

**AGENCY FOR
INTERNATIONAL
DEVELOPMENT**



**COUNTRY DEVELOPMENT
STRATEGY STATEMENT**

FY 1981

SENEGAL

BEST AVAILABLE

**DEPARTMENT
OF
STATE**

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Senegal: Country Development Strategy Statement

Part I. Analysis

A. Analytical Description of the Poor

Although Senegal has certain advantages over other Sahelian countries, the fact remains that the great majority of its people are poor. What distinguishes Senegal is the presence of much greater regional variations in income distribution and access to social services. Senegal's relative advantage is largely the result of the presence of a relatively highly developed administrative, commercial, and industrial pole in the capital city of Dakar, with an excellent port, and the fact that commercialized agriculture is much more widespread in Senegal than in other Sahelian countries.

Senegal can be divided into three distinct economic zones: (1) the Cap Vert region, encompassing the capital city of Dakar and Rufisque; (2) the peanut basin, where more than 80% of Senegal's peanut production takes place; and (3) other regions lying beyond the boundaries of the main peanut basin where commercial agriculture is not yet widespread, namely the Fleuve, Eastern Senegal and the Casamance.

1. CAP VERT.

With a population of 1 million, Cap Vert contains two-thirds of Senegal's urban population and nearly 20% of its total population. The region has been growing at an annual rate of 4.1% or double the growth in rural Senegal. The capital city of Dakar, with a population of 800,000 in 1976, has been growing at 7% a year. Senegal's rural poor flock to Cap Vert because of greater employment opportunities and better access to social services.

Health facilities are much better in Cap Vert than in the countryside.

There is one doctor for each 4,000 inhabitants compared with the nation-wide average of one for each 16,000 inhabitants. Recent Government statistics show that Cap Vert has 73.2% of all doctors, 78.5% of the pharmacists and 81.6% of all the dentists in the country. Nearly two-thirds of the country's 350 midwives work in Dakar as do more than a third of the country's 2,600 nurses and other medical assistants.

The figures also show that Cap Vert's urban populations eat better than the people in the countryside. Average per capita daily calories consumption was estimated to be around 2500 calories compared with 2070 calories in the rural areas. Better nutrition, reliable drinking water supplies, and easier access to dispensaries and maternities have brought lower mortality rates, higher life expectancies, and less suffering from endemic diseases of the rural areas.

Profile of the poor in the urban areas. There are three broad income groups: (1) the relatively well-to-do who make up approximately 3-5% of Cap Vert's population; (2) the middle classes who comprise about 20% of the population; and (3) the urban poor who make up 75% of the city population.

About half of the upper class in Cap Vert are European or Lebanese. A small but steadily growing number of Senegalese business men and professionals with income of \$15,000 or more and ranking Government officials who have high salaries and access to investment constitute the remaining.

The middle class comprises about 20% of Cap Vert's population. Family incomes range from \$2,000 - 10,000 a year. The urban middle class consists of the following categories: (1) the other half of the Lebanese community and a small number of expatriates holding middle level jobs in Government and in

the private sector; (2) Africans in the middle and upper echelons of the civil service and parastatal agencies; (3) Lower and middle-level managers in the private sector; (4) Senegalese merchants, artisans and transporters who own businesses and have sufficient access to credit, government contracts, and political support; (5) foremen and highly skilled industrial workers who make up the lower end of the urban middle classes.

At least 75% of the urban population have per capita incomes of \$400 or less and are classified as "urban poor". AID's poverty line of \$150 calculated in 1969 dollars, translates into \$330 current dollars per capita. Because of Cap Vert's high pricing structure, it seems reasonable to use \$400 per capita as a cut-off point for the poverty line. The urban poor consist of:

- lower echelon civil servants and semi-skilled workers in the private sector, earning between 20,000 and 40,000 CFA/month,
- unskilled workers, day laborers and domestics, earning the official minimum wage (SMIG) of 107CFA/hr or less, and petty traders, peddlers, vendors and artisans who make up much of the so-called informal urban sector in Cap Vert.

There are few statistics, concerning the number of women working in the traditional informal urban sector as market-women, flower vendors, etc. Most married urban women are tied to the home and spend most of their time and energies on household duties, cooking, cleaning, and raising children. Most of the women in the traditional sector have had little schooling although it is likely that many of their daughters will be going to school. Those that do work as market-women earn a supplemental income which often help their families stay above the poverty level.

Seasonal or temporary workers whose poverty drives them to Cap Vert during the dry season when agricultural activities are at a standstill are included in the "urban poor". They are generally young male bachelors who earn sub-standard wages when they are fortunate enough to get a job. The ones who can find a permanent job often decide to remain in Dakar, seeing the city as a chance to lead a better life. This group is generally the poorest of the poor.

The category of "unemployed" includes those people who have temporarily lost their jobs because of slowdowns in the economy or, because of lack of skills, are unable to find employment. For people close to subsistence, even temporary unemployment is a very heavy burden. More significant is the growing number of permanently unemployed young school-leavers who can't find jobs because of the relatively slow growth of the modern wage sector. Unemployment in Cap Vert is very high. Official Government figures during times of peak employment estimate the unemployment rate to be about 25%. The real figure is probably much higher. Family solidarity sees to it that unemployed youth are taken care of but this places additional heavy burdens on low income families who already find it difficult to make ends meet. Despite often grinding poverty, however, the urban poor are still generally better off than the rural poor because they have relatively better access to schools, medical facilities and other amenities.

2. THE PEANUT BASIN contains slightly more than 50% of Senegal's population. It generates more than 2/3 of Senegal's agricultural monetary revenues and produces about 80% of Senegal's peanut crop which still remains the foundation of the Senegalese economy nearly two decades after independence. In 1959, per capita incomes for the peanut basin were estimated to be around \$100.

Since then, real per capita incomes have fallen below this level because of population pressures, declining terms of trade, and drought.

The peanut basin encompasses the administrative regions of Thies, Sine Saloum, Diourbel, and Louga. Although this area is the mainstay of the rural economy, it has poor soil resources and often deficient rainfall. Since the mid-1960s most of the peanut basin has suffered from chronic drought which has largely cancelled out Government efforts to improve productivity by modernizing agricultural techniques.

In 1977, the region had 43 doctors, midwives, and 875 nurses to meet the needs of the peanut basin's 2.5 million people. Less than 20% of the school-age children were in primary school and this figure was much lower in many rural areas. For the area as a whole, daily calory consumption was estimates to be around 2100 calories. Moreover, the great majority of the rural population in the peanut basin suffer from seasonal hunger during the summer months (soudure) at just the time when they need their strength to work their fields.

Rural women generally play a complementary role in the rural economy. This is particularly true among the Islamized Wolof of the peanut zones where the men do most of the cultivation. Serer and Peulh women are generally more active economically and less subordinated to their husbands than Wolof women. Women have little voice in the economic-decision-making process which is dominated by the male head of the household. This male dominance is recognized unofficially by the Government-sponsored cooperative system which deals directly with the male head of the household as the representative of the family farm unit. Rural extension services are also geared towards adult farmers. Males produce most of the cash crops in the peanut basin. Women play an

important role in drawing water, gathering firewood, caring for family gardens, and providing additional labor during certain periods in the agricultural calendar. Less than ten percent of girls go to primary school in the peanut basin, further restricting their potential to play a more active role in the family and village when they grow older.

Although the peanut basin as a whole is poor, its profile of poverty varies considerably because of differences in population densities, soil fertility, rainfall, and socio-economic organization.

The northern zone of the peanut basin extends from Louga to Diourbel to Thies. It is the poorest part of the area with poor sandy soils and very erratic rainfall which varies from 400-500 mm over a short 30-45 day rainy season. Only short-cycle crops such as millet and peanuts may be grown. About a half million people live in this area.

The rural population of this zone was the hardest hit by drought, losing much of their crops. Real per capita incomes have dropped sharply, while the environment has been deteriorated.

Nearly all the small farmers in this zone are Wolof who tend to plant up to 2/3 of their fields in peanuts. However, since the late 1960s there has been a movement back towards growing more food crops, although peanuts still remain the dominant crop. Land holdings are somewhat larger here than in the central peanut basin, though because of lower yields, this is not translated into higher incomes. Per capita incomes in current dollars are around \$150 in non-drought years and drop to less than half that in drought years.

The Central zone extends from Mbour and Thies to Diourbel and Kaolack and is the most densely populated area in the peanut basin with population

densities averaging 80-100 km². This area has about a million and a half people and is overcrowded. Rainfall averages 600-800 mm over a 40-50 day period so agriculture is somewhat less precarious than in the northern peanut basin. Much of the rural extension efforts of the 1960s were concentrated in this area. As a result the area generally has higher yields per ha. than the northern zone and a large percentage of the small farmers here are using agricultural equipment and fertilizer. Gains in real per capita income, however, due to increased productivity are being cancelled out by population pressures.

The Serer and the Wolof are the two major ethnic groups inhabiting the central peanut basin. There are about 400-500,000 Serer in the zone. The Sine Saloum is the most densely populated rural region in Senegal. The Serer are excellent farmers who have a much better traditional agriculture system than the Wolof who tend towards peanut monoculture. The Serer plant more millet and use their livestock to provide manure for their fields. Serer farmers generally have small land holdings, as do their Wolof counterparts. Since they devote a smaller part of their fields to peanuts, their cash incomes are generally lower in good crop years. However, they are less likely to suffer from hunger during the soudure because of their millet reserves and cattle. Because of land shortages, large numbers of young Serer have been migrating to the cities and to less crowded parts of the peanut zone.

There are 600-700,000 Wolof in this zone. Most are small family farmers with holdings under 10 has. The Muslim brotherhoods play an important role in the life of the Wolof farmer of this area. Experience has shown that the marabouts (Muslim religious leaders) are most likely to take advantage of modern agricultural equipment to improve the productivity of their fields, and

that their lead can have tremendous effect among the production techniques practised by their following. Given the present social structures, the success of any rural extension program seeking to modernize agriculture depends, if not on direct participation, at least on the blessing and active support of the marabouts.

Since the mid-1960s real per capita incomes have also declined for most of the region's small farmers. Population pressures, deteriorating terms of trade, and drought have prevented increases in real income. However, the small farmers here are better off than those in the northern zone in general and were not as hard hit by the drought. Moreover, the central peanut basin has a better network of roads, schools, and health services than the northern zone and greater opportunities for dry season work in larger towns like Thies and Kaolack.

The Southern peanut zone which extends south and east of a line through Mbour-Thies-Kaolack down towards the Gambia River is the least crowded part of the peanut basin and with rainfall of 800-1000 mm over a 55-75 day cycle is less likely to suffer as much from the drought. Soils generally have a heavier clay content than to the north and are saline along the Saloum River and the Sine Saloum Delta. In the eastern part of the zone, cotton production has expanded rapidly since being introduced in the late sixties. The major ethnic groups in this area are the Serer and the Wolof. The population is about 500,000 and is growing more rapidly than other parts of the peanut basin because of the availability of land. Maraboutic influences are not as prevalent as in the northern and central zones. In this zone, one is beginning to see the emergence of a class of small farmers who have enough land and high enough incomes to take advantage of agricultural equipment and fertilizer.

Real per capita incomes are generally higher in this zone because of greater use of modern agricultural equipment which have enabled many small farmers to extend the area of cultivation. Higher rainfall has partially sheltered the inhabitants of this region from the worst effects of drought. This area is probably the only part of the peanut basin where real per capita incomes may have risen slightly since independence or at least held their own. It has much better prospects for the future than the northern and central zones. On the other hand, roads, schools and social services are not as prevalent here as in the central peanut basin. It is the least urbanized part of the basin.

3. OTHER PRINCIPAL REGIONS OF SENEGAL.

The administrative regions of the Fleuve, Eastern Senegal and the Casamance as well as the Sylvo-Pastoral zone where most of Senegal's cattle stock is concentrated, contain about 1.5 million people or about 30% of Senegal's total population. They include the least urbanized and most undeveloped areas in Senegal. On the other hand, they have the greatest agricultural potential and are Senegal's best hope for the future. At present, commercial farming is much less extensive than in the peanut basin and therefore per capita incomes derived from agricultural activities are much lower.

With the exception of the Toucouleur-dominated Senegal River Valley, women generally tend to play a more important economic role in these zones than in the peanut zone. Peulh women in the sylvo-pastoral zone sell milk products in the towns and earn an important part of the family's monetary income. Their receipts help Peulh families to maintain food subsistence levels. The Peulh woman, like the Peulh male, rarely goes to school.

The most active women economically are the Diola women of the Lower

Casamance. They are far more independent than women in Northern Senegal. Diola women also play an important role in rice cultivation, grow vegetable gardens, and sell their vegetable surplus in urban markets. Diola women are also the best educated in rural Senegal, generally reflecting the high level of school attendance in the Casamance.

Although Peulh and Mandingo women are generally less active economically than the Diola women, they still play a more important economic role than women in the peanut basin, especially in areas where there is considerable rice cultivation.

a. Region of the Fleuve. The Fleuve has a population of more than 500,000. Nearly 20% of the population live in the regional capital of Saint-Louis which contains most of the region's social services. The city has little industry and is primarily an administrative, commercial and service town. The rural population of the Fleuve Region have little access to schools, hospitals, and modern services. Per capita incomes from agriculture range from \$40 to 80. The main agricultural crop is millet though rice production is increasing with the construction of irrigated perimeters. Because of the lack of economic opportunities at home, the region has a large outflow of migration towards Dakar and other major urban centers, particularly during the dry season. The income earned by the migrant workers represents from 25 to 50% of family incomes in many parts of the Fleuve.

The Toucouleurs are by far the most numerous ethnic group and comprise nearly two-thirds of the region's population. Caste still plays a major role in determining Toucouleur social status. Access to land still remains in the hands of a smaller number of Toucouleur leading families. Toucouleur rural poor are frugal and hard-working, and more and more are participating in

in irrigated perimeters without distinction as to class. Despite their sub-standard wages and bad living conditions in the cities, they still manage to save a little money during their seasonal work which helps to buy some of the necessities for their families. Toucouleur farmers are frequently victimized by drought, when even flood recession rice farming is uncertain.

The Wolof make up about 25% of the population in the region, are concentrated in the western part. The Wolof grow some peanuts along with millet. Because of lack of economic opportunities, there is a large outflow of Wolof to Dakar, Saint-Louis and other urban centers during the dry season. Greater economic opportunities and higher incomes are enjoyed by farming in the irrigated perimeters in the Delta now being expanded. Farmers in these areas produce tomatoes and rice and earn up to three or four times as much as farmers in other areas of the Senegal River Valley. Incomes are also higher for those working in Richard Toll where rice and sugar plantations offer employment opportunities. However, wages are still low, not high enough to pull families over the poverty line. At present this area is limited to one crop a year due to salt intrusion on the Lower Senegal during the dry season.

Although comprising only 5% of the population of the region, the Peulhs are an important group because of their role as herders. They live in close symbiosis with the Toucouleurs of the Senegal River Valley. They take care of virtually all the cattle and other livestock in the region.

b. Eastern Senegal. Eastern Senegal is the largest and least densely populated region in the country (5/km²). It contains only 5% of the nation's population and is the region least integrated into the national economy. Eastern Senegal is another example of a region which is very poor and underdeveloped but which has vast agricultural potential.

Most of the region's modern economic activities center around Tambacounda where peanuts and, more recently, cotton are the major crops. A "new lands" project is seeking to develop the agricultural potential of this underpopulated area. The economic status of the small farmers in this area is similar to that of small farmers in the Sine Saloum. Cash incomes are generally higher than those in the northern and central peanut zones but as a pioneer zone, health and educational services are virtually non-existent.

c. The Casamance Region. The Casamance has a population of approximately 750,000 or 15% of Senegal's total population. Separated from northern Senegal by the Gambia River, the region historically was not highly integrated with the rest of the country.

Although per capita incomes are generally lower than the peanut basin because of the absence of cash crop farming in many areas, the region has great potential due to its high rainfall and plentiful land. Because of this, present production is adequate for self-sufficiency and the rural poor of the Casamance are less likely to suffer from food shortages during the hungry season than the rural poor in the peanut basin. Recent droughts, however, have affected the Casamance, making some food distribution necessary. Although nutrition levels are higher, the health level is lower due to the climate and lack of safe water supplies causing malaria and other endemic tropical diseases.

The Casamance can be divided into three main sub-regions, each dominated by a particular ethnic group. The Lower Casamance has a population of approximately 300,000. The dominant ethnic group there are the Diola, who are more individualistic and egalitarian in a socio-economic organization. The Diolas living south of the Casamance River devote most of their fields to rice cultivation. Their holdings are generally very small and their fields fragmen-

ted. Productivity has been going down because of increased problems of salinity. The Diola rice farmers have very low cash incomes and are very frugal and self-reliant. Unlike the Wolof in the North, they rarely acquire debts. The Diola north of the Casamance River have been undergoing the process of Mandingoization. This means that they have been converting to Islam and becoming peanut cash crop farmers and adopting the economic and social patterns of their neighbours to the North.

There is a very heavy Diola seasonal migration to Dakar, Banjul, and other urban centers during the dry season. The rural exodus towards the cities empties many Diola villages of its youth, young women as well as young men. Despite its monetary poverty, the Lower Casamance has 50% of its school-age children in primary school and a relatively dense network of dispensaries thanks to the presence of numerous Catholic mission school and health services. Despite its rice-growing potential the area has yet to produce a sizeable surplus for commercial use.

Other ethnic groups (Manjaques, Balantes, Mancagnes, etc.) are more open to innovation than their Diola neighbours and have been more willing to try their hand at growing peanuts and starting banana plantations. These groups generally have higher families incomes than their Diola neighbours.

The Middle Casamance is less densely populated and less urbanized than the Lower Casamance. The dominant ethnic group are the Mandingos. Rice, and to a much lesser extent, maize are the main food crops, while peanuts are the area's main cash crop. Farm holdings are small and income distribution depends on the extent to which a family farm is integrated into the Sedhiou peanut and rice schemes where semi-mechanized farming is encouraged and incomes are as high as two or three hundred dollars per capita, much higher than the national average

for rural areas.

The Upper Casamance is sparsely populated and inhabited by sedentari-
zed Peulh who grow millet and rice as their food crops and peanuts for their
main source of revenue. Thanks to their livestock, the Peulhs have an inte-
grated agricultural economy. Per capita incomes in the region have been rising
as cotton production has been expanding. Unlike the Lower Casamance, there is
little outward migration towards the towns. Like other regions farthest away
from the capital, the Upper Casamance also has a paucity of modern educational
and social services. This area has a high agricultural potential including
substantial areas of soils suitable for semi-aquatic rice.

d. The Sylvo-Pastoral Zone. Peulh herders comprise about 80% of the
population of the Sylvo-Pastoral Zone. This zone covers about one-third of
Senegal's area and is located between the Senegal River Basin and the northern
fringes of the peanut zone.

Although in terms of capital stock accumulation, many herders own
relatively large numbers of cattle, their actual monetary income is among the
lowest in Senegal, about \$30-80/yr. Many herders practise some wet-season
millet cultivation, but poor rainfall in the zone tends to diminish the impor-
tance of this and make them depend on outside sources for essential foodstuffs.

Herds provide milk, and occasionally, animals for sale. The most
regular yearly income is derived from the sale of milk and milk products.
This is done by women, who use the money obtained to satisfy household needs.
Although money obtained in this way "belongs to" the women, in fact it is used
for family needs.

Herders in the zone are by nature extremely independent and reluctant
to submit themselves to outside authority. For many herders, cattle raising

is not only a means to an end, but an end in itself. Herders themselves are reluctant to speculate on what might be an "optimal" herd size.

At the same time, there is evidence that herders are becoming more receptive to change. Since the drought, for example, the Peulhs have been particularly careful about protecting trees and the environment and in cooperating in campaigns to fight bush fires which they know deprive them of pasture for their herds. Two recent studies of the area mention a change in herders' perceptions of things as a direct result of the drought.

As seen from the discussion of the rural poor in Senegal, there are gradations of poverty among the regions and even within regions. Nonetheless, Senegal remains a country of small subsistence farmers and herders whose incomes are below the poverty level, even in the relatively more developed peanut basin. Almost any program carried out by AID with the rural farmer/herder would have a direct beneficial effect on the participants as well as a significant multiplier effect within the region.

B. Causes of Poverty and Constraints to Improvement of the Well-Being of the Poor.

Improvement of the well-being of the poor in Senegal will depend on two factors: 1) economic growth creating additional wealth and 2) equitable distribution of this wealth among the poor majority. Constraints to equitable distribution of wealth are not an unsurmountable problem in Senegal. On the other hand there are fundamental constraints on economic growth to create that wealth. Thus even though the GOS has made significant efforts to develop its economy since independence, real per capita GDP has not grown. Real GDP fluctuated around \$160 per capita (1970 prices) in close correlation with annual

rainfall. Major drops in per capita GDP occurred in 1969, 1971, 1973 and 1978 as the result of droughts sharply reducing the peanut and food grain harvest. The fundamental causes of low growth in Senegal's economy are the limited resource base of the country and the strong influence of exogenous variables of rainfall and world market conditions for vegetable oils and phosphates, its principal exports.

1. Resources Constraints

With the exception of the rich alluvial soils in the Niayes region along the coast north of Dakar and along the banks of the major rivers, the soils in Senegal are generally fragile. Soils in the central peanut region suffer from population pressure and reduction of fallow. Much of the alluvial soils along the lower river basins presently have limited potential due to salt incursion from the sea.

Rainfall is highly variable from year to year and from region to region. In the central and northern part of the country not only is rainfall limited but its duration is short. Also, variability of rainfall of over 100% from year to year has been noted. Since the early 60's the rainfall average has been more than 18% lower than in the previous 30 year period, with a series of droughts in 1968, 1970 and 1977. During the last 18 years, rainfall has been above the historical average only three times and below it 12 times.

There are three major river basins in Senegal: the Senegal, the Casamance and the Gambia/Kouloulou. Of these the Senegal River has the most potential. It is estimated that some 200,000 ha. can be brought under irrigation on the Senegal side of the River. At present there is a great variation in water flow in the Senegal during the year. It ranges from more than 7000 m³ per second during the flood stage at Bakel to as little as 5m³ per second

during the dry season. A major constraint on the use of the Lower Senegal River for full agricultural production is salt incursion. During the dry season when there is a lack of fresh water to flush the salt out, it can encroach as much as 200 kilometers inland. Due to highly variable flow and salt incursion, irrigation development on the Senegal is now limited to only one crop a year, reducing return on investment in irrigation development in the region. With the construction of the Diama dam north of Saint-Louis and the Manantali dam in Mali, full development of the potential of the Senegal can be achieved.

The Casamance is a minor basin in terms of water discharge but it is a major potential area for agricultural production. Salt incursion is the major physical constraint to achievement of this agricultural potential.

The Gambia and its tributary, the Kouloulou, also has some agricultural potential for Senegal but development is limited by the presence of onchocerciasis (river blindness).

It appears that Senegal has major subsoil water reserves for development of local water supplies and, to a more limited extent, for irrigation of vegetable crops. The use of subsoil water for agricultural production in the future requires additional research and testing before significant resources are committed to it.

2. Other Principal Constraints to Development of the Rural Economy

a. Human Resources. Availability of more good managers would help solve a number of fundamental problems in the development of Senegal's rural economy. The expansion of investment opportunities as the result of increased absorptive capacity is probably the most important. The effective management of national and external resources going into the rural areas is essential to assure judicious and economic use of the resources and also to assure a steady

flow of donor funds to the rural areas. The shortage of technicians is not as much a matter of talent and funds available, as it is of the educational system. Higher education is especially geared towards academic performance rather than practical skills; both vocational and technical training are still not sufficient.

Middle level technical schools lack the necessary structures, faculty, curriculum and financial resources needed to mount a full scale program of management/technical education. 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 in demand in more favorable locations . The result is that the least qualified are found when the best qualified are needed.

b. Technological constraint. Senegal is fortunate to have a fairly substantial base of intermediate technology available for the development of its agriculture. A substantial amount of research has been done on food crops to develop an adaptable packages of intermediate technology for the traditional farmer. In addition, Senegal has its own manufacturing capability for the small farm implements and phosphate fertilizer needed in the technological packages developed.

Although there exists in the country a fairly well developed package of intermediate technology for dryland farming, there is a major technological constraint looming in the future for Senegalese agriculture. With the possible exception of the development of a millet better able to produce under adverse climatic conditions, there appears to be no major breakthrough on the horizon in dryland agriculture under the present intermediate technology package . Once this package has been applied to all available

dryland areas, present technology will begin to have diminishing return. The World Bank has estimated that this will take place somewhere between 1990 and 1995. At that time, increasing per capita rural income could only be achieved by migration to other areas of greater agricultural potential. This technological constraint plays a major role in discussion of the trade off between irrigated and rainfed agriculture (see section II).

c. Storage. Marketing of peanuts and the major cereals is a monopoly of ONCAD, the GOS central marketing agent. ONCAD is engaged in the purchase of cereals and also concerned with its storage and marketing at various consumer levels. ONCAD's present storage capacity is not consistent with their policy of establishing a security stock of approximately 100,000 tons as well as maintain adequate storage to accommodate yearly purchases and movement of grain from excess to deficit production areas. The problem applies particularly to millet which is for the most part consumed by the rural population.

ONCAD is apparently faced with this very problem this year, with a good harvest of millet and farmers ready to sell to ONCAD. Without adequate storage ONCAD may soon have to face a serious bottleneck in storage infrastructure that could so disrupt the marketing sector that producers would hesitate to make any further increases in cereals production.

Assuming that 60% of all cereals in distribution will be channeled into the major centers with existing storage facilities (Dakar, Saint-Louis, Kaolack, Ziguinchor), it is calculated by ONCAD that there is a need for additional storage capacity equal to 40% of the 330,000 tons projected to be in the distributional pipeline in 1985. By this projection there is a need for additional storage capacity of 130,000 tons.

3. Macro-Economic Constraints

There are four major macro-economic constraints on the growth of the Senegalese economy: 1) lack of adequate public savings, 2) continual balance of payment problems, 3) inadequate absorptive capacity and 4) limited growth potential from exploitable mineral resources.

a. Public Savings and Recurrent Cost Constraint. The lack of adequate public savings has limited Senegal's internal investment program and has resulted in heavy borrowing by the Government with subsequent high debt servicing cost on an already limited national budget. In addition, it has reduced Senegal's capacity to absorb foreign donor investment as it lacks funds to cover recurrent cost of such programs.

The Government is constrained in its options to increase public savings. It cannot significantly increase borrowing from the Central Bank as credit expansion is restricted by the necessity of keeping in equilibrium with the Monetary Union of the CFA Franc. It has limited possibility of increasing taxes as its ratio of taxes to GDP is already a high 19%. Increasing the tax base depends on increased economic growth which it lacks internal investment funds to generate. Present external borrowing capacity is also limited. The debt servicing ratio is now 17% of export value of goods and services. This is the maximum it can handle without major rescheduling of its debt. Since the Central Government budget is the major determinant of public savings, the Government must solve its public savings problem by the slow and rather painful process of austerity. The Government is now committed to this path as the recent (December 13, 1978) speech of the Prime Minister has indicated. The Government has cut its capital budget by over half, increased customs duties and instigated stricter controls over imported goods. It has also started a

crackdown on tax fraud, and reduced borrowing on private capital markets.

In addition to austerity, the Government needs to increase efficiency of public and para-public enterprises and reduce recurrent costs. Reduction of recurrent costs will require that beneficiaries of Government services pay the cost of those services as soon as they are able. In the urban areas, costs of utilities and other public services should be fully paid by its users wherever possible. In the rural areas the problem is more complicated due to the long gestation period between investment and the time when benefits become quantifiable and collectable. Recurrent costs in this lag period must be covered by the Government or by the foreign donors. Nevertheless, as soon as they are able, the beneficiaries should begin to bear the cost of elements of agricultural programs such as the extension services.

Beneficiaries of social service programs should also pay for the recurrent cost of these programs as much as possible. Recent experience of the AID-funded health program in Sine-Saloum offers an example of how this could possibly be done. In this project, basic health services are provided to the rural poor at very low cost because of the high degree of local contribution and participation by the recipients of these services and the minimal level of services being offered. The results of this program to date seem to indicate that with proper design and substantial local participation, a large amount of the recurrent cost of social service programs could be covered by the beneficiaries.

Foreign donors will have to play a major role in the recurrent cost issue. All projects must be evaluated on the extent to which they will raise the annual claim on the Government's limited budget to sustain the project. Senegal will have to depend on both recurrent and capital assistance from

foreign donors for a long time to come. Given the limitations noted above, expansion of Senegal's economy will depend primarily of foreign donors assistance.

b. Balance of Payment Constraint. Senegal has had a continual negative trade balance since independence. Nevertheless, between 1960 and 1972 balance of payment was not a constraint on Senegal's slow growing economy. Since 1972 major deficits in the balance of payments has lead to a negative position in the overall foreign reserve position of the country. This deficit doubled in 1973 and has since remained at this high level. Different factors have contributed in varying degree to this increased trade deficit. Among these have been the Sahelian drought reducing peanut exports, the wide variation of world prices for peanut oil and phosphates, the higher cost of imported petroleum and food, and the Government expansionary policies that lead to a rapidly increasing money supply, increased inflation and increased demand for imports. The result of these factors has been a substantial drop in foreign reserve holdings. As of June, 1978 net overall foreign reserves were negative 32.9 billion FCFA.

To rebalance the economy, the Government has begun stabilization measures to dampen domestic demand for imports while, at the same time, trying not to tighten the economy so much as to limit economic growth. Nevertheless, this is only a short term solution to the problem. The long run solution is in diversification of export products and crops, and reduction of the import bill. Of the latter, and most important area to reduce is imported food which makes up some 30% of total imports. Both of these objectives underscore the necessity of increased investment in the agricultural sector, a fact well recognized by the Senegalese Government.

c. Absorptive Capacity. Absorptive capacity is a factor of the stage of economic growth of a country. Senegal still requires a greater build-up of its absorptive capacity in order to utilize fully the investment committed to its development by foreign donors. The abilities to plan, execute and monitor programs are limiting factors affecting Senegal's absorptive capacity. The Government has established a para-public consulting agency, SONED, to help in this task. In addition, the regional development agencies are gaining increasing capabilities to do this work, particularly SODEVA in the peanut basin. Nevertheless, the number of projects to be handled vastly exceeds their capacity. Some foreign assistance in this area such as the AID Agricultural Sector Analysis program and the National Plan of Agricultural Resources project are planned to help reduce this limitation.

The major absorptive capacity problem of Senegal for foreign and public investment is the lack of availability of public funds to meet recurrent costs. This is particularly true of social services. The country as a whole is too poor to afford a much higher level of social services. (See recurrent costs).

d. Limited Mineral Resources. One of the principal constraints towards long term growth, particularly of a semi-industrial economy that is Senegal's ultimate objective, is the limited exploitable mineral resources within the country. For the foreseeable future the only mineral resource Senegal can call on will be phosphate rock. Senegal produces annually about 1.5 million tons of phosphate rock. With present equipment it has a maximum production capacity of 1.8 million tons. Total reserves in the country are estimated to be 70 million tons, or enough for about 45 years at the present rate of extraction. Little growth is foreseen in the tonnage of phosphate that Senegal will produce, and no additional growth in the economy from this sector is anticipated.

C. Progress and Commitment towards Equitable Growth by GOS

In the aftermath of the Sahelian droughts, Senegalese planners and officials faced the reality of the impossibility of further developing their society without significant growth of the economy, particularly the rural sector. A number of basic policies have been undertaken by the GOS to generate greater and more equitable growth in the country. These policies have not been formalized in any particular plan or heralded in any particular proclamation. They have, however, resulted in a series of interrelated actions that, taken as a whole, represents a significant shift from the previous policies tending to favor the urban sector. These actions can be grouped under four major headings: 1) redressing the imbalance between the rural and urban sectors, 2) decentralization and local participation in the development process, 3) education for the poor majority, and 4) rural health care and the introduction of family planning.

1. Redressing the imbalance between the rural and urban sectors.

The major theme of the shift in policy now underway has been the redressing of the imbalance of investment and development that existed between the rural and urban parts of the country. The rural/agricultural sector is the basic resource of the Senegalese economy. Seventy per cent of Senegal's population are in the rural agricultural sector. Agriculture represents about 30% of the GDP and over 60% of export earnings. Its importance in the economy is increasing as agriculture is the source of raw materials and demand for much of the other activities of the economy.

An example of how important the agricultural sector is to the entire economy can be seen as a result of the 1977 drought that reduced the harvest by over half. In the industrial sector not only was peanut oil refinery

production sharply down (-44%) but other industries also had major cutbacks in production. These included beer and soft drinks (-5%), petroleum refining (-8%), cloth and clothing (-16%), and general manufacturing (-57%).

Despite its great importance, until the recent evaluation of policies occurred, the rural/agricultural sector received significantly less investment and development relative to the urban/industrial sector. In fact, the rural sector was used as the principal source of savings to finance the development of the urban sector. The GOS has now reevaluated this situation and a major redressment of this policy has occurred. This change can be seen in modification of the farm price policy and in increased rural investment as the result of diversification of agricultural production.

a. Farm Price Policy. Until November 1974, farm gate prices were set at a low level to subsidize food costs of urban consumers and to provide substantial revenue for the national budget (40%) from the export of peanuts. The policy of low farm gate prices had been in effect from the beginning of the colonial period. The combination of this policy and the Sahelian drought resulted in stagnate agricultural production and weakness in the economy as a whole. In 1974 this policy was reversed. Farm gate prices were greatly increased and subsidies on urban food cost were eliminated. The producer prices of peanuts rose 41%, millet 33%, rice 66%, cotton 37% and corn 20%. Without subsidies the retail price of rice and bread rose respectively 76% and 32%, making retail prices high enough to provide incentives for local production and made available additional investment resources.

This reversal of the previous low farm price policy has continued to the present. Even now when the GOS is in a tight monetary situation, the government has recently reaffirmed the continuation of higher prices

to the farmers for their production.

b. Diversification of Agriculture. Because of the obvious vulnerability of a single export crop economy, Senegalese planners are acutely aware of the necessity of diversification of agriculture. This diversification program does not mean the replacement of present cultures with new ones, but rather the addition to present production of new crops in expanded production areas primarily outside of the peanut basin.

Peanuts are Senegal's main cash crop and will remain so for the foreseeable future. Senegal is a major exporter of peanut oil with some 40% of the world market. Yet, because there are a number of close substitutes to peanut oil (soybean, palm, sunflower, etc.), Senegal has had to be a price taker rather than a price setter for their principal export earner. The outlook for future rises in world prices for peanut oil is not promising. The FAO projects an expanding demand for edible oils, particularly in the developing world. But they also predict increased supplies from increased soybean, palm and sunflower production.

In light of the extensive investment in extension, marketing and refining facilities already in place in the country, peanuts will continue to remain a major crop in Senegal but its production will probably not expand. The government is now planning to stabilize production at around 1,200 million tons which would allow the present refineries to operate at their most efficient level.

Before the Sahelian drought, Senegal was not able to mount a major diversification program due to the lack of financial sources for the required investments. The Sahelian drought and subsequent events have provided the impetus to Senegal and the necessary foreign donors to undertake

a significant program.

The diversification program in Senegal is characterized by two factors, its additionality to the present millet/peanut production and by its balance. It is balanced by region, by crop and by technique be it irrigated or dryland. The Senegalese have not put all their effort into a single technique, crop or grandiose scheme.

Diversification means irrigated rice, vegetables, wheat and sugar production in the north; increased cattle production in the Sylvo-pastoral zone; edible (HPS) peanuts, cowpeas and millet in the central zone; cotton, corn and upland rice in the east; and, rice (patty, swamp and upland), cotton, tropical fruits, peanuts and corn in the south.

Hand in hand with the diversification program is the policy of increased food self-sufficiency. Senegal consumption pattern of heavy dependence on imported food (rice and wheat) for the urban sector is part of its colonial heritage. After independence, a combination of limited increases in agricultural production, rising food import costs, and a rapidly growing urban population made this old pattern unworkable. The necessity of greater food self-sufficiency has thus become more urgent.

In 1976, a program for food self-sufficiency was put forth by the Ministry of Rural Development. The objective of this program was to reduce food imports in a three pronged move: (1) the substitution for rice and wheat in the urban diet with locally based products; (2) increased production of irrigated rice in the Fleuve and Casamance and, (3) increased production of dryland millet.

Greater food self-sufficiency will depend heavily on increased rice production. A number of questions have been raised about the economic

viability of rice production in Senegal. The principal problem is that domestic production costs exceed cost of imported rice. High domestic production costs are due to high cost of inputs, limited economies of scale, underutilized milling capacity and high transportation costs. Import costs are low because Senegal imports low quality 80-100% broken rice chips.

Response to this criticism notes that most studies have concentrated on capital-intensive rice in the delta, which has been inefficient. As rice production increases, greater efficiency should result from better use of milling facilities, greater economies of scale and effect of the learning curve of farmers newly introduced to irrigated practices. This should significantly lower production cost of locally produced rice and make it more competitive with imported rice.

An option that is often mentioned is making Senegal's self-sufficiency food desire part of a regional concept of self-sufficiency rather than a strictly national one. Such a policy, it is argued, would mean lower costs and risks and result in more efficient resource use due to maximizing comparative advantage. This suggestion also supports the increasing regional perspective of the Sahelian food question. The principal problem with this option is that Senegal is understandably reluctant to have an important source of its food supply, the basic need of its people, dependent on the stability of neighboring governments and policies.

Additionally, there are also economic and infrastructural constraints on a regional self-sufficiency policy. Mali, for example, is the nearest neighboring state that could conceivably supply the Senegalese market with rice. But a closer examination of Mali's rice production area and transportation constraints shows that it is much more economical for Mali to export

towards its southern and eastern neighbors than towards Senegal. Therefore, while some regional coordination of food policy may take place, it is unrealistic to assume that any significant regional self-sufficiency policy will be developed in the near future.

2. Decentralization and Local Participation in Development

To achieve the long-range agricultural production goals which they have established, the GOS has adopted a regional development policy using semi-autonomous development agencies which have begun to taken over from the central ministries the responsibility for development planning and for the provision of inputs and extension services to farmers.

These specialized agencies have as their purpose the development of a region or a specific commodity. Their activities always include extension services and may include construction and maintenance of infrastructure, marketing and processing, training, input supply and agricultural credit. Such organizations in Senegal enjoy a reasonable degree of autonomy that enables them to operate to some extent outside the cumbersome governmental financial and procurement procedures.

Five of the regional development agencies which have been organized are: (1) Societe de Developpement et de Vulgarisation Agricole (SODEVA), which has been given full responsibility for extension in the groundnut basin; (2) Societe d'Aménagement et d'Exploitation des Terres du Delta (SAED), is responsible for irrigation development in the Senegal River Valley; (3) Societe pour le Developpement des Fibres Textiles (SODEFITEX), formerly responsible for cotton development only, is now concerned with all agricultural development in Eastern Senegal and the Upper Casamance; (4) Societe pour la Mise en Valeur de la Casamance (SOMIVAC), is responsible for overall planning

and development in the Casamance; and (5) Societe de Développement de l'Elevage dans la zone Sylvo-Pastorale (SODESP), has been given the responsibility for developing the livestock industry throughout the Ferlo zone.

Additionally, the GOS has taken measures to increase the participation of the poor in decision-making. The most important of these measures has been the administrative reform, beginning in 1973, to give substantial power to the local level "rural communities" which now exist in six of Senegal's eight regions. The rural community, a group of villages in a small area run by an elected council, advises on all development projects in its area and has self-taxing powers of which 70% is spent according to community priorities. The other 30% is divided among Senegal's poorest rural communities. While their budgets are small (the government plans to increase them), the rural communities' financial independence allows them to establish their own development.

The rural communities are to be the basic grass-roots development unit. By exercising direct responsibility over many of the projects directly affecting them, the rural communities will be provided with more incentives to participate more actively in their own development.

3. Education for the Poor Majority

Although the bulk of education in Senegal is still tending to be elitist French languaged oriented, the GOS has made a serious attempt to provide education and training to children and adults of low income and rural families, but there are financial constraints on how much can be done in the near term. Education now represents 22% of GOS's operational budget. Further increases in education will have to come from general economic growth or new, low cost education programs. Nevertheless, a number of steps have

been taken to bring education to the poor. In 1974, GOS undertook Practical Primary Education (PPE) in conjunction with the World Bank to establish rural education centers offering primary school leavers and youths without education a blend of practical training in agriculture, literacy and numeracy, etc. The Professional Rural Training Office of Human Promotion has 20 centers opened with ILO help to train farmers, herders and fishermen in areas with proven development potential. Human Promotion is also working with USAID and other donors such as UNICEF in projects designed to give women economic skills such as gardening, stockraising, tie dying and informal training in health, sanitation and nutrition.

GOS has established several agencies to offer informal education and training to adults of low income and rural families and for women. One of these, has begun a project to assist urban and rural artisans and small businessmen to overcome the basic constraints in the artisan sector: lack of credit to buy equipment and materials and technical assistance in management and appropriate technology.

Technical and vocational training for youths and young adults is being reorganized. A number of uncoordinated schools: industrial upgrading, merchant marine, secretarial/clerical, tourism, lower and middle level business are to be brought under the tutelage of the Ministry of Education to make the programs more effective.

In 1978 a GOS pilot project in Dakar has begun local language in primary schools. Until then, primary education has been entirely in French even though the vast majority of Senegalese don't speak French at home.

Further advances along these lines will be largely dependent upon the gradual expansion of extension systems to the rural areas, and greater adap-

tation of the education system as a result of current experimental programs.

4. Rural Health Care and Introduction of Family Planning

Until recently, most Senegalese laws, institution and socioeconomic policies encouraged large families. However, the GOS has been impelled to take a number of steps in favor of family planning as a result of 1976 census which showed the rate of population growth in 1970 to have been 2.9% and not the previously estimated 2.2%. The Minister of Health, with the support of the President, Prime Minister and Ministers of Plan, Social Action and Women's Condition, had by August 1978 adopted the following measures:

- (i) allowed six government health facilities to begin overt family planning,
- (ii) appointed a family planning coordinator in the MOH; (iii) indicated to USAID that MOH funds will be given to family planning in the next annual budget; (iv) requested and agreed with USAID on the content of an initial family planning project, and (v) proposed a law permitting pregnancy interruption up to the third month. In addition, an Interministerial Council established in July 1978 a National Population Council to suggest new demographic growth and development policies for 1980 Development Plan. GOS also signed a project with UNFPA for proposed revisions of population laws to be submitted to this council and has asked UNFPA for a consultant to help, inter alia, with family planning.

While much of the health care is still centered in Cap Vert, the government has taken steps to increase the health budget and to develop a more effective rural health network.

In addition to the development of this network for rural health centers, the GOS administrative reform of 1972 has done a great deal to improve the access of the poor to low cost health services. By decentralizing some of

the decision making powers of the government through the creation of "rural communities" with self-taxing powers, the GOS has made it possible for the local population to help in the creation of its own health delivery system in coordination with the national government. Such systems are more responsive to local needs and considerably more cost effective than present national based health delivery systems. In the Sine Saloum region, for example, 8% of the locally gathered tax revenue goes towards the purchase of medicine. In addition, the population in this region has levied taxes on itself to construct village health huts. By building on a base of an already relatively politically aware population, the GOS has taken a strongly positive step towards the creation of effective rural institutions including health.

5. The GOS Commitment to Human Rights

Progress and commitment towards equitable growth must also consider the human rights situation within the country. Senegal has an excellent human rights record. It is one of the most democratic states in Africa. Since 1974, it has had a multiparty political system which is dominated by the ruling party, Parti Socialiste (formerly the Union Progressiste Sénégalaise (UPS)).

At the present time there are three legal parties, the PS, the Parti Démocratique Sénégalais (PDS) and the Parti de l'Indépendance Africain (PAI). During the February 1978 electoral campaign, the two legal opposition parties were able to campaign freely and to present their point of view on national television. The PDS won about 20% of the official vote and, because of the proportional representation system, now has 18 seats in the National Assembly.

Senegal also has one of the most vigorous free opposition press in all of Africa. Each opposition tendency has its own journal and there is also a widely-read satirical paper (modeled after France's Canard Enchaîné) called Le Politicien which takes frequent potshots at the government.

D. Analysis of the Plan

The Fifth Plan (1977-1981) is essentially a continuation of the previous plan in the sense that roughly half of the projects are carried forward from the Fourth Plan. The investment program cover by the plan includes all investments by the Government, private entities and foreign donors as well as certain other components which are typically treated as recurrent expenditures in the national accounts. It excludes a wide range of small investments by private persons in housing, agriculture, and small businesses. One major difference in Plan orientation is that while previous plans laid out priorities only within sectors and sub-sectors, the Fifth Plan has developed a hierarchy of priorities with investment in the productive sectors of agriculture and industry having the highest priority.

One comment on the Plan is that it tends to set overly optimistic goals and targets. For example, one of the major goals of the plan is tripling real per capita income by the year 2000. To achieve this goal, the 5th four year plan has divided future development into two phases. The first phase, from 1977-1985, is the "phase of consolidation". Growth in this period is projected at 5.8%. From 1986 to 2000 the "phase of expansion" is to take place, with a growth rate of 8.9% a year. These targets appear unrealistically high. The World Bank projects average growth of 4% per year over the next 15 years. Because of these overly high targets, realization rates of the plans have been approximately 50%.

Almost 40% of the forestry investment is for environmental protection of the Sylvo-pastoral zone and coastal dunes. Firewood production and brush fire control also receive 20% of forestry investment.

The investment program in tourism, another sector of importance to Senegal as a potential foreign exchange earner and employment generator appears to have been adjusted to the market situation. The Fourth Plan realization was 5 percent of the total envelope to this activity.

Planned outlays for education and health in the Fifth Plan is 9 percent of total investment. The priority that the Government attaches to this sector is also reflected in its operational budget, it has remained at roughly 30 percent of the total operational budget over the last five years.

E. Other Donors

Senegal has been relatively successful in obtaining foreign donor assistance, particularly since the 1968-73 droughts. According to AFR/DP/PPE, Senegal received commitments of assistance totalling \$167.4 million in 1975 and \$194.8 million in 1976. This is more than \$33 and \$38 per capita for the two respective years.

The major donor to Senegal is France, followed by Canada, U.S., the various UN agencies, Germany and other donors. While France's aid on a grant basis increased 13% in the five year period 1973-77, its percentage of total grant aid fell from 58% to 30%. Canadian aid increased from 12% to 28% of the total and U.S. assistance from 9% to 20%.

The orientation of the major donors' assistance to Senegal can be briefly summarized as follows: France, the major donor, puts its funds into institutional (research and secondary education) and infrastructural development

and maintenance. One half of the French grant aid goes to support Senegal's education system. France also provides major personnel support for the operation of governmental administration and services.

Canadian aid has grown more than 153% in the last five years. Most of its assistance is in large-scale projects including fisheries, development of a secondary-level technical school, agricultural research, forestry, civil aviation and health care.

The West Germans have also done a number of large-scale programs in agricultural development and tourism, and they are a major contribution to the OMVS infrastructural financing.

Other donors include the following: IBRD/IDA have provided loans for land resettlement, agricultural development, rural roads, tourism and institutional development (ONCAD, SODEVA). OPEC countries have provided funds for highway construction and smaller projects. They have made major commitments for development in the Casamance but funds are still awaiting release. China has also provided some assistance in rice and vegetable culture in the Fleuve and Casamance. FED had had a number of projects in diversification of agriculture (HPS peanuts, cotton, vegetables) in road building and, with the French, are financing the Free Trade zone near Dakar.

1. Grant Assistance

According to the annual reports of the UNDP representative, grant assistance to Senegal increased from \$62 million in 1973 to more than \$155 million in 1977. On a per capita basis this is an increase from \$13 to \$30.

However, Plan's investment envelope is overestimated to provide both the incentive and scope for technical work on new and undefined projects and to give foreign donors a broad spectrum of project possibilities. Foreign donors, who financed 51 percent of Fourth Plan investment had considerable influence on the sectoral priorities development pace of program execution. The bulk of foreign aid in the Fourth Plan (1973-1977) went to agricultural development, closely followed by transportation.

This pattern is likely to be repeated as the role that foreign donors are expected to play in the financing of the 5th Plan is increasing. The 4th Plan called for 48% direct foreign investment while the 5th Plan calls for 63%. The remainder of the 5th Plan financing comes from internal sources. The Government has estimated that through 1990 at least 85% of its development investment will be financed from external sources including donor inputs and GOS borrowing from abroad.

Obviously the Government cannot support heavy borrowing and a cut-back in the projected investment envelope of the 5th four year plan will need to be undertaken. This process is underway now, and a revised Plan is expected in April 1979.

The extent of reduction and content to be reduced are not yet known but indications are that the productive sector will receive even greater emphasis as the Government seeks to spur the economy forward.

Senegal's Plans given direction to the development process and present foreign donors with a choice of projects. Agriculture has been given top priority in the Fifth Plan. Investment in the 5th four year plan for the agricultural sector is projected at 27% as against 23% of the total investment budget under the 4th Plan.

It must be re-emphasized, however, that the levels of realization of the agricultural sector vis-a-vis other sectors are the important considerations and it is the donors who largely determine levels of realization of the Plan. Under the 1974 Plan, for example, 48% of the agricultural sector, projects realized; donor financing accounted for 58%.

While total investment in the agricultural sector is rising, there has been a shift in investment planning levels within the sector in the past three plans. Crop production received 48% of the total investment of the agricultural sector in the 4th Plan and 41% in the 5th Plan. On the other hand, in the livestock subsector, investment between these two plans increased from 7% to 14%, fisheries went from 14% to 26% and forestry increased from 4% to 11% of the total agricultural sector investment. Five percent of the 5th Plan's agricultural sector investment is allocated to rural subsoil water development.

Fifty-six percent of the investment of the crop subsector of the 5th Plan is for irrigation development, 60% for the Fleuve Region and 40% for the Casamance. Dryland development is allocated 36% of the crop subsector. Most of this is for the peanut basin and the Casamance. Funds for the peanut basin are primarily (60%) for increased development of the extension service and Human Promotion. Horticultural crops, primarily small scale vegetable production, make up the rest of the crop subsector.

About half of the livestock investment is for the development of cattle production in the Sylvo-pastoral zone and Eastern Senegal including Bakel. Other investments are projected for livestock in the Casamance, and for poultry and sheep production.

In the past five years, grant assistance had had a significant shift in orientation. In 1973, some 60% of assistance went to education and human resource development while only 11% went to agricultural development. Since then, funds directed toward education development have increased about 22% a year while agricultural development assistance has increased by 75% a year. Thus in 1977, assistance in agricultural development has increased to 31% of total assistance and funds for educational development had dropped to 38%.

This increased emphasis on agricultural development has been the result of donor recognition, triggered by the crisis of the Sahelian drought, of the importance of agriculture to the overall development of Senegal.

2) Loan Assistance

An accurate breakdown of loans undertaken by the Senegalese Government is difficult to obtain. According to the Ministry of Plan, financing of the IVth Four-Year Plan can be broken down to 27.8% grants, 26.4% concessio-nary loans (interest of 0 to 2%, repayment period of 20 to 50 years), 31.3% low interest loans (interest about 12%) and 14.5% loans at commercial rates.

An analysis of loans received in 1976-77 indicates that the major source of borrowed funds were commercial banks (30%), IBRD/IDA (20%), CCCE France (17%), African Development Bank (12%), and FED (8%). Most loans were used on infrastructural development, many of which directly benefitted the rural sector. Several soft term loans are being used to finance irrigated perimeters and other types of agricultural development projects.

AID has already set a pattern for close cooperation with other donors both in design and implementation of projects within the CILSS/Club context. A recent example is the SAED Training Project which was designed in cooperation

with FAC and CCCE, and Diagambal which is being designed in cooperation with IBRD (Debi-Lampsar). AID is also assisting Senegal to develop technical dossiers for project implementation by other donors. An example is the Baila study and project design in the Casamance, which is to facilitate a project for which Arab financing has been pledged.

Part II. Strategy

A. Objectives. Senegal lacks the strong mineral resource base to form the foundation for an industrial economy. Its options for the present are limited to an agro-economy. Senegal enjoys a comparative advantage in groundnut production but stagnating yields, the widely fluctuating world market price for groundnuts, the recent droughts and the requirement to purchase large quantities of food grains on the open market, have convinced policy makers that increased food self-sufficiency is a viable goal for the country and that, if this goal is ever to be reached by the end of the century, considerably more attention must be paid to the rural areas.

Given the policy decision, Senegal has begun to attack the major constraints to agricultural development, which can be restated as follows:

- Unfavorable balance of payments which reduces availability of budget resources needed for internal expenditures and capital goods for development.
- Variable climate conditions with uncertain rainfall.
- Declining soil fertility.
- Limited agricultural diversification.
- Endemic health problems.
- High population growth rate.
- High infrastructure development cost.
- Insufficient trained personnel.

Other serious, region-specific constraints are obviously present, such as saline intrusion in the Casamance and Senegal River Deltas, and onchocerciasis in Eastern Senegal.

Nonetheless, Senegal is a country with considerable potential and a reasonable opportunity of becoming self-sufficient within 20 years. Senegal also has a significant role to play in the economy of the entire Sahelian

region. It is a leading member of the OMVS and successful implementation of the plan for long-range development of the Senegal River Valley, with 60% of the irrigable land in the Basin in Senegal, could have an extremely important impact on providing food resources for the entire region over the long term.

In assisting Senegal to deal with the more serious constraints to development, U.S. development assistance pursues a strategy which places major emphasis on equity assistance to the rural poor by developing the agricultural base and the rural developmental infrastructures which support it. AID's strategy of assistance to agricultural production to the rural population supports the GOS long-term goals which can be listed as follows:

- Orient the country towards the rural poor.
- Increase food production to decrease reliance on expensive imports and assistance.
- Increase the use of natural resources, primarily water resources.
- Improve human resource capability.
- Improve the lot of women.
- Reduce the population growth rate.
- Bring health services to the rural poor.

Long-range objectives of the U.S. program in Senegal can be summarized as follows:

1. Assist the GOS to largely eliminate dependence on imported food grains to feed its population through interventions at the rural level of the small farmer to increase his production, to assist herders to adopt more rational livestock production techniques, and to open minimally-used lands to irrigated development in the principal river basins.

2. The development of rural areas and provision of social services, including family planning to the rural population. The inadequacy of such services, especially access to primary health care, has been a major contributory factor to the emigration from the farm to urban areas, to the low rate of productivity in the highly labor-intensive agriculture practiced in Senegal, and to social unrest in the rural areas.

3. Finally, the protection and regeneration of the natural resource base of the country is essential if Senegal is to become self-sufficient. A delicate balance exists between efforts to help the rural poor to increase their capacity to produce adequate food for themselves and the market, and efforts to preserve the soils and rangelands for future generations. The pressures on rangeland by increased size of herds, the contribution of the drought to grass and soil nutrient degradation, the pressure on farmland of expansion of cultivated areas by an increasing population, and the increased demands for fuel-wood energy are all serious problems which are addressed integrally with efforts to increase food production.

B. Development Alternatives. Senegal, and concomitantly the AID program, are attempting to treat questions regarding growth and equity for which there are no absolutely clear-cut answers. Four basic points can be noted, however, particularly in regard to the agricultural sector.

1. Resources are too limited to attempt to do everything at once. Nonetheless, while giving emphasis to the three primary agricultural sections of the country, attention is being given to other areas where rainfall, soil conditions, and other factors hold promise for long-term development. While emphasis on certain geographic zones may have an adverse equity impact on less-favored regions, the country must build up a resource base if it is to

truly develop. Moreover, even those farms in the most-favored regions are poor by any standards, so that growth is really not carried out at the expense of equity when such a choice is made.

2. Dealing with various size farms in agricultural intensification poses the problem that, in most cases, greater initial progress can be made with those farmers who are better educated, more industrious, and have slightly larger land holdings than the poorest farmers. The former tend to have the knowledge to introduce more modern methods and can take the necessary risks as far as agricultural credit and debts are concerned.

With few exceptions, farms in Senegal are small and it is therefore a question of relative poverty rather than relative wealth. To the fullest extent possible, GOS regional agricultural extension services are available to all farmers in the region. With the greatest degree of intensification implemented in the first instance with the more knowledgeable farmers, the results on these farms act as incentives for the less-progressive farmers to follow their example. This has been the experience thus far in the groundnut basin and again we conclude that there is no basic conflict between growth and equity.

3. A third area for concern is the problem of deciding on relatively heavy capital investments which are required, for example, in irrigated agriculture such as that being carried out in the Senegal River Valley, and the results which could be obtained by making the same investments over a larger area in dryland farming.

Irrigation is seen in Senegal as additional to the existing investment for development of dryland agriculture through intermediate technology. The cost of this additional investment in irrigation will be supported primarily

by outside donors and soft loans. Investment in dryland agriculture will begin to show diminishing returns in the 1990s. Thus a policy based solely on dryland agriculture must deal with the problem of a growing surplus of rural population. The World Bank, in its projection of the Senegalese economy to the turn of the century, projects that without development of irrigation for the production of substitution or replacement of imported agricultural products, Senegal's long term economic growth will be ultimately limited by the agricultural sector. Thus long-term equity, which is dependent on economic growth, is ultimately dependent on the development of irrigation.

Even though the rates of returns are low in the initial phase, the World Bank lists five mitigating factors why investment in irrigation should not be postponed.

a. Differences in rates of returns of dryland and irrigated projects are often smaller in practice than in theory due to the large uncertainty of dryland investment as a result of climatic conditions and variable world markets.

b. Returns on dryland agriculture in Senegal are expected to fall in the next decade while returns on irrigation will probably rise. Given the lead time required to reap returns in irrigated projects, such projects should be started now so as to be able to offset the decline in growth of dryland agriculture projected for the future.

c. Compared with other options of growth such as export-oriented industry, irrigation provides more opportunities to reduce urban/rural income gaps, stem urban migration, and increase demand for domestic products.

d. Irrigation should reduce the effect of periodic Sahelian drought on Senegal's population.

e. By beginning irrigation investment now, Senegal should be able to stretch out the program of investment over time. This would allow more extensive development and training of farmers in irrigation techniques and reduce the dislocation of the economy and social structure by allowing more time for the fundamental change implied by irrigation to take place.

C. AID Development Approach. Until recently, AID participation in Senegalese development has been as a minor donor. Beginning in 1975, however, a bilateral program stressing agricultural development, rural health and human resources development was started which is reaching substantial proportions. Within the framework of the overall SDP and Club/CILSS strategy, it is expected that over the next decade, AID, will contribute meaningfully to overall economic development of the country. In working out its strategy, the Mission has taken into consideration three principal alternative approaches. These are:

1. Concentration of AID resources in one geographic region of Senegal.
2. Concentration on one specific sector, e.g. dryland farming, livestock, or irrigated agriculture.
3. An integrated approach to rural development providing major assistance in the principal geographic areas of the country with a balanced approach to dryland farming, irrigated agriculture, livestock, rural health services, human resources development and conservation and development of natural resources.

Neither of the first two alternatives have been considered feasible for a number of reasons. First, several other donors have been working in Senegal for a much longer period than AID, including the French, FED, IBRD, and Canada. Many of these donors have electric programs and deal with various parts of the economy, are active in various phases of agricultural development,

and have projects and programs in different geographic areas of the country. No one donor has the necessary financial resources or technical backstopping to provide all of the assistance required in any one of the more important sectors, nor to take overall responsibility for the development of a geographically region. Furthermore, it is the policy of the Senegalese Government, with which we concur, to desire a broad approach to economic development which can only be provided by the combined resources of several donors. To limit participation in any specific sector or geographical region to one donor by Senegal would not be politically possible, nor would it be a wise decision developmentally.

In keeping with the basic precepts of the Sahel Development Program, AID long-term commitment to the Sahel, and cooperation with other donors on both a regional and bilateral basis as fostered within the Club/CILSS strategy, AID has chosen the alternative of participating in a meaningful way in the integrated rural development of the country in the principal geographical regions where Senegal has requested our assistance and where our financial resources and technical skill complement and enhance the programs being carried out by other donors. This more balanced effort permits AID to have a much closer working relationship with the GOS, takes advantage of other donor activities in the regions and sector activities chosen, and makes optimum use of the absorptive capacity of the country.

The intermediate targets for AID are set in the regions which offer the most promise for production increases and where the majority of the rural poor are situated. The AID program will seek to establish the institutional and data base necessary if the long-term objectives of Senegal and the AID program are to be achieved. It will, through a series of specific action

programs, provide training of management and extension personnel of the development agencies operating in these regions, institute rural based health delivery systems and, will attack the most prevalent constraints to development in the regions while at the same time maximizing direct and immediate benefits to the rural villager. The testing of technical approaches (farm intensification, irrigation, farmer/herder organizations, etc.) will be an essential element of the short-term program.

AID programs will provide institutional support to the regional development agencies and will provide essential training of management and extension personnel. Rural based health monitoring and delivery systems are being put in place along side the agriculture development projects. Grain storage facilities will be located in the important production areas and village and cooperative level storage will be tested.

AID intermediate objectives also include developing approaches to optimum land utilization through range management and intensification of agriculture, protection of soil and grassland through reforestation and bush fire control, and the testing of alternate energy sources to halt the depletion of forests. The strengthening of the technical services which have primary responsibility in this area and farmer/herder education programs complement the action programs promoted by AID.

While concentrating resources in the three productive regions as outlined above, several other sectors are important. First, in the area of research, AID intermediate objectives are to assist in the decentralization of agricultural research facilities in order to assure that there is an infrastructure in place for the effective adaptive research in the various ecological regions of the country. Further, over the next five years, AID will work

with the GOS to develop a complete analysis of the agricultural sector, including crop production, livestock, forestry, fish, marketing, etc., and the institutional capacity to continue the analysis, to interpret its data and to recommend alternative approaches to development in Senegal.

Second, one geographic area of Senegal with great potential for development over the long-run is the Region of Senegal Oriental, where both rainfall and land are abundant. Its extreme isolation from the centers of commerce and government has, however, resulted in this region being neglected by both the GOS and the donors until recently. A masterplan for the development of the region has recently been completed which underscores its potential as an area for both food and cash crop production and as an area which can absorb large numbers of people from more populated areas, such as the groundnut basin.

Before full scale development can begin in Senegal Oriental, years of slow experimentation are required. AID objectives in the area are to begin on a small scale to introduce farmer organizations, new cropping techniques, irrigation, health services, etc., in several villages in order to test the economics of working in the region and the social acceptance by the people of the new techniques.

D. AID Assistance Strategy

The priority element for AID programs in Senegal is the agricultural sector, particularly that sub-sector which is directly involved in the production of food crops. Beginning with the medium term drought relief projects, the AID program has evolved into one of resource intervention in dryland farming and farming systems; irrigated rice and vegetable production, including research and extension; grain storage operations; and infrastructural and commodity support to the regional development organizations which are the instruments for change in the rural areas of Senegal.

Land tenure is not a problem in Senegal. Small family-owned farms number 360,000 and account for virtually all of the agricultural production in the country. While technically all land belongs to the State, in fact the use of land stays within family bounds through perpetuity provided it is being used. Land lying fallow is considered to be in use. In the few instances where productive land is redistributed, decisions on its partition are taken by village councils and not by central government decree.

Senegalese society is structured in a hierarchy of self-administrative and religious organizations. The formation of "groupement de producteurs", youth and women cooperatives and full-fledged crop or function specific cooperatives is a natural evolution of the local societal structures, and are strongly supported by the GOS and the donors.

Virtually all of AID financed production programs, for example, treat with farmers and herders through their cooperative organizations. The organizations serve, in Senegal, as an excellent vehicle for decision making at the lowest possible level, for extension training to the largest numbers of people and for the delivery of inputs at the most reasonable price.

1. AID programs with the Regional Development Agencies. The AID program in Senegal recognizes the important role which the regional development agencies play in agricultural development of the rural areas and, over the next three to five years, AID will be involved in both direct support to certain of these agencies and implementation of agricultural production projects through them. The principal regional development agencies to receive AID assistance are SO.DE.VA, SAED, SOMIVAC, ONCAD and SODESP. AID has for the past several years, worked with SO.DE.VA to implement programs which, in stages, intensify farmer inputs and the technology he uses in millet production and to establish a liaison between research and field work which can bring the proven results of the laboratory and field trials to the farmer.

To achieve self-sufficiency in food grain production, to improve its balance of payments position and to decrease the heavy reliance on rice importations, the GOS has given top priority to the development of water resources. One prime area, capable of comparatively rapid development, is the Senegal River and the rich alluvial soils in the river delta basin. The development of The River Basin on the Senegal side is the responsibility of SAED. Considerable AID resource flows to the Delta region over the next five years will implant irrigation equipment and introduce farmer managed irrigation production practises.

The Casamance Valley in the extreme south of Senegal has long been regarded as most promising, especially for rice production, both rainfed and irrigated. It has good soil and adequate water. The Government now plans a concerted effort in the Casamance to realize its potential as a major regional supplier of the nations grain requirements. A number of rice/fruit projects have been promoted by various donors. Success has generally been good but with certain specific problems. Networks of swamps and streams compartmentalize the

region, making communication difficult. Salt intrusion into the lower lying marigots is one of the primary limiting factors in growing rice in those areas. Additionally, various development projects have suffered from lack of coordination.

AID assistance in the Casamance will flow through SOMIVAC and its implementation unit for the Lower Casamance, PIDAC, and will provide the capital and institutional infrastructure and the technical packages necessary to increase and market agricultural production, especially of rice, to increase farmer income and, ultimately, to improve the quality of life of the Casamance farmer.

The opportunity exists for AID projects in both the Senegal River Delta and in the Casamance to have substantial beneficial impact on per hectare yields and on total food grain production, on an improvement of the balance of payments position of Senegal and on the quality of life of the farmers directly involved in these production projects. With the strengthening of the infrastructures of both SAED and SOMIVAC over the next three years, both of these agencies should be better staffed and equipped to move more rapidly in planning and implementing irrigation projects. SAED, which has considerable experience in the planning and execution of irrigated farming will move forward with the development of both large scale, mechanized perimeters and small scale, farmer operated perimeters which, while perhaps not producing the yields that the more centralized and highly intensified perimeters would, nevertheless, offer more to the farmers involved. SOMIVAC will be in a position to begin development of the many marigots which are interspersed throughout the Casamance and which are potentially rich in production.

GOS efforts to achieve self-sufficiency in grain production, efforts largely supported by AID, and other donors, presupposes a support organization

which can purchase, store, manage and market such food grains. AID assistance to provide ONCAD adequate storage capability for both security and buffer stocks which Senegal, using its own financial resources, can purchase, is being undertaken.

Long range planning efforts by AID will continue assistance to the important dryland farming systems of Senegal, to the regional and local research efforts into better agricultural packages, to the incentives for food grain production (marketing, storage) and to the human resources necessary to plan and implement agricultural research and production programs.

2. Research and Planning. Central to AID strategy in Senegal is the effort to improve the country's capacity for agricultural planning and policy formulation at both the national and regional levels. Given the limited resources available to it, its dependency on widely fluctuating world prices for its major exports, erratic climatic conditions and uncertain external resource flows, AID considers it essential that the GOS national and regional planning units develop a firm technical and socio-economic data base to know more clearly the options available to it, as well as the analytic tools to use the information for rational medium and long-term planning. As national agricultural policy is developed it is equally essential that the regional planning/development agencies have the means to follow through with the planning and implementation of specific interventions, taking into account the ecological and social factors present in the regions.

It is the regional development agencies, moreover, who are central to the formation of farmer/herder cooperative groups, who provide the more skilled technicians, engineers, etc., required as Senegal moves to more sophisticated production techniques.

Adaptive research in agriculture, forestry and intermediate technology and the transfer of research results to the farmer are key elements of AID strategy to increase food production and preserve natural resources and, again, it is the strengthened regional development agencies who will be tasked with forming the essential liaison between research and extension.

3. Livestock. Senegal's potential for increased livestock production is important. Good range management practices and more rational production techniques, goals of several AID efforts in this sector, can mean the difference in range preservation, in improved quantity and quality of red meat production and, ultimately, in increased income to the herder.

Long-range planning in the livestock sector must await the experience of programs now being implemented in Senegal and throughout the Sahel. As well as a question of the techniques being introduced by these projects, techniques which have been tested successfully in the United States under ecological conditions similar to the Sahel, the success of these projects and the direction which future programs will take will be determined by the acceptance by traditional herders of the new range management and herding practices.

4. Health. Village health systems organized and financially supported by the local populace, backed-up by the national/regional health infrastructure, offer the most effective health care to the community. AID is working with the Ministry of Health and the local governments in an effort to institute a pilot program in one Region of the country for the delivery of health services to villagers. The key role which local people will play as the last link in the chain of delivering health services to their villages, the self-financing aspects of the program and the relatively minor recurrent costs to the Government of such an approach can go a long way in helping to overcome

the primary constraints of limited human and financial resources which have, in much of the developing world, effectively prevented meaningful health services from extending beyond urban areas.

Second, on the belief that good health is a sine qua non for agricultural productivity, a health component is included as an integral part of each rural development project financed by AID. Health surveillance, monitoring and control systems will be integrated with irrigation programs.

5. In the field of family planning, AID goals are to assist the Senegalese Government in offering comprehensive family planning services through its network of hospitals, maternity services and maternal and child health centers, as well as the distribution of contraceptive devices, as appropriate, in both urban and rural areas. This will involve training personnel, organizing clinics and a logistic support system.

The gradual acceptance of family planning concepts by the Senegalese will result in benefits to the health of both mother and children as child spacing is more widely introduced.

6. Preserve and Replenish the Natural Resources of the Country. The degradation of Senegal's land and soil base due to uncontrolled grazing, wind erosion, bush fires and excessive use of forest resources is serious and contributes to an ominous pattern of decreasing food production and increasing hardship to the rural population. AID objectives in this area are to develop rational approaches to crops and grazing land utilization through range management and intensification of agriculture, protection of soil and grass land through reforestation and bush fire control, the latter involving constructing

fire breaks, manning fire fighting brigades, etc., and the planting of fuelwood forest lots. AID assistance to the Livestock Service, to SODESP, to SODEVA, and particularly to the national Water and Forest Service all form a part of strategy aimed at meeting these objectives.

7. Human Resource Development. One of the primary development problems in Senegal is that of the absorptive capacity of the government services to plan, implement and manage the development of rural areas. There is a serious need for trained technicians, primarily at the middle level, which AID is attempting to meet. The program objective of having a trained technical development cadre, especially with the specialized development agencies, is being addressed within the context of each of the AID projects being financed as well as in projects specifically addressing the human resource need.

E. Implementation constraints.

The key constraints in the implementation of projects are:

(a) lack of trained Senegalese cadre; (b) administrative delays; and (c) local and recurrent costs. AID can provide some assistance to help unlock the first constraint, but over a rather long period given the time it takes to put participants through training programs. In the interim, technical assistance will be required. The second constraint will not yield easily to any donor efforts but will only be resolved over time as development occurs. The problem of local costs and recurrent costs are by far the most serious constraints and it is apparent that donors must be prepared to adopt a liberal policy in their regard until such time as the long-range production programs begin to give Senegal a reasonable resource base.

On the AID side, the principal implementation constraint is in finding qualified, French speaking technicians willing and able to live in remote areas where housing, medical and educational facilities are poor. French language capability to the level which permits the technician to work with his African counterpart is a problem for which there is no easy solution. The mission has attempted to structure projects, insofar as possible, to reduce dependence on technical assistance or join AID financing with other donors who can provide technical assistance more easily. The involvement of Peace Corps Volunteers in AID projects, to the extent that Peace Corps can recruit the technical expertise required in AID projects, is considered in each project since Volunteers are willing and eager to live in rural areas and easily adopt French and local languages. PVO's, who also have a pool of young personnel with language capability, experience in rural areas and willingness and enthusiasm, have to be considered as implementors of major AID financed development efforts.

F. Kinds of Assistance.

Grant funding is proposed for AID interventions in Senegal for the immediate future. AID programs focus on the rural areas where yearly per capita income range from \$30 to \$100, where basic health and social services are not available and where the only means of livelihood is agriculture or livestock production. The agricultural development in Senegal holds long term promise, has not reached the point where it can begin to produce more than modest returns to the economy. The farmers burden, for amortization and agricultural credit, is such that debt financing cannot be shifted to him through higher taxes.

It is envisioned that all funding in Senegal will be project assistance, although sectoral considerations are involved. No program assistance is planned. The accent on project assistance is based on the fact that each integrated project must be packaged so that training, administration, management, supervision, evaluation and monitoring are assured. Proper controls to assure efficient use of AID funds would be difficult to establish during the period covered by this strategy statement for program assistance.

Grant project funding should be supplemented by a multi-year PL-480 Title III rice program of 25,000 to 40,000 tons annually. The import of rice under this program will assist the GOS to maintain adequate rice supplies while providing local currency support for certain priority areas and also help resolve Senegal's balance of trade problems.

Local cost financing will remain a major element of US programs in Senegal. The major focus of AID assistance is in establishing rural development institutions for agriculture and livestock production, health services, etc. Even with the U.S. procurement of technical services and equipment, the support costs for personnel and operating expenses will be a large element of project financing to be borne by AID.

The question of recurrent costs has been discussed in Section I of this paper. While it is expected that Senegal will be able to begin to bear a share of the recurrent costs of development projects now underway, the nature of the projects being financed in Senegal, with high local support costs and long-term rather than medium-term benefits, make it unlikely that the GOS will be able to assume all recurrent costs immediately.

A study of recurrent costs in the Sahel is being undertaken by the CILSS. A final decision on the level of donor assistance to project recurrent costs in Senegal should be deferred until after the results of the study are available.

III. Assistance Planning Level

Table I presents the Proposed Assistance Planning Levels. These levels outlined above represent a minimum of the level which AID has indicated will be forthcoming within the context of the Club/CILSS Sahel Development Program. At most, at these levels, the AID program will directly effect and benefit perhaps 15% of the rural population of Senegal. However the development problems outlined in this paper are long-term problems for which no resolution can be expected within five years. Also as important as the number of people immediately assisted by the AID program is the fact that AID can, during the time span of this strategy statement, help provide the basic infrastructure development which is necessary for Senegal's long-term development.

The mission has an authorized personnel level of 24 , of which 19 positions are filled. Future programs will not substantially increase the number of projects, but will involve projects of larger scope. Project management requirements at the mission will not increase appreciably, particularly in view of the fact that many projects which AID will be financing will be implemented by university or institutional teams. At the end of the five year period covered by this paper, AID mission personnel can be expected to increase by four over the present authorized level, including a supply/procurement specialist, an environmentalist and two project managers.

PROJECT ASSISTANCE PLANNING LEVEL

Table 1.

<u>CATEGORIES:</u>	FISCAL YEARS (\$000)					TOTAL
	1981	1982	1983	1984	1985	
1. <u>AGRICULTURE:</u>						
Crop Production						
Dryland	5,000	4,000	3,500	3,000	3,000	18,500
Irrigated	3,200	3,500	6,000	10,000	11,000	33,700
Livestock	1,500	1,800	3,500	3,000	3,500	13,300
Planning	2,500	2,500	1,500	500	500	7,500
Research	2,000	1,700	1,500	2,000	1,000	8,200
Marketing and storage	-	1,000	1,000	2,000	2,000	6,000
SUB-TOTAL	14,200	14,500	17,000	20,500	21,000	87,200
2. <u>HEALTH AND POPULATION</u>						
Rural Health/nutrition	1,000	2,400	2,300	2,300	2,000	10,000
Surveillance and Monitoring	400	700	500	500	500	2,600
Family Planning	700	700	700	500	500	3,100
Rural Water Supply	-	1,000	1,000	1,000	1,000	4,000
SUB-TOTAL	2,100	4,800	4,500	4,300	4,000	19,700
3. <u>ECOLOGY</u>	1,700	1,600	2,500	2,000	2,000	10,800
4. <u>HUMAN RESOURCES</u>	-	1,000	1,000	2,000	2,000	6,000
TOTAL	18,000	21,900	25,000	28,800	30,000	123,700
TITLE II (non-add.)	5,000	5,000	5,000	5,000	6,000	
TITLE III (non add.)	7,000	8,000	8,000	8,000	9,000	
Percentage of funding required for current port folio of approved projects.	81%	41%	10%	-	-	21%

LOCATION	DESCRIPTION OF THE POOR MAJORITY	CHARACTERISTICS	CAUSES OF POVERTY	CONSTRAINTS TO IMPROVING WPL-WING OF THE POOR	GOV POLICIES AND COMMITMENT TO THE POOR	OTHER DONORS' PROGRAM	AID PROGRAMS AND POLICIES
A. Cap Vert	<p>1. Lower echelon civil servants and semi-skilled workers in private sector. (per capita income \$400-225 yr.)</p> <p>2. Unskilled workers/day laborers and domestic earning minimum wage. (per capita income \$225-150)</p> <p>3. Petty traders, vendors and artisans in informal sector. (per capita income less than \$150).</p> <p>4. Seasonal/migratory workers.</p> <p>5. The urban unemployed.</p>	<ul style="list-style-type: none"> - Marginal economic security. - Heavily in debt. - Borderline poverty. - Substandard housing, clothing and nutrition. - Most illiterate, little chance for achievement. - Dependent on overburdened public services for health and other needs. - Standard of living generally falling. - Housing, clothing and nutrition lower than above. - More traditional life style. - Schooling limited to Koranic school. - Generally young male bachelors. - Live in most squalid conditions in worst slums. - Malnutrition, lack of health care. - Dependent on kinsmen, patrons or sarabants. - The poorest of the poor. - Unemployment rate more than 25%. - A large number of young school leavers. - Dependent on family solidarity to survive. 	<p>(For all the Cap Vert and such of the rest of the country)</p> <ul style="list-style-type: none"> - Dualistic nature of colonial endowment establishing an urban elite. - Government actions and policies that lead to stagnate economic growth. - Urban population growth faster than ability of economy to absorb. - Government policies that subsidized high levels of consumption within urban elite and middle class. - Low priority of practical and/or vocational education. - Economy based on single export crops whose value is determined by congenous world markets. - The Sahelian drought. - The Government attempts to sustain urban based economy with saving of rural sector leading to stagnation of agricultural production. - Lack of credit or other sources of investment to expand informal sector of economy. - High cost of living due to inflation. 	<p>(For all of Cap Vert and much of the rest of the country)</p> <ul style="list-style-type: none"> - Lack of diversification of economy and export base. - Low propensity to invest in private sector. - Low levels of public saving. - A burdensome para-public establishment. - Low productivity of urban wage force. - High capital/output ratio. - Large and growing public debt burden. - Extremely limit foreign reserves. - Continue all trade deficit. - Overextension of government managerial capacity. - Limited tax base due to lack of economic growth. - Dependence on high cost fossil fuel for energy. - Limited employment opportunities outside of Cap Vert. - Continuing urban migration and population growth. 	<p>Policies having a nation-wide effect</p> <ul style="list-style-type: none"> - Shift tax burden from rural to urban sector. - Administrative reform (rural committees). - Establishment of a multiparty state. - New ministries for women and social action. - Reorganization and support of "Human Promotion" office. - Start literacy program in vernacular. - Raised farm gate prices. - Reorganized SUBUDIT office. - Began family planning program. - Began program at practical primary education. - Creation of labor intensive employment (tourism). - Investment code to encourage increased investment. - Balance budget to correct macro constraints. 	<p>Programs having a nation wide effect</p> <ul style="list-style-type: none"> - ISRA (FAC/Canada) - ONCAD (IBRD) - Forest protection (Canada) - Technical school (Canada) - Modernization of traditional fishing pitroque (Canada) - Basic health (Canada) - Rural roads (IBRD) - SUDIPROIT (IBRD/FW) - Practical primary education (IBRD) 	<p>Programs having a nation wide effect</p> <ul style="list-style-type: none"> - Ag. Sector analysis - Nat. plan of Nat. Resource - Renewable energy - Family Planning project
B. Peanut Basin	<p>1. Northern zone (500,000 population) Source of 2/3 of Senegal's optional revenues. - 15% urban.</p> <p>2. Central zone (1,500,000 population)</p>	<ul style="list-style-type: none"> - Declining real income (\$75-100 per capita). - Most Wolof peanut farmers, some Fouta herdsmen. - Poor nutritional level during lean season. - Subject to sharp fluctuations of income due to climatic variation. - Strongly dependent on markets and Government for economic security. - Falling real per capita income (per capita \$100-200). - Overpopulated (80-100 inhabitants per ha²). - Population mix of Sereer and Wolof farmers. - Large migration, particularly Sereer to other regions. - Herdsmen play important role, particularly among Wolof. - Better off than northern peanut region not as badly affected by drought. - High indebtedness among Wolof and warabouts. 	<ul style="list-style-type: none"> - Declining fertility of soils. - Variability of climate. - Lack of saving, heavy indebtedness thus lack of investment. - Limited alternatives for diversification of agriculture. - Population growth. - Short period of rainfall (30-45 day). - Declining soil quality. - Limited possibility to diversification of agriculture. - Technological limit of inter-estate rainfed production. - Population growth. - Lack of saving for investment. 	<ul style="list-style-type: none"> - Creation of SO.DE.VA. - Intensification of millet and peanut production. - Subsidize farm inputs. - Effectively carry out drought relief program. - Promote diversification edible peanuts, vegetable production, cotton production. - Encourage migration to "New Lemis". - Shift population from north and central zone to southern zone. - Development of transformation industries - oil pressing, cloth manufacturing. - Expansion of social services. - Raised farm prices. - Reschedule or forgive farm debts. - Continue extensive agricultural research program. 	<p>Creation of SO.DE.VA.</p> <ul style="list-style-type: none"> - Intensification of millet and peanut production. - Subsidize farm inputs. - Effectively carry out drought relief program. - Promote diversification edible peanuts, vegetable production, cotton production. - Encourage migration to "New Lemis". - Shift population from north and central zone to southern zone. - Development of transformation industries - oil pressing, cloth manufacturing. - Expansion of social services. - Raised farm prices. - Reschedule or forgive farm debts. - Continue extensive agricultural research program. 	<p>Support of SO.DE.VA. (IBRD/IDA/CCE/PAC).</p> <ul style="list-style-type: none"> - Diversification to edible peanuts (FED). - IUD Senegal (FED/CCE). - Development of Sine-Saloum (CCE). - Diversification of Bas-Saloum (IFA). - Experimental units (FAC). 	<ul style="list-style-type: none"> - Cereals Production I - II - Rural Health Sine-Saloum - Cereals Storage.

