has already overloaded the urban circuit and, in fact, the rate of growth of urban areas (6.3%) is much higher than the overall population growth. Of the 25,000 new jobs required every year to absorb youth entering the labor pool, only 7,000 can be expected to come from the commercial sector, and many of these are at below poverty levels.

The rate of increase of land brought under cultivation is about 3.5% per year. It is estimated that of the 1.25 million hectares suitable for farming (47.5% of the country), 904,000 hectares are already under cultivation (1977). Marsh land and dry valleys constitute an additional 84,000 hectares susceptible of development with more sophisticated technology than is available in Rwanda, and the use of the national parks for limited grazing is possible.

The entire region has a serious population density problem relative to available land, food and energy resources.* If one considers only the contiguous area of eastern Zaire along with Rwanda and Burundi, the population density of the region is the highest in Africa, with the south Kivu area of Zaire topping the list at around 215/km$^2$. Regardless of the effectiveness of efforts to introduce family planning, the population problem will become worse over the next twenty years. Each country's problems affect the other two, especially from the standpoint of food and energy resources.

The rapid growth rate contributes significantly to the gravity of the usual range of tropical and worldwide diseases endemic to the three countries, and particularly to the problem of malnutrition. These problems have already been discussed above relative to Rwanda and are similar for the region.

The status of health services in the three countries does differ, however. Public health institutions are almost non-existent in rural areas of

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* In view of efforts to coordinate certain development activities of the three Great Lakes countries, Rwanda, Burundi and Zaire (eastern) under the CEPGL umbrella, a brief look at similarities and differences in the health and population problems of the area is in order. This CDSS does not, however, purport to speak for either the Burundi or Zaire AID missions, but gives data and impressions gained from documents available to us.

the Kivu region of eastern Zaire. Efforts of private organizations, chiefly church missions, cannot nearly fill the gap. Comparatively, the health services distribution in Rwanda is good for the entire country, though oriented toward curative medicine. Burundi falls between the two though much closer to Rwanda's situation. Rwanda and Burundi benefit from small size and good and moderately good road systems compared to Zaire's tremendous size and notable lack of a viable road and transport system. On the other hand, the literacy rate is considerably higher in northern Zaire and the population is concentrated in villages as opposed to the almost complete absence of villages in Rwanda and Burundi. Provision of equivalent health services should, thus, be less complex in northern Zaire than in Rwanda and Burundi.

Attacking the population growth rate, even indirectly as a health problem through spacing of children, faces different obstacles in each of the three countries. While not as far along in actual provision of FP services as Zaire, Rwanda may take the lead within the next few years. For Rwanda, the population problem is nationwide, it has been recognized by the government as a problem, and the country's small size and relatively good infrastructure will make the mechanics of adding family planning services to existing health and community programs less difficult than for most African countries. Cultural and religious attitudes regarding family size and methods of contraception will slow the family planning program at first in Rwanda but the example of initial acceptors and the economics of the population problem itself can be expected to create an exponential increase in acceptance of contraception toward the end of the five year period.

2. Low Level of Technology and Inability to Provide Extension and Other Support Services. The Rwandan farmer has displayed receptivity to new farming techniques. They have traditionally accepted new crops, they have intercropped and have terraced and contour plowed where the benefits of these techniques have been demonstrated to them. Unfortunately, yields of the major crops have not increased over the past five years as should have been expected and as is necessary to keep in step with the growing population and smaller farm sizes.* Yields of most crops did increase between 1940 and 1959, presumably as a result of plant breeding. However, between the figures cited by

* Morris, W. H. M. - "Agriculture Production, Marketing and Crop Storage in Rwanda", June 1979

Leurquin* based on the 1950 Ten-year Plan and the 1961 study of the Belgian AESED** and the MINAGRI figures for 1965-67 and 1973-77, there is almost no change. Leurquin concluded that the food situation between 1945-60 remained satisfactory because of more extensive and intensive cropping. But between 1960 and 1977, while the area cultivated increased, crop yields did not. He states that between 1945 and 1960, the African farmer had neither the resources nor the opportunity to buy feedstuffs, farm machinery or fertilizers. This remains the case today except for certain export crops. While improved seeds are disseminated from the research organization on a substantial scale, there is some question of the effectiveness of research in selecting improved and adapted varieties during the last 15 years, which may account, in part, for the stagnation in yields.

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* Leurquin, Ph. - Le Niveau de Vie des Populations Rurales au Rwanda-Urundi, Editions Nouvellearts, Louvain & Paris 1960

** AESED Etude Globale de Developpement du Rwanda et du Burundi, Brussels 1961

The introduction of draft animals has not succeeded, most probably because of the relatively small sizes of farms and the inability of the small farm to support livestock without supplemental feeding. There is some indication that the association of small ruminants (sheep and goats), feeding on the herbage on the anti-erosion fences is quite practical and could be introduced on farms which cannot afford a cow.

While it is clear that increasing agricultural production will be a major aim of a sectoral strategy, it must first be established that the technical base for such an increase exists. There is obviously a breakdown in the transmittal of research results to the farmer through extension services. The more serious problem, however, is that the development of farming systems for farms of less than 1 ha is not being successfully addressed. There seems to be a need for a critical reassessment of technical improvements that can be introduced to the ordinary farm. Diversification in food and crop production (beekeeping, fish production, fruit trees, etc.), erosion control, fertilizer and compost usage should be more thoroughly researched and tested, as should mixed farming for those farms large enough to support cattle.

Once the technical base is established it remains to find the method to diffuse the technology. Bean and grain storage and marketing systems are neither adequately refined nor administered to protect the farmer from inordinately large crop losses to insects, to protect him from exhorbitant prices in the pre-harvest periods, or to act as an incentive to increase production of these food crops. USAID reports have repeatedly quoted an FAO estimate of 30% loss in traditional farm storage in Rwanda. Using a much lower loss rate, the economic analysis of the AID-financed grain storage project estimated savings over the first 5 years of operation, by silo, ranging from $5,755 to $11,510, storing less than one hundred tons of cereals and pulses per year.

Agricultural credit is not well developed in Rwanda. Small farmer credit opportunities do exist, however, through the Banques Populaires (People's Bank). They have been organized with Swiss government assistance

and exist in all 10 prefectures. A recent study* states "of all of Africa's cooperative savings and credit movements, Rwanda's is the fastest growing, both in terms of growth and numbers of depositors." However, total loans to members generally do not exceed 25% of total savings, and most loans are for housing and improvements rather than for agriculture. The study concludes that the lack of use of credit availability can be traced to total inexistence of marketing outlets where agricultural inputs can be bought. The absence of a credit channeling mechanism, such as cooperatives, may also be contributing to a lack of credit utilization for many rural communities.

3. Geographic Isolation and Poor Internal Lines of Communication. Because of its landlocked position (access to seaports in Kenya and Tanzania is through Uganda and Burundi, respectively) the price of Rwanda's imports are substantially increased, and its earnings from exports reduced. The impact of distance, 1,700 kms to the nearest port at Mombasa, Kenya, by road and rail, is further aggravated by the imbalance in the nature of incoming (heavier and bulkier) and outgoing (lighter agricultural products), which means that trucks and railway cars have no cost-effective back hauls. Recent shipment of coffee by air has not helped to make transport more efficient and has reduced the profitability, and thus incentive, of export crop production.

Other travel restrictions exacerbate the already serious problem, increasing prices and causing delivery delays and merchandise loss. These include differing motor vehicle regulations, restrictions on night travel in Uganda, deposit requirements, border closings, etc. The internal political problems and occasional rifts between adjacent countries also adversely effects availability and prices of Rwandan imports, most seriously petroleum products.

While the import of agricultural inputs, particularly, fertilizer, is restricted by Rwanda's geographic isolation, one beneficial effect is that Rwanda more and more has looked internally for domestically produced items. This import substitution should be encouraged through assistance to cottage and light industry enterprises.

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* CUNA, October 1980, A Feasibility Study on Establishment of Experimental Revolving Funds to Provide Farm Tools and Livestock to Small Farmers in Gikongoro Prefecture.

International isolation and lack of adequate lines of communication, primarily rural roads, form a serious impediment to access to health, education, extension and other government services, and to markets. Rwanda covers an area of 26,000 kms$^2$. The topography makes road construction costly and transportation difficult. The road network of about 6,300 kms includes the national network (2,400 kms), comprising 350 kms of paved road, 280 kms of recently gravelled roads, 750 kms of very old roads, and 1,000 kms of earth road; and the district network of 3,900 kms of earth road maintained by local authorities. In fact, all roads that are not surfaced or recently regravelled are low standard earth roads characterized by corrugated surfaces, large ruts and potholes and, in wet weather, by deep mud. The high costs and the dangerous conditions of the roads have reduced access to markets and services, working obvious hardships on the rural population.

4. Absorptive Capacity.

A. Institutional Capacity. Development of the primary sectors, particularly agriculture, is constrained by the low level of external investment and the relative inefficiency with which the actual investments are applied. While agencies are willing to provide increased financial assistance, the government's ability to plan its use, to present proposals to donors, and to implement specific projects, is not adequate. The inhibiting factor is largely one of human resources. Less than 25% of the population is literate, which hinders their ability to form cooperatives, to use agricultural credit, and to absorb technical innovations. More serious, less than 2% of the population have received a secondary education and thus the manpower pool for government cadre is simply not available. The circle is unending. The technical ministries suffer from lack of adequate financing but trained personnel are not available to attract more financing.

Donor efforts at upgrading the skills of technicians and at putting more of them into the system, with transport and equipment support, does result in more effective project implementation and better delivery of services to rural areas. It also means, however, that the recurrent costs occasioned by more and better trained personnel have to be eventually absorbed by the government, costs which it may be unwilling and/or unable to bear.

The situation is improving somewhat. Enrollment in higher education has increased at 9% a year since 1970. The lower ranks of the administration are

becoming more efficient and increasing numbers of Rwandans are returning from university training abroad to add to higher level manpower needs. More efficient use can be made of the expatriate technical assistance now in Rwanda. The training potential of technical assistants has often been wasted because of lack of counterparts and by reluctance of Rwandans to assume a counterpart role. A more selective use of technical assistance is required as is more reliance on trained Rwandan personnel.

B. Ability to Bear Recurrent Costs. Revenues depend on coffee production and world coffee prices, and thus are subject to fluctuations from year to year. In the period 1976-79, revenues grew at an average rate of 24%; expenditures for government operations grew an average of 17% and remained well within revenues. Revenues in 1980 are expected to drop by 6% with expenditures increasing by 21%, though with an excess of approximately $13 million in revenues over expenditures. Increases in expenditures are likely to maintain this pace over the next 5-8 years until the education reform, which is requiring the largest part of the increase, is fully in place. If revenues can be maintained at the rate of the past five years, the government should be able to meet counterpart contributions and recurrent cost obligations. The extraordinary development outlays which the government should be making would be limited, however. Should a fall in world coffee prices extend over a period of years, external assistance would be required to meet recurrent costs. For the most part, donors are aware of the tenuous ability of the government to meet recurrent cost obligations. Some donors are prepared to meet these costs after their projects are completed. As it is not AID policy to directly provide this kind of budget support, innovative measures have to be introduced to assure that the recurrent costs occasioned by our projects can be met. First, to the extent possible, and even at the expense of some efficiency, existing personnel should be used rather than additional requirements established. There are, for example, large numbers of social workers and health assistants who are under-utilized and can be trained to deliver nutrition education, family planning information, etc., without increasing the payroll burden. Training of elected representatives to provide low level information and service delivery to 10 family groups is another method of reducing extension service costs. Increased training to cooperative members, using them as extension assistants, is already being put into effect. Finally, currencies generated by PL 480 food import sales or Commodity Import Programs can help meet recurrent costs until such time as our projects begin to realize a return or savings to government revenues.

## C. RWANDA'S DEVELOPMENT OBJECTIVES

The Development Plan. The Second Five-year Plan (1977-81) for Economic, Social and Cultural Development clearly advocates direct intervention in the rural areas, the principal focus of development. The Second Plan is forthright in identifying the principal constraints to development and is candid in admitting mistakes (in health and education, for example) which were made in the past. The mission of the Second Plan is to address four principal problems. These are:

-- Food availability/population disequilibrium. The short-term solution is seen in increasing agricultural production through crop intensification and land reform, but the Plan states that, for the long-term, the only answer is to reduce the population growth rate.

-- Underutilization of human potential. With more than 25,000 youth entering the job market every year, a significant number of jobs have to be found in the rural economy. Again, the Plan suggests that the mid-term answer lies in new land cultivation, labor intensive rural works, cooperative formation and rural artisanry. The education reform is to play a focal role in providing viable skills to youth.

-- Difficult living conditions. The weakness of rural infrastructure, the bad organization of rural transport and storage, the absence of required social services, particularly health and sanitation, directly contribute to dissatisfaction with rural living.

-- Financial disequilibrium, reflected in high inflation, low public and private savings and a restrictive credit policy.

The Plan's target for GDP growth is an annual average of 5.9%. The target growth rates for the sectors, as well as the changes in their shares in GDP are shown in the following table.

Gross Domestic Product by Sector*
(billion RWF at 1976 prices)

| | 1976[a/] | | 1981[b/] | | Projected Average |
|---|---|---|---|---|---|
| | Amount | % | Amount | % | Annual Growth Rate (%) |
| Agriculture | 30.4 | 56.7 | 38.8 | 54.1 | 5.0 |
| Industry | 11.1 | 20.7 | 15.6 | 21.8 | 7.1 |
| Mining | 1.1 | 2.0 | 1.6 | 2.2 | 7.5 |
| Commerce | 6.1 | 11.3 | 8.8 | 12.3 | 7.5 |
| Other, including Public Sector | 5.0 | 9.3 | 6.9 | 9.6 | 6.8 |
| Total | 53.7 | 100.0 | 71.7 | 100.0 | 5.9 |

* Source: IBRD, Report No.P-2398-W, April 11, 1979

a/ Estimated
b/ Projected

Provisional data indicates that, over the first three years of the Plan, GDP growth averaged 4.8%/year; 1980 growth will be on the order of 4%.

The total planned investment is about 54 billion RWF (US $ 590 million). The share of the government would be about 7%, the private domestic sector 23%, and the externally financed public sector at 70%. Total wage employment would increase from about 125,000 persons in 1976 to 166,000 in 1981. Wage employment in industry (excluding mining) would increase by 8,600 persons, to 24,300 in 1981.

While there is no comprehensive information on employment generation, it appears that job creation will fall short of goals. Moreover, there has been a rapid expansion of public sector employment, particularly in education and defense under strong pressure to provide employment for secondary-school leavers. To reduce the growth of public sector jobs, all new hires have to be approved by the Ministry of Finance.

The Plan's overall objectives and priorities appear to be consistent with Rwanda's problems. However, except for manufacturing, the targets seem to be ambitious. First, there is heavy reliance on foreign assistance, since 70% of the required resources are expected from external sources, which in most instances is project specific. But many of the projects identified in the Plan are either at a very early stage of preparation or are not prepared at all. Second, the share of investment expected from the private domestic sector appears high. Finally, the adverse impact of the shortage of qualified manpower and the transportation problems seems to have been underestimated. Sector specific objectives of the Plan, particularly those sectors which are of interest to USAID, include the following:

1. Agricultural Sector. The agricultural and livestock production goals of the Second Five-year Plan, although modest in some areas, will be difficult to meet. The proposed goal of 3.8% a year increase in food crop production over 5 years is to be achieved by strengthening the extension service, and by adding market outlets for rice, potatoes and fruits and modern vegetables in the towns. However, the stagnation of yields of nearly all crops suggests that, as in the past, the increase is more likely to come from more people cultivating more land.* New technology for an increase in the productivity of land and labor does not seem to be quickly available.

* Production increases of 36% between 1968-69 and 1976-77 were achieved by increasing land under production by 32%. However, surface for banana production increased by 50% while production increased by only 18%, indicating that a different crop mix could achieve more significant production.

The Plan proposes a 12.7% a year increase in the value of the production of industrial crops; this is to be accompanied by diversification, with coffee declining from 83% to 73% of the value of all industrial crops at the farm. However, the value of Rwandan exports will still be closely related to the world market price of coffee. The area planted in coffee has increased by about 5% a year. The goal of 30,000 tons of cafe parche (22,000 tons of clean beans) was reached in 1979 but total production in 1980 is likely to drop to 20,400 tons due to insufficient rains and a history of bad plant maintenance.

The livestock production goals are quite modest for sheep and goats (an increase of 2.5% a year). For beef, an increase of 4.4% a year is proposed, from a herd which, over the last decade, has been declining. Very large increases in poultry and rabbit production (32.0% a year), in milk (19.2% a year) and in eggs (20.1% a year) are less likely to materialize.

An increase of 37% a year in the supply of fish is proposed. Production reached 890 tons in 1979 (797 tons from lakes and 93 tons from ponds). The goal of 7,000 tons by the end of 1981 is not likely to be met.

The Plan shows recognition of many of the problems attendant on increasing food crop production but in truth, there is little quantitative data on the real state of agriculture today (i.e., no reliable census of agriculture, statistics on area in crops, yields and production and marketing). While there are a few new inputs (varieties, crops) becoming available from agricultural research, socio-economic data on farming and the profitability of proposed interventions are not available. At present, the real stimulus that can be provided is improved farm prices and reduction of losses through cooperative assembly and, where appropriate, marketing and storage of products. Annex 1, Table 2, presents the status of achievement of production goals for selected commodities as of the end of 1979.

2. Health Sector. Recognizing the absolute necessity of raising the health status of the population within the limits imposed by extremely severe financial constraints, the national strategy has selected a concept of "medicine de masse" as the means of achieving national health goals. The primary aim is prevention with special attention to health education, improved hygiene and better nutritional practices. In language that implies a shift from past emphasis on curative medicine, the Five-year Plan states:

> The causes of mortality occur principally from diseases which are readily identifiable and for which appropriate treatment is simple, and applicable by persons who can be trained in a short period of time. More doctors and

> new hospitals in the cities would not alter the situation. Instead, a reorientation of medical training and the creation of many more health centers can remedy the low productivity of the present system. "Mass medicine" addresses itself especially to mothers and children; it supplies mothers with essential information about nutrition and sanitation which will lead to perfect and total physical and psycological development of their children. (Deuxieme Plan Quinquennal page 29).

A later section entitled "Problems and Constraints to Social Cultural and Administrative Development" is of particular significance because it represents the government's own perception of its health problems. After acknowledging the extreme demographic pressures facing the nation, the Plan presents a candid summary of the precarious state of health. The root of the problems is considered to lie in the environment which contains all of the conditions requisite for the spread of infectious and parasitic diseases. Contributing to the problems are the unsanitary practices and lack of water which make efforts to improve health difficult. Malnutrition and inadequate maternal and child health care are seen as equally important factors. The widely dispersed housing patterns make efforts to reach the population with health services difficult, particularly because the health centers are often located at a considerable distance from many of the people.

Three avenues of action are recommended in the Plan:

-- Nutrition education is seen as an essential element which should accompany efforts toward improving levels of agricultural production.

-- Emphasis upon preventive medicine is seen as the best way to address the national health problem, particularly in light of the higher costs associated with curative medicine and the limited funds which the government is able to allocate to the health sector. Elements receiving special mention are: sanitation education; maternal and child health care, and health centers and training of occupational physicians which this implies.

-- The third thrust of the guidelines is upon efforts toward reducing the rate of population growth through heightening awareness of the demographic problems facing the country.

The main features of the health program as outlined in the Plan do not reflect, however, the bias toward preventive health, which the rhetoric of the Plan suggests. The Plan, upon closer analysis, appears to be giving top priority to development of the hospital system; goals are stated on the basis of political division rather than on those of established need or population norms. This may be a function of the delegation of certain responsibilities for preventive health to the Ministry of Social Affairs and Cooperatives. Certainly, the bulk of health education and information services are performed by this Ministry in its Social Action Centers, and it appears that information and education on family planning will also fall to Social Affairs. It can generally be concluded that preventive health in Rwanda has no organizational home.

3. Education. In the education sector, as in health, the Plan calls for a radical departure from past policies. The Plan recognizes that the system of education was badly adapted to the overwhelmingly rural life of the Rwandan population. The Education Reform, which has been in implementation for several years, is a result of the reassessment of past results and future needs of this sector. It is an attempt at universal primary education, with post-primary education of three years available for the 90% of the children who do not have the opportunity to continue to secondary schools. The education reform, at least that element which is attempting to re-orient the training toward rural life, is supported by USAID financing.

4. Industrial Sector. The industrial sector is receiving emphasis primarily in the agro-industries and rural artisanat. Encouragement is being given labor-intensive enterprises for the production of import substitution commodities. A new investment code to give tax and customs duty concessions to nationals, the establishment of a guarantee fund to help small and medium-scale enterprises obtain credit, the creation of a technical school, and a Bureau for Industrial Promotion to help local entrepreneurs undertake small industrial projects are measures being taken to encourage small industry.

## D. COMMITMENT TO RURAL DEVELOPMENT AND PROGRESS IN ACHIEVING OBJECTIVES

The rhetoric of the Development Plan is carried over to high government official pronouncements in a manner from which one must conclude that rural development truly is the focal point of the government. The President's major speeches at New Year and Independence Day are devoted to a discussion of the pace of development. The President and his ministers frequently visit rural communities and high officials invariably preside at seminars and conferences for rural cadre. The recent convention of the official party, the MRND,* devoted considerable attention to development, particularly how to more fully invalue the local population. Finally, as a means of focusing attention on rural problems, yearly development themes have been announced. In 1980, the theme was "soil conservation"; 1981 is drawing attention to rural water and sanitation needs.

The principal macro factors which affect the ability of the economy to grow are largely outside of the control of the government. These include geographic isolation, political instability of the surrounding countries, world market prices for Rwanda's exports, and increasing oil prices. In general ways Rwanda has tried to mitigate the effects of these factors. Rwanda has acted judiciously to maintain good relations with her neighbors, realizing that Uganda and Kenya, and to some extent Tanzania, control the lifeline of the economy. Increased reliance on imported oil is discouraged and the government encourages the traditional self-sufficiency of the people.

The question to be considered here is whether the government is putting to best use those factors which it can effect, and whether concrete actions of the government evidence a commitment supporting stated policies to promote basic human needs. If that commitment is amply demonstrated, the case for continued and increased donor assistance to Rwanda can be made.

The current Five-year Development Plan (1977-81) is centered around a rural development program whose objectives are the necessary structural transformation of the economy to increase food production, train more and better qualified manpower, improve living standards, particularly in the rural areas, and reduce the reliance on external sources of assistance. The other sectors, such as manufacturing, mining, construction, tourism, and transport are expected to play a supporting role.

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* Mouvement Revolutionnaire National pour le Developpement

Budget allocations over the recent past indicate a GOR commitment to improve rural living conditions. The 1980 Development Budget was 34% higher than the previous year. An increase in Ordinary Budget receipts over 1979 permitted strong increases to development-oriented ministries. In 1978, the total budget increased by 21% over 1978, the increase in 1980 was 22% over 1979. The development ministries, agriculture, social affairs and education, received increases of more than the total percentage increase.*

Government economic policies are conservative. They have significantly decelerated the rate of inflation, realized substantial improvements in the GOR's financial position, the balance of payments and in the banking systems' reserves.

While projections for 1980 are less favorable than for the years immediately prior (the real GDP growth rate is likely to remain at 4%) prospects for the years immediately thereafter are good. The mining sector is expected to recover and flow at a 13% rate due to replacement of machinery in 1979. Private investment in the transport sector is expected to increase sharply as a result of new regulations giving preference to indigenous transport companies.

Gross domestic savings have increased rapidly over the past five years, from 1.2 million Rwandan francs in 1975 to 10.2 million in 1979 and 11.85 million projected for 1980, largely reflecting increased resource generations from coffee. In relation to GDP, gross domestic savings rose from approximately 2% in 1975 to about 12% in 1979.

General consumer price increases are strongly influenced by disruptions in supply routes, both external and internal. From 7% in 1976, the index rose to 14.7% in 1977, dropped to 12.5% in 1978 and rose again in 1979 to 15.8% as a result of the long border closing. Government attempts to contain the rise in consumer prices, through the setting of maximum profit margins, has been largely unsuccessful. Efforts to avoid transport bottlenecks and to reduce localized shortages and high prices of food supplies have been more successful with the establishment of a national commercialization agency and the stocking of supplies in regional warehouses.

The government has had less success in employment generation. The goal of 40,000 new jobs by 1981 will not be met. Jobs directly in the agricultural

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* Embassy Kigali, Airgram A-22, Central Government Budget - Rwanda 1980, September 5, 1980

production sector will materialize only slowly unless larger scale land reclamation is begun. This will be a decision largely left to the donors to make. Steps described elsewhere herein to revitalize the mining and manufacturing sector are looked to for the near term. Lending rates were substantially revised upward in 1979, except for loans directly related to export activities and for imports of essential commodities, thus already reducing speculative borrowing and somewhat encouraging a labor intensive approach to local market industries. Interest rates for term deposits were also substantially increased, an action which has begun to galvanize time and savings deposits.

(1) Rural Development. The present extension service is staffed with underpaid, poorly trained agents who lack the physical means (transport, paper, technical inputs) to carry out their work. The Ministry of Agriculture has begun to put into place a system of extension, one which differs from the older, traditional hierarchial system of using basic field agents supervised by higher agents who in turn are supervised by trained agriculturalists. The new system is based on the selection and training of a volunteer "lead farmer" who is selected by a group of 10 farmers to bring to them the new technology and practices. The "lead farmers" are supported by trained extension staff who visit them in the field. The new system, which is not yet thoroughly evaluated, seems preferable from two points of view. First, it does not demand a large increase in the number of paid extension staff, though it does require that they be better trained. Second, it brings farmers together in groups, puts more emphasis on the communal development effort and fosters a cooperative spirit that is an essential element of cooperative and communal development. Third, by giving the initiative to farmers themselves, the system makes the best use of one of Rwanda's strongest assets: the willingness of the farmers to improve their situation and their awareness of the precariousness of the present existence and the discouraging prospects for their children.

Crop specialization, according to ecological zones and new crop introduction (maize has met with particularly successful acceptance), are receiving more and more government attention. The inadequacy of the transport network resulted in GOR policy attention to, and resources for, an agency to deal with storage, commercialization and price stabilization of foodstuffs. Policies to restrict cattle population by protecting pastures and to promote mixed

farming, with small ruminants, are being implemented with donor support.

Specialized extension services are provided to coffee farmers, including provision of fertilizers, insecticides and tree spraying, and advice in plant management. Rwandan coffee has, however, deteriorated in quality since the early 1970's, and no longer commands premium prices. The government's objective is to limit coffee to 30,000 hectares but increase production. The process of replacing old trees began in 1979 and will continue for the next 3-4 years.

(2) Encouragement of Participation in Economic Development by the Poor

Decentralization. The 143 communes are the smallest unit with a real administration. Each has a burgemeister, appointed by the President of the Republic, with elected counsellors, and a commune secretary paid by the commune. There are an agricultural center, agricultural and veterinary agents and demonstrations at the commune level, with agricultural monitors and veterinary agents at the several sector levels of the commune. At the prefectoral level, of which there are 10 in the country, there are agricultural and veterinary agents of A-2 level (3-4 years post high school training) who supervise and provide continuing training to the commune level agents.

Taxes are collected at the level of the commune under the direction of the burgemeister, and are utilized to cover the recurrent costs of the commune level services. A tax of $5.50 for each family head, and a $2.75 head tax on cattle constitute the main source of revenue. A typical commune budget is about $15,000 annually. The national government pays most of the technically skilled employees assigned to the communes, while the commune hires and pays other personnel with the tax revenues. A "Communal Development Fund" with contributions from the national government and from donors, puts additional revenues at the disposal of the communes for specific development projects. The commune also benefits from the provisions for obligatory communal labor, through which local agricultural and infrastructure projects are undertaken. The small size (up to 80,000 people) of the communes, moreover, makes them a suitable vehicle for ensuring that farmers' ideas and opinions are heard and that local initiatives are acted upon.

The intention is to give the burgemeister the administrative responsibility for all the activities of the agencies in the commune, while the technical responsibility will remain with the technical ministries in Kigali. The initiative for proposing and preparing them lies with the people of the commune through the Development Committee and the Technical Commission of the commune.

Cooperatives already play an important role in the development efforts of Rwanda. Cooperatives in Rwanda are already beginning to give the farm family institutional access to means of production, the market, agricultural knowledge and the financial system.

The Government of Rwanda has placed a heavy emphasis on the development of cooperative activities while at the same time not wishing to control their free functioning. The government is promoting the establishment of multifunctional cooperative development in each commune, with both marketing and supply functions. The present strength of Rwandan cooperatives is over 350 cooperatives grouping over 50,000 members with capital amounting to approximately 1.5 billion RWF ($16.4 million). Other pre-cooperatives, or other organizations assuming a form similar to a cooperative, are under the overall direction of the Ministries of Youth and Sports, Defense, Agriculture and Livestock, National Education and Justice. The government's policy for development of agricultural credit is to promote producer cooperatives. A small amount of credit for cooperatives is now available on a pilot basis through the Banques Populaires program which is seeking, with Swiss assistance, to develop rural credit. The Banques Populaires have operating rural banks with total assets of about $4 million. Credit operations have been limited to 25% of deposits in order to protect farmer savings. Little agricultural credit has been distributed owing to few demands, high risks and minimal experience.

The question of land reform is extremely complicated here, as elsewhere, where all land is considered to be within public domain, and farmers enjoy simple usufruct rights. An ad hoc commission has been formed to treat the question of land reform and to determine whether there is to be a fundamental agrarian reform aiming at equal distribution of land, or a land code recognizing private property, while setting limits on its extent. The Development Plan for 1977-81 appears to favor the latter. It discusses the need to address the question of absentee landlords, particularly those who let their land lie idle, and also proposes (rightly or wrongly is not at issue here) the regrouping of people into villages for easier access to services. The Plan does not propose that this be done during the years of the Plan but proposes that new lands brought under production should adhere to the principle of an established village. The question of land classification is also treated by the Plan, and this is an area in which the GOR has already begun to move with some progress.

Rwandan women play a major role in the agricultural production of the country, as well as in the domestic life of rural society. Food production has traditionally been the responsibility of the woman, even though her husband held title to the land, and often told her what to cultivate. The woman's predominant agricultural role is not reflected in the existing emphasis of extension work among women. Rwanda's system of social centers, nutrition centers, and family groups focus on nutrition, sewing and cooking, and child care, rather than on agriculture. The problem is recognized by the GOR and several measures are being taken to re-orient training for women

(3) Health and Family Planning. To a large extent the size of the population and the population growth rate relative to ability to increase food production dominate the Rwandan scene. Population pressures have had detrimental effects on nutritional levels which in turn reduce the ability to combat infectious diseases. The high infant mortality rate has been a direct consequence of a lack of an effective MCH program which would include more nutrition education.

The curative bias toward medical care is changing, albeit slowly. The physician/patient ratio (1/40,000) is not a valid benchmark for judging commitment to providing basic health care in a country which is poor, rural and with a bad transport/communication network. Rwanda should not undertake a large program to increase numbers of doctors when the same investment would provide appreciably more rural nurses and paramedics. The nurse/patient ratio of 1/5,010 (1973) is a better indicator of health care availability to the people. In Rwanda, everyone lives within 15 kms of a health care facility. The quality of care given at these rural centers should receive the priority attention.

Progress is being made in health care for the rural population. In the past year, the number of health centers increased from 72 to 84 and dispensaries from 198 to 213, making health care accessible to a larger percentage of the rural population. There has also been a welcome emphasis on nutrition training, including food preparation demonstrations, for mothers of small children, with the number of nutrition centers almost doubling from 45 to 87 over the last three years. Each center has an enrollment of around 700 mothers who return each month for training and for health care for their children.

An Expanded Program for Immunization is effectively underway with initial statistics indicating a significant drop in the incidence of targeted diseases in areas reached during the first two years of the program. The nutrition centers cited above are included in this program as immunization sites.

The history and continued practice of large families in Rwanda are a result of a series of interrelated factors, including high infant mortality, farm labor constraints, cultural heritage, government policy and religious bias. It is known that in pre-colonial times a high, completed family size was considered desireable as a source of labor and as a form of "social security". There were few, if any, cultural norms promoting child spacing and these traditional values still persist. An 18-month breast-feeding period and post-partum amenorrhea continue to be the most important means of spacing births. The high rate of infant mortality can also be presumed to have an effect on the individual family's perception of the need for large families. The government position, until recently,has been to discourage a public position in favor of FP information and/or education. Despite a lack of cultural practices to regulate fertility and a continuing reliance on children by the old and infirm, other factors and pressures now exist to induce couples to plan their families. First among these is the shrinking land base which makes additional sons a burden on the father who is traditionally bound to provide land (and a cow or two) for his sons' welfare.

In response to AID/W's request for benchmarks against which to measure GOR performance toward reducing the population growth rate, USAID/Rwanda indicated several factors, the achievement of which would indicate adequate commitment and progress in the field of family planning to justify continued and expanded U.S. bilateral assistance. (80 State 141512; 80 Kigali 1566). These are:

(a) Implementation of the USAID Family Health Initiatives project to include the development of a national plan for provision of MCH/FP information and services, and continued training of Rwandan officials in the provision of MCH/FP information and services.

(b) GOR action on specific projects for services including promulgation of the degree establishing ONAPO, provision of FP services in health and social affairs centers, use of mass media for FP information, FP included in GOR medical and social affairs training programs, a "family life" training in the school system, increased emphasis on the education of women and their involvement in development, and effective treatment of the population issue in the GOR's Third Five-year Development Plan.

After a long history of refusal to acknowledge the necessity for addressing the problem of a burgeoning population, the GOR has, over the past year, taken significant and very encouraging steps which indicate a strong official

commitment to reducing the country's population growth rate. In September 1980, the decree was approved establishing a National Population Office (ONAPO) to provide family planning information and services to the Rwandan population.* The new semi-autonomous office will begin by carrying out studies of the problems affecting the growth of the population, evaluate the importance of these problems on national development, and propose solutions to accomplish an equilibrium between the available resources and demographic growth. The family planning policy, as stated in the decree, will permit all reversible methods to be introduced. A recognized proponent of family planning, who is also high in the political hierarchy, was designated as first Director of the National Office of Population. A UNFPA project supporting ONAPO activities and management, delayed for over a year, is to be implemented beginning early in 1981.

Pathfinder representatives were in Rwanda in December 1980 to get the local activities of their 1979 pilot project for MCH/FP services moving. U.S. MCH/FP training for 26 nurses for this pilot project was completed this past year and agreement has now been reached with ONAPO for support of the in-country training for 160 FP auxilliary workers required for the extension of the MCH/FP information and services envisaged under the program. Pathfinder will also assist in the preparation of brochures concerning family planning and Rwanda's population problems for use in the schools and for distribution to the public.

A preliminary RAPID presentation was previewed by Rwandan and USAID officials in September 1980 and a Rwandan representative from the Ministry of Plan is now in Washington assisting with suggested revisions prior to a second review and formal presentation early in 1981.

(4) Universal and Relevant Education. The adult literacy rate is estimated to be at 23%; primary school enrollment currently at 49.4%; and total primary school enrollment at 386,000 students. (Source: Profile du Pays Rwanda 1978.) There are no current data on the ratio of female enrollment or on the teacher/student ratio, but it is estimated to be at 34% and 1/50 respectively. The percentage of females in secondary education, however, is known to be much lower, probably at 2%.

A major reform of the Rwandan educational system, especially primary and non-academic post-primary, was instituted in 1977. The reform is designed to make primary education available to all children and to make this education more relevant to rural life. The reform recognizes the deficiencies in curriculum which, heretofore, prepared all students for higher education, even

* A report on the status of ONAPO is detailed in 80 Kigali 2289 and Kigali 00125.

though that possibility exists for less than 10% of those currently finishing primary school. The reform is adding 2 years to the required 6 years primary schooling and introducing, in the 7th and 8th years, a curricula more oriented toward rural life. For those who do not go on to high school, an additional 3 years rural and agricultural curricula will be required at Integrated Rural Artisan Learning Centers (CERAI's). The Ministry of Education has begun (with USAID help) to restructure the curriculum and to establish, in the first phase, 30 CERAI. The CERAI will also introduce adult functional literacy on a pilot basis.

Rwanda's school-age population is increasing at a rate of 4-5% per annum. Education presently receives the largest share of the GOR Ordinary Budget (22%) and it is expected that counterpart funds for donor financing will be made available from the Development Budget as required. Whether Rwanda's resources will be able to bear the brunt of recurrent costs after donor financing is completed, which the educational reform implies, is open to question. Certainly, heavy donor financing will be required to make the new educational system operational. Target dates for completion of the educational reform have not been made, but most people are of the opinion that the government and the donors will be hard pressed to get it entirely into effect before the end of the century.

(5) Mining and Manufacturing. Mineral extraction is by both industrial and traditional methods. Where deposits are small, artisans mine individually and sell their minerals to the government mining agency. During planting and harvest seasons, labor supply is reduced. Fiscal incentives to artisans in the form of waiver or reduced import taxes on equipment, are being instituted by the government to assure a steady mineral supply.

The policy of the government with respect to industrial development has been to encourage industries that would create employment opportunities. There has been a deliberate move into less capital intensive projects and primary industries in agricultural processing. Measures taken in recent years have included the establishment of a Chamber of Commerce and the Development Bank of Rwanda, and the creation of a Guarantee Fund (not yet in operation) for capital to be made available to small-scale entrepreneurs by commercial banks.

The major part of Rwanda's energy requirements continue to be gotten from wood. The energy policy being followed is one of diversification of energy

resources so as to lessen dependence on imported oil. Increased investment in hydroelectric power plants, large and small, and large-scale reforestation programs are being undertaken. Conservation measures, the most important of which is to immediately transmit increases in costs of petroleum products to consumers are being taken.

(6) Human Rights. Adherence to basic human rights is a key objective of official policy of the present Rwandan government. Though there is a single-party system, freedom of thought, religion and expression are generally respected. Criticism of the government is tolerated but since there is only the official newspaper and that is published only once a week, and other fora for criticism do not exist, printed criticism is limited. Freedom of movement is somewhat restricted as the government attempts to limit urban migration and migration from neighboring countries, but migration from one rural community to others takes place freely. Informal migration patterns among countries, which have existed for a long time throughout the area, continue without much official opposition or restraint.

(7) Other Donor Assistance. The government has just recently completed an evaluation of the implementation of the first three years of the Second Plan which details donor contributions. The study has not yet been released, however, and the data on which this section of the CDSS is based comes from UNDP documents which, themselves, depend entirely on information voluntarily submitted by the donors. Allocation of donor funds to specific sectors is a function both of government requests and priorities and donor restrictions and interests. Neither are ever fully met.

The following table indicates the way funds have been allocated over the past several years. It is clear from this table that both the GOR and the donors are attempting to channel funds to the primary sectors and that external resources are being used to address Development Plan objectives.

## DEVELOPMENT ASSISTANCE

| Technical Assistance | 1978 | 1979 |
|---|---|---|
| 1. Agriculture, forests, fish, livestock | 18.6% | 26.5% |
| 2. Education | 23.5 | 25.8 |
| 3. Health (including water) | 7 | 11 |
| 4. Policy and planning | 11.3 | 4.2 |
| 5. Industry and tourism | 8.6 | 8.4 |
| 6. Natural resources (including electricity) | 7.5 | 2.8 |
| 7. Humanitarian assistance | 13 | 9.1 |
| 8. Transport and communications | 3 | 7.2 |
| 9. Other | 7.5 | 5 |
| | 100 % | 100 % |
| | $67 million | $67.4 million |

| Capital Assistance | | |
|---|---|---|
| 1. Transportation and communications | (not broken out by UNDP report) | 36.8 |
| 2. Industry and tourism | | |
| 3. Agriculture | | 12 |
| 4. Natural resources (including electricity) | | 10.4 |
| 5. International commerce and development finance | | 14.3 |
| 6. Health | | 6.1 |
| 7. Education | | 2.4 |
| 8. Humanitarial assistance | | 4.3 |
| 9. Other | | 13.7 |
| | $60.3 million | $97.1 million |

Approximately 65% of assistance made available in each year was in the form of grants. Most of the loans, from the World Bank and the EEC, were at concessional terms. It is not possible to determine, with present information, the extent of funding which was purely technical assistance as opposed to project financing. Certainly, aid to the education sector by Belgium, France and Canada is largely in the form of personnel.

In terms of both funding and personnel, USAID is a minor donor in Rwanda and is likely to remain so. Other bilateral and multilateral donors have a longer history in Rwanda which gives them a better base of knowledge and experience and also better access to decision makers. Donor assistance to Rwanda is characterized by source and sector concentration. The six leading bilateral and multilateral donors in order of importance, Belgium, France, Germany, EEC, World Bank and U.N., together provided more than three quarters of the $165 million in assistance made available to Rwanda in 1979. Similarly, more than half of the total assistance was in three sectors: agriculture, education and transportation and communication. Major efforts in the agriculture sector were projects for the expansion and diversification of industrial crops (tea by Belgium and pyrethrum by UNDP) and for agricultural intensification

(in the BGM region by France and the World Bank and in Mutara valley by Canada and the World Bank).

In the education sector, chief donor activities were tied to the on-going, education reform, i.e., professional staff and operating expenses for the Ministry of Education Pedagogical Bureau, construction of school buildings and a textbook printing press (Belgium and France). Other important activities were provision of teachers and professors by Belgium, France and Canada. Leading activities in the transportation and communications sector were the grading of Rwanda's international and internal roads, air and telecommunications links with principal financing from FED, France and Germany.

Coordination and cooperation in project implementation is occuring more and more, particularly by the World Bank which has major projects with the French and Canada. No formal donor consultations take place but informal contacts and consultations are frequent and sector specific. USAID cannot pretend to play a general leadership role among donors in Rwanda. Beyond large differences of funding and staffing levels, other bilateral donors have long histories of involvement with the country (Belgium and Germany) or strong linguistic and cultural ties (France, Canada and Switzerland) exist that the U.S. cannot equal. The Belgians have informally taken a lead role in donor assistance in energy programs; the UNDP in water and sanitation. USAID is currently regarded as the "leader" in population and in food grain storage and marketing.

There are two offices within the Ministry of Plan which have donor and project coordination responsibilities; one is responsible for new projects and the other is responsible for implementation of on-going projects. The Ministry of Foreign Affairs and Cooperation also has responsibility for bilateral assistance, but primarily in locating funding for projects which have been approved by the Ministry of Plan. Most donors,in fact, deal directly with the technical ministries after minimal initial contact with the Ministry of Plan.

## PART III. OBJECTIVES AND STRATEGY

The long-range objectives of the USAID program in Rwanda can be summarized as follows:

a. increase Rwanda's per capita food production through appropriate interventions at the national and farm levels to more efficiently use limited resources;

b. to effect a general improvement in the health status of the Rwandan family and to bring the demographic situation in Rwanda into balance with development potential.

The U.S. has a unique opportunity to play a key and catalytic role in several development sectors, a role perhaps out of proportion to the total amount of U.S. financing being made available and despite the fact that the U.S. is a relative newcomer as a partner in Rwanda's development. USAID is taking a lead role in food storage and marketing, in agriculture sector analysis and planning, in fish culture, and in maternal/child health and family planning. Moreover, U.S. assistance is being significantly channeled to local participatory organizations, i.e., cooperatives and communes. Our emphasis on participation of the poor in the development process through support to local development authorities is recognized to the degree that the GOR has requested USAID to conduct a detailed study of the ability of local bodies to continue and improve their developmental role.

The extent to which financing is made available for USAID programs in Rwanda will determine the ability of USAID to implement the strategy herein presented. While the strategy is predicated on increasing funding levels, it remains attuned to the realities of USAID overall financing expectations and, for that reason, seeks to address key problem areas where USAID limited funds and U.S. expertise can have the greatest effect.

The serious problem of employment generation, for example, will not be substantially met by USAID under its present strategy. Neither the funding likely to be made available, nor personnel which can be posted to Rwanda, will permit an all-out attack on this problem. Nor is it likely that USAID will be in a position, over the life of this CDSS, to address in a real way the problem of internal isolation caused by poor lines of communication.

In the social services sector, USAID strategy will be to concentrate on several aspects of maternal/child health. Rural health delivery, for the

benefit of the general public, is not included as a part of the strategy, again because of funding and management constraints, and not because these areas are not of interest to USAID or are adequately covered by other donors. Rural primary education has been rejected as an area of intervention for virtually the same reasons.

A. RURAL PRODUCTION

Rwanda's difficult geographic position and extreme population pressure virtually dictate a policy of self-reliance, particularly in the attainment of food self-sufficiency.* The USAID Africa Bureau itself gives a bleak projection of the ability of sub-Saharan African countries to rely on future massive food imports.** The particular situation of Rwanda, land-locked and land scarce, demands that agriculture, specifically food production and intensification of all agricultural production, receive the highest attention if basic human needs are to be met.

The long-term objectives of relative food self-sufficiency and increasing rural incomes can be addressed in several ways. First, there are particular crops which can be identified for intensification efforts; intensification of geographic areas with the hope of achieving an oil spot effect is also possible. The latter appears to be the main thrust of development policy of the GOR through its regional integrated rural development approach. Strengthening of extension services while at the same time establishing strong linkages between research and extension constitute the modus operandi of the intensification efforts.

While intensification programs will, if successful, meet food demands of the rapidly growing population and increase rural incomes, the equally serious problem of employment generation is only partially solved by intensification efforts. The potentially explosive social and political situation brought on by the exploding population in the face of limited land resources and little opportunity in the commercial sector, has to be addressed. It is for this reason that the government is pursuing a parallel agricultural policy of new land development, i.e., the 50,000 to 90,000 hectares of marsh and swamp land not presently under cultivation.

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* World Bank "Memorandum on the Economy of Rwanda" Report No.1108-RW, July 27, 1976, page 15

World Bank "Agriculture Sector Review - Rwanda" Report No.1377-RW, June 30, 1977, page 15

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GOR development priorities are reasonable and properly directed and GOR goals and plans in the agricultural sector, especially as they relate to food production, will be supported as a long-term USAID objective. The more limited objectives of the USAID program, to be achieved over the next five years in the agricultural sector, will emphasize food production and the full participation of the rural population in development.

As a first step, the improvement of the country's capacity for agricultural planning and policy formulation is a priority activity to be supported by USAID. Rwanda is engaged in preparing a food strategy with the World Food Council with the objective of attaining a steady 4% yearly increase in food production and an 8% yearly increase in cash crop production. Yet, estimates of current production, acreage and yields on which the agricultural production targets are based are not reliable. Rwanda does not know if the present agricultural system is capable of even these necessary minimum production increases. Existing variations in production, yields, inputs, technologies, cultural and marketing practices and, hence, many of the more important constraints to, and means for, increasing production have yet to be identified and quantified. The formulation of sound policies and a determination of the needed composition and level of investment in the agricultural sector must draw from a fund of information that is not presently available. The government's capacity to use this data as an analytical tool for rational development planning must be strengthened.

Over the next five years, USAID will actively engage in completing a national agricultural census and in establishing an office in the Ministry of Agriculture to analyze the data for use by policy makers and to continually update and expand the socio-economic agricultural data available to the country.

As a means of increasing food availability and of assuring a fair price to the producer, the improvement of food crop storage and marketing facilities is one of the priority goals in the agriculture sector of the 1977-81 Rwandan Development Plan. In 1975, USAID began a long-range program in Rwanda to improve storage and marketing, first by creating an efficient national food crop marketing board with purchasing and storage centers in strategic areas of the country, and later treating the problems of storage at the local level (cooperatives and missions).

USAID support of the storage and marketing program will continue and be expanded. A liaison of the national marketing and storage effort with a strengthened program of cooperative owned and managed silos will be encouraged

over the next several years. Storage and marketing at the national level is essential to balance food transfers between excess and deficit production areas and to reduce speculative price fluctuations. Local level storage/marketing units tying into the national system will reduce post harvest loss and will set the stage for diversification to other crops. The establishment of a security stock and strengthening the capacity of the GOR to coordinate food transfers among regions and between national level storage facilities and cooperative level facilities will be the principal elements of this effort. As Rwanda moves toward a doubling of its population in the face of stagnant crop yields and limited land resources, and the impossibility of bearing the cost of major food imports, the USAID integraged storage and marketing program, with the objectives of reducing post harvest losses, effectively transferring food from the excess to deficit production areas and encouraging production through pricing mechanisms, assumes increasingly greater importance.

Providing basic human needs through increasing production remains the bulwark of GOR policy and USAID long-term objectives. The options exist for USAID to participate in a dry-land regional intensification program, in the Butare region of the country, or to develop heretofore unused valley lands. The first option, a geographically limited intensification program would include research, upgrading and reinforcing the agriculture extension service and establishing a strong linkage between research and extension. The capacity of the government to absorb this kind of assistance given the human resource constraints, and the ability of the country to support the recurrent costs of an expanded and better trained extension service are not fully known but, obviously, will determine the long-term success of such a program. This approach does, however, offer the opportunity,over the long-term, to concentrate USAID resources going to other sectors (education, health, energy) in the same geographic area and thus achieve a significant transformation of that area. GOR's expressed preference is that USAID select the latter option as a means of both increasing total food availability to the country, and of providing farm employment. As noted above, there remains significant hectarage in the valley lands of the country which is readily susceptible to cultivation. Spontaneous settlement and farming of these areas has not occured because the technology of farming the heavier soils, often under irrigation conditions, is not widely practiced and requires a certain infrastructure and technology not yet available to the farmer. With Rwanda's

expanding population and with the increasingly high cost of food imports, the economics become more favorable and open the way for serious study of development of valley and marsh lands. USAID, with experience in Asia and Latin America, is uniquely qualified to be of assistance in this area.

USAID strategy for the next several years will be to obtain the necessary economic, social, environment and technical data to permit us to determine the advisability and feasibility of participating in intensification and/or new land development and to select from among the several options open to us. The strategy for longer term project specific participation will be put into abeyance until this more complete information base is available.

ENERGY IN RELATION TO AGRICULTURAL DEVELOPMENT

Forest land now covers less than 6% of total area and is diminishing rapidly. Scarce land is being taken out of forest production for food crops and the result has been a decline of wood available for fuelwood and charcoal, virtually the only energy sources for both rural and urban populations. A study carried out in 1977 showed that in the more densely populated rural areas, wood constitutes only 30% of energy use; agricultural residues (dried mannure, grass and leaves) make up the remaining 70%. The direct result is lower agricultural yields. Coffee and other crop yields fall by 50% or more when mulch or organic fertilizer is not used.* Increasing erosion of hillsides has been attributed to excessive cutting of trees.

The government designated 1980 as the year of soil conservation in order to galvanize resources and public attitude to meet the challenge of natural preservation. In support of GOR initiatives to maximize agricultural production through resource preservation, USAID will participate in village level reforestation and erosion control programs through contributions to the communal development fund and through assistance to private and voluntary organizations who have programs in this area.

Also, USAID will help the GOR in investigate the potential for improving the use of indigenous energy resources, including forest products, but also alternate sources of energy.

There are a variety of new and renewable sources of energy available to Rwanda, including solar power, peat, cattle dung, small streams, wind, etc., which lend themselves to cost effective exploitation. USAID strategy is to

* World Bank Report No.2868a-RW Integrated Forestry & Livestock Development Project

support applied research and on-farm testing of alternate energy devices such as solar water heaters and crop and fish dryers, mini-hydroelectric generators, biogas converters, efficient stoves for burning wood and peat, and more efficient methods of charcoal production. The technical appropriateness, the economic feasibility, the cultural acceptance, and the real possibility of replicability on a large-scale will all be investigated. Later stages of USAID support will include additional research and testing of other energy use reduction devices and will concentrate on a wide scale information and education efforts as well as assistance in production of those devices which have proven feasible.

PL 480 FOOD FOR DEVELOPMENT

As outlined in this CDSS, Rwanda has a strong development policy, aimed particularly at improving agricultural performance. There is also a policy of encouraging local participation in development by devolving more and more authority to communes to plan, implement and support development activities.

The PL 480 program can support our objectives in rural production in several ways. First, the use of PL 480 commodities in food-for-work activities for rural roads, land preparation and reforestation programs will be continued and expanded. PVO organizations working in Rwanda (CRS and SAWS) will continue to program and manage food-for-work projects. Target geographic areas will be those where other USAID programs can be supported, directly or indirectly, through the food-for-work projects. USAID projects themselves, will use the food-for-work mechanism wherever possible to encourage the introduction of new production techniques and to more fully have local participation.

Second, proceeds realized from the sale of Section 206 FFP commodities will be channeled to rural communities through the Communal Development Fund and will be both sectorally and geographically targeted to other USAID activities in an integrated approach to achieve our development objectives.

Long-range sector goal:

-- Production increase by an amount equal to or greater than the population growth rate.

Short-term sector goals:

-- Functioning statistics and analysis office in the Ministry of Agriculture which has trained survey and analysis staff. A completed computerized survey of agriculture in Rwanda, periodically updated and refined, available to the country's planners.

-- An operational national food storage and marketing agency, with facilities in all prefectures (a total of 15,000 metric tons) and trained staff.

-- A food security stock of 10,000 metric tons.

-- Cooperative and commune food storage silos in 100 locations, operated and managed by local groups.

-- Studies (social, economic, environmental, agronomic and engineering) completed to enable USAID to determine the feasibility of participation in a large-scale agricultural production project.

-- Technical and socio-economic trials completed on mini-hydroelectric, solar power and bio-mass installations. Ten of each type in place and functioning.

-- 1,600 hectares planted in trees.

B. HEALTH AND POPULATION

After examining the need for health assistance and the role of other donors in this sector, USAID has determined that concentration of our resources in primary health care can yield the greatest returns over the short-term and can provide the impulse for a reduction in Rwanda's population growth rate over the long-term. Our strategy will be to further concentrate health care programs on women of child bearing age and children. With 45% of the population under 15, and 43% of the women in child bearing age, an MCH/FP program appears to be the most efficient means of addressing the GOR/USAID health sector development priorities.

Over the next five years, USAID interventions will support: (1) protection from the most prevalent contagious diseases; (2) maternal and child nutrition education and assistance; and (3) FP/information and services. Over the long-term, USAID health programs will seek to achieve a reduction in infant mortality and morbidity to the point where the necessity for a high fertility rate is obviated. The PL 480 food distribution program now being carried out by CRS and SAWS will continue to emphasize the use of donated commodities for overcoming malnutrition problems of vulnerable groups, with emphasis given to maternal/child health programs, and for food-for-work development activities.

In Rwanda, as in most developing countries, the age group of 0 to 5 experience a high death rate.This is often estimated as contributing 40 to 60% of all mortality. The infections causing the greatest amount of most easily preventable illness and death include diarrheal diseases, measles, malaria and whooping cough. If mothers are expected to reduce their fertility rates, they should be assured of higher survival rates for their children. An optimal outcome of a selective disease control program would be a reduction of infant and child deaths from those common and easily preventable causes, accompanied by a

willingness to adopt child spacing methods which assure better health for both mother and offspring. USAID will support the GOR in implementing its "Expanded Program for Immunization" to achieve approximately 40% nationwide coverage over the next five years, and approximately 80% coverage over a ten-year period.

Child malnutrition is one of the primary health concerns of Rwanda. It is largely the result of unspaced pregnancies and large families in the face of subsistence level incomes. Nutrition education and the provision of food supplements has long been a U.S. program objective in Rwanda and will continue to be. Of the 108 active nutrition centers in the country, 88 are incorporated into the Catholic Relief Services PL 480-supported nutrition education program. These nutrition centers, whose clients are at-risk mothers, will play an important role in an MCH/FP information and education program and, with additional training for the staff, can provide FP services at a future time.

USAID strategy will be to continue support to the nutrition centers through the PL 480 program and, over the next 20 years, achieve a nationwide network of centers offering nutrition education. It is estimated that approximately 250 such centers will be required. The shorter term goal is to assist in the establishment of 25 nutrition education centers.

With regard to population, the GOR 1977-81 Development Plan states, "A reduction of the rate of population growth is necessary and it should be achieved along with increases in food production. The basis of a demographic policy centered on the spacing of births and on the improvement of health conditions should be worked out during this five-year period, taking into consideration that the effects of such a policy are very slow". In Rwanda, as in many African countries, the development climate for encouraging the rural population to limit the size of families is only beginning to be felt.

USAID will be prepared to support the GOR in those health or nutrition efforts which provide a framework for the extension of family planning or child spacing advice or services. The U.S. is in an ideal position to assure a fully supportive posture with the promise of responding to those directions or activities the GOR encourages. For its part, the GOR will need time to transform its caution to commitment. On the hillside, families will need time, information and resources to become more confident of the chances for survival of their children. The keystone of USAID's strategy should be to accelerate this process wherever possible, without stimulating resistance.*

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* DAP 1974, Rwanda Development Assistance Program 1974

USAID also has a unique opportunity, through support to the government's National Office for Population (ONAPO) to assist the government in developing and implementing a national plan for complete MCH/FP services, including demographic and population research, a broad MCH/FP information and education program, and to assist the GOR to make MCH/FP services widely available.

The private sector,which is already providing some family planning information and services, will be reinforced. One means would be through increased aid to the Bureau des Formations Medicals Agrees du Rwanda (BUFMAR, a local organization of about 75 religious and private voluntary medical organizations working in Rwanda) through the USAID-assisted Medical Assistance Program International (MAP).

GOR programs to establish integrated basic health, nutrition and family planning services facilities in rural areas are being encouraged by USAID. Nutrition centers, already functioning with CRS assistance, can be combined with sanitation education, with an immunization program and with family planning education and services to offer a comprehensive MCH program.

USAID will also participate in the U.N. Decade for Water and Sanitation as part of our program to reduce mother and child morbidity and mortality. Village water delivery systems will be financed in conjunction with other USAID rural production activities and will be limited to selected geographic areas. Private voluntary agencies working in Rwanda have experienced personnel to both design and execute these systems with minimum demands on either the GOR or USAID. Sanitation will be encouraged as part of the education program given in the MCH/FP centers. The short-term sector goals are:

1. An established National Office for Population, coordinating demographic research and ensuring that planners and policy makers are aware of results.

2. A functioning MCH/FP information, education and service delivery system, to include: a) family planning services in at least 10 public health facilities where trained staff is available; b) family planning information and limited services (condoms, pill resupply) in social and nutrition centers (at least 30); c) introduction of child spacing sensitization component into GOR medical and social affairs training programs.

3. A system for training personnel for MCH/FP education and service delivery.

4. Immunization services routinely and readily available to the population in all ten prefectures.

5. Reduction of infant mortality and morbidity from target diseases:
   -- measles, 50% reduction
   -- BCG, 50% reduction in under 15-year olds
   -- pertussis, 25% reduction
   -- polio, reduction in number of children receiving rehabilitation treatment.

6. An expanded nutrition program, including nutrition education, nutrition surveillance, improvement of sanitation, development of garden projects and the provision of appropriate supplemental foods.

7. Five communes (approximately 150,000 people) provided safe drinking water.

## C. HUMAN RESOURCE DEVELOPMENT

The U.S. is already playing an important role in rural education through a project for the construction of 30 CERAI and technical assistance to develop a curricula for rural education (make reference to Progress and Commitment Section). The CERAI's can play a major role in increasing education opportunities for the rural population both young and adult, and in orienting education to the realities of rural life. Moreover, graduates of the CERAI's will form the manpower pool for both lower-level rural technicians (with short-term specific training) and for mid-level extension agents (with longer term specific training). Thus, the CERAI's are an important element in the government's objective of increasing services to the rural population, and of the USAID strategy. It is not likely, however, that USAID will program additional funds to the CERAI's over the next several years. An evaluation of our participation in the program, and of the Education Reform, will be required before additional USAID assistance is given.

The situation is fluid, however, and the options for USAID's further participation in the education sector over the near term should not be foreclosed prematurely. After all, human resource availability is a major constraint to Rwanda's development and the GOR is in the midst of an Educational Reform which USAID supports. Should the options so present themselves, the U.S. position should emphasize practical education at all levels while accommodating the alternative evolutionary option of the reform. USAID assistance should specifically concentrate on the network of post-primary technical and vocational institutions dealing in areas which relate to USAID's objectives, i.e., agriculture,

health and nutrition, as well as related technical or management skills. Above all, USAID options to promote training of women at post-primary schools, already begun with assistance to Rwanda's Agricultural School for Women, should remain open and be broadened.

The focal point of USAID's program for human resource development over the near term will be integrally linked to project funding, and will take advantage of regional training opportunities where the training offered supports USAID's objectives. USAID projects already provide substantial funding for in-country training of Rwandan personnel, primarily at the level of field technicians, and provides some funding for U.S. and third country training for higher level technicians and project managers who will work with USAID technicians and who will be prepared. both through formal and on-the-job training, to assume directional roles after USAID technicians have departed. This is particularly evident in USAID programs in cooperative grain storage and for MCH/FP. In view of the important role of cooperatives in carrying out rural development in Rwanda, and particularly in carrying out USAID projects, future attention will be focused on the training of cooperative managers, accountants, etc., and supporting training for cooperative members in rural production techniques. The institutional mechanisms for providing this kind of training are now being established. USAID support will be within the context of rural production projects.

It is estimated that, over the past several years, USAID has allotted over 50% of total funding, regional and bilateral, coming into Rwanda for direct support of human resources development. With assurance that regional training funds will continue to be available to supplement bilaterally-funded training, USAID/Rwanda does not anticipate a discrete Rwanda Manpower Development project effort.

## PART IV. ASSISTANCE PLANNING LEVEL

### A. PROPOSED ASSISTANCE PLANNING LEVEL (PAPL)

| | 1983 | 1984 | 1985 | 1986 | 1987 | Total |
|---|---|---|---|---|---|---|
| Rural Production | | | | | | |
| Sector planning | 1 | 2 | 2 | 3 | 3 | |
| Resource conservation | 3 | 4 | 5 | 7 | 7 | |
| Research | 2 | 3 | 3 | 3 | 3 | |
| Extension/cooperatives | 4 | 5 | 7 | 9 | 9 | |
| Human resource development | 3 | 3 | 3 | 4 | 4 | |
| Health and Population | | | | | | |
| Planning and research | 1 | 2 | 2 | 2 | 2 | |
| Nutrition/immunization | - | 1 | 1 | 3 | 3 | |
| Family planning | 2 | 3 | 4 | 5 | 5 | |
| Clean water | 3 | 4 | 4 | 4 | 4 | |
| Human resource development | 2 | 2 | 2 | 2 | 2 | |
| Total | 22 | 29 | 33 | 42 | 42 | |
| PL 480, Title II (non-add) | 4 | 5 | 6 | 7 | 8 | |

### B. JUSTIFICATION FOR THE PAPL

The USAID office in Kigali opened in 1975. The dialogue with Rwandan officials concerning USAID development concerns has raised expectations for levels of USAID funding which are sufficiently substantial to have an impact on major development problems here. The GOR has responded to USAID initiatives by looking to USAID as a principal donor in several areas and to seek USAID assistance in support of other donor activities where U.S. has a particular expertise and knowledge. USAID assistance in agriculture and health and education planning presents an excellent opportunity to influence development policy, an influence which will be broader than the relatively low level of development assistance which USAID will be able to provide over the coming years would imply. To reduce the USAID funding levels much below those presently required would imply a reduced U.S. interest in participating in Rwanda's economic development. Rwanda is one of the five least developed countries in the world. U.S. acceptance in world fora to support the development of the poor countries of the world clearly included Rwanda. More serious, a relatively low level of USAID funding would jeopardize the gains we have made in certain sectors and would compromise our ability to influence GOR po-

licy programming. We would not be able to capitalize on the experience being gained and the rural infrastructures being established. Funding at current or only slightly increased levels would not constitute or support a "strategy" for development.

Rwandan officials frequently question the modest levels of U.S. assistance, and remind us that Rwanda is among the poorest countries in the world, that the development problems here are imposing but not impossible to overcome, that the U.S. has particular expertise which Rwanda needs, and that U.S. assistance to other countries in similar or more favorable circumstances is often greater. Clearly, Rwanda is looking for significant increase in U.S. assistance.

## C. PROJECT MANAGEMENT AND WORKLOAD

The fact of limited manpower resources will require discipline in programming, as well as careful selection of employee and contractor skills. Effective use of limited personnel will include the following:

1. Sector Emphasis and Use of Project Resources Transfers. USAID is supporting several key rural sectors where the U.S. has a special expertise and where the limited financial resources which USAID can give to Rwanda can be used to best advantage. This sector concentration has helped, and will continue to restrict the number of technical assistants needed to implement projects. For example, a program for the construction of storage facilities at both national and cooperative levels, and the training of local staff is being financed in three on-going projects, approved in different years. Sector concentration has permitted one compace and effective management unit and the sharing of training resources. In effect, USAID has been able to carry out a $5.8 million program with 2 technicians in place. Continued concentration in this area, and in MCH/FP can achieve the same economies of personnel and management time. Sector concentration has the added advantage of limiting the number of project counterparts, thus enabling sound and mutually respectful working relationships to develop.

Project resources transfers, particularly under the PL 480 program will be continued and expanded. The feasibility of CIP program for Rwanda, to permit local government units to carry out rural development projects in water delivery, rural road repair and reforestation, is being studied.

2. Use of Short-term Consultants and Experts. USAID/Rwanda has had particular success in locating and recruiting qualified short-term technicians who are available for repeated visits, but who very often will not accept a long-term assignment. While the expanded use of short-term consultants, in lieu of long-term technicians, will depend, of course, on particular project needs, it can be a viable alternative and one which has already found favor with the Embassy, which prefers a low profile, and with counterpart GOR ministries.

3. Increased Utilization of PVO's and Title XII Institutions. The GOR has endorsed the role in which U.S. non-governmental organizations can and do play in grass-roots development here. The mission has had good success in utilizing U.S. PVO's for project management, through both the OPG and contract route, and our strategy is to continue to support and encourage voluntary agency activity in Rwanda. Voluntary agencies not only provide an additional pool of resources, but they can provide experience and French-speaking expertise not readily available to USAID. This is particularly true when the technical assistance required is "mid-level". Use of Title XII institutions, under the "university-provided agricultural and rural development technical support to missions" proposal (80 state 121881 and 80 Kigali 1280) to provide technical support to Great Lakes Region (Rwanda, Burundi and northern Zaire) will be explored in conjunction with the Burundi USAID mission over the coming years.

4. Other Donor Agency Participation. More flexibility in engaging other donors, particularly the U.N. specialized agencies, in implementation of USAID-financed projects would provide us with a range of expertise, French-speaking, for whom administrative backstopping would not be required. USAID/Rwanda has proposed that FAO be contracted to implement a U.S.-financed fish culture project and, if permitted, similar arrangements with FAO, WHO and UNICEF are possible in the future.

5. Regional Approach to Project Management and Implementation. The Regional Development Strategy Statement for the Great Lakes Region which will be prepared over the coming months, will examine opportunities for sharing both USAID staff and technical assistance. Reliance on project design, technical and financial assistance from REDSO/EA and EAAC will continue at approximately the same levels as in the past.

6. USDH Mix and Local Staff Development. In FY 81, with the arrival of a U.S. direct-hire agricultural officer and the hiring of a local or TCN direct-hire professional, all AAO direct-hire staff positions will be filled. To implement a growing program, beyond FY 82, an engineer and a capital projects development officer may be required in FY 83. Corresponding increases in local staff may also be required. The use of foreign nationals offers an excellent prospect for doing more with less over the long-run. The USAID program in Rwanda, and in similar small, non-English-speaking countries, will have to rely more and more on local technical staff. USAID/Rwanda should have at least 12 local hire staff to work with the 6 USDH. Future local hire positions should be reserved mostly for professional level employees. Locally recruited and TCN staff working in commodity procurement, project support administration, participant processing, financial management, etc., can reduce the workload of U.S. direct-hire staff significantly -- freeing the latter for program management and direction. While they are difficult to hire in Rwanda, every effort will be made to locate Africans with professional level skills or who can be trained to that level. The positions should be available to permit the local personnel to be hired.

7. Administrative and Project Support. Under the direction of the Mission Management Officer, USAID/Rwanda is establishing a four-person Support Unit to provide administrative, procurement and management services to project managers and field staff and to PVO's and contractors who are implementing projects. USAID direct-hire employees are supported under an agreement with the Embassy, but contractors are USAID's responsibility, and their support often falls to project managers. The duties of the Administrative and Project Support Unit include:

-- commodity procurement and record maintenance;
-- logistical support: housing, furniture, supplies, transportation;
-- participant and staff training; and
-- administrative support to contractor and PVO personnel, particularly those located outside of Kigali.

8. Role of USAID/W in Increasing Field Efficiency. There is an important role which AID/W must play if small missions like Rwanda are to do "more with less". First, a review of all reporting requirements must be held and clear directions given on what missions are to be expected to furnish. Obviously,

with reduced personnel levels, AID/W will have to live with less information, not more. A review of the three major yearly documents required, the CDSS, ABS and CP, will show that some information requested is duplicated. For example, in both the CDSS and the ABS, missions are asked to discuss how they will manage their program with reduced levels and still obtain maximum efficiency. Long-range planning tables are requested in both documents, with only slight variations.

The CDSS preparation requires substantial input from missions, REDSO and Washington. The review process in Washington is even more demanding of the time and efforts of high-level officials. Yet, it is generally conceded that the sixty-page document is not sufficient to present a clear and complete analysis of the information requested. A return to a longer DAP style document, prepared every 3 or 4 years by specialized teams sent from AID/W, is perhaps in order as a way to reduce personnel workload while ensuring a complete document which provides a context for objective and rational program planning.

## SELECTED ECONOMIC INDICATORS

Table 1

| Indicator | Unit | 1976 | 1977 | 1978 | 1979 | 1980 |
|---|---|---|---|---|---|---|
| GDP current prices | RF mil | 61.9 | 71.6 | 76.4 | 89.0 | 103.2 |
| Agricultural GDP | % | 49 | 46 | 43 | 42 | 40 |
| Real GDP growth rate | % | 6.3 | 5.2 | 4.9 | 4.2 | 4.1 |
| Per capita current GDP | US $ | 153 | 171 | 177 | 200 | 224 |
| Inflation | % | 6.7 | 14.7 | 12.5 | 15.8 | 12.0 |
| Coffee exports | 1,000 tons | 36.7 | 19.1 | 17.2 | 39.3 | 24.0 |
| Coffee prices (FOB/CIF) | $/lb | .86 | 1.69 | 1.28 | 1.60 | 1.44 |
| Tea exports | tons | 4,981 | 5,611 | 5,636 | 4,826 | 6,500 |
| Tea prices (FOB/CIF) | $/lb | .66 | .87 | .72 | .98 | .88 |
| Government revenues | RF mil | 6,628 | 8,385 | 8,766 | 12,210 | 11,493 |
| (coffee taxes) | RF mil | 2,025 | 3,000 | 1,461 | 3,826 | 1,350 |
| Government current exp. | RF mil | 5,003 | 6,245 | 6,930 | 8,444 | 10,247 |
| Government current surplus | RF mil | 1,626 | 2,140 | 1,836 | 3,766 | 1,246 |
| Government develop. exp. | RF mil | 776 | 1,012 | 1,032 | 1,474 | 2,264 |
| Exports, FOB | RF mil | 10,601 | 11,741 | 10,367 | 18,838 | 13,250 |
| Imports, FOB | RF mil | 9,698 | 9,497 | 13,456 | 14,474 | 16,470 |
| Trade balance | RF mil | +903 | +2,244 | -3,089 | +4,364 | -3,220 |
| Overall balance of payments | RF mil | +2,790 | +2,133 | - 39 | +6,360 | -2,450 |

## Table 2

## Land Used for Cultivation*
## Estimated Family Size

| Prefecture | Total Area Km2 | Population 1978 | Annual Rate of Change 1965-78 | Annual Rate of Change 1970-78 | Land in Farms Ha 1975 | Land in Farms Ha 1976 | Land in Farms Ha 1977 | Land Cultivated 1977 as % of all land | Land Cultivated 1977 as % increase over 1976 |
|---|---|---|---|---|---|---|---|---|---|
| Butare | 1,820 | 601,165 | 4.30 | 0.80 | 89,129 | 91,710 | 95,711 | 52.6 | 4.43 |
| Byumba | 4,987 | 519,968 | 4.30 | 5.00 | 92,029 | 93,983 | 99,342 | 19.9 | 5.70 |
| Cyangugu | 2,226 | 331,380 | 2.80 | 2.20 | 61,588 | 61,961 | 66,054 | 29.7 | 6.60 |
| Gikongoro | 2,192 | 369,891 | 2.25 | 1.70 | 68,414 | 63,945 | 71,893 | 32.8 | 12.43 |
| Gisenyi | 2,395 | 468,786 | 3.60 | 3.00 | 80,231 | 89,574 | 94,776 | 39.6 | 5.80 |
| Gitarama | 2,241 | 602,752 | 4.00 | 2.90 | 77,531 | 81,559 | 84,173 | 37.6 | 3.20 |
| Kibungo | 4,134 | 360,934 | 3.85 | 5.90 | 94,311 | 96,476 | 99,068 | 24.0 | 2.69 |
| Kibuye | 1,320 | 337,729 | 2.40 | 5.60 | 61,127 | 64,259 | 65,232 | 49.4 | 1.51 |
| Kigali | 3,251 | 698,063 | 6.70 | 9.60 | 102,652 | 110,023 | 114,543 | 35.5 | 4.10 |
| Ruhengeri | 1,762 | 528,649 | 2.45 | 1.50 | 103,527 | 109,534 | 113,451 | 64.4 | 3.58 |
| Rwanda | 26,338 | 4,819,317 | 3.8 | 3.2 | 822,539 | 863,024 | 904,303 | 34.3 | 4.78 |

* Potential Land Use (Delepierre and Prefal, 1973)

| | |
|---|---|
| potential farm land | 1,250,000 ha |
| land unsuitable for farming | 525,000 |
| roads, rivers, research, etc | 75,500 |
| military and revenue | 12,700 |
| hunting reserve | 64,300 |
| national parks | 282,900 |
| natural forests | 137,000 |
| marshes | 48,000 |
| dry lakes | 35,800 |
| lakes | 127,800 |
| total | 2,559,000 |

ANNEX 1

Table 3

Progress Toward Production Targets on Selected Cultures

| | 1981 Targets (000 MT) * | 1979 Actual (000 MT)** |
|---|---|---|
| Bananas | 2,000 | 2,023 |
| Beans | 278 | 181 |
| Peas | 87 | 39 |
| Sorghum | 209 | 163 |
| Corn | 91 | 83 |
| Sweet Potatoes | 940 | 868 |
| Potatoes | 200 | 215 |
| Coffee | 30 | 24 |
| Tea (green) | 36 | 23 |
| Sugar cane | 25 | 27 |
| Beef | 12 | 12 |
| Milk | 60 | 65 |
| Fish | 7 | 1 |

* Second Five-year Development Plan, 1977-81

** Ministry of Agriculture Annual Report, 1979

## MATRIX FOR RWANDA CDSS

| Who are the Poorest | Causes of Poverty/Constraints to Development | GOR Priorities to Reach Poor |
|---|---|---|
| 1. Those lacking access to adequate land and labor.<br>(a) 1/3 of farm families having less than 1/2 ha land<br>(b) women headed rural households (15-20%) of total rural families | 1. High population pressure on limited productive land.<br>- rapid population growth<br>- lack of employment opportunities | Commune-based development strategy.<br>Rural infrastructure development.<br>Rural health care delivery. |
| 2. Those lacking access to adequate infrastructure (inequitable distribution of clinics, schools, markets, silos, centers, etc.) | 2. Low level of agricultural technology and inability to extend known technology.<br>- poor animation/communication in rural areas<br>- weak rural infrastructure<br>- inadequate storage, transport<br>- low levels of trained manpower<br>- low women's status | Demographic strategy including child spacing program.<br>Transportation and communications program.<br>Collaborative planning in agriculture.<br>Universal and relevant education. |
| 3. Those without access to any land and being forced off farms of birth in search of alternative (scarce) livelihood to farming. | 3. Geographic isolation. | Land reform planning.<br>Favorable policies in agriculture. |
| 4. The bottom (5%) mainly invalid, infirm, aged, without family support. | 4. Low absorptive capacity<br>- general poverty of country<br>- inefficient use of community resources, e.g., umuganda, taxes<br>- lack of trained planners, technicians | |

U.S. Program Objectives

1. Increase Rwanda's per capita food production through appropriate interventions at the national and farm levels to more efficiently use limited resources.

2. Effect a general improvement in the health status of the Rwandan family and to bring the demographic situation in Rwanda into balance with development potential.

U.S. Strategy to Achieve Objectives

1. Development institutions at commune level to improve local initiatives in raising living standards.

2. Improve Rwanda's capacity to do long-term planning in the agricultural sector.

3. Continue support to national and cooperative level food storage and marketing efforts.

4. Obtain necessary economic, social, environmental and technical data to permit us to determine the feasibility of future participation in crop intensification and/or new land development.

5. Concentrate resources to meet health care needs of children and women of child bearing age, including delivery of family planning services.