

**AGENCY FOR
INTERNATIONAL
DEVELOPMENT**



RWANDA

**COUNTRY DEVELOPMENT
STRATEGY STATEMENT**

FY 82

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January 1980

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

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AID Affairs Office/Rwanda

January, 1980

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COUNTRY DEVELOPMENT STRATEGY STATEMENT: RWANDA

PART I - Analysis

A. Analytical Description of the Rural Poor. In recent years, Rwanda has been able to maintain relative self-sufficiency in food supply. Rwandan farmers have shown themselves to be extremely adaptable to an increasingly perilous population/land ratio. New lands, albeit marginally productive, have been put into crops. Double cropping and inter-cropping have become the norm. Terracing of the hilly land has increased farming area though faulty terraces have resulted in increased erosion. However, it is the conclusion of virtually every study recently completed that the population/land ratio has reached alarming proportions and that, given the available technology, without strong measures to decrease population growth rate and to increase crop production, Rwanda will soon face serious food and nutrition deficits.

The vast majority of Rwandans are at poverty level. The country, densely populated, land-locked and ranking among the poorest in the world, can offer only agriculture as a means of subsistence for its people. Ninety-five percent of the people depend on farming as their sole means of support. 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 (only 40% of farms are over 1 ha), mitigates the climatic advantages and reduces fallow practices.

The standard of living in rural areas generally does not differ from one geographic region to another. Though the south of the country is more environmentally favored, this is the area 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. Thus, despite a range in farm size from .3 to 7 hectares country-wide, rural income distribution is relatively even.

Nor are urban dwellers substantially materially better off than the rural population. While social services are obviously more readily available in the urban areas and the diet is more adequate, there is serious under and un-employment and the majority of those with jobs are subsistence laborers, small merchants, etc. Moreover, city dwellers have a difficult time finding adequate affordable housing. 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⁽¹⁾. 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 (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. Even looked at along these lines, however, there is no significant difference in poverty levels among the different zones. While nutrition levels may be a bit 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 extant which in recent years, have begun to result in relative degrees of poverty - with promise that, unless focal 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. alternative means of livelihood;
2. adequate productive land and labor; 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 1972⁽²⁾, 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 4%, as preliminary data from the 1978 census indicate, 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.

At the homestead level the prime source of this potentially landless group is the young men who do not have access to land on the hillside (colline) in which they were born. Traditionally, farm land is an inherited right owed them by the lineage (inzu) allotted through their 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 which are 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. Rwanda's gradual increase in population density has been accompanied by diminishing average farm size despite occupation and planting of new land. As a result, the average farm size is today barely 1 ha (40% lower than the estimate of 1953). Almost all the good land has now been occupied and only tracts of marginal land and flooded lowlands are still uncultivated.

The ecological zone in which a farmer finds himself, along with the size of his farm, 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 report on the paysannat at Icyany.⁽³⁾ Only 48.6% of the land 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. There seems to be no possibility for the employment of chemical fertilizers except for certain export crops such as coffee, tea and pyrethrum, and to some extent, rice. Yields are difficult to estimate due to unreliable data on hectareage 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 ⁽⁴⁾, 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 years 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 seems that only children over 15 help on the farm and that girls provide more assistance in crop production

than boys. 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 corroborated further by a study in southwest Uganda ⁽⁵⁾ 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.

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). ⁽⁶⁾

3. Families Lacking Access to Adequate Social Services/Infrastructure.

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 (and presumably throughout the countryside as well) are diseases heavily concentrated in the under five age group; 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 and could be a routine part of an effective MCE program. The high infant mortality rate for the country as a whole (128/1,000 births) and for hospital deaths in particular, is largely a consequence

of the lack of an effective MCH program.

Nutrition 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. The most severe nutritional problems are also concentrated in the under five age group. Since only the most severe cases of malnutrition ever reach the hospital, records understate the morbidity and mortality associated with malnutrition. There is little health planning of a national, comprehensive nature. Two health systems public and private are poorly coordinated or integrated.

Health care focus, up to present, 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.

(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 deter-

mining 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 to insects and to humidity and, with the right to repurchase at a nominal fee for storage, is spared paying private traders exorbitant 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 ⁽⁷⁾ 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 village (Muganya) has 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 does not follow a pattern but is largely reactionary - to political unrest, to lack of employment possibilities, etc.

Migration from the home of birth is 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 ⁽⁸⁾, migration patterns have undergone substantial changes in the past three to five decades. Prior to the 1960's, there was

* Paysannats are organized settlement schemes on which the tenants hold plots of 1.5 - 2.0 hectares, including a cash crop, by lease from the state. Failure to observe the terms of the lease may result in expulsion. Extension services, social services, water supply, roads, etc., are usually much denser than elsewhere.

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 returned from outside Rwanda (Prioul 1977:90). 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. Table 1 documents cross-prefectural movement; there has also been considerable movement within the prefects.

TABLE 1

<u>Prefecture</u>	1970	1970		1978	
	<u>Agricultural Land Utilization (Ha)</u>	<u>Density</u>	<u>Growth</u>	<u>Density</u>	<u>Growth</u>
Butare	1,702.9	330	12.3	353	0.8
Byumba	2,251.4	162	4.6	228	5.0
Cyangugu	1,056.2	267	4.3	314	2.2
Gikingoro	1,514.9	215	3.5	244	1.7
Gisenyi	1,290.4	292	5.6	363	3.0
Gitarama	2,053.8	239	7.0	293	2.9
Kibungo	2,572.9	95	2.2	140	5.9
Kibuye	1,296.2	182	0.9	260	5.6
Kigali	2,631.0	150	6.2	265	9.6
Ruhengeri	1,389.5	340	4.1	395	1.5

Assuming that very little arable garden 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⁽⁹⁾. Overall rural to ur-

ban migration is still increasing far beyond even the most recent estimates. For example, in 1976 Prioul⁽¹⁰⁾ estimated urban growth rate to be 4.19% in 1975 and predicted a 6% growth rate by 1985. Sirven's⁽¹¹⁾ 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 1970 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 garden agriculture⁽¹²⁾.

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 relatively young adults who have not yet gained access to their own farmland, and/or who are seeking the very limited employment opportunities of 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 stricker, 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 all point to the likelihood that the essentially poor population of Rwanda will progress or regress as a single society. Much like the passengers in an overloaded life-boat, the land and the people of Rwanda make up a fragile, precarious entity. Under such conditions, only maintenance of country-wide equilibrium will enable progress towards a better standard of living.

B. Causes of Poverty and Constraints to the Improvement of the Well-being of the Rural Poor. Five interrelated factors constitute, at once, the principle causes of poverty and the leading constraints to accelerating development in Rwanda. These are (1) high population pressure on available land and, a factor which exacerbates this growing disequilibrium between population and arable land, lack of off-farm employment opportunities; (2) low level of agricultural technology and inability to extend 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; (4) lack of a mineral resource base which would provide additional opportunities for off-farm employment; and (5) low absorptive capacity due to both limited manpower and physical infrastructures.

1. Population Pressure. Already the most densely populated country in Africa, Rwanda has a population growth rate nearing 4% 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 would only meet 40 to 45% of food needs in the year 2001 and would 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 smaller 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 3.6% per year. It is estimated that of the 1.2 million hectares suitable for farming (47.5%) of the country, 860,000 hectares are already under cultivation. The balance represents less desirable (though none-the-less cultivable) land, land in fallow and land in relatively under populated regions. Marsh land and dry valleys constitute an additional 90,000 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.

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 inter-cropped 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 5 years as should have been expected and as is necessary to keep in step with the growing population and smaller farm sizes.* It is uncertain what the cause of stagnating yields is, though it is likely that a series of factors come into play. In the first place, there have been no major crop introductions since the early 1960's and it is quite possible that the intensiveness of agricultural research efforts of the 1950's have never been repeated. Yields of most crops increased between 1940 and 1959, presumably as a result of plant breeding. However, between the figures cited by Leurquin⁽¹⁴⁾ based on the 1950 Ten Year Plan and the 1961 study of the Belgian AESED⁽¹⁵⁾ 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 is still 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.

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.

* Yield data must be looked at with some skepticism, as does Morris⁽¹³⁾: "In the present data series the area is probably the most reliable, with the yields and the production being subject to greater error. There is general admission that a new base line is needed for the statistical series and that a trickle down system of training for the agricultural extension service staff involved in gathering the data is necessary. The population-land supply situation makes this almost essential for any serious planning for the agricultural sector."

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 and fertilizer 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 exorbitant 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. Most credit has been extended to finance coffee exports and goes to relatively larger traders. The lack of small farmer credit opportunities may be as much a function of a lack of a channeling mechanism, such as cooperatives, as it is of government reluctance and/or inability to itself finance and manage an extensive rural credit system. A cooperative movement, including rural banks, is developing.

To have a reasonable chance of success, however, it is essential to have experienced and properly trained cadres to hold broad discussions with farmers on their specific problems, enabling them to decide when the cooperative is to be established and the manner in which it is to be organized, and to have simple structures so that they can actually be managed by the farmers. For this reason, it seems desirable to set up a training school for the personnel of cooperatives as quickly as possible, to improve methods of cooperative implementation and to assure that every family unit or every adult producer subscribes to the capital of the cooperative and that the cooperative maintains separate structures for marketing/supply and for savings/credit.

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 required by East African Community customs, 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 by the donors through assistance to cottage and light industry enterprises.

Internal 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 26,000kms². 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 gravel 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 regavelled are low standard earth roads characterized by corrugated surfaces, large ruts and potholes and, in wet weather, by deep mud. The high user costs and the dangerous conditions of the roads have reduced access to markets and services, working obvious hardships on the rural population.

4. Lack of Mineral Resources. (Natural resources and industrial development.) While there are important deposits of cassiterite and wolfram in Rwanda, and some gold, the mining of these minerals does not contribute significantly to gross domestic product despite the fact that mining is largely artisanal. The relatively high world price, however, does mean that these minerals are an important foreign exchange earner for Rwanda. The expansion of mining activities, although a priority in the Second Five-year Plan, is realistically limited by the attention and resources being directed toward the production of food crops for domestic consumption and for export.

More serious is Rwanda's lack of a manufacturing base which could improve GDP and absorb its share of youth entering the job market each year. Except for a large brewery, there are less than 100 modern manufacturing enterprises in the country, and these are all relatively small. Only manufacturing connected with agricultural production has shown some growth over the 7-10 years, though construction has begun to advance over the past several years.

Energy is becoming an increasingly serious problem in Rwanda, though electricity requirements appear to be being met. Large, exploitable methane gas deposits in Lake Kivu offer an important potential source of energy, as do the peat bogs, for rural needs, where most of the energy supply is from firewood.

5. Absorptive Capacity. Despite a burgeoning population, there does exist a significant manpower shortage which acutely affects the ability of the GOR to absorb external funding, especially in agriculture where investment remains low, and to effectively use its internal resources. Less than 25% of the population is literate, which hinders their ability to form cooperatives, to use agricultural credit, and to absorb logical innovations. More serious, less than 2% of the population have received a secondary education and thus the manpower pool for government cadre at all levels is simply not available to supply needed people. The need for trained manpower is pervasive throughout the government system, from the planning offices to field technicians. The circle is unending. The technical ministries suffer from lack of adequate financing but trained personnel are not available to effectively use what is available or to attract more.

It is at the middle and, more important, at the lower levels of field technicians where the need is greater and where reinforcement is necessary if any progress toward development at the local levels is to be observed.

Additionally, low pay scales and the hardship living conditions of the rural areas, due to lack of educational, health and communications facilities, make these areas unattractive to the most qualified technicians who are also in

demand in more favorable locations. The result is that the least qualified are often found where the most qualified are needed.

The situation is improving however. Enrollment in higher education has increased at 9% a year since 1970 and the Educational Reform bodes well for the future. 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.

6. Macro-Economic Constraints. The economy is dominated by the agricultural sector which provides the livelihood for about 90% of the population and contributes about 58% of GDP. Agriculture is also the principle foreign exchange earner, especially coffee, which has accounted for more than half of Rwanda's trade revenues in recent years, roughly \$98 million in 1978, and about 70% of all government revenues. Production of coffee in 1978 was in excess of 25,000 tons, grown by 400,000 small farmers. As coffee production has tended to fluctuate considerably from year to year, due to poor maintenance of the trees and to climatic changes, the government is encouraging increased emphasis on other export crops, such as tea and pyrethrum. Production of both crops tripled from 1973 to 1977 but did not maintain its growth in volume in 1978. Tea production, nevertheless, accounts for approximately 15% of foreign earnings as Rwandan tea draws highest prices on the London market. The Government predicts increase in production in 1979 to 7 million tons, up from 5.3 million in 1978. Factory capacity for tea stands at 7.8 million tons. Tea is, for the most part, not grown by individual farmers but is generally grown collectively, on plantations. The U.S. is the major purchaser of Rwanda's agricultural crops and this market is not likely to dry up if prices can remain at reasonable levels.

The expansion of export crops is constrained by the necessity to produce food crops for domestic consumption. Food imports constitute an estimated 14% of total imports each year. With food prices rising on the world markets, Rwanda is necessarily concentrating on achieving relative food self-sufficiency.

Other export crops are minerals, mainly cassiterite, a tin ore. The lack of large amounts or a variety of exploitable minerals hinders both the expansion of this sector as well as the development of a broader manufacturing base. The

limited market, shortage of trained labor and inadequate ancillary services, such as commercialization, further restrict the industrial sector.

Lack of adequate transportation and communications infrastructure has been a serious impediment to an improved economic picture in Rwanda. At present, only 300 miles of road are paved in the country and the route to the sea, the trans-African highway through Uganda and Kenya, is tenuous at best, and affects both exports and imports. The telephone and telegraph systems are unreliable though steps are being taken to improve the situation, including the consideration of using satellite technology.

GDP has been growing at about 6% per annum since 1974, and it appears that all sectors of the economy have shared in growth. The growth in the agricultural sector is almost entirely attributable to favorable world coffee and tea prices and to above average harvest of these crops, but less or not at all to yield increases in food crops. At a minimum, a 4% increase in production is essential to maintain level with the increasing population. While total food production in 1978 showed a 1.5% increase over that of 1977 (to 4.07 million metric tons) over half of total production was in bananas rather than more nutritious foods. Under present technology and farming practices, it is doubtful if the 4% required increase can be steadily maintained or if the agricultural sector can continue to hold its share of growth. The ability of the agricultural export sector to hold its own will greatly affect Rwanda's ability to maintain a favorable balance of trade. Either needed capital imports will have to be curbed to allow for food imports, or Rwanda will have to operate with a negative balance of payments.

Government revenue depends primarily on taxes on international trade, buoyant since 1973 with high coffee prices. Government salaries were raised in 1978 for the first time in three years, by 20% at the lower levels and 10% at the top. The government acknowledged that the rising cost of living justified a greater increase, but pleaded that budgetary resources would not permit it.

There are a number of other external factors which may arise to exert a constraining force on the economy of Rwanda and on the country's ability to effect development. These include: rapidly increasing oil prices which further reduce competitiveness of Rwanda's exports on the world market and drastically increase prices of essential industrial and agricultural imports; renewed hostilities between or among Rwanda's neighbors which would effect communications links and restrict or enhance migration; adverse climatic conditions which would require larger food imports and set back the pace of development advances; and internal political problems.

The strategy for development (Part II) while making certain assumptions with respect to political stability in the area, relatively steady world market prices, and normal growth of Rwanda's economy, nevertheless, attempts to take these unforeseen but possible factors into account through a program which encourages self-sufficiency and self-reliance.

C. Progress and Commitments.

1. Development Planning and the Economy. The present government has made perceivable progress in developing a strategy to strengthen the economy. Many socio-economic aspects of the country are favorable, and it is around these that the government has designed its strategy. The population has a certain unity deriving from homogeneity in customs and standard of living. Income and wealth distribution are remarkably even. There are neither the remnants of a strong traditional hierarchy nor signs of significant emerging urban-rural polarization. Moreover, the small size of the country reduces the administrative difficulties and, at the same time, limits serious regionalism. The country also has a natural asset in its relatively fertile soil which, provided that the problem of erosion in Rwanda's hilly terrain can be overcome, can give good yields for a variety of foodcrops.

The problems and constraints facing Rwanda's economic development have been recognized in the Second Five-year Plan. The Plan is centered around an integrated rural development program which aims to achieve, in the medium term, 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 strong supporting role.

Following an increase of about 2% per annum between 1971 and 1974, GDP at constant prices has been growing by some 6% per year. All sectors of the economy appear to have shared in growth. Conservative fiscal policies and budgetary discipline have helped Rwanda to hold its inflation rate to a very respectable 5.8% estimated for 1978, after several years of widely fluctuating inflation (17.4% in 1975; 2.6% in 1976; 23.1% in the last half of 1977). In large part, the fluctuations are in part generated by political factors in neighboring countries which affect Rwanda's ability to move goods into and out of the country.

Government economic policies are conservative. It has 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. It has increased attention on key sectors such as agriculture and has intensified efforts in development planning as witnessed by the preparation of the 1977-81 Development Plan. However, this has all been achieved at a level of investment, physical imports and capital inflows which may be too low compared to Rwanda's development needs, and may hinder Rwanda's achievement of a 3% increase in foodcrop agricultural production. The government has established no restrictions on imports, permitting high import duties to regulate the flow and also to provide a significant source of revenue to the treasury.

The government's interest rate policy aims at attracting investors into Rwanda by maintaining a generally lower level of interest rates than in neighboring countries and to encourage both local and foreign investment in particular sectors, such as agriculture, through concessionary interest rates. Interest rates are fixed by the BNR. Interest rates for consumer loans, import credits and working capital for manufacturing are 11%, export credits for coffee are 5% and for tea 4%, while the rate for marketing export crops is 8%. Medium and long-term loans to the private sector vary at between 5.5% and 9%, depending on the use. It is generally thought that the other impediments to development of export crops and agri-related business, such as manpower shortages, are more serious and that there may be a rise of interest rates in the coming years to mobilize additional resources and to reduce deficit financing by the government.

2. Encouragement of Participation in Economic Development by the Poor.

(A) 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, an agricultural and a veterinary agent and demonstrations at the commune level, with an agricultural monitor and veterinary agent at the sector level. The communes are grouped into 10 prefectures some of which are further divided into subprefectures. At the prefectural level, there are agricultural and veterinary agents of A-2 level (3-4 years post high school training).

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 skilled 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 burgomaster 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 projects and preparing them lies with the people of the commune through the Development Committee and the Technical Commission of the Commune.

(B) 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 different system of extension, one which differs from the older, traditional hierarchial system 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.

Cooperatives already play an important role in the development efforts of Rwanda. They are truly cooperative, not controlled by the government, and function well in the social structure. 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 as follows:

- 127 agricultural
- 66 consumer
- 53 artisan
- 35 savings and credit (Banques Populaires)
- 33 mixed
- 12 construction and housing
- 8 livestock
- 6 mining
- 3 fishing
- 3 beekeeping
- 3 laborers
- 1 transport

These organizations group nearly 50,000 members and have galvanized capital amounting to approximately 1.5 billion RwF (\$16.4 million). Of the total, 124 cooperatives have achieved full status as a cooperative; the others are in advanced stages of pre-cooperatives and are registered by the Ministry of Social Affairs and Cooperatives. 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 a total savings of about \$9 million. Credit operations have been limited to 25% of deposits in order to protect peasant savings. Little agricultural credit has been distributed owing to few demands, high risks and minimal expe-

rience.

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 principal 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 women, 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 reorient 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. Life expectancy is 45.6 years and infant mortality is at 128/1,000 live births (source: Profile du Pays Rwanda, June 1978). The leading causes of death, primarily in the group under 25 years old, are largely preventable, i.e., measles, malaria, tuberculosis and viral infections. The high infant mortality rate is 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 com-

mitment 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.

Reliable estimates of health expenditures are difficult to obtain. In 1977, total health expenditures amounted to 2.228 billion RwF or about \$5.00 per capita. Of that, only 20% came from the Ministry of Public Health. External assistance by both multilateral and bilateral donors amounted to about 38% of all health expenditures and establishment of rural health programs (MCH care, preventive vaccinations, etc.) is thus largely dependent on donor priorities and financing. About half of all health facilities are involved with religious mission organizations, so it is not so surprising to find that external private assistance amounts to a percentage similar to the MOH contribution to the total health expenditure. Rwanda's private expenditures (mainly for drugs), other government expenditures (mainly for training) and other Rwandan organization expenditures make up the remaining 20%.

The history and continued practice of large families in Rwanda are a result of a series of interrelated factors, including cultural heritage, government policy and religious bias. It is known that in pre-colonial times a high, completed family size was considered desirable 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 breastfeeding 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. The position remains that the distribution of artificial contraceptives through official government channels is still forbidden. Despite a lack of cultural practices to regulate fertility and a continuing reliance on children by the old and infirm, other factors and pressures may now exist to induce couples to plan their families. These include the open lines of communication between husband and wife, which may not exist in other African societies and the shrinking available land,

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.

After a long history of refusal to acknowledge the necessity for addressing the problem of a burgeoning population, the GOR has now resolved to develop a national family planning program. The commitment is a cautious one, but implementation on a pilot basis has begun with a Pathfinder program. Doctors, nurses and social workers have been trained in the U.S. and elsewhere in family planning; concepts and practices as part of the new GOR perspective on this question, and the GOR is discussing a major program with AID for rural health/family planning. The "National Office for Population" has been established and is being staffed.

The percentage of national budget resources allotted to the Ministry of Public Health increased 13% in 1978 over 1977, and again 10% in 1979. MPH was allocated 6% of the ordinary budget in 1979, up from 4.8% in 1977, or a \$1.37 per capita expenditure. (Source: GOR Budget 1979.) No breakdown of health expenditures by curative vs preventive health program is available.

In August 1978, the GOR carried out a complete census with the assistance of the U.N. Most of the raw data collected will require until 1980 to be fully collated for analysis to begin. Nevertheless, the census showed that Rwanda's population has increased by a staggering 61.7% between 1964 and 1978. The population reference bureau's estimates for 1979 indicate a crude birth rate of 50/1,000 and a death rate of 19/1,000, with a growth rate, therefore, of 3.1%. Later estimates indicate that the growth rate may be as high as 4% per annum.

With 45% of its population under 15 years of age and 43% of women in child-bearing age (15-45), even if Rwanda were able to begin a massive FP program immediately, no change in the population growth rate would be felt until the end of the century. While some access to family planning services is available through hospitals and private physicians, the large majority of the population does not yet have such access.

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 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 AID 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. 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.

D. Host Country Development Plan and Budget

1. Development Plan. The Second Five-year Plan (1977-81) for Economic, Social and Cultural Development clearly advocates direct intervention in the rural areas, the principle focus of development. The Second Plan is forthright in identifying the principle 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 principle 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 crop intensification, 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 and causes rural exodus.

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

The Plan identifies principle structural reforms which are essential if the sectoral objectives are to be achieved. These institutional reforms are: decentralization of development actions, land reform, demographic policy, education reform, and rationalization of public investments.

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 Annual Growth Rate (%)
	Amount	%	Amount	%	
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	<u>5.0</u>	<u>9.3</u>	<u>6.9</u>	<u>9.6</u>	<u>6.8</u>
Total	53.7	100.0	71.7	100.0	5.9

The total planned investment is about RwF 54 billion (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%. The share of industry, excluding mining, is roughly estimated at about RwF 4 billion (about US \$ 44 million), or about 7.5% of the total planned investment. This appears to be realistic given the level of investment that was achieved during 1973-77. 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.

The Plan's overall objectives and priorities appear to be consistent with the present problems and future prospects of the Rwandan economy. However, except for manufacturing, the targets seem to be relatively ambitious. Firstly, 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. Secondly, 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 AID, include the following:

- (A) Agricultural Sector. GOR objectives in development of the farm sector indicate: (a) recognition of the population/land resource problem; (b) desire to increase productivity of the farm labor force and their production; (c)

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

a/ Estimated

b/ Projected

recognition of the need for rural infrastructure, particularly improved marketing and storage systems to cope with increased production; (d) reliance on the restructuring of rural development service at the commune level, including cooperative development and cooperative marketing and storage.

The agricultural and livestock production goals of the 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.

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 café parché (22,000 tons of clean beans) is attainable in 1981 if the yield is above average.

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. The two major sources of fish have been Lake Kivu (452 tons in 1977) and Lake Luhondo (531 tons). The increase is possible with rapid development of commune and farm level fish production.

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 through cooperative assembly and, where appropriate, marketing and

storage of products, in which USAID, with GREMARWA, CRS, CLUSA and now LCS, is playing a leading role.

The proposals to develop valley bottoms (marais), one of the major remaining underdeveloped land resources, has merit. Although some of these projects have been satisfactorily carried out, there is little data on the cost/benefit ratios. Furthermore, it seems that in some cases the soils of the marsh can become acid when they are drained and exposed to the air.

(B) 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 upon 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 at Kigali and the creation of 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 psycholo- gical development of their children. (Deuxieme Plan Quinquennal p.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 infectuous 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:

- 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 government appears to be giving its top priority to development of the hospital system and 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.

(C) 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 AID financing.

(D) 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 com-

modities. 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.

(E) Budget*. The 1979 GOR budget showed a 21% increase in ordinary receipts expenditures and a 112% increase in the Development Budget. Development oriented ministries and education remained priorities in both budgets.

(A) Ordinary Budget Expenditures - 1979

	% of 1979 <u>Budget</u>	1979	% change 1979 <u>1978</u>
Presidency	5.5	503,253,484	- 3.8
National Defense	18.0	1,633,968,451	+27.0
Interior	1.1	109,362,030	+40.0
Foreign Affairs	7.0	665,368,890	+ 2.4
Finance	16.0	1,476,910,770	+15.0
Econ. and Commerce	0.5	51,336,370	+50.0
Justice	5.0	448,183,179	+26.0
National Education	22.0	1,962,044,415	+35.0
Plan	0.5	47,753,844	+16.0
Civil Service	0.6	54,649,386	+24.0
Post and Communication	3.3	307,297,745	+ 4.0
Public Health	6.0	588,037,192	+10.0
Agriculture	4.0	377,522,937	+27.0
Social Affairs & Cooperation	1.5	131,524,884	+56.0
Public Works	7.5	697,344,102	+33.0
Youth	1.0	106,480,285	+13.0
Natural Resources	0.5	<u>53,281,036</u>	+27.0
Total Ordinary Budget		9,214,319,000	

(B) Development Budget Expenditures - 1979

Economic & Social Development	53.0	1,383,304,600	+198
Counterpart to Foreign Assistance Projects	33.0	870,164,400	+60
Government Admin. Costs	8.0	215,264,350	+213
Military Construction	5.5	144,500,000	+11
Other	0.5	<u>13,252,532</u>	-156
Total Development Budget	+112	2,626,485,882	

* Source: CERP 0200: Central Government Budget - 1979. Department of State AIRGRAM No.A-24, dated 8/31/79, from Amembassy Kigali.

(F) Other Donors. In 1978 there were 14 bilateral donors with assistance programs in Rwanda. In terms of estimated levels of assistance for that year, AID ranked sixth. AID's ranking slips to ninth or tenth when assistance provided by multilateral donor organizations, such as the U.N. family and FED, is included for a truer picture of donor resource flows. The level of loan and grant assistance in 1978 totalled approximately \$67.0 million. The allocation of this assistance by sector is indicated in Table I. Twenty-three percent of donor assistance supported the education sector, followed by support of the agricultural sector and emergency aid for school - and hospital - feeding programs. Major donor-financed projects within the first 6 donor-supported development sectors are outlined in Table .

The relationship between donors represented in Kigali is presently based on informal contacts and meetings to discuss areas of mutual interest, potential collaboration or duplication of effort. Given the increasing flow of donor resources to Rwanda over the past several years, and indicative of a trend of larger donor programs in the future, there is also a sense of competition between donors. Each donor is under internal pressures to increase the project portfolio at the same time that limits are being reached on GOR absorptive capacity, recurrent cost burden and trained manpower to execute projects. Most donors attempt to develop a strategy of assistance to Rwanda, but are often pressured by the "home office" to include some projects which do not fit well within the strategy.

The GOR handles donor relations on two levels: the centralized level, with frequent access to the President, and the ministerial level. On the central level, donors discuss the broad parameters of projects and negotiate bilateral agreements with the Ministry of Plan and the Ministry of Foreign Affairs. There are two offices within the Ministry of Plan to coordinate donor projects, one responsible for new projects and the other responsible for the implementation of on-going projects. The Ministry of Foreign Affairs also has responsibility for bilateral assistance. Given this situation, most donors tend to deal directly with the ministries. It is consequently incumbent upon a ministry to coordinate donor projects within a specific sector, and this is often difficult. The net result is often duplication of time, effort and resources.

The recently established National Bureau for Projects Studies (BUNEP) could potentially serve as a resource center for the collection and dissemination of data on Rwanda, including donor and GOR reports and studies on specific projects.

PART II - Strategy

A. Objectives. Rwanda lacks the mineral resource base necessary for the foundation of a strong industrial economy. Its difficult geographic position virtually dictates a policy of self-reliance. Rwanda enjoys a comparative advantage in its abundant rainfall, its relatively good soils, its overall healthy climate and a history of hard work and self-sufficiency on the part of the Rwandan people. Rwanda stands an excellent chance of achieving its development goals as the population pressures begin to be relieved and if agricultural production techniques can keep pace.

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

- (1) To assist the GOR to achieve and maintain normal food self-sufficiency through appropriate technical interventions at farm level to more efficiently utilize land presently under production and land being brought into cultivation.
- (2) The development of infrastructure to facilitate and improve the delivery of essential social services and off-farm employment opportunities to the rural population. The paucity of these services is a major contributor to rural poverty, and has accelerated migration, particularly of youth, to the urban areas of the country.
- (3) The establishment of a viable system of storage and marketing of basic food crops, which will rationalize an incentive price structure, and will encourage crop diversification through the pricing and marketing mechanisms.
- (4) The protection of the natural resource base. A delicate balance exists between efforts to increase food production and efforts to preserve the soils and forests essential for the long-range viability of the country and for future generations. Population pressure on even marginally productive land, the demand for firewood from dwindling forests, and the severe erosion of Rwanda's hillside soils are all serious problems which must be addressed integrally with efforts to achieve food self-sufficiency.

Development Approach to Achieve Objectives. AID is a relative newcomer as a participant in Rwanda's economic development program and remains a minor donor. It would not be possible for AID to pre-empt a particular sector of concentration, nor would it be practical for AID to concentrate on a specific geographic section of the country. Nevertheless, AID development assistance, channelled correctly, has the potential for leadership in several sectors and can serve as a valuable complement and catalyst to donor funding in other sectors. It is already apparent that in the areas of food crop storage and marketing, cooperatives, rural and agri-

cultural sector analysis, and health education and family planning, AID plays a major role in supporting and encouraging GOR policy and programs. Over the long run, with continued support to these areas, AID will, be able to influence needed policy changes such as increased resources to a basic rural health delivery system, incentive prices for food crops, progressive attitude toward cooperative formation, etc.

The GOR, moreover, recognizes U.S. expertise in food production, in energy, and in natural resource protection, and they will be looking for AID to develop prototype efforts in such areas as irrigation, fish production, and renewable and alternate energy resources.

AID has chosen the development approach of participating in a meaningful way with other donors in development of those geographic areas and in those sectors where U.S. technical skills are appropriate and where AID financial resources can take advantage of other donor activities and make optimum use of the absorptive capacity of the country.

B. AID Assistance Strategy. The strategy for AID medium-term programming will be discussed as a function of each of the four long-term objectives, though it is clear that the specific strategies are multi-directional, working at one time toward the achievement of several or all of the objectives. Overall, the AID strategy is to assist certain key development support systems where the inability of these systems to offer innovative technology or to provide gainful employment to the rural population has resulted in stagnation of the rural economy and diminishing equity to the farmer.

The strategy will require an AID commitment to the long-term development of Rwanda at a level where our financial assistance can be meaningful and where it can induce needed policy emphasis or change. Agricultural production is the focal point for the AID program and it is in this area that we would hope to achieve the most immediate returns. Other interventions, however, in both this and other sectors, and at both national and local levels, will be essential to assure that production can be supported and that the serious questions of basic human needs do not go unanswered.

1. Rural Production. Food production increases can be achieved through direct intervention in several ways. First, there remains significant hectareage in the valley lands of the country which is readily susceptible to cultivation of rice and other crops appropriate to these soils and water conditions. Spontaneous settlement and farming of these areas has not occurred because the

Rwandan farmer is not familiar with the technology of rice and wet-land agriculture, and because financing for the necessary up-front infrastructure has not been available. These lands are also inaccessible. With Rwanda's rapidly expanding population and with the increasingly high cost of food on the world market and of its transport to Rwanda, the economics become more favorable and open the way for serious study of possible development of valley and marsh lands. AID, with significant experience in Asia and Latin America, is uniquely qualified to be of assistance in this area.

Second, alternative crop production, including the production of fish, small ruminants, poultry, etc., offers an excellent supplement to basic food crop production to meet expanding food and nutrition needs.

AID support of a grain marketing and storage effort will be continued and expanded. A liaison of the national marketing and storage efforts with a strengthened effort to establish 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 availability between excess and deficit production areas. Local level storage units which store and market grain, tying into the national system, reduce post harvest losses and will set the stage for diversification to other food and cash crops. Data collection and analysis for national agricultural pricing is an essential component of the AID strategy.

Cooperatives will play an important role in our strategy to achieve food production increases. There is a true grass-roots cooperative movement in Rwanda. The government has monitored the development of cooperatives and encouraged it through training and management support, but has neither pushed too fast nor established a myriad of regulations which would constrict cooperative development. AID intends to encourage this hands-off policy while supporting training for cooperative members and leaders and other support to improve cooperative management. Support to local crop storage owned and operated by cooperatives is an example of the type of specific program which can support our strategy.

Essential to the strategy to increase rural production is the effort to improve the country's capacity for agricultural planning and policy formulation. Given the limited resources available to Rwanda, its dwindling land resources vis-a-vis a growing population, its need to look inward in the face of rising food and oil costs on the world market, AID considers it essential that a solid agricultural data base be developed. The government's capacity to use this data as an analytical tool for rational development planning must also be strengthened. Further, an up-to-date technology base is essential if production increases (food -

crop and animal) are to be realized. Socio-economic research of the agricultural sector will be a primary AID responsibility; adaptive technical research, to complement that which is being undertaken by other donors, will be pivotal.

Finally, the human resource needs in the agricultural sector cannot be understood. The government's ability to use donor resource flows is directly limited by an inadequate, in numbers and quality of personnel, cadre of technicians, primarily middle level. AID strategy is to build into each development project the necessary training for personnel to man that project, and to provide ancillary technical and university training through other, centrally funded training programs. A principle focus of AID strategy will be long-range support to the education reform, particularly those aspects of the reform which provide post-primary education to all Rwandan children, and restructure this training to respond to a rural, agricultural economy. This emphasis is expected, in the long-run, to provide a pool of young people with basic rural and agricultural skills for recruitment and further training as extension agents and rural technicians.

2. Expansion and Strengthening of Rural Services. The delegation to the communes of the authority for carrying out development, as well as certain fiscal and financial responsibilities, is at the core of the GOR plan to improve the quantity and quality of basic services available to the rural population. The ability of the commune to involve the rural population in decision making and to secure their participation, through umuganda (community participation through donation of labor) in the the development of their communes, has been demonstrated and is supported by AID. AID strategy is to support the improvement of the organizational and operational capacity of the communes. This can be done by providing assistance in organizational development, fiscal planning, etc., and by supporting the government's Communal Development Fund which finances projects proposed and implemented by the commune. The PL 480, Section 206 program is an excellent mechanism for generating local currencies while providing essential food stuffs and will be stressed over the next five years.

Indirect support to strengthening of communes will result from our involving these local government units in our larger development projects to develop basic rural services. These include the following:

(A) Rural Health, Nutrition and Family Planning. While the GOR plan is to concentrate on preventive care through rural health delivery systems, GOR budget allocations continue to be directed toward support of facilities and personnel for curative medicine, leaving the preventive side to donor funding. The GOR program

for nutrition education, given on a wide basis through the Centres Communaux de Developpement (CCDFP), is endorsed by AID. Cautious beginnings by the GOR to family spacing are also supported by AID. The GOR is proceeding on a phased approach, training of personnel, followed by information and education, followed by provision of family spacing services.

AID strategy will be to support GOR initiatives in rural health care and to use this financial support to influence the GOR to direct increased resources to preventive health care. The use of local volunteer health workers or a system whereby villages pay for the primary health care they receive will be supported by AID as a means of reducing the recruitment costs constraint. Preventive health measures such as clean rural water supply, immunizations and vaccinations are integral to the AID strategy of improving rural health services. Those projects which might have a deleterious effect on health levels (fish production, irrigation) will be monitored and, if deemed necessary, will include a disease control component.

AID will support the GOR efforts in establishing a family planning program (we are looked to as the principal donor in this area) but continued evaluation of the family planning program, particularly the receptivity of the populace to child spacing, will be required to determine where and in what fashion an acceleration of the phased approach can be made.

The CCDFP appear to be an appropriate vehicle for the delivery of health, nutrition and family planning information and education to the rural population, and this concept will be looked at closely to determine its potential role in AID strategy. Other institutions and informal groups will also be used, such as the health centers, schools, cooperatives, etc.

(B) Cooperatives and Education. Support systems for increased production and improved standards of living. The role of both cooperatives and the rural education system in AID's strategy to achieve increased rural production have been discussed earlier in this CDSS. Cooperatives in Rwanda, perhaps more than any other rural institution, offer a real chance for the farm family to participate in local development efforts and to be a beneficiary at the same time. They are a structure controlled by the local population in a country where communication channels are often unavailable, and as such, can be a local catalyst for development through the introduction of improved agricultural practices, services and knowledge. The cooperative movement at the national level appears to have competent, imaginative leadership. AID assistance to cooperatives is already substantial and should continue to increase over the medium-term. The chief con-

straints which AID programs should address are training in accounting, management and technical skills, and support for the technical programs of cooperative members. One area of particular interest is the enhancement of the capacity of cooperatives to manage agricultural credit facilities. Agricultural credit is not extensively available and is generally restricted to cash crops. One reason may be the lack of a rural mechanism which can effectively manage credit at the local level at reasonably low cost. The Swiss supported Banques Populaires are already a source of rural credit and this organism and responsible cooperatives, also important elements in the delivery of agricultural inputs and extension services, are thus essential to AID strategy.

Education is another vehicle integral to AID's strategy to assure essential rural infrastructure. U.S. assistance will specifically concentrate on the network of post-primary technical and vocational institutions dealing in areas which relate closely to AID priorities, i.e., agriculture, health and nutrition, as well as related technical and management skills such as agricultural tools and cooperative management. It is planned that the cooperatives and the commune education centers provide the audiences for a series of informational and educational opportunities such as household budgeting, agricultural and rural credit, nutrition, family planning, etc.

(C) Employment Generation. Increasing opportunities for employment in the rural sector, both on-farm and off-farm, is an important component of the GOR priorities and is a key element in AID strategy to support growth and equity in rural Rwanda. The private sector can absorb only a fraction of the youth entering the job market each year. Nor is the present agriculture sector in a position to provide viable opportunities over the long-run. AID strategy in this area involves three approaches: (a) create new agriculture opportunities through development of new lands, particularly the valley and marsh areas for rice production. It is estimated that between 40,000-50,000 hectares can be brought under intensive production to provide land for approximately 20,000 families. Intensified use of land already under production is another facet of this strategy element. Fish and small ruminants are production alternatives which can provide job opportunities; (b) agri-related cottage and artisan industries will provide not only employment opportunities but also farm tools and equipment, food conservation and processing, etc., which will facilitate production and encourage diversification; (c) labor intensive public works, primarily rural road construction, soil conservation, reforestation, and water and erosion control will be emphasized.

All of these elements, but especially the last, are supported by GOR policies to build the commune into the "unit for development" and can make maximum use of a PL 480 Food for Development program.

3. Natural Resources. A rapidly increasing population in the face of limited land resources is having a particularly devastating effect on the natural resource base. Over utilization of the land, cultivation of range land areas and forest land, and increasing demands for firewood have lead to reduced soil fertility, erosion of hillsides, overgrazing of remaining pastures and serious deforestation. The GOR is particularly cognizant of this problem. GOR officially designated 1980 as the year of soil conservation in order to galvanize resources and public attitude to meet the challenge of natural resource preservation. AID strategy in support of GOR initiatives to maximize agriculture production has been discussed in preceeding sections of this paper and relate to intensifying production on existing farm land, opening new land for agriculture and diversifying agriculture and other means for employment. In that these efforts will reduce pressure on land, they form an element of AID strategy to protect and replenish natural resources. In addition, AID is supporting the GOR program to investigate the potential for improving the use of indigenous energy resources which are easily accessible, more widely distributed naturally, and more affordable to its dispersed rural population.

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. AID strategy is to 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 AID support will include additional research and testing of other energy use reduction devices and will concentrate on a wide scale information and education effort as well as assistance in production of those devices which have proven feasible.

Reforestation on a large scale is being covered by financing from the Swiss government. AID participation in village level reforestation will be through contributions to the communal development fund and through assistance to provide voluntary organizations (such as World Relief) who are beginning small

efforts in this area. A major area development project by AID will also include a component for village wood lots.

4. Regional Organizations. Rwanda is a member of two regional organizations which are of particular importance to the GOR development program. The Kagera River Basin Commission (Tanzania, Burundi and Rwanda) is headquartered in Kigali. Its principle concerns are the planning and financing of major infrastructural needs of the three countries, including transport lines, telecommunications, and energy. Its primary concern at present is the proposed hydroelectric dam to be constructed at Rusumo Falls. The importance of the dam to Rwanda is being questioned by the GOR. Since the country's electrical power needs are reasonably assured into the next century, serious reservations are being expressed over the inundation of up to 40,000 hectares (depending on the height finally agreed upon) of Rwandan agricultural land which will result from construction of the dam. The possibility of movement of a large segment of the population from Rwanda to Tanzania (1 million people is the figure used) would be a major undertaking clearly fraught with possibility of disaster.

AID assistance to the Kagera River Basin Commission over the next several years will include support for funding of major roads which will provide Rwanda with a second route to the sea through Tanzania, assistance in formulating an indicative plan for the River Basin, and studies which are required to bring specific proposals to the level where they can be considered by the donor community.

The Economic Community of the Great Lakes (CEPGL) (Rwanda, Burundi and Zaire), based in Gisenyi, Rwanda, was formed in 1976. Originally, the trilateral grouping was established for mutual security purposes. The role of the CEPGL has been expanded to include economic and developmental cooperation which, to date, has included plans for a regional investment bank, free movement of goods and people across borders and a transportation plan to ease the land-locked area's difficulties. AID assistance over the coming years will be in the area of development planning, demography and energy source development. Studies required for determining the feasibility of regional development projects would also be financed.

5. Women in Development. The important role which women play in agriculture is recognized by the analysis of this CDSS. Women head-of-households are among the poorest of the poor and a target group for AID assistance. Unfortunately, this view is not shared by all decision makers here and projects for and with women are difficult to orchestrate. Nevertheless, in addition to those MCH/FP projects which largely benefit women, several moves are afoot which it is AID's strategy to encourage and support.

An Office for Women's Affairs has been staffed in the Ministry of Social Affairs and Cooperatives (the Secretary General of this Ministry is the highest woman in the government) and AID strategy is to look for ways to support this office through project and training funding. AID support to the CCDFP will provide an excellent opportunity to focus attention on the women's role in society. Likewise, U.S. assistance to cooperatives will insist that women's co-ops and pre-co-ops receive equal time and attention and that general co-ops include women in decision making and management.

AID support for rural educational reform has already begun to provide training for young girls both in general rural-oriented post-primary education and to the specialized training of women agricultural technicians. In the future, AID will continue to stress the necessity of providing training opportunities for girls and women.

6. PL 480. Malnutrition is one of the primary health concerns of Rwanda. Steps have been taken by the Rwandan government to combat malnutrition but the problem of increasing food production and improving its availability to the poorer segments of the population, the vast majority, is so great that it will take some time to overcome.

Within this frame work, the Title II program administered by Catholic Relief Services (CRS) takes on ever greater importance. It serves humanitarian purposes, but the program also supports the important development objective of increasing food production and improving nutritional standards, central elements of AID program strategy.

AID's overall goal of ensuring food availability is served by the Title II program in three ways: first, the program provides supplemental food to people for whom adequate supplies are not available; second, it serves as a tool for teaching more nutritious and effective uses of foods which are available; and third, through courses at nutrition centers and at schools supplied by PL 480 foods it offers CRS the opportunity to teach agricultural techniques aimed at increasing available food supplies.

Agricultural production averages approximately 3.80 million metric tons annually, with a very small percentage of this (38,000 metric tons) in cash crops. To meet minimum food requirements, Rwanda would have to import 65,000 metric tons of food annually. In fact, minimum requirements are not met and only 15,000 metric tons are imported, except in years of extreme crop production deficiency, such as 1974, when emergency imports are required. The average Rwandan receives

only about 85% of FAO established nutritional requirements, while total U.S. Title II imports serve as a food supplement to only 1.5 to 1.8% of the population. U.S. food assistance, both through the CRS and the Section 206 programs, are aimed at providing nutritional supplement to the poorest segment of the community. The present Development Plan foresees growth in the agricultural sector at approximately 3% per year, yet the population growth rate is nearing 4% per year. Thus, there will be a continuing need for PL 480 Title II distributions in Rwanda for the foreseeable future. This is a reflection of the problems which have been described in this CDSS and AID's recognition that the PL 480 program is an effective instrument for dealing with those problems. The need for PL 480 Title II food imports will eventually be reduced, but only if development resources are brought successfully to bear on the rural population.

AID has discussed the possibility of a Title III program in Rwanda. For the moment, however, Rwanda has preferred the concept of the Section 206 program even though it is smaller in scope and the uses of generated funds is more limited. AID strategy will include continued use of the Section 206 mechanism in support of our overall program objectives, with the possibility of extending the present program and adding additional commodities. New regulations on the Title III program appear to answer GOR past reservations on this program and the possibility of a Title III program will again be raised.

PART III - Assistance Planning Level

A. Proposed Assistance Planning Level (PAPL)

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>Total</u>
<u>Rural Production</u>						
Agriculture production (research) (basic food crops) (livestock, fish, etc.)	4	3	4	4	9	24
Storage, marketing, pricing	1	1	2	2	2	8
Cooperative & extension services	1	1	2	3	3	10
Agricultural sector analysis & planning	-	2	1	2	2	7
<u>Rural Services</u>						
Rural health delivery (nutrition) (immunization) (family planning) (basic health care)	4	5	8	8	9	34
Cooperative formation training	1	2	2	2	3	10
Education	1*	2	2	3	3	11
<u>Rural Works & Infrastructure</u>						
(rural roads) (rural water supply)	-	2	2	2	4	10
<u>Natural Resources</u>						
(ecology) (energy development)	4	3	3	4	5	19
<u>Regional Organizations Planning</u>						
	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>7</u>
Total	17	22	27	32	42	140
PL 480 Title II	3	4	4	5	5	
HIG	-	3	3	3	-	

* for on-going project

B. Justification for the PAPL. The AID office in Kigali opened in 1975. The dialogue with Rwandan officials over the past year concerning AID development concerns has raised expectations for levels of AID funding which are sufficiently substantial to have an impact on major development problems here. The GOR has responded to AID initiatives by looking to AID as a principal donor in several areas (food grain marketing and storage, rural health and family planning, agricultural education, agricultural sector survey and analysis) and to seek AID assistance in support of other donor activities where the U.S. has a particular expertise and knowledge, such as in fish production, rice production and energy development.

It is in these areas that U.S. assistance can have real impact over the long-term. Much of AID assistance over the next several years will be establishing infrastructure and pilot programs to research and test development interventions for wider replication. AID 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 AID will be able to provide over the coming years would imply. To reduce the AID 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 AID funding would jeopardize the gains we have made in certain sectors and would compromise our opportunity to beneficially affect GOR policy and programming. We would be able to complete the projects which are currently in the envelope but 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 low 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 Work Load.

1. AID Staff and Use of Intermediaries. The PAPL represents a good mix of bilateral, regional and PL 480 and PVO activity and it is this mix which will facilitate effective program implementation. With this mix, it is anticipated that a direct hire staff level of seven, the present level, will be able to implement a substantially larger program over the next several years, though the composition of the AID staff will change somewhat. Retaining seven direct-hire positions assumes a program substantially larger than at present. Present staffing has two program direction officers, two technicians (health and agriculture) and three administrative support personnel. With additional GSO assistance which the Embassy is seeking and which the AAO supports, AID should be able to reduce its administrative staff and increase the program or technical staff. Remaining at present staff levels is entirely dependant, however, on having the support services provided by REDSO/EA, particularly engineering, sector design and economic analysis, and relying on voluntary agencies (CRS, SAWS) to implement the PL 480 Title II program. Increased levels for foreign national employees, both local and TCN, will be required and their skills will have to be fashioned to enable them to assist in providing greater management and operational assistance. The opportunity to hire dependants of AID and contractor personnel to provide financial and administrative support should remain an option. Engineering, commodity procurement, project support administration, processing of participants and financial management are areas where locally recruited and TCN staff can reduce the work load of the U.S. direct-hire staff, freeing the latter for program management and direction. At the end of the period covered by this CDSS, it is expected that the direct-hire staff will be increased by two, to a level of 9 and will include a general engineer and an IDI agriculturalist.

The GOR has endorsed the role 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, generally through the OPG route. The AID strategy is to continue to support and encourage voluntary agency activity in Rwanda. Voluntary agencies are not only an additional source of resources, but they can provide the experience and French-speaking expertise not readily available to AID and are often able to provide their own support services. The collaborative approach offered by the Title XII mechanism is another means of providing necessary project administration and technical assistance which is being pursued by the mission. Two active projects will be implemented under Title XII and

two other projects now at PID stage may also profit by Title XII participation.

Rwanda has displayed some reluctance to engage Peace Corps volunteers as technical assistants in AID-financed development projects. They have argued that there are already a number of Rwandans who could fill this role but lack the means to do so at present. They have urged, then, that Rwandans be given the short-term special training and the support to enable them to operate much as volunteers do. However, it is also apparent that where Peace Corps volunteers can bring with them a particular expertise and experience not available here, they would be welcomed. Each case will be judged as it arises. The mission has discussed the possibility of future programs in cooperatives, alternate energy and health, using PCV's, and this will be pursued further in the course of the design of each project.

2. Project Funding and Implementation Authority. It is conservatively estimated that 30 hours are required by mission staff to prepare, translate, proof-read and negotiate grant agreements. Simple amendments adding tranches of funds are estimated to require 10 hours to process. An equal amount of time, or more, is required on the part of the host government since Grant Agreements and their Amendments are circulated through a number of concerned Ministries. Life-of-project funding would serve to substantially reduce this workload and release both U.S. and host government personnel to more important implementation questions. The use of the annual evaluation and work plan as a basis for releasing funds each year already constitutes sufficient check on project expenditures and assures sufficient leverage for required project design changes.

Questions of Delegation of Authority to the smaller posts have to be reconsidered. Delegations should be based on the theory that the head of an AID mission, even a small mission, has the experience to determine when assistance from REDSO and/or AID/W is required, and that he/she can be trusted to request that assistance.

D. Housing Investment Guarantee. Support to urban areas does not fall squarely within the AID strategy for Rwanda. Nevertheless, the government's capacity to support the growing population in the urban areas is an important factor in political stability and the ability to bring development to the rural areas. It is clear that GOR priorities lie in rural Rwanda. It is also clear that the inevitable concentration for people in urban areas to provide government and private industry services must be accommodated with acceptable shelter, water and sanitation facilities. The GOR's policy toward urban development is two-pronged. First, the rate of rural exodus must be lessened through improvement of rural

agriculture services and rural employment generation. Second, steeply rising costs and difficult living conditions must be reduced for those essential personnel required to live in the capital and other urban areas. The GOR Ministry of Public Works recently commissioned a study of housing needs and the potential for low-cost housing in the urban areas of Rwanda. The government is aware of both AID and World Bank experience in developing low-cost housing, and it is possible that a request would be coming to AID for such a program in Rwanda. AID policy should be to assure that GOR investments in housing are rational and will lead to orderly urban development.

MATRIX FOR RWANDA CDSS - Page 1 of 2

Who are the Poorest

1. Those lacking access to adequate land and labor.
 - (a) 1/3 of farm families having less than 1/2 ha land
 - (b) women headed rural households (15-20%) of total rural families
2. Those lacking access to adequate infrastructure (inequitable distribution of clinics, schools, markets, silos, centers, etc.).
3. Those without access to any land and being forced off farms of birth in search of alternative (scarce) livelihood to farming.
4. The bottom (5%) mainly invalid, infirm, aged, without family support.

Causes of Poverty/
Constraints to Development

Rapid population growth.

Increasing shortage of arable land.

Growing disequilibrium in land tenure and use.

Reduction in energy sources.

Rural underemployment.

Low level of agricultural technology/knowledge.

Poor animation/communication system in rural areas.

Geographic isolation.

Dispersed settlement pattern, few urban centers, markets.

Weak rural infrastructure.

Inadequate storage, transport.

Inefficient use of community resources, e.g., umuganda, taxes.

Low levels of trained manpower.

Low women's status.

GOR Priorities and Progress
to Reach Poor

Commune-based development strategy.

Rural infrastructure development.

Rural health care delivery.

Demographic strategy including child spacing program.

Transportation and communications program.

Collaborative planning in agriculture.

Universal and relevant education.

Land reform planning.

Favorable policies in agriculture.

RWANDA

U.S. Program Objectives

1. Assist GOR achieve and maintain normal food self-sufficiency through appropriate interventions at farm level to more efficiently utilize land presently under production of being brought into production.
2. Development of infrastructure to facilitate and improve the delivery of essential social services and to rural population.
3. Establishment of a viable system to store and market basic food crops, to rationalize an incentive price structure, and to encourage crop diversification.
4. Protection of the natural resource base.

USAID Strategies to Meet Constraints

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

Improve food production and storage.

Develop use of rural labor off the farm.

Specific USAID Initiatives Over Medium-term

Educational analysis in Ag. Education project.

Management assistance for bourgemester, silo managers.

Local revenue project,

Support for commune development (e.g., afforestation).

Food for development.

CCDFP - nutrition.

CCDFP - child spacing.

Radio.

CERAI's.

Nyagahanga Girls School.

Fish ponds.

Local crop storage.

AG sector planning.

Food storage and marketing.

Security stocks.

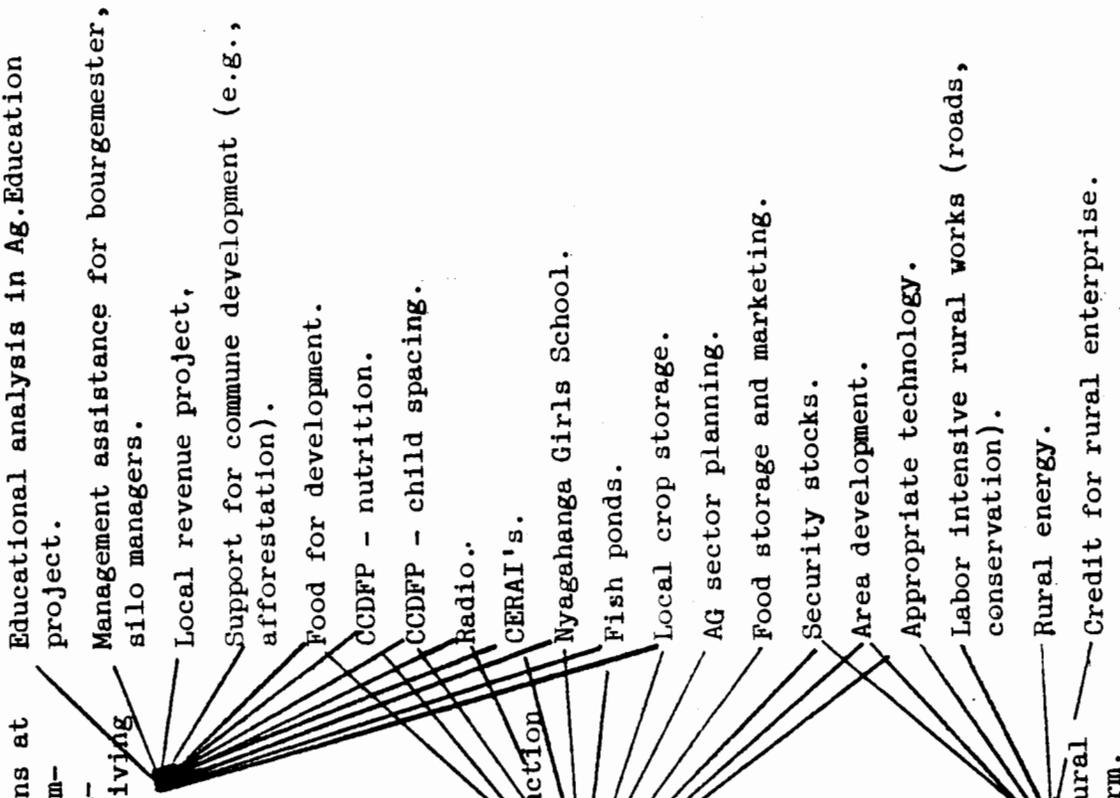
Area development.

Appropriate technology.

Labor intensive rural works (roads, conservation).

Rural energy.

Credit for rural enterprise.



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