PN-AAU-103

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AGENCY FOR
INTERNATIONAL
DEVELOPMENT

SENEGAL

COUNTRY DEVELOPMENT STRATEGY STATEMENT

FY 83

BEST AVAILABLE

January 1981

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

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INTRODUCTION

Eighteen months before the retirement of President Leopold Senghor in January 1981, Senegal reached an important turning point. With the economy in deep trouble, two paths were open to the Senghor Government. Each involved severe risks. The first possible course was to continue in the same direction with declining per capita productivity and a widening resource gap, while stepping up the government's program of piecemeal reforms. If these reforms did not take hold, however, Senegal would soon be left wholly at the mercy of international sources of credit. After a half decade of heavy borrowing, Senegal's debt repayment burden by 1979 was already fast approaching its limits.

The alternative path, to undertake a comprehensive, phased restructuring of Senegal's economic and financial system, would similarly require massive external support, in addition to great political skill. Despite the very real hazards implicit in such a program, the government determined that nothing less than the transformation of key sectors of the economy could stem the slide into insolvency. In choosing this course, the President assigned the task of constructing the reform program, including the procurement of initial finance, to his heir apparent, the Prime Minister, Adbou Diouf. Following a wide range of discussions, including close consultations with the IBRD and IMF, Mr. Diouf introduced his Plan de Redressement before the National Assembly in December 1979. In the year which followed, he began to put his reform into effect.

Today, as President, Abdou Diouf is in the strongest possible position to direct the implementation of Senegal's Reform Plan. In sharply curtailing consumption of goods and services, however, and in pressing new approaches to stimulate rural production, the Reform is bound to challenge established Senegalese

practices and interests. While the Reform is assured of extraordinary international economic assistance, at least for the first three years, there is no certainty that this, or any, Government can succeed in seeing it through. But on the crucial point - the new President's identification with the Reform and his determination to make it work - there is no doubt.

This present document marks the last stage in nearly a year of consultations with the host government over the character of the AID program in Senegal, past and future. The results of the evaluation phase of this joint review were published in July 1980, and are summarized in the analysis section of this paper. The tentative conclusions of the planning phase, July - December, 1980 make up the principal part, the strategy section, of this CDSS.

The timing of this joint assessment to coincide with the first year of the Reform Plan has been fortuitous. Not only has this allowed each party to review past performance more objectively, it has also favored the adoption of joint objectives and strategies. In the next stage of the process, following Washington's review, the USAID and Embassy will negotiate an overall agreement with the Government of Senegal on the major lines of the USAID program, and will define a specific series of investments for the period 1983 - 1987.

I. ANALYSIS

In early 1981, Senegal struggles with its worst economic and financial crisis since Independence in 1960. Every economic indicator attests to this fact: negative balance of payments, high debt servicing, low productivity, and widening resource gap. Liquidity has posed such major problems, that in June 1980, the government could not have met its payroll without emergency outside assistance.

Senegal's deep economic difficulties are the result of a confluence in 1979-1980 of long-term trends and sudden setbacks. The structural causes of the crisis, together with the short-term contributory factors, have been thoroughly studied over the past twelve months by the Senegalese government and the donor community. A general consensus exists regarding both the fundamental reforms which Senegal must undertake and the nature of the outside assistance which the government will require.

Our analysis begins by summarizing the state of Senegal's economy. Next, it explores in some detail the roots of the problem and sets forth the particulars of Government's Reform Plan, especially as the Reform pertains to the rural areas. The present section concludes with a review of other donor support and a summary of the basic findings of the recent U.S. - Senegal Joint Assessment. From there, we proceed in the main part of this submission to lay out the proposed USAID strategy in support of Senegal's Reform Plan.

A. The Current Crisis

The Senegal's multi-faceted economic emergency is best illustrated from the aspect of external accounts. The national balance of payments is in grave disarray. In 1979, Senegal's current account deficit, according to the IBRD Report published in November 1980, was estimated to be $436 million, or 51% of exports. This deficit was due to a drop in earnings from exports coupled with a steady increase in imports, especially petroleum and consumer goods. The drop in exports was due to the failure of rains and a poor peanut harvest that reduced peanut product earnings from $322 million in 1977 to $196 million in 1979. Increased imports were partly the result of the sharp rise in petroleum costs from $92 million in 1978 to $137 million in 1979, but

even more largely were due to increased imports of consumer goods, including foods which accounted for $199 million in 1979. The 30% increase in overall imports between 1978 and 1979 was a result of demand fueled by the expansionary policies of the government. The imbalance in current accounts thus reflects both long and short-term factors: high population rates, slow growth, low savings, and a widening resource gap, aggravated by oil price increases and poor crop years. Under their combined impact, the imbalance has been seriously aggravated, from minus $68 million in 1977 to minus $436 million in just two years.

Consumption has grown as a percentage of GDP in the last couple of years, as the government and consumers have tried to retain previous standards of living and services while the economy has declined. Consumption as a percentage of GDP reached its peak in 1979 at 97% of GDP. Investment has remained at about 20% of GDP. To cover some of the resource gap thus created, gross domestic savings dropped from about 10% of GDP to less than 3%. This still did not cover the resource gap which stood at 17% of GDP in 1979. To make up some of this gap the government has had to borrow heavily from the foreign assets of the West African Monetary Union (WAMU). By the end of 1979, Senegal's balance in WAMU was a negative foreign assets account of $303.2 million. As a further aid to cover this gap the government expanded credit through increasing money supply. Money supply went from a long term average of 5% of GDP to over 32% in 1979. This expansionary action increased imports directly, and also indirectly through an increase in domestic demand. Inflation, meanwhile, has held steady at between 8 - 10%.

During the same period (1976-1979) the government was incurring large budget deficits. To cover these deficits it borrowed heavily on the domestic

market, and also from public enterprises and local governments. When this supply became exhausted in mid-1980 and its cash flow dwindled, the government began to delay payment for goods and services. This led to a major cash problem in the economy at large and to the June 1980 crisis in salary payments.

In addition to domestic borrowing, the government also undertook a major external borrowing effort to finance development and counterpart funds for investment in the economy. By the end of 1979 total public and publicly guaranteed external debt outstanding stood at $1.27 billion. Debt service payment claimed about 20% of the value of exported goods and services.

At the root of Senegal's economic crisis is the long-term decline in productivity. Beginning in the mid-sixties per capita GDP began to fall behind population growth rates, estimated at 2.7%, by about 0.2% annually. While generally negative, the GDP growth rate in constant prices has risen and fallen sharply in recent years: plus 0.7% (1977), minus 9.0% (1978), plus 12.6% (1979) and minus 5.5% (1980, estimated). This erratic behavior of GDP around a declining per capita trend points up the combination of long-term factors and short-term changes already noted. Senegal's declining per capita production is a reflection of the totality of basic constraints, including policy and institutional factors, to which we now turn.

B. Economic Structure and Performance

While Senegal is characterized as a semi-industrialized country by African standards, Senegal retains a basically rural economy. Seventy percent of the population live in rural areas. In a normal year, agricultural exports account for more than half of total export earnings. Whereas the direct contribution of agriculture is only 30% of GDP, the secondary (20%) and tertiary (40%) sectors depend heavily on agricultural activity.

The structure of the Senegalese economy is further distinguished by a marked dualism. On one hand, there is a large, relatively unproductive, subsistence rural sector employing farmers and agriculturally related laborers. Per capita income in this sector has been falling and is about $ 150. On the other hand, there is a small monetarized urban sector based around Dakar (the Cap Vert Peninsula). Per capita income in this sector has also been falling, but from a much higher base of about $ 850. This sector is composed of a large, relatively poor, urban informal sector generally outside of legal or governmental control and a small salaried formal sector, most of which is within public or para-public concerns.

There are limited economic linkages between the urban and rural sectors except for the peanut trade for export. Food (millet and rice) in the rural sector is mostly produced and consumed locally. For example, only 2% of Senegal's rice production of 100,000 tons in 1978 - 79 was commercialized. The urban sector for the most part consumes imported cereals (rice and wheat). This divergence has serious implications for Senegal's food strategy, as populations in the cities grow at double the rate of those in rural areas. We will return to this point later.

Sixty percent (60%) of GDP is produced by 10% of the population in the urban area of Cap Vert. 1975 figures on GDP per worker indicate that a worker in Cap Vert produces over four times the value added to GDP than his fellow laborer in the rest of the country.

Over the entire economy lies the government's bureaucracy. As noted, much of the urban formal sector is public or parapublic. In the rural area the State has played a dominant role in the economy through the regional develop-

ment agencies (RDAs) and the central marketing board, ONCAD.

As a result of the large government investment program in the mid-seventies to buy control of the main industries and utilities from foreign owners, the public sector accounts for about 40% of GDP. This large para-public sector has been extremely inefficient and uneconomical due to overstaffing, poor accounting, poor internal control and a lack of dynamic management. The performance of the para-public sector has played a major role in the stagnation of the economy.

The performance of the economy takes as its starting point two very real constraints: a meagre natural resource base and a high population growth rate.

Senegal is resource poor in several ways. Senegal's agricultural lands are composed of fragile and generally poor soils. From region to region they are prone to solidification, acidification, structural collapse and other forms of physical and chemical degradation. Wind and water erosion are given further reign as forest reserves are cut back for fuel. Senegal has few known mineral deposits outside the phosphate mines which provide a steady but unspectacular flow of foreign currency. Known off-shore oil deposits are modest. Large iron-ore deposits in the far south-east are of good quality, but their exploitation will require infrastructure and other investments which will delay returns until the 1990's.

The country's principal resource limitation is water. This constraint, more than any other natural cause, explains the vulnerability of Senegal's agriculture. There have been major droughts in six of the last ten years, causing the crop failures which have contributed to depressed growth rates. This, in turn, has affected both production-credit repayments for Senegal's major credit operation and farmers' willingness to adopt capital-based inno-

vations. Groundwater reserves are generally known, but more accurate maps, and above all, recharge studies, are required as these reserves are tapped. River basin water development is expensive in the Senegal and Gambia River Basins. Riverine food production through irrigation is a long-term proposition, but offers the security against drought which is an essential part of any food self-sufficiency strategy.

Population growth rates, a second basic constraint, are officially recorded at 2.7%, but unofficial estimates (e.g. the Senegambia Migration Study, based on early returns from the 1976 census) cite 3.3% as more nearly correct. These rates, when combined with sluggish or minus economic growth, have serious enough portents in themselves for unemployment and for health and education services. These ramifications have been spelled out in the 1980 RAPID presentation for Senegal. But perhaps even more serious than high growth itself is the extreme regional maldistribution of Senegal's population. At the present time, 40% of Senegalese inhabit less than 4% of the country, the Dakar/Thies axis. Migration analysis shows this trend is growing, rather than diminishing. The population of Dakar will expand at 6.1% per year and other urban areas at 4.3%. Unless these trends are reversed, the Cap Vert (greater Dakar) area, with one million persons today, will have approximately 40% of the population of Senegal (4 million) in 2000 AD. Unless the characteristics of Senegal's dual economy are changed, the implications of this population structure for food imports, to name only one in a series of factors, are staggering.

The third and final basic constraint which touches both the structure and the performance of Senegal's economy is its over-centralization. This feature was inherited from the colonial era, when Dakar was the capital of all French West

Africa, and when administration on the Paris model was the order of the day. Excessive central control is the result of government development strategies in both agriculture and industry. In the sixties, the government created a wide network of agriculture development agencies (the RDA's), instituted a highly centralized marketing organization (ONCAD), and introduced a complex mechanism of guaranteed prices and input subsidies. In the seventies, the government adopted a policy of direct public investment in industry, a policy made possible by the quintupling of phosphate prices between 1972 ($ 12/ton) and 1975 ($ 67/ton). This temporary windfall allowed heavy borrowing on the Eurodollar market.

Unfortunately, government take-over of specific enterprises did not follow careful financial analysis. Requirements to keep these enterprises afloat have led to a drain on government's financial resources. The development of private industry, meanwhile, has been discouraged by costly wage policy and price controls. Furthermore, over the past two decades, Senegal has set up a wide range of public enterprises. These include ONCAD, SISCOMA (agriculture equipment manufacturer), SONAFOR (well drilling), the BNDS (development bank), and many others. These public enterprises, although already weak in financial management and actual performance, have nevertheless been pressed to take on larger and more varied operations without equivalent increases in either staff or budgets.

Overcentralization perhaps more than any other single factor has squelched growth in Senegal's rural sector. The central marketing board (ONCAD), along with State controlled Cooperatives and the RDA's, set farm-gate prices, delivered credit services and inputs, provided extension services and then

bought and marketed agricultural production. The whole course of rural development was conducted through this set of polyvalent rural institutions. Over the years these structures have increasingly been used to regulate the rural sector in the attempt to achieve national production targets and to introduce new technologies into the revenue earning groundnut industry. They were also intended to "socialize" production and marketing in order to safeguard the welfare of the rural farmers.

These institutions began to encounter problems in the late 1960's and by 1978 they were in substantial difficulty. The cooperative structure, including farmer credit, was near collapse.

The cooperatives and the associated credit system were plagued with massive loan defaults. ONCAD was increasingly unable either to provide timely inputs or to market cereals profitably. Under ONCAD direction, the quality of seed stocks has deteriorated seriously in recent years. The Regional Development Agencies consistently have had difficulty in providing technical assistance which has materially helped the farmers. The result has been that this large institutional superstructure, covering all agricultural enterprise from research through marketing,has had little impact on crop production, productivity, diversification or stability. The costs of this system, however, have been substantial, even in terms of mismanaged credit and seed stocks alone. In sum, the institutional failures have interacted powerfully with climatic and soil factors to increase the natural vulnerability of Senegal's agricultural base. The government's overall policy of using revenue surpluses from the rural sector to develop urban-based industry has suffered a double defeat on both the agricultural and industrial fronts.

The ensuing general economic decline has inevitably worsened the position of the poor in Senegal. The interim CDSS last year outlined the regional characteristics of poverty in some detail. An updated version of that document is annexed to this submission.

The poor represent the great majority of Senegalese, both in urban areas and rural regions. For the 65% of Senegal's 5.7 million population which live in the countryside, per capita GNP is less than $ 150 annually. At the same time, 75% of the one million persons inhabiting the Greater Dakar - Cap Vert area received an annual income below the $ 400 per capita poverty line, extrapolated from AID's measurement of "poor" in 1969 dollars.

The poor must not be viewed as a homogeneous group. There are important regional differences in the magnitude and causes of poverty. The very structure of poverty and how it is reflected varies between urban and rural groups and within and between regions. Overall it is significant that this large poor population is very much in motion, both in physical terms seeking work or changing abode, and in net increases in numbers, As the population is in a period of change so is the nature of poverty.

Within the dynamics of movements and change of the poor, two characteristics stand out among all others. First, there is a high urbanization rate among the poor from the countryside to either Cap Vert or intermediate urban centers. We have remarked above on the alarming growth of urban areas in Senegal. Second, the poor, both urban and rural, are becoming more marginal. This phenomenon is a long-term trend resulting from the dualistic nature of the Senegalese economy. The gap in total value added and in productivity between the small urban monetized sector on the one hand, and the poor rural and urban semi-monetized sectors on the other, is widening.

While landlessness is not yet characteristic of the poor in Senegal, the rural society is marked by seasonal unemployment and migration in search of work. The breakdown of traditional social institutions is therefore a characteristic of this poor majority.

Why are the majority of Senegalese poor? This is so primarily because of low resource endowments and rapid population growth which slows per capita growth. Senegalese are not poor because of fundamental distortions in the way that national income is distributed. Class and caste differences in rural areas are not of primary importance in economic terms. Nor can any systematic corruption be blamed for economic impoverishment. Rather, in the context of Senegal's general economic decline for a combination of reasons, the government's development investments have not significantly touched the poor majority in a way which allows them to productively use those investments.

C. Government's Reform Plan (The Plan de Redressement)

Since 1974 in response to the Great Drought (1967-1973), but particularly since 1977, the government has attempted a number of partial reforms to stem the deterioration of rural incomes. Farm gate prices have increased steadily since 1974 along with levels of rural investment: millet prices have gone up by 81%, cotton by 100%, peanuts by 69% and rice by 80%. A series of legislative and administrative reforms were also launched in 1973 to place responsibility for certain local decisions and for local tax revenues into the hands of rural councils below the arrondissement (district) level. The effect of these rural measures, however, has not been great. Whereas the local councils are by now established in nearly the whole of the country, they still remain effectively

under central control. And because economic reforms were introduced in piecemeal fashion, the benefits of higher nominal producer prices were largely negated by the high costs of the provision of inputs, extension, and marketing.

Late in the seventies, the Senghor government, faced by growing economic pressures from within and without, took the bold decision with which we began this discussion. Under Abdou Diouf's leadership, the government engaged in intensive discussions with the IMF and World Bank to devise a comprehensive program of economic and financial recovery. In December 1979, the Prime Minister before the National Assembly formally launched Senegal's Reform Plan. Over the past twelve months the government has amplified details of the plan. Evidence of the government's commitment to the Reform Plan has accumulated. In direct support of the Reform, Senegal's Sixth Five Year Plan, an investment program for the period 1981-1985, is in state of preparation and will be ready by Spring, 1981. During 1980, the government has rallied to the Reform extraordinary international financial support.

The Reform has two phases: 1) stabilization of the economy (1980-81), and 2) growth of the economy (1981-1985). Although the target growth rate is a modest 4% per year, the poor peanut crop in 1979/80 has already reduced the possibility of Senegal's having met the target in 1980. A similarly dismal crop is predicted for 1980/81.

The goals of the government's structural adjustment program are financial improvement and accelerated growth. Towards these ends, the government envisages:

1. the improved management of public finance, the parapublic sector and the external debt, and also of the level of government savings;
2. the introduction of a restrictive and selective credit policy;

3. the introduction of a new foreign trade policy;
4. more systematic reliance upon market mechanisms and economic incentives to encourage private investment and guide national production;
5. a reorientation of the national investment program towards the most productive sectors; and
6. institutional reforms in the rural sector.

Overall the Reform will entail the progressive disengagement of the government from the economy, particularly in the rural sector.

Of equal importance with the total of macroeconomic measures proposed in public finance, money and credit, balance of payments, prices and wages, and investment, are the major reforms planned for agricultural institutions and policies. In the fullest official statement of the Reform, the government's Declaration on Economic Policy (October 31, 1980), by far the greatest attention is given to actions in the agriculture sector. The priority objectives of the Reform in the rural areas are to develop food crops, to diversify agricultural production and step up processing for export, to increase farm incomes and improve the quality of rural life, and, significantly, to "encourage farmers to accept more responsibility by providing them with extension services and training in cooperative organization, so as to enhance their capability to manage their own affairs."

To accomplish these objectives, the government has set out a number of specific reforms. These include:

- setting an incentive price policy to stimulate agricultural production and exports;
- restructuring agricultural research;
- reorganizing seed distribution and the marketing of other factors of production;

- revamping the agricultural credit system;
- improving the collection and weighing of peanuts;
- reorganizing the Rural Development Agencies to decentralize their management, reduce their operating costs, and increase their efficiency;
- encouraging private initiative in areas of marketing; and
- fostering greater involvement of cooperatives and village sections within the cooperatives, in primary marketing and other activities related to agricultural production.

The government's commitment to the Reform is real. As evidence, we have seen:

- subsidies on all urban consumer foods abolished causing rises in bread, sugar and peanut oil prices. An example of these increases: a 250 gram loaf of bread went from 43 CFA to 70 CFA;
- increase in farm gate prices of peanuts and cotton in 1980 from 45.5 CFA to 50 CFA/kg for peanuts and 50 CFA to 60 CFA for first quality cotton;
- abolishment of two major parastatals (SONAFOR and ONCAD) owing to mismanagement and inefficiency. This has meant the displacement of 600 employees at SONAFOR (well digging) and 4,000 people at ONCAD;
- increased import duties from an average of 10% to a new average of 15%;
- granting of export subsidies of 10% on selected non-traditional exports;
- reduction of government's budgetary expenditures, including the halving of the size of the official motor pool, the closing of 26 consulates and embassies overseas, and the reduction of the budget on all government services;
- changes in directorship of all RDA's, replacing less effective leaders with administrators who are strong managers;

- a moratorium of five years on farm debt and the beginning of a systematic audit of cooperatives to place future transactions on a sound basis;
- removal of all farm-impact subsidies except for fertilizer;
- strengthening a new cooperative structure with funds from peanut sales;
- liberalizing trade in food grain and farm inputs through the use of private traders for cattle supplies, and in marketing of millet, rice and transport of peanuts.

The assumption of the Presidency on January 1, 1981, by Adbou Diouf, the person principally responsible for the design and implementation of the Reform, assumed that the impetus to implement the program will continue.

A section dealing with Senegal's commitment to growth with equity, responding to AID/W's special concerns in this regard, is included as an Annex to this submission.

Other donor support of the Reform Plan on the part of IMF, the Bank Group, and France, to name only the three most important sources, has been strong and immediate.

France, since 1960, has provided substantial financial and technical assistance to Senegal. This has amounted to the equivalent of $44 million in grants annually and $14 million in loans (5.5%, 12 years). Until recently, the level of French cooperants in Senegal was over 1,500, of which about 1,000 were secondary and university level teachers. As part of the Reform Plan, however, Senegal has cut back by 10% (to 1,400) the number of French cooperants, in order to save on the shared costs of this assistance. This total will be further reduced in subsequent years, with cuts proportionally deeper in the general teaching force than in research and other specialized occupations.

In mid-1980, France agreed to extend exceptional aid to Senegal in support of the Reform Plan and to ease Senegal's severe liquidity crisis. The first tranche of this assistance is a package at various terms totalling $104 million for disbursal in 1980. The second tranche announced at the year's end totals $55 million, including a $30 million loan to finance ongoing agricultural reforms and a $25 million credit, provided as interest subsidies, to ease Senegal's debt burden.

The IMF support for the Reform Plan was announced in August, 1980 when the IMF Board approved an Extended Fund Facility amounting to $243 million. Drawings will take place in a series of tranches: $71 million before Feb. 15, 1981; $102 million until June 30, 1982; and the remaining $70 million in the following twelve months. Remaining drawings on previous agreements amounted to a further $30.4 million in 1980. The performance criteria to which Senegal has agreed for IMF borrowing include the areas of domestic credit, the overall deficit on central government operations, and measures to bring balance of payments close to equilibrium.

The World Bank worked closely with Senegal and the IMF in devising the $60 million Structural Adjustment Loan/Credit in support of the Reform Plan, granted at the close of 1980. The IBRD Loan/Credit was designed, first, as a modest part (about 11%) of a total external financing package including assistance from the Fund, France, STABEX, and exceptional aid from other sources. STABEX, the export revenue stabilization arrangement under the European Common Market Lomé Conventions, provided Senegal with an estimated $35 million in 1980, and a further estimated $65 million depending upon the severity of the fall-off in Senegal's peanut trade.

Second, the Bank's Loan/Credit is intended as a first operation, to be followed by others in succeeding years after FY 1982. The purpose of this exceptional IBRD assistance is to set the Reform in motion according to a detailed and pre-arranged time schedule, specifically to help with financial and balance of payments crises and to assist in structural adjustment, including the reform of policies and institutions in the agriculture sector. Further assistance of this type will depend upon progress made under the Reform Program. This assistance is additional to the IBRD's regular operations in Senegal, with outstanding funds totalling $285 million roughly divided between rural development (30%), transport (30%), education (15%), and miscellaneous (tourism, telecommunications, technical advisors, etc.).

In addition to these major sources, a range of other donors are active in Senegal of whom the most important, following the U.S., are Germany and Canada. The Saudi's have announced a $30 million multi-year credit in support of Senegal's Reform Plan. Tables giving details of donor commitments by sector and region are included in the Appendix to this report.

D. The U.S. - Senegal Joint Assessment, 1980.

Even before the dimensions of the current crisis were fully manifest, the USAID Director in November, 1979 proposed to Senegal's Minister for Plan and Cooperation that a joint assessment be conducted of the AID program in Senegal for the years 1975-79. The USAID further proposed that this review, lasting about six months, should lead directly to the joint planning of U.S. economic assistance in the five years to follow, 1982-86. The Minister accepted both proposals and agreed to co-chair, with the U.S. Ambassador, a joint Management Committee to supervise both the assessment and planning activities.

It was agreed that the Joint Assessment would include two elements. There would be, on the one hand, an evaluation of four representative USAID projects, one in each of the four principal areas of AID activity in Senegal: rain-fed cropping, irrigated agriculture, livestock, and village health. Each evaluation would include a beneficiary survey conducted by Senegal's National School of Applied Economics (ENEA). At the same time, an analysis would be made of the entire contemporary economic context in which USAID/Senegal operates and which it must seek to address. Both governments further agreed that following completion of the evaluations and the analysis, performed under the aegis of a joint Working Committee in the period February-June, 1980, the Management Committee would reconvene to review the findings and chart the planning process. All events occurred as planned. The final report of the Joint Evaluation was signed and distributed in July, 1980.

The major findings of the Evaluation with direct implications for the USAID strategy in the 1980's are as follows:

1. Senegal's balance of payments and budget constraints are now especially binding. At the same time as there is a need for restructuring the economy, Senegal also faces a liquidity crisis. The USAID strategy will need to account for these factors throughout the five year planning period. The current AID project approach by itself is not suited to do so.

2. The major Senegalese institutions charged with rural development, namely, the Regional Development Agencies and the cooperatives, are in serious difficulty. Although these institutions must be reformed and reorganized, the USAID's rural programs should not rely exclusively upon central government instruments to reach the target population.

3. If USAID projects are to achieve maximum impact and permanence, they must be more closely monitored. Because of their prototypic nature, more serious attention must be given to the systematic measurement of the effect these projects have over time. The projects must also involve the ground-level beneficiaries much more directly in design and implementation. To do this, the AID project vehicle must be rendered more flexible.

4. Given the stagnation of Senegal's economy, a great deal more thought must be given to ways in which A.I.D. resources can (a) stimulate local productive forces, both on and off-farm, and (b) help to build institutions whose social value equals or exceeds the amounts spent to maintain them.

5. USAID resources by themselves can never meet Senegal's short and long-term requirements. A method must be found to coordinate U.S. bilateral aid to Senegal with at least the major multilateral and bilateral donors, so as to form a concerted program directed at the country's fundamental needs.

II. The U.S. Assistance Strategy. FY 1983-1987

A. Overview

In view of the sobering circumstances in which Senegal finds itself, then, what is the USAID's most effective course? Also, given the recent findings of the Joint Assessment, what departures from current practices should this course entail?

The long-range goal (2000 AD) of U.S. assistance to Senegal is food self-sufficiency, defined in the broadest sense as: Senegal's achievement of the capacity to feed its people, by domestic production and storage and by trade, even in drought years. This goal, further refined, is the central aim of the Sahel Development Program as declared by Senegal and other CILSS Members in 1974, and as endorsed by the U.S. and other donors at the founding of the Club du Sahel in March, 1976, in Dakar.

USAID/Senegal retains this modified goal of food self-sufficiency for three main reasons.

First, it should be apparent from the analysis that the stimulation of Senegal's agricultural production and trade is the key to moving Senegal's economy off dead center, with the employment that will entail on farms and in secondary industries. Senegal's stability, and independence, depend upon the vitality of the agricultural sector.

Second, a reliable food supply in association with sound nutrition and health practices will contribute more than any other accomplishment to meet the basic needs of the Senegalese people. Only as these elementary requirements begin to be met can Senegal achieve the climate of confidence necessary if population growth rates are eventually to come into balance with national productivity.

Third, Senegal's self-sufficiency in basic foods, defined to include storage and trade, is in the direct interest of the United States, which will not be able to sustain indefinitely higher Third World demands for emergency food shipments.

The pursuit of this long-range goal--food self-sufficiency in its broad sense--requires that USAID/Senegal follow two complementary program paths. The first, in agriculture, will aim at the significant increase and diversification of production and trade. The second, in human development, will seek to assure the improved nutrition and general access to family health facilities which must accompany production efforts if the full benefits of production are to be realized and if fertility rates are to be reduced.

But if the long-range goal of the AID program in Senegal remains

the same, the program itself will experience significant shifts in approach and emphasis. The USAID has introduced some of these changes over the last twelve months (FY 1980); others will take place in the course of the present year; but effects in certain cases, especially where project revisions and new initiatives are called for, may not be apparent until the planning period (FY 83-87) is underway.

We propose three principal modifications in the character of the AID/Senegal program.

First, USAID/Senegal recommends the establishment of a Consultative Group for Senegal to mobilize maximum assistance for the implementation of Senegal's Reform Plan. The Group will also monitor the progress of the Reform towards its declared objectives and will help to ensure that major policies and investment activities are consistent with these ends.

The Senegal Consultative Group will bring together the principal donors to coordinate assistance at three levels: first, the level of balance of payments support required during the period of economic restructuring; next, support in framing effective policies in such areas as farmgate prices, credit, marketing, research, and recurrent costs; and, last, support at the level of the myriad specific activities required to implement the Reform. Of special importance will be aid to the Regional Development Agencies, above all SODEVA and SAED. These institutions must undergo substantial reform and are almost entirely dependent upon donor assistance.

At the balance of payments level, the Consultative Group will provide an international framework for analysis and support. With regard to Government policies and activities, the Group will relieve any single donor from the politically difficult position of insisting upon adherence to Reform goals

and upon stringent performance standards.

The World Bank, IMF, and French support for the Reform Plan in 1980 is evidence that a move towards an organized donor grouping is already underway. Very informal soundings with several principal donors in Dakar suggest a high degree of receptivity to the formation of a more highly structured arrangement. In addition to the IBRD, the IMF, and France, initial members of the Consultative Group would include Germany and the European Economic Community. Other donors such as Canada, Holland, Belgium and the OPEC states may also want to participate. Following acceptance in Washington of this recommended major initiative, USAID/Senegal, with continuing guidance from AID/W, would seek to sound out the Government of Senegal on its attitude toward such a Group. With Senegal's support, the USAID anticipates that the Consultative Group can be formed and begin functioning in FY 1981.

The Senegalese government would play the central role in such a Group. The principal goal of the Government's new Sixth Plan (1981-1985) will be the implementation of the Reform. With a $5,000,000 IBRD credit, the Ministry of Plan will be substantially strengthened in the area of program planning and evaluation. The USAID believes that this Ministry would therefore appear to be the natural focal point for the establishment of a Senegalese Secretariat for the Consultative Group.

This well organized form of donor collaboration, then, would ensure more concerted support for Senegal's Reform as well as the more effective utilization of such donor support by Senegal itself. The Group could be expected to engage in joint evaluation and planning with the government at the various levels, and across the range of issues involved. Operation within this multi-donor context will represent the first important modification in the

USAID/Senegal program.

The second and third departures from past programming are closely related. As we have seen in the preceeding section, a principal finding of the Joint Assessment was that the USAID's Dakar-directed, hands-off, project approach in Senegal is inadequate given present circumstances. On the one hand, AID's typical project containing technical assistance, participant training, and commodities has little direct bearing on Senegal's present macro-economic crisis; and, on the other, USAID projects, loosely monitored, have taken too little account until now of ground-level beneficiaries.

Therefore, a second major change in USAID programming will be greater emphasis upon non-project assistance which will be increased from $ 7 million in FY 80-82 to $ 20 million for FY 83. This total will be comprised of $ 15 million in PL-480 Title III and $ 5 million in agriculture sector grants. Increased emphasis upon this form of assistance will:

(a) Accelerate the transfer of U.S resources to Senegal without bringing about major changes in the number of personnel needed to administer the AID program;

(b) Provide substantial support for carrying out Senegal's economic reform plan in concert with the IMF, World Bank, France and the EEC; and

(c) Generate local currencies which will increase flexibility in designing and implementing AID technical assistance activities.

At the grass roots USAID/Senegal will use local currency proceeds to train and equip selected producers' groups, cooperatives and community councils. Their vitality is an indispensable part of raising agricultural production. For this work at local levels, USAID/Senegal will seek to establish a two track approach: (1) certain actions will be directed through the Regional Development Agencies

(RDA's), which remain responsible for all development activities in their respective zones. Our purpose here will be primarily to improve the RDA extension services and their ability to monitor and evaluate their own programs.

(2) Where possible, a second series of actions will be directed alongside the RDA's to build farmers groups and cooperatives and to stimulate local commerce. We will discuss this approach more fully in succeeding sections.

Less fundamental than the changes noted above are other shifts in the nature of the Senegal program which are nevertheless important and which will shape and direct the detailed strategy, following. These changes are:

- The consolidation of USAID activities from five geographic areas to three which we consider to have the greatest agricultural potential, and the reduction in the number of independent activities from 30 currently to 15 projects by the middle of the planning period. The geographic consolidation will be achieved in two ways: first, by shifting support for cereals production in the northern tier of the Peanut Basin to coincide with the area of the village health program in the Sine-Saloum. Parts of these areas coincide with known reserves of salt-free, easily accessible ground water for crop irrigation. Second, consolidation will be achieved by switching U.S support in the livestock sector (after our present obligations have been honored) from extensive range operations in the Ferlo zone to mixed farming in the AID concentration areas of the Fleuve, Sine-Saloum, and Casamance. Thus, the target population will number (according to 1976 census figures) upwards of 1,000,000 in Sine-Saloum, 530,000 in the Fleuve, and 736,000 in the Casamance. This marks a reduction of approximately 1,500,000 (in 1976 terms), when Thiès and Diourbel are dropped.

- The combination of AID activities in the Fleuve Region, including Bakel area projects, into one program, namely, the Integrated Development of the Senegal River Basin (625-0621), now in project preparation stage. We will recommend that AID engage a major U.S. firm to manage all technical aspects of project execution. AID's office for OMVS affairs, located in Dakar, will maintain responsibility for design and policy aspects, monitoring, and relations with all principal actors (OMVS, the USAID's of Mali, Mauritania, and Senegal, and other donors). AID's OMVS office will draw on the technical expertise of the three USAID's as required. Regional funding for the project will pass through the OMVS itself, which has responsibility for the overall planning and coordination of Member State development (irrigation, roads, and health), in addition to dam and waterway construction. As this program gets underway in conjunction with heavy other-donor activity in the Basin, we will seek to strengthen the OMVS capability to track and coordinate this entire complex of actions. The Secretariat of the Club du Sahel has stated, on the basis of preliminary discussions, that it is ready to consider special assistance to the OMVS towards this end.

- An increased emphasis on the importance of nutrition as the central factor linking agriculture production and human development, with particular importance for basic human needs, especially in maternal and child health. This concern is expressed in the Title II program and will be sharpened through a range of new initiatives.

- Greater care to situate AID's family planning assistance within a well prepared, government-directed population strategy, with substantial support from other donors. The link between child spacing and MCH services must be particularly strong if family planning is to receive popular acceptance in

the course of the planning period.

Throughout this work, from production to nutrition and family health, USAID/Senegal will continue to identify, and place increased stress on the particular role of Senegalese women within the context of each major project. To this end, the Mission, in FY 1980, has appointed professional women project officers within each of the USAID's functional divisions - agriculture, health, and human resources. The USAID will also appoint, in FY 1981, a Senegalese WID officer and will assign her (or him) to the Program Office to ensure her/his contribution to every phase of program activity. Given the Senegalese woman's central part in production and family care, it follows that women's improved health, training, and economic status are fundamental to attaining a long range equilibrium between food and population.

3. Detailed Strategy for FY 83-87

Acting in concert with other major donors in support of the Government's Reform, USAID's principal goal is Senegal's sustained capability by 2000 AD to provide its population with adequate food -- by production, trade, or storage -- even in years of poor rains. To achieve this, without reducing peanut cultivation, is one of four cardinal economic objectives under Senegal's Fifth Plan (1977-81).

What must Senegal do to attain this goal? If the population growth rate continues unarrested at the official figure (2.7%), there will be 10.6 million Senegalese at the turn of the century. Even if the real growth rate is higher as some experts believe, it is possible that Senegal's fertility rate will begin to decline by the end of this decade in response to the marked drop in

infant mortality rates recorded since 1950, and to population programs just now being introduced.

Given actual per capita consumption rates, a minimum, these 10.6 million persons will require 2.1 million MT of grain. Assuming that Senegal can increase by a reasonable rate both the area planted in grain and the yields per hectare (figures we return to below), we estimate that Senegal can produce 1.8 million MT of the total bulk required. By this simple reckoning, Senegal will have to import the balance, 300,000 tons, somewhat below the amount currently procurred from abroad (350,000 MT/yr). It would be assumed, however, that by 2000 AD, Senegal's trading position will have strengthened considerably.

There is a difficulty with this reckoning, however. As the analysis has shown, the urban population is growing at roughly twice the rate of the general population. Urban areas, as we have seen, prefer rice and wheat to the major crop, millet, produced and consumed in rural areas. Disaggregating demand and supply, therefore, and assuming current per capita consumption rates do not change, we may project an import requirement in 2000 AD for approximately 300,000 MT each of rice and wheat, and, hypothetically, an oversupply of 300,000 MT of millet. Clearly, if even a liberal form of food self-sufficiency which permits imports is to become reality by 2000 AD, present trends in Senegal must change substantially both on the demand and supply side.

The USAID believes that Senegal can achieve this modified type of food self-sufficiency in twenty years, but only upon two essential conditions. The first condition, underlying an increased, more diversified production, is that the Senegalese government will turn over substantial responsibility to

the rural population for managing its own affairs. The Reform Plan expresses precisely this intention. The local structures -- councils and cooperatives -- are largely in place. Through a carefully prepared deregulation process, carried out in stages, the government (according to the Reform Plan) will assign major responsibility for farm inputs, including credit and seed, to local cooperatives, and to the suppliers. Similarly, the government under the Reform will encourage private enterprise in marketing. The crucial objective is the establishment of an alternative to state-controlled seed, fertilizer, credit and marketing channels. Central government control over the factors of rural production in Senegal must give way to a freer, more efficient system.

The second essential condition is that the Cap-Vert/Thiès urban axis, and secondary urban centers generally, consume more from, and produce more for, the rural sector. With 40% of Senegal's population in 2000 AD, the Cap-Vert/Thiès axis, and Dakar in particular, will need to establish firm marketing and supply links with the rest of the country. The economies of city and country must be aligned, the dual economy dissolved. The Reform Plan, by adopting policies which will make imports more expensive for the urban consumer and which will shift the terms of trade to the rural sector, has this end in view. To convert the dual economy, it will be necessary for a much greater percentage of Senegalese farmers to succeed in making intensive production practices profitable. This, in turn, will depend in large part upon a completely reliable supply of inputs. Thus, our second condition is linked to the first.

In support of Senegal's Reform Plan, towards a degree of food self-sufficiency, the USAID strategy combines programs in agriculture and human

development as set forth in the pages which follow.

1. The Agricultural Program

USAID/Senegal's agriculture program will address four main targets:

- the progressive decontrol and commercialization of rural production;
- the development of more effective agronomic practices;
- the increase in cultivated land area;
- the improved management of soil and water resources.

Throughout this discussion we will be concerned with the nutrition component, construed in its broadest sense, of production activities. The specific initiatives we propose leading to improved human nutrition will be brought together, however, within the human development program.

a. The commercialization of rural production

As the analysis has shown, overcentralization and inefficient government control of credit, supplies, and markets (for peanuts) have constituted an important constraint on agricultural production in Senegal. Government has established and managed the cooperatives as a branch of the central bureaucracy for the provision to farmers of supplies, including credit, and for the recuperation of produce. Following the collapse of this system, the Government under the Reform Plan now proposes to reverse this course, to withdraw progressively from the rural sector. The cooperatives are to be prepared to assume responsibility for managing credit, seed and other inputs, and the marketing of peanuts directly to the oil mills. Approved (licensed) private traders are to develop a system of marketing millet and rice, and to continue with the marketing of corn and sorghum. These moves are to be combined with higher producer prices for peanuts and cotton.

USAID/Senegal believes that an opportunity now exists, for the first time since Independence, to extend significantly small-scale commercial agriculture, with all that implies for off-farm enterprises and employment. As marketable surpluses increase, and, with them, rural purchasing power and demand, conditions may be set for establishing a complementarity, in lieu of polarity, between rural and urban areas. Greater production at remunerative prices is the key to this commercialization process.

To help the Government bring about the commercialization of rural production, USAID/Senegal plans to work simultaneously at three levels: the farmers' groupings, the RDA's, and the private entrepreneurs. The USAID will carry out this work within the three regions (Sine Saloum, Casamance, and the Fleuve) which will constitute AID's principal zones of interest in Senegal during the planning period.

At the level of the village producer, USAID/Senegal will contribute to the activation of the farmers groups, which will be the component parts of the new cooperative system. For the farmers groups, and thus the cooperatives, to function, their officers must be drawn from a membership which is sufficiently literate and numerate in a local language to cope with basic records and written agreements. The USAID's principal method, therefore, in strengthening farmers groups directly will be through support of functional literacy campaigns in local languages geared to management (not production) activities. This is a specific provision of the Reform Plan. In this, the Mission will support Senegalese efforts to adopt the highly successful literacy and numeracy techniques employed under USAID/Mali's Operation Mils project, in which the government has already demonstrated interest.

USAID/Senegal will begin application of these methods under the Cereals II, Casamance, Bakel Perimeters, and Bakel Livestock projects, using project funds already available. The Mission will regard these initiatives with farmers groups as closely monitored demonstrations. They will be carried out under varying circumstances, using the most efficacious agencies available -- RDA agents, Promotion Humaine, PVO's (local or foreign), Peace Corps, or private contractors, as conditions warrant. The National School for Applied Economics (ENEA), with responsibility for training cooperative agents, is likely to be an important part of this effort. Later, as additional funding is required to extend the methods which have proven successful with farmer groups, we propose to draw upon local currencies specifically set aside for this purpose under a portion of the Agriculture Sector Grant which is scheduled to begin in FY 1982.

Self-managed cooperatives will evolve from activated farmer groups, and will assume significant responsibilities, such as: seed production; peanut seed stock maintenance; procurement of inputs direct from suppliers; millet/ sorghum purchase from farmers; and peanut collection, marketing and delivery to oil mills. In addition to training, therefore, the cooperatives in the beginning will also require material support.

To these ends, the Mission will support training programs for cooperative officers and managers in the three AID-emphasis zones. USAID/Senegal will assist in the physical restructuring of cooperatives beginning in FY 1981 under the Title III program, with the construction of 100 collection warehouses. The government has requested additional U.S. support under Title III for local level seed storage facilities. The USAID will consider, as well, a program

of credit to self-managed cooperatives for equipment and storage purposes. Financed under the remaining portion of local currencies generated by the Agriculture Sector Grant, this credit could be directly linked to the successful completion of training programs. If successful, the training/credit scheme could continue on a larger scale under the replenishment of the Title III program, during the Planning Period, FY 1983-87.

At the level of the Ministry of Rural Development and the RDA's, for which this Ministry is responsible, USAID/Senegal's effort will be both to encourage and to enable the Government to withdraw from direct rural management. This will allow the cooperatives to come into their own as envisioned. The principal hurdle to accomplishing this is the conflict of interest involved in Government's assigning the RDA's the task of preparing the cooperatives to replace the RDA's in all of their functions save extension.

Under our major projects with SAED, SODEVA, and SOMIVAC, the Mission's prime objectives with the RDA's will be, first, to assist them to turn rural management functions over to appropriate local level organizations (farmer groups, coops, rural councils) and, second, to continue to prepare RDA's to play their primary role as extension agencies.

Since the RDA's are almost entirely dependent upon donor support, AID's voice in concert with the other principal contributors to SAED, SODEVA, and SOMIVAC should have a powerful effect. Here is perhaps the first and most pressing requirement for a close Consultative Group approach in support of the Reform Plan.

The USAID Director will use his regular monthly meetings with the Minister of Rural Development, and his frequent sessions with the heads of SAED, SODEVA, and SOMIVAC, to emphasize the special U.S. support for this aspect of the

Reform and to offer expert assistance to schedule and implement the turnover of functions. While honoring present commitments, the USAID will move as quickly as possible away from the past U.S. emphasis on the central administrative infrastructure of the RDA's including high level technical assistance and post-graduate training, towards improving the quality of the technical services which the RDA's can provide directly to the farmer.

There is a third, and final, level upon which USAID/Senegal will work in the commercialization of the rural sector. This is the level of the private entrepreneur. One may consider the private sector in Senegal in terms of two categories. The first, including merchants, traders, and transporters, tends to be licensed and strictly controlled, and can look after its own interests as controls are relaxed. The second portion of the private sector, the artisans, provides essential services and employment. This group includes blacksmiths, woodworkers, masons, and equipment repairmen. Their services will be in greater demand as rural incomes rise. Beginning in FY 1981, the USAID will explore the need for a pilot activity to promote artisan small enterprise which supports rural communities and cooperatives and provides off-farm employment. This project would be located in one or more of the AID emphasis zones. Under the project, USAID/Senegal would extend credit and management assistance to these artisans, and encourage technical training through existing institutions. Depending upon the result of this pilot, the USAID will be prepared to expand support to the private sector, within AID emphasis zones, during the Planning Period.

b. Intensification and diversification: more effective agronomic practices

If Senegal is to feed its population by 2000 AD, both by production and

by trade, Senegal must both intensify and diversify its agricultural production. This will require:

(1) improved research in several domains;

(2) the development of technical packages which a significant percentage of farmers can use profitably;

(3) a trained extension branch which directly assists the farmers to employ more productive methods; and

(4) as we saw above, timely and reliable inputs, including credit.

These improvements must be carried out within a general policy framework which offers incentives to agriculture.

To return to the calculations with which this discussion began, estimates are that roughly half of Senegal's arable land (4.6 million hectares) is actually under cultivation. Although a considerable proportion of the rest is reserved as national forests, there is ample land for new cultivation. Of the land now in production, 1 million hectares are planted in peanuts, 1 million in millet. These two represent 80% of the total value of all crops, with the remainder primarily rice, cotton, and vegetables.

Assuming a significant but realistic increase in new lands brought under cultivation (next section), the USAID estimates that to achieve the modest degree of self-sufficiency projected, Senegal must raise millet yields from 0.7 MT/ha (1979) to 1.2 MT/ha. Senegal's present millet yield is considerably below current yields in Kenya and Tanzania (1 MT/ha), with the implication that it is technically feasible for Senegal to make the progress necessary.

With this degree of intensification, Senegal could meet its projected demand for millet in 2000 AD (1.2 million MT), without having to expand significantly land area cultivated. In this way, new lands will be available for

crop diversification: corn, bird-resistent sorghums, wheat, and vegetable and fruit crops, for example. Senegal must also raise irrigated rice returns from 1.3 MT/ha to 5.0 MT/ha over the next two decades. This latter figure compares with averages now produced in Bakel and elsewhere in the world (eg., 5.3 MT/ha in Egypt). For upland rice, we estimate productivity in Senegal will rise only marginally, from 0.9 MT/ha to 1.1 MT/ha., because of poor soils in the area in which it is primarily grown.

In the policy area, USAID/Senegal will join with other donors in the context of the Consultative Group to offer encouragement and support to those elements of the Reform Plan which would favor incentive pricing, production-oriented research, and improved extension services. To assist the government with the framing and monitoring of the necessary pricing policies, the USAID will provide continuous expert support and training at the macro- and micro-economic levels through a Title XII arrangement with Michigan State University and through special studies funded from Title III local currencies and AID Development Support Bureau central contracts. Government's new pricing policies will be linked, of course, to the recent 15% import tax which applies to items across the board, including food.

USAID/Senegal will contribute to agronomic research in several important ways, beginning in FY 1981 and extending throughout the planning period. First, each of AID's planned activities in the Fleuve, the Peanut Basin, and the Casamance will provide support to the government's overall plan to decentralize and reform the present system of agriculture research. This reform will ensure that research is more closely tuned to regional soil and climate differences and to the interdisciplinary realities of farming systems. World Bank and

Rockefeller participation have helped to develop the new plan and the Bank, France, Belgium, and the FAO will support its implementation. Thus, USAID/ Senegal's discrete research activities will form part of a larger whole.

The USAID will contribute to crop research in a variety of ways. In the Casamance, we will concentrate largely upon rice research at the ISRA station near Ziguinchor. As part of the OMVS Agronomic Research II project in the Fleuve, AID will place emphasis upon research into corn and wheat, as well as a range of other products, both on the marketing and production sides. Recent experience with corn in the southern Sine Saloum, Bakel perimeters, and in the Casamance has been encouraging. Senegal is planning a major corn expansion program, from 50,000 ha (45,000 MT) at present to 70,000 ha. by the end of the decade. Under this plan, corn would substitute for imported foods in the urban diet. AID will look particularly at the marketing aspects of this plan. Wheat has flourished in other dry areas, such as Pakistan. The present cheap import price of wheat currently poses a disincentive to domestic production. In another research effort, the USAID will sponsor an experiment, beginning in FY 1981, to test techniques for transforming millet for the urban market, as a substitute for wheat and rice imports. If these trials succeed, an estimated 50,000 MT of millet could be marketed per year in urban areas in this way by 2000 AD.

AID will also continue research at the AID-financed regional crop protection center (Dakar) into wide-spread menaces, such as the mealy bug, which attacks cassava.

A distinctive area of the U.S. contribution to agricultural research in Senegal will come in the application of economic and social analysis to production. This is an area which has been very largely ignored in Senegal until

the present. Through persistent programs of training and of data gathering and analysis, both at micro and macro levels, the USAID aims to put Senegal in a position to predict, for example, the potential pay-off of investments in the Lower, Middle, and Upper Casamance, or to calculate the effects of given price, storage, or marketing initiatives. Other important topics of USAID sponsored research over the planning period include: the comparative costs of producing versus importing rice, corn, and wheat; ways in which the productivity of women may be enhanced, depending on crop and ethnic group; the nutrition effects of different crops and of how processing and marketing affect consumption; the regional aspects of food stocks and trade, with problems of customs, tax, and price policies.

A particularly significant question which the USAID will wish to address in the course of this research is the optimal role of livestock in Senegal's future production scheme, particularly the relationships which exist between range and mixed farming practices. This research is important, not least because the findings will have a direct impact on the Mission's livestock program. Our present sense, as the sedentarization of herders grows apace, is that AID investment in mixed farming schemes in the Peanut Basin, or in the Fleuve riverine villages, may yield higher benefits than continued efforts in open range schemes. Here, beneficiaries are few, costs high, and results uncertain. The use of livestock in mixed farming is a question which also has implications for soil management, and will reappear in a later section. The possibility of converting excess millet into beef for export or for urban consumption is another research area the USAID will explore.

Extension and agricultural education must be intimately linked with these improved programs of research, if Senegal's production is to profit. USAID/Senegal will seek to strengthen these links during the planning period. Although technical packages have been developed, notably for peanuts, only perhaps 15% of Senegalese farmers have adopted them. The reasons for this are not clear. It is apparent from work done by Purdue and others, that extension services do not touch the great majority of farmers, even in the Peanut Basin. The farmer, however, has need for extension services to answer the hard questions he faces, such as how to defend against crop disease. Extension is particularly important to the introduction of new crops and growing techniques, such as the direct seeding of rice. USAID will help the extension services address these needs through both the new SODEVA program, which will get fully underway in FY 1981, and the Casamance project which provides for strong ties between ISRA and PIDAC, the extension agency. Work with SAED at Bakel was undertaken two years ago and is beginning to show results. A distinctive feature of this extension effort under all three USAID programs is that it will emphasize contact with farmers groups, with the advantages discussed in the preceeding section.

Finally, USAID/Senegal will consider the government's recent request to participate in the establishment of Senegal's university-level agriculture training faculty. This school, the National Institute of Rural Development, is to be situated at Thiès. Through participation, the Mission would wish to assure that a strong rapport is established between this facility, the reorganization of research and the proposed reform of agriculture policy and institutions. But the USAID will carefully evaluate the proposed curriculum

and practical content of the program, the estimated recurrent costs, and potential duplication of training currently underway in other facilities, before reaching a decision.

c. The increase of cultivated land area (new and irrigated)

If food production is to keep pace with population growth, Senegal must continue to expand its total area under cultivation, by both irrigated and rainfed methods. In order to keep annual grain imports within manageable limits, assuming that per hectare yields of millet and rice can be raised to the levels set forth in the preceding section, we estimate that Senegal may maintain essentially the same land area (1 million ha) planted in millet as exists today. Over the past decade, millet lands have expanded by about 1% per year. If this expansion were to go forward at this rate over the next twenty years, it would account for 220,000 ha, roughly three times the area designated (70,000 ha) for the planting of corn by 1985 under the Government's Sixth Development Plan. The long-term possibility of substituting corn, or some other production, for extended millet production must be explored.

In the same period, we estimate irrigated rice must expand from 15,000 ha to 55,000 ha; or 2,000 ha annually, an attainable amount. The correlation between rice produced and rice delivered in Dakar is, of course, a separate issue of concern. Thus, to adapt these long-range goals to our medium-term planning period, lands planted in millet/sorghum (until intensification practices take hold) must be augmented by 55,000 ha, those cultivated in irrigated rice by 10,000 ha between FY 1983-87.

USAID/Senegal will place primary emphasis in the near term upon rice and millet cultivation and, as the research discussed above bears out, upon corn

and perhaps irrigated wheat. In the Fleuve, AID's five year planning target is to increase irrigated production by 2000 ha. on the Senegal side in the context of the OMVS Integrated Development Project. Based upon the Bakel Samll Perimeters experience -- more than 400 ha. planted in 2 years with little outside support -- we believe this to be a reasonable objective. The emphasis upon new land cultivation under Phase One of AID's current activity in the Lower Casamance is less direct. Our objective at this stage is to establish SOMIVAC, the government's development agency for the whole of the Casamance Region, and its extension arm in the Lower Casamance, PIDAC.

Under Phase One, USAID/Senegal also will be investing considerable resources to draw up a master development plan for the Lower Casamance. This work will include the preparation of several project proposals for international financing. This work is to be ready by no later than FY 1984. Meanwhile, Louis Berger Inc. will complete in FY 81 an AID-funded study of ways to develop rice production in the drainage area of a major estuary in the same zone. It is possible that USAID/Senegal may decide to pursue one or more of these project options under Phase II of the Casamance project.

Alternatively, the Middle and Upper (i.e., eastern) Casamance are endowed with promising soil and rainfall conditions. These zones also fall within the purview of SOMIVAC. There are 16,400 ha. with choice growing conditions in the Middle zone, particularly in the area of Sedhiou. A further 436,000 ha. of arable land are available in the Upper region.

<u>USAID/Senegal will explore the options which may be open to investment in these zones under Phase II of the Casamance program</u>. We also hold open the possibility of participation in large-scale agriculture by U.S. private

interests, perhaps in a shared venture with the Senegalese agribusiness agency, SODAGRI. Because the eastern-most area of the Casamance falls within the Gambia Basin territory, the USAID will consider these lands in the context of the OMVG, when those plans are further advanced. Increased production in these zones will be slow, however, since a key element in the development of the Middle and Upper Casamance will be the provision of basic water, roads, and market infrastructure. Disease, including onchocerciasis, is a problem. Settlement here may involve issues posed by foreign (mainly Guinean) immigrants, who are already present in numbers.

As USAID/Senegal undertakes significant agriculture programs in the Casamance and Sine Saloum, the Mission will seek to develop a more systematic sharing of information with USAID/Gambia, which has been working in much the same physical and social environment for several years and hence has already acquired much relevant experience.

The USAID believes improved communications are a significant part of the process of opening new areas for agricultural development and commercialization. Such matters as market and weather information, provision of agricultural extension agents' outreach and training as well as activation of farmer groups and other producer organizations can be produced by and benefit from interactive communications systems (telephone and teleconferencing). Senegal will commence in FY 81 experimentation with a comparatively inexpensive and comparatively maintenance-free satellite communications system linking Dakar and the Middle and Lower Casamance. Should this application of telecommunications prove effective we would propose to use it in the development of the Senegal River Basin.

Most essential of all to the cultivation of new lands is water management. Directly related to this is the question of the energy usually required to pump surface or ground water.

A fair amount is known about the groundwater resources of Senegal, enough to begin the careful exploitation of these reserves in conjunction with the monitoring of water quality, pressure, and recharging rates. AID is preparing to do just such groundwater analyses for certain areas of the Fleuve under OMVS auspices. USAID/Senegal intends to select two other production zones, within the Sine Saloum and the Casamance, using the availability of high quality, non-saline groundwater as an important criteria. In this way, the USAID will make the careful study and exploitation of groundwater resources, for habitation and for irrigation, an integral part of our future production programs. We plan to supplement to the maximum extent possible the use of underground water with the improved management through small dikes and other means of rain and water run-off.

In addition, within the second phase of the Renewable Energy Project, USAID/Senegal will deal, along with fuelwood production and conservation, with the important question of alternative energy sources for pumps. We will examine related technologies for raising water, eg., the use of narrow gauge bore wells and polyvinyl tubing with potential for local manufacture in Senegal.

d. Effective resource management

As published accounts began to warn thirty years ago, and as Landsat imagery shows clearly today, significant areas of Senegal's northern and central areas are experiencing progressive environmental degradation. This is particularly critical in the Peanut Basin, the country's major production and

population center. This degradation takes five different forms, varying from the north to south of the Basin, depending on soil types, rainfall, and cultivation patterns. These are:

- infertile soils, owing largely to the abandonment of fallowing;
- saline soils in the Sine Saloum delta region caused mainly by diminished precipitation and runoff;
- water and wind erosion as a result of the exposure and over-cultivation of all soils;
- the degradation of plant reserves caused by drought and over-exploitation;
- human and social stress, including inadequate food, vitamin deficiencies, and depopulated villages.

The result of this process has been declining yields and narrowing economic options, resulting in chronic food shortages. As a result of the preliminary assessment made by the National Academy of Sciences (NAS) team invited to visit the Peanut Basin in April 1980, we may question the ability of the agricultural system in the Basin to withstand the stress of the next multi-year drought. In spite of this danger, however, the NAS team reports that Senegal's central research station at Bambey in the Peanut Basin is performing virtually no studies aimed at the problems of land and vegetative degradation.

Given the long experience of the United States in soil conservation, with the proven capacity of the USDA Soil Conservation Service and with strong professional groups like the National Association of Conservation Districts, USAID/Senegal proposes that the U.S. take the lead with the Government of Senegal in organizing a concerted multi-donor reclamation operation in the

Peanut Basin over the next decade. The objective of this undertaking will be to develop sustainable land-management systems in the Basin which can increase the productivity of soils while diversifying sources of food.

Program activities in the short run would seek to improve existing systems in two or three pilot locations. In the short term, these activities would include replanting of proven varieties of trees and shrubs for groundcover, forage, and firewood. The medium term, coinciding with the FY 83-87 plan period, would explore new plant resources for designing new systems. In the long-term, we may anticipate the easing of pressures in the Basin as out-migration exceeds population growth, with the flight to the cities better balanced by young farmers seeking more attractive alternatives as new lands open in the Fleuve, Casamance, and Eastern Senegal.

In what will become an important part of this overall program of resource regeneration, USAID/Senegal has already begun reforestation work in the Peanut Basin. A total of 3000 ha. in fuelwood are scheduled to be planted south of Thies under this scheme, by 1983. At the same time, Peace Corps/AFRICARE teams financed by AID have begun experimentation with methods for establishing woodlots at village level in the Basin. Building upon this experience in FY 1983-87, perhaps in conjunction with a multi-donor effort organized under the new grouping of major western bilateral donors to Africa, CADA, these programs will be expanded at a steady and rapid rate. The USAID and Peace Corps will couple this program with support for the mass proliferation throughout Senegal of cheap fuel-conserving stoves made from local clays and sand.

To mobilize the human resources required to plant trees and install small run-off dams, USAID/Senegal will experiment in the off-seasons within select

areas of the Sine Saloum with labor-intensive public work schemes. Payment will be made either in food (Title II) or in cash, with some provision for the reinvestment of part of these funds in local enterprises.

An important element of the reclamation scheme will be integration and support of livestock production in the Peanut Basin. Large numbers of livestock are already in the zone, but the largely traditional management methods appear to coexist parallel with the traditional crop production system. Maximum agriculture production including livestock production for meat and milk (for improved family nutrition), farm power and transportation, and soil fertility will require an integrated agriculture and livestock system. Thus, as noted in the preceding section, USAID/Senegal will carefully consider shifting the focus of our livestock program within the period of the CDSS from open range areas to our chosen geographic zone of emphasis within the Peanut Basin, the Sine Saloum region.

To give impetus to the various actions which will be required over time at the village level under this land regeneration program, USAID/Senegal will seek to organize within the Sine Saloum zone a working body of PVO's (American and Senegalese), together with Peace Corps, to complement the work of Senegalese agencies. Together the combined force will assist villages with wells, tree and shrub plantings and other conservation measures, and vegetable gardening. A proportion of the volunteers' time will also be devoted to the training of cooperative and council members as discussed in a preceding section, and to the surveillance of health huts located in the same village communities.

2. The Human Development Program

Better nutrition, wider training, and greater access to primary health care facilities are both the means and ends of agriculture development. Before reviewing the specific steps which USAID/Senegal will take in the areas of nutrition, health, and population, it is important again to highlight in this strategy the central role of women. Women in Senegal are equal partners with men in the production of food, with the various farm tasks divided evenly between the two sexes. In the following subjects, especially food preparation and child care, the predominant part rests with women.

a. Achievement of an effective food/nutrition strategy

A well-implemented plan to improve the nutrition, and hence the overall health and productivity of Senegalese, is clearly the point at which the two lines of the USAID's food production - human development strategy come together. The increased availability and higher consumption of improved foods is the focal point towards which programs of agricultural production and commercialization lead, and from which general health programs take off.

USAID's Title II program strongly underscores this programmatic connection between food supply and health. Of the 221,000 Senegalese who benefit each year from Title II foods, ninety percent receive CSM nutrition supplements from government-run MCH clinics. The great majority of these are located in the three geographic zones of AID emphasis. The Mission believes, subject to further review, that the Title II nutrition program may serve to help establish MCH programs throughout the rural areas in which AID is principally involved.

While the current state of malnutrition in Senegal cannot now be stated with statistical precision, it appears to many observers on the evidence of

high infant mortality and generally low income levels, that malnutrition of varying degrees of severity may be present. Malnutrition in Senegal takes three inter-related forms: seasonal under-nutrition, widespread protein-caloric malnutrition, and nutrient and vitamin deficiencies. It is estimated that per capita caloric intake in the rural areas is little more than 2,000 calories per day, a deficit of 15-20% by international standards. Even this sub-standard diet, however, is 10-15% lower in the period of rains June-October, before the harvest. This is the period of planting and weeding, requiring maximum energy but coinciding with highest seasonal rates of malaria and diarrhea/dysentery. Records show a sharp increase in infant mortality and morbidity during this season, and illnesses cut into labor availability, which is the critical constraint, to an unmeasured degree.

Past efforts of the government to increase local food production for the purpose of raising nutritional standards have met with relatively little success. Many crop development and diversification schemes have been implemented in the past with too little explicit regard for their social or nutritional impact. Where attention has been paid to nutrition, it has so far focused more on research than on investment. Nutrition problems are studied primarily as a public health issue, with the health sector concentrating heavily on curative rather than preventive care.

The government's new approach, however, signals a commitment to begin to change this situation. Senegal began recognizing the importance of nutrition as a basis for overall development plans in the mid-1970s. The Fifth National Plan (1977-1981) establishes a foundation for a food and nutrition policy to undergird national planning in all sectors of the country. The Fifth Plan

acknowledges requirements to increase food supplies, to compensate for seasonal, regional and socio-economic deficiencies, improve nutritional education, develop a Senegalese weaning food, consider an iron fortification program, and perform detailed food consumption surveys.

To implement this portion of the Fifth Plan, the government designed a Food Investment Strategy (1977-1985). Senegal's Food Strategy is a pioneering attempt among Sahelian countries to address the complex of food and nutrition issues in an integrated manner, and to adjust national development policies to meet nutritional requirements. It runs through the period covered by the Sixth National Plan.

USAID/Senegal will support the Government in the careful preparation of a national food investment and supply strategy. The Title XII agriculture research and planning activity will assist this effort, along with more specialized surveys and studies. Through a combination of means, the USAID will ensure better analysis of the actual status of nutrition in rural areas, together with principal causes, in order to arrive at a series of recommendations for the improvement of rural nutrition in Senegal. This assistance in the FY 81-84 period will be highly important for framing food investment policies, for planning national food security measures, and for mobilizing local people in an economically viable, income generating food-related industry.

To assist Senegal in refining its national food strategy, the USAID will support the National School of Applied Economics (ENEA) in organizing two four-week country nutrition strategy workshops. Drawing upon support from AID's Development Support Bureau, these workshops will be held in April and November in 1981, for planners in those key ministries (Plan, Finance, Rural Development, Research and Technology, Human Resources Development, Women's

Affairs, and Health) and national agencies principally concerned with the rural sector and with food supply and market programs. Workshop participants will examine what is known about a) the current food situation, including the role of food aid; b) international efforts to develop a conceptual framework for national food and nutrition strategies, as led by the World Food Council; c) Senegalese programs and initiatives underway to address food self-sufficiency; and d) roles the separate ministries and agencies could pursue in light of their specialized authorities and responsibilities. In this way, the workshops will help to lay the ground for Senegalese entities to define a more cohesive food investment and supply strategy, using the Title XII-generated data, over the 36 months following. The workshop experience should also help the various elements of the government in their work with the local level enterprises, both public and private, which produce most of the food Senegalese consume today.

The USAID will proceed most actively within our geographic emphasis zones. We will pay due attention to assessing and analyzing food flows and constraints in order to assist the government to improve their judgments concerning the expansion and termination of development programs. The Mission will continue to employ PL 480 Title II and Title III for income-generating and food supplementing activities. USAID/Senegal's food production and commercialization programs, in short, will by design bias development investment and ensuing operations towards providing sufficient daily food for what is today an inadequately nourished population.

b. Improved Access to Primary Health Care

The importance of improved access to health services is widely accepted

as an economic good. Improved health directly supports rural production where labor shortages at critical times due to illness may severely reduce yields and where low physical reserves inhibit the adoption of new inputs and techniques. Better health in the long run also contributes to stabilized population growth. In Senegal at the present time, the average woman must endure twelve pregnancies to produce one son who will survive to the age of twenty-five. So long as the incidence of child mortality remains high, and even for a number of years' lag time after the rates begin to decline, large families are bound to be the social norm.

In addition to health services and disease surveillance components of irrigation projects, USAID/Senegal has already started a redesigned village health program of extremely broad dimensions which will eventually cover 300 villages in the Sine Saloum Region. Given both the fundamental nature of this program and the investment of time and resources which will be necessary to see it successfully implemented, the USAID has not projected a greatly expanded health effort over the period FY 1983-87.

With the arrival at post of the new Health Officer in January 1981, USAID/Senegal will undertake with the government a thorough review of health sector needs in Senegal. Our findings and programmatic recommendations will form the basis of a revision of the CDSS health sector in January 1982. This health sector review will concentrate on two subjects of special interest for USAID/Senegal. The first is the identification of the most significant ways in the three USAID emphasis zones in which improved agricultural production is linked to health care. The second special interest is to identify the most effective means for introducing child spacing and MCH services within the context of primary health care.

USAID/Senegal will key its health effort in the FY 1983-87 period to that level in the hierarchy at which rural health facilities best meet both production and family health requirements. The principal thrust of the USAID program is likely to continue to be within the Sine Saloum. By concentrating a portion of the Mission's crop production, livestock, and resource management activities in the same area, as outlined above, greater local income will be generated to support local health services. This concentration of activities will also ease problems of project support and monitoring. The USAID will continue to strengthen health care and monitoring activities which already are provided within programs in the Fleuve and Casamance.

If food self-sufficiency is to remain a serious goal for Senegal, however, careful regard must continue to be given to instituting a population program on the most solid possible footing. That a population policy is required in Senegal, and urgently, no objective observer will dispute. While population increase is officially reckoned at 2.7% per year, many demographers, as our analysis has shown, put the real figure at between 3.0% and 3.3%. Little can be done, given Senegal's present age profile, to prevent the population reaching 11 million by 2000 AD. But actions taken over the next decade may have a marked effect on checking demographic growth after that time.

The critical question in our view, and in the opinion of the Prime Minister as expressed to the AID Administrator in September, 1980, is not whether Senegal should adopt a population strategy, but what that approach - how fast and in what areas - should be. From every indication given during the Joint Assessment and Planning, the most effective approach in the extremely conservative Senegalese environment will be comprehensive and multi-donor, with Senegalese authorities firmly in the lead. The Mission is convinced that for AID to push

family planning services ahead of demonstrable concern for general nutrition and health would be to run the grave risk of a backlash which could seriously retard the entire population program and compromise the credibility of American intentions here in the process.

Because the population issue is vital, and since circumstances lead us to seek an advance along a broad, general front, there is all the more reason to start at once. Beginnings have, indeed, been made.

On the Senegalese side, the government-guided Association for Family Well-Being (ASBEF), affiliated with the International Planned Parenthood Federation, has been publically revived. ASBEF, seeking a family planning program along lines of child spacing and MCH care, intends to begin in 1981 the survey and persuasion of key Muslim and Catholic leaders throughout Senegal, while at the same time offering limited PMI services and public information programs from Dakar.

On the U.S. side, in addition to preliminary nurse training and the provision of supplies by Pathfinder (largely unused), USAID/Senegal has signed grant agreements with Senegal in FY 1979-80, committing $1.38 million for population services. However, the Mission is convinced both on the basis of the lengthy delays in project implementation as well as by Joint Assessment findings, that conditions will not permit proceeding directly in the manner originally intended. We have therefore scheduled a full scale review of the population program for early 1981, as part of the general health sector survey mentioned above. The Mission's aim will be to start immediately with support to family planning services in those facilities where well-equipped MCH services also exist. At present, these are invariably in urban areas.

Meanwhile, the USAID can begin support for a broad-based research and education program. We will also seek to improve selected MCH facilities in secondary centers and in rural health posts, so that family planning services, complemented by commercially marketed supplies, may commence without unnecessary delay.

Without some form of the rural health program at close proximity (the exact level yet to be determined) to local populations, USAID/Senegal is convinced by the evidence that no general population program will be possible in Senegal over the long term.

c. The Enhanced Social and Economic Standing of Women

General experience shows that, like nutrition and rural health, the enhanced status of women acts not only in the long-term to level off population growth rates, but to increase economic production as well. Literacy, general education and training, relief from menial tasks as their sole preoccupation, improved health, a voice in decisions affecting the community -- all have an appreciable effect on the role women play beyond the confines of the family plot and consequently upon women's expectations and ambitions.

In the course of the planning period, USAID/Senegal will introduce a specific women's orientation within each of its health and production programs. This will follow the general example of the women's component designed for the Cereals II project, which funds both a special women's extension unit within SODEVA, and, in addition, a series of village-level pilot activities for women which the SODEVA women's unit will supervise. The Mission intends to phase out individual WID actions in favor of integrated activities within large programs. To complement special staffing arrangements within the USAID, described above (p. 27), the Mission will consider an arrangement with a

specifically women's PVO, like the National Council of Negro Women (which has a pairing agreement with the Senegalese women's organization), to assist as needed in the design, implementation, and/or monitoring of actions and policies specifically affecting women.

C. Alternate Strategies

Because the agriculture sector is of central importance to the Senegalese economy, the USAID considered no course of action which did not have primary effect upon this sector. The alternatives considered, rather, would have selected one or more key elements of the strategy finally adopted and would have emphasized these at the others' expense. The Mission also considered variations on the geographic zones selected. Following in brief are four of the most important options discussed.

1. Education and Training: One alternative strategy would place prime emphasis on the reform of key education and training institutions affecting the primary sector, and would assist selected Senegalese institutions on a country-wide basis. Among those considered would be the non-formal agencies (Maisons Familiales, post-primary practical and professional training, and the literacy service), the primary school system (to help it adapt to rural needs), and the secondary-level agriculture and management schools. Finally, this alternative would favor support to the proposed National Rural Development Institute (INDR) at Thiès.

Of these, the accepted USAID strategy would preclude assistance only to primary schools. The USAID is not satisfied that a sufficiently powerful national will for reform exists in this area to make U.S. participation effective. The strategy finally adopted, however, will place prime emphasis on the training

in national languages of farmers groups and cooperatives in the three AID emphasis zones. This strategy also allows funding for a training institution or program, such as ENEA, in direct proportion to the impact such training would have on commercialization and production in an AID-emphasis zone. This criteria, tying practical training to a practical result, is the criteria Senegal must apply if the country is ultimately to cover the recurrent costs of its training system.

2. Fish: Given Senegal's significant and underdeveloped ocean fishing resources, and the prime criteria under the USAID strategy to increase Senegal's production and trade, it may be argued that fishing is the sector which offers the USAID the greatest potential returns. The final USAID strategy countenances off-shore fishing only in the province of a regional resource-management training program. Rather than launch into a brand new venture, with the demonstrable difficulties of establishing a program in Senegal, the Mission has determined that AID should build essentially upon the foundations laid since the beginning of the program in 1975. The USAID is satisfied that there are a number of other donors, and especially national and commercial enterprises, prepared to help the government to fully develop Senegal's fishing potential.

3. Water Development: If water is the essential missing ingredient to agriculture in Senegal, the case can be made that the USAID should focus its energies on mapping and developing the nation's ground and surface water resources. But straight well-digging programs have generally failed, in Senegal and elsewhere. Taken alone, water programs may be no more productive than other activity dedicated to an isolated element of the production process. The USAID strategy thus gives priority to water management but integrated within the package of production programs we plan to implement.

4. Alternate geographic zones: Under the adopted strategy, the USAID plans to concentrate program activities in FY 1983-87 in three regions, or parts of them: the Sine Saloum, Casamance, and the Fleuve. Another zone was considered but set aside: the large, undeveloped, underpopulated frontier area of Eastern Senegal, where production commensurate with its size will depend upon major infrastructure and health undertakings, and is thus years away. Much thought was given to retaining two areas in which the USAID is now active, namely, the Ferlo open range zone for livestock and the Thiès-Diourbel regions for millet/sorghum production. To enhance program impact, however, as well as to improve management efficiency, the Mission preferred to focus operations in the three regions named. Given the size and complexity of the undertaking planned for the Fleuve, a further alternative was to reduce still further the scope of AID activities to two regions. But in view of the management device recommended for the Fleuve -- namely, a major contract with a U.S. firm to manage technical aspects of the Integrated Development Project, with assistance from the three USAID's concerned -- the Mission determined that further reduction of project zones within Senegal would not be necessary.

D. Summary and Next Steps

Commercialization, intensification, extended cultivation on new and irrigated lands, and the regeneration of resources: these four paths, aligned within the three USAID emphasis zones, constitute the main route USAID/Senegal will follow during FY 1983-87 in the direction of food self-sufficiency broadly defined. As part of a Consultative Group effort, AID's interventions at a policy level are likely to be persuasive. In the common support of Senegal's Reform Plan, the prototypic nature of many USAID activities will gain resonance and force. U.S. non-project assistance will offer Senegal some

relief in face of the macro-economic crisis. The local currencies generated, together with the greater participation of OPG and Peace Corps personnel, will afford USAID projects much greater flexibility when working to strengthen farmers groups and cooperatives --the local institutions at the heart of greater productivity under the Reform. Primary health care, including nutrition and population services, will closely accompany the food production and commercialization programs.

Following review of this CDSS in Washington, we propose to proceed on two fronts at once. On the Senegal side, the next meeting of the Management Committee of the Joint Planning exercise is scheduled for April 1, 1981. At this meeting, the Ministers of Plan, Rural Development, and Finance will sit with the American Ambassador and the USAID Director to review AID's five year strategy and chart the future direction of our collaboration. USAID/ Senegal will prepare the Government for this meeting through the Director's regular monthly sessions with the Minister for Rural Development and through his frequent encounters with other leading officials.

Next, following the spring session of the Management Committee, the USAID Director and Mission staff will meet with the RDA's and Ministries principally concerned to translate the strategy into a plan of work, beginning with ongoing project funds already available. An important event in this work plan will be a joint workshop with key Senegalese services to redefine AID project assistance to make it more responsive to the findings of the Joint Assessment and the new strategy.

On the side of the other principal donors, the U.S. will seek as part of the Joint Review Senegal's acceptance at the highest levels of a donors' group in direct support of the Reform Plan. Immediately thereafter, in close

coordination with AID/W, and using the good offices of U.S. representatives in Paris and at the World Bank, as well as local contacts, the USAID will take the initiatives necessary to form a Consultative Group in 1981.

In lieu of the CDSS in January 1982, USAID/Senegal will plan to submit two related documents. Each will serve to update the strategy presented here. The first will be a much more precise statement of the Mission's program in the human development area, especially health. This document will also cover training, however, where the government has yet to define the roles at farmer level of the various relevant agencies. The second USAID submission will present a detailed monitoring and evaluation plan for the adopted strategy. The plan will include a description of methodology and a quantification of the objectives, the presentation of which would be premature before the Consultative Group forms and the new government further elucidates the course it will follow.

E. Management Strategy

The FY 1982 CDSS established a USAID management strategy with three principal objectives. These are:

- increasing the efficiency and rate of project implementation;
- reducing the cost and increasing the continuity of all USAID management components by means of the Senegalization of the USAID staff; and
- development of project selection criteria which facilitates program management.

These objectives remain valid and substantial progress has been made toward achieving them.

1. Implementation

The strategy outlined in this CDSS will have a significant impact upon implementation by concentrating AID programs in three geographic areas.

We also believe that by working increasingly through PVO's and Peace Corps at the village level the number of administrative problems encountered with cumbersome Senegalese RDA's will be lessened. A Project Support Unit provides further assistance in strengthening project implementation, as does the refinement of the bi-monthly project reviews which include a detailed analysis of every project in the USAID/Senegal portfolio. These reviews are chaired by the Director and are frequently conducted at the project field sites with the senior GOS official involved.

USAID is currently negotiating a contract with a U.S. company to assume responsibility for administrative support for the 30 American personal services contractors currently employed by the USAID. The contractor will provide such services as shipment of vehicles and personal effects, handling of payroll and banking, clearance of household effects through customs, and identification and leasing of housing. By having a specialist working on these problems it will not be necessary for each contractor to learn de novo Senegalese administrative and customs procedures, which are particularly cumbersome.

An Operations Manual documenting Mission-specific internal procedures has been completed with assistance from a U.S. consulting firm and SER/MP. The Manual will be ready for implementation in the USAID by March 1. It provides a detailed description of all of the office functions, programming implementation, and management policies and procedures for the USAID. The Manual also rationalizes internal Mission procedures and provides a common basis of understanding for the functions and relationships among all the offices within the USAID. The Operations Manual will serve as an excellent guide to TDY, contract and newly arrived permanent staff on how the USAID functions on a day-to-day basis.

2. Reducing Costs and Increasing Continuity

USAID now has under full implementation a local staff development program which is substantially upgrading the capabilities of non-American personnel. Even though the program has been underway only six months, 27 training programs are in operation covering the full gamut of USAID activities from automobile maintenance to office procedures to project design. Senegalese staff are already beginning to assume responsibilities frequently reserved for American personnel in program operations, budgeting and training. The success of this program means that it will be possible to maintain the number of American direct-hire at the current level for FY 1981 and possibly can reduce that number by FY 1982 with a well-trained local staff.

3. Project Selection Criteria

As a result of the Joint Assessment it has been possible to identify aspects of project selection and design which impede program execution. These include overly complex technical assistance including sophisticated equipment, complicated management structures and institutional support for administratively cumbersome Senegalese organizations. By moving toward more simply designed activities which can be executed with a different level of expertise, we believe projects can be implemented much more rapidly.

Nine projects were identified for termination or accelerated close-out in FY 1980. Project completions were accomplished for four of the activities by December 31, 1980. The other five projects will be closed out during the first six months of CY 1981.

The increasing focus upon non-project aid will greatly facilitate the transfer of resources to Senegal. At the same time the generation of host

country owned local currency will aid project implementation by providing more flexible financing, especially with respect to local procurement of goods and services. Difficult and time-consuming waiver processes currently utilized because of restraints placed upon appropriated dollars will be substantially reduced.

III. ASSISTANCE PLANNING LEVELS

Table I presents the Proposed Assistance Planning Levels. These figures are based upon the revised program strategy outlined above, and exceed the levels previously authorized pending receipt and review of the present submission. The USAID believes that the higher levels are justified in view not only of Senegal's critical economic situation, but of the reality of its rigorous austerity and reform program. The Mission's recommended strategy, based upon a joint assessment held in 1980 of USAID and Government programs, will directly support this Reform, particularly in its provisions for the rural sector.

The Mission has an authorized direct hire personnel level of 28. For reasons cited in the preceding section, this level will remain steady through the first three years of the planning period and will decline thereafter, despite the significant increase in program levels. These reasons include the use of a reduced number of larger and better concentrated programs, the collaboration of OPG and Peace Corps personnel, and the increased employment of Senegalese professional staff.

TABLE I

PROJECT ASSISTANCE PLANNING LEVEL

CATEGORIES	FISCAL YEARS ($000)					
	1983	1984	1985	1986	1987	TOTAL
1. AGRICULTURE						
Food Production						
Rainfed	4.0	2.5	3.0	4.0	4.0	17.5
Irrigated	4.0	4.0	6.0	7.0	7.0	28.0
Livestock	2.0	1.0	1.5	1.5	2.0	8.0
Planning & Research	2.5	3.5	3.5	3.0	3.0	15.5
Marketing/Storage	1.0	1.0	1.0	1.0	1.0	5.0
Institution Develop.	1.0	2.0	2.0	2.0	2.5	9.5
Private Sector	1.0	2.5	3.0	4.0	5.0	15.5
Ag. Sector Grant	5.0	5.0	5.0	5.0	5.0	25.0
SUB-TOTAL	20.5	21.5	25.0	27.5	29.5	124.0
2. ENVIRONMENTAL REHABILITATION AND RENEWABLE ENERGY	5.0	6.5	6.0	7.5	10.0	35.0
3. HEALTH & POPULATION						
Rural Health	1.0	2.0	2.0	1.5	2.0	8.5
Family Health	1.0	2.0	2.5	2.5	2.5	10.5
SUB-TOTAL	2.0	4.0	4.5	4.0	4.5	19.0
T O T A L:	27.5	32.0	35.5	39.0	44.0	178.0
TITLE II (non-add.)	6.5	6.8	7.1	7.4	7.7	35.5
TITLE III (non-add.)	15.0	15.0	15.0	20.0	20.0	85.0

ANNEX TO CDSS FY 1983

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GLOSSARY OF ACRONYMS

ACRONYM	FULL TITLE	EXPLANATION
ABEDA (BADEA)	Arab Bank for Economic Development in Africa	
ADB (BAD)	African Development Bank	
ADF (FAD)	African Development Fund	
ASBEF	Association Sénégalaise pour le Bien-Etre Familial	Senegalese Association for Family Well-Being
BNDS	Banque Nationale de Développement du Sénégal	Senegal National Development Bank
CADA	Concerted Action for Development in Africa	Major bi-lateral donors
CCCE	Caisse Centrale de Coopération Economique	Official French Loan Agency
CEAO (WAEC)	Communauté Economique de l'Afrique de l'Ouest	Francophone West African Common Market
CFAF	Monetary unit of Senegal	Approx. 220 CFAF=$1.00 U.S.
CIDA (ACDI)	Canadian International Development Agency	Canadian aid agency
CILSS	Comité Permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel	Sahel regional organization for drought relief
EEC	European Economic Community	
EIB (BEI)	European Investment Bank	
ENEA	Ecole Nationale d'Economie Appliquée	National School of Applied Economics
FAC	Fonds d'Aide et de Coopération	France's special appropriation for project assistance
FAO (OAA)	Food and Agriculture Organization of the UN	
FED (EDF)	Fonds Européen de Développement	Common Market Dev. Fund
IBRD (BIRD)	International Bank for Reconstruction and Development	World Bank
IDA	International Development Association	Soft loan window of IBRD
IMF	International Monetary Fund	
ISRA	Institut Sénégalais de Recherches Agricoles	Senegal's agricultural research institute
ITA	Institut de Technologie Alimentaire	Food research center and laboratory
KFW	Kreditanstaff fur Wiederaufban	German aid agency
MCH (PMI)	Maternal Child Health Center	Pre and post natal clinic
NAS	National Academy of Sciences	
OMVG	Organisation de la Mise en Valeur du Fleuve Gambie	Organization for Gambia River development
OMVS	Organisation de la Mise en Valeur du Fleuve Sénégal	Regional organization for development of Senegal River Basin
OPEC	Organization of Petroleum Exporting Countries	
ONCAD	Office National de la Coopération et de l'Assistance au Développement	Senegalese agricultural marketing agency
ORT	Organization of Rehabilitation through Training	Non-profit organization
PIDAC	Projet Intégré de Développement Agricole de la Casamance	Extension service in Casamance
PL 480		Legislation authorizing U.S. food aid program
RAPID	Resources for the Awareness of Population Impacts on Development	
SAED	Société d'Aménagement et d'Exploitation des Terres du Delta	Regional dev. agency for Senegal River Valley

GLOSSARY OF ACRONYMS (Cont'd)

ACRONYM	FULL TITLE	EXPLANATION
SDP	Sahel Development Program	
SERST	Secretariat of State for Scientific and Technical Research	Ministry for all research in Senegal
SISCOMA		Agriculture equipment manufacturer
SODAGRI	Société de Développement Agricole et Industriel du Sénégal	Senegal company for rice dev. in Casamance & Senegal Oriental
SODEFITEX	Société pour le Développement des Fibres Textiles	Regional dev. office for Eastern Senegal and Upper Casamance
SODESP	Société de Développement de l'Elevage dans la zone Sylvo-Pastorale	Office for livestock dev. in the Sylvo-Pastoral zone of Northern Senegal
SODEVA	Société de Développement et de Vulgarisation Agricole	Regional agency for extension services and dev. in Peanut Basin
SOFISEDIT	Société Financière Sénégalaise pour le Développement de l'Industrie & du Tourisme	Financial institution
SOMIVAC	Société pour la Mise en Valeur de la Casamance	Regional agency for planning and development in the Casamance
SONAFOR	Société Nationale de Forage	Government well-drilling Co.
SONEPI	Société Nationale d'Etudes et de Promotion Industrielle	Agency for small and medium sized business
STABEX	Export revenue stabilization arrangement	Under Lomé II convention with EEC
UNDP (PNUD)	U.N. Development Program	
UNESCO	U.N. Educational, Scientific and Cultural Organization	
UNFPA (FNUAP)	U.N. Fund for Population	
WAMU (UMOA)	West African Monetary Union	

Description of the Poor

The poor represent the great majority of Senegalese. For the 65% of Senegal's 5.7 million population which live in the country side, per capita GNP is less than $150 annually. At the same time, 75% of the one million persons inhabiting Greater Dakar in 1980 received an annual income below the $400 per capita poverty line, extrapolated from AID's measurement of "poor" in 1969 dollars.

The majority of Senegalese are poor because the country is poor, rather than because of gross distortions in the way that national wealth is distributed. Of the perhaps 30,000 inhabitants of Dakar who are classified as "upper class" by virtue of earning $15,000 or more per year, half are European or Lebanese, the rest belonging to a small number of Senegalese businessmen and professionals or to the top rank of government officials. Class and caste differences in rural areas are not of primary importance in economic terms. Nor can systematic corruption or bureaucratic inefficiencies be blamed for the economic impoverishment of the Senegalese population.

While landlessness is not yet characteristic of the poor in Senegal, the society is marked by seasonal unemployment and migration in search of work. Migratory flux and the breakdown of traditional social institutions is characteristic of this poor majority.

Lack of sufficient cash income forces people during the slack agricultural season (January through mid-May) to migrate from rural to urban areas where they join the ranks of the urban poor. Many of these seasonal migrants are now settling permanently in towns. Lack of cash income, educational opportunity and/or fertile land is also inducing farmers to migrate from less developed areas of Senegal to cash crop zones as hired laborers or as permanent settlers. This continued in-country migration has had a destabilizing impact on development and growth. Some areas now lack people to cultivate the fields at the same time as urban areas - and especially the Cap Vert region - strain to absorb new migrants.

Social institutions are less well-defined than ever before. The old multi-generational extended family structures, responsible for agriculture and economic support, are breaking up as family members leave.

As migrants take on new economic and social roles they tend to change their ethnic identities. Diola, for example, are Mandinkalized when they move into Ziguinchor and become Muslims. Serer and Diola who migrate to Dakar adopt Wolof customs and language.

This flux, while damaging to traditional structures, helps new ideas and knowledge move quickly between urban and rural areas. Some migrants go to other more developed areas of West Africa, and some have become migrant laborers in France.

Against this general background of movement and change, development projects are designed to take account of the particular context of the principal economic zones which characterize the country. These are:

a. the Cap Vert Peninsula, including Dakar;
b. the Peanut Basin, inland from Dakar; and
c. the peripheral, mostly non-commercial agricultural provinces, particularly the Senegal River Basin to the north (the Fleuve Region), the Casamance Basin to the south, Eastern Senegal, and the Sylvo-Pastoral zone (Ferlo) in the north-central part of Senegal.

1. The Cap Vert Peninsula, including Dakar, is the extreme western point of the African continent and has been in contact with Europe for over 500 years. It is today heavily urbanized. With 20% of Senegal's total population (and the majority of its urban population), Dakar produces 60% of GDP. Its population of one million persons is growing rapidly at the rate of 6% annually.

As stated above, three-quarters of Dakar's population live at the survival line, using their $400 per year or less incomes to cover food, clothing and lodging with costs comparable to those in the United States. Most of this population earns what they can as unsalaried artisans, watchmen, apprentices, street vendors, water carriers, errand runners, launderers, and domestic servants often to families who are themselves poor. The majority have no formal education, but even people with training find difficulty in obtaining jobs.

Women are among the poorest of the urban poor. In contrast to peasant women who usually have some independent income from their own plots, most urban women have no income at all. A 1976 study showed that about 85% of married women and 75% of divorced women did not work for a salary or regular income. Some young single women migrate seasonally or temporarily from rural areas to the city to work as domestics where they are likely to live in conditions of extreme poverty.

Urban women who work are usually employed as vegetable vendors, flower sellers, petty traders or in other jobs that earn very little, but their small incomes give them some financial independence and help their families to subsist. Those with a high school education may find work as secretaries, and the tiny minority who are University graduates have professional careers.

Despite the poverty of the great majority of persons who inhabit Dakar and its environs, the capital itself still offers more than the other principal zones of Senegal.

Education and health facilities are much better in Cap Vert. Cap Vert has nearly 70% of the employed college graduates in the country, including 73.2% of all doctors, and 81.6% of all dentists; two-thirds of the nation's midwives and one-third of other medical assistants work here. On the average, people in Cap Vert are better nourished than the rest of Senegal, with 2,500 calories per day versus an insufficient 2,070 calories in rural areas. These aggregate figures, however, do not reveal consumption patterns. The groups which suffer most from malnutrition and anaemia in rural areas -- small children, pregnant and lactating women -- are likely to suffer from the same sort of malnutrition even in Cap Vert, and for the same reason - poverty.

2. The Peanut Basin, immediately inland from Dakar is one of the oldest areas, dating from the last century, of cash crop agriculture in West Africa. A large area encompassing the administrative regions of Thies, Sine Saloum, Diourbel and Louga, 80% of the peanut crop representing two-thirds of the nation's agricultural revenue. The government had just begun to implement major agricultural reforms of the late 1960's when the catastrophic six-year Sahelian drought struck. The return of normal rains since 1974 has been irregular. Rainfall in 1977 was less than in the worst year of the long drought. The rains came very late in 1980 causing severe production shortages in peanuts and rice. Meanwhile, the population continued to grow and world wide inflation brought deteriorating terms of trade, so that real per capita incomes in the Basin have actually fallen. Fewer than 20% of children are in primary school and the daily caloric consumption is about 2,100.

The Wolof ethnic group comprises about two-thirds of the total population of the Peanut Basin. Their approach to peanut cultivation has traditionally been a shifting, slash and burn agriculture, in which, as the population grows and land is exhausted, young men move out to settle on the expanding frontier.

The Serer ethnic groups are more densely concentrated in the southwestern portion of the Basin, and comprise about one-third of the total. Having been hemmed in by Wolof expansion, the Serer have developed a more balanced system of rotational farming on smaller plots, using fallowing, cattle manure, and the acacia albida tree to ensure fertility. In the area around Fatick, however, over-population has become chronic with densities of 80-100 km2. Fallowing is disappearing, yields have declined, and out-migration is extensive. The World Bank funded "New Lands" resettlement scheme in Eastern Senegal has created a partial frontier outlet for the Serer, but most out-migrants prefer the cities.

In the north, the oldest Wolof cash cropping areas are also experiencing soil exhaustion accompanied by high rates of out-migration. One small zone in the Louga area went over to desert during the recent drought, and has been abandoned by farmers and pastoralists alike.

The traditional work unit, in Wolof as in Serer areas, has been the extended family, cultivating communally the family's millet, maize, and niebe bean fields, while individual members earned cash from private peanut plots. As cash cropping has intensified, communal food fields have shrunk and in some places disappeared, replaced by individual peanut plots. The extended family is becoming fragmented in response to this tendency, as well as to western education, urban migration and a general liberalization of values and customs. Today, perhaps one half of the families in the Peanut Basin are single household compounds. The old versatility in switching cultivation from cash crop to food and back, according to market conditions, is still retained, however.

Another major institutional factor in the Basin are the Islamic brotherhoods, mainly Mourides and Tijanes. Because they are the largest non-governmental rural organizations, they are an important element in the success or failure of agricultural policies and projects: the Government has often granted permission to brotherhoods to cultivate sylvo-pastoral reserve lands, using tightly organized disciples' work groups to clear and cultivate. Afterwards, the use-right to the land is generally assured by the disciples, while ultimate control over the land tends to decentralize among members of the leading marabout (religious) families as they branch out.

Agricultural incomes and living conditions vary substantially in different areas of the Basin, depending upon rainfall, land fertility, and the availability of road, rail, water supply and marketing infrastructure. The variability and spacing of rains are chronic problems throughout the Basin. Plot sizes average about one hectare in overpopulated areas to 2 1/2 hectares in the ox-plow equipped areas in the center and on the eastern frontier. Harvest incomes range from less than $80 annually in the drier north to as much as $400 in the well-equipped center and on the frontier.

As would be expected, living conditions tend to be best along the two rail lines and the paved roads, where at least minimal water supply, electricity, transportation and consumer goods are available. In frontier areas settlers still have to dig their own wells and carry their harvest to the road in head loads or on burros.

3. The principal peripheral areas include the administrative regions of the Fleuve (Senegal River), Eastern Senegal, and the Casamance, as well as the Sylvo-Pastoral zone where most of Senegal's cattle are concentrated. These areas contain 1.8 million people, or 30% of Senegal's population, and are the most undeveloped and least urbanized portions of Senegal. Largely because of their distance from the capital, commercial farming here is at present less widespread than in the Peanut Basin. Per capita agricultural incomes are therefore lower. These zones, nevertheless, have considerable agricultural potential and their successful development represents Senegal's best hope for the future.

a. The Fleuve Region, bordering the Senegal River, has a population of 580,000, nearly 17% of which lives in Saint-Louis, the regional capital. Saint-Louis is a primarily administrative and commercial town and contains most of the region's social services. The rural population has little access to schools, hospitals and modern services. Most farming is for subsistence even in the small irrigated perimeters along the River, although increasingly some of the vegetable output is being marketed nationally.

The Delta area around Saint-Louis is inhabited mainly by Wolof fishermen and by villagers under the auspices of government's development agency, SAED. The farmers in the Delta, where per capita income is about $80 per year, combine the farming of paddy rice and vegetables with fishing, and herders pasture livestock there seasonally.

Tukulor comprise 60% of the population of the lower and middle Senegal Valley. This area, between Dagana and Matam, is suitable for double-cropping, once on rainfed lands, and again on the river flood plain after the flood waters of the Senegal River have receded. The traditional system of land tenure is still strong. Peasants own few fields on the riverbanks and must rent them from the noble and fishermen families who own most such land. Although they do much of the farm work, women do not own farming plots in this area. They cannot inherit land, only cows and other moveable goods.

Because of the lack of economic opportunities, the Tukulor have migrated in massive numbers from the area, mostly to Cap Vert. Today, more than half of Senegal's Tukulor population lives in Dakar. Poorly educated, they become for the most part unskilled workers, street vendors or domestics.

The Upper Senegal Valley, in the area around Bakel, is inhabited mainly by Soninke. Soninke young men have long favored emigration to France where, even though they earn at the bottom of European wage scales, they manage to send home up to half their pay. In some villages as many as 80% of the men aged 17-50 years are absent from the area. Recently, France has been tightening its immigration laws, making work permits more difficult

to hold or obtain. It is too early to be certain what effect these restrictions will have on Soninke movement.

In the Senegal Valley as a whole, up to 30% of the active male population has emigrated. Although agricultural production has not shown an absolute decrease, since cash incomes are used to hire farm labor to supplement that of women and children, production in the area has stagnated. Except where irrigated development has occurred, returning migrants have no opportunity to reinvest and develop the local economy.

b. The Casamance Region in the south of Senegal has traditionally been isolated from the economic and administrative center, Dakar, partly because of the necessity to cross the Gambia River to reach there. Cultural and religious differences have also served to set the region apart. The Casamance is relatively underpopulated, and its 790,000 inhabitants are mostly subsistence farmers. Inadequate roads, bridges, potable water, and marketing infrastructure make the population vulnerable to seasonal malnutrition and endemic diseases. If these characteristics of underdevelopment could be overcome, the Casamance has perhaps the best development potential of any region in Senegal. Rainfall is the highest in the country averaging 1,200-1,500 mm. per year.

Due in part to extensive Catholic missions, school attendance is greater than in any other rural area of Senegal, with 50% of school age children in primary school.

The Lower (or Western) Casamance, which is the focus of a U.S. assistance program, is inhabited primarily by Diola. Diola society is individualistic and egalitarian. Women and men jointly cultivate rice on small holdings. The men prepare and dike the plots, while the women replant and tend the rice. During this later period, men traditionally earn additional cash from construction, fishing and palm wine making. The rice harvest is divided between men and women. The men feed their families the remainder of the year. Both men and women may sell part of their rice crop for money once they have provided for their families.

There is a very heavy migration of young men and women to Dakar and to towns in the Casamance. In some areas as many as half the women aged 12-20 may emigrate. These migrants, many of whom do not return, seem to be motivated in part by their comparatively high level of education and by lack of economic opportunities at home. This migration of the productive labor force out of the region has led to a drop in agricultural production.

To the east, the Mandinkas dominate the Middle Casamance, which is less urbanized and less densely settled. They grow millet, maize and, as a cash crop, peanuts. Mandinka land holdings are small and the returns commensurate. Those farmers who participate in the region's semi-mechanized

peanut and rice farming schemes have annual incomes as high as $200-300 per capita, higher than the national rural average. Most agricultural work is performed among the Mandinkas by women who have no control over any of the harvest.

Still further to the east, the Upper Casamance is sparsely populated, primarily by sedentary Fulbe. The Fulbe combine livestock raising with millet and rice farming. Peanuts and cotton are grown for cash income. Per capita income has been rising as cotton production has spread. There is little migration to urban areas, but during the rains, men often migrate to the eastern Peanut Basin in a quest for cash as client farmers or harvest workers. Their wives and children plant and tend the fields in their absence. Like most other regions distant from Dakar, the Upper Casamance has little education and social services.

c. The Region of Eastern Senegal is, second to Cap Vert, the fastest growing part of Senegal (4.9% per year). Natural increase accounts for about 2.9% growth, the immigration from Casamance, Guinea, and Mali for another 2%. It is, therefore, ethnically very diverse. Where roads and marketing structures exist, cash incomes derived from peanuts or cotton can be higher than in the Peanut Basin, but educational and health services are as yet virtually non-existent.

d. The population of the Sylvo-Pastoral zone, last of Senegal's major areas, is 80% semi-nomadic Fulbe cattle herders. Per capita cash income is very low, $30-80 per year. The herds provide milk and occasionally cattle for sale. The men pasture their cows in farmers' fields giving milk and manure, as fertilizer for millet, as payment. Some Fulbe families cultivate their own millet on the edge of the river valley in the wet season. Part of the family then stays with the crops while the young men take the cattle elsewhere. The most regular income is earned by the women who sell milk and milk products. This money belongs to the women, but they use it mostly to meet their family's needs. Few Fulbe of either sex go to school or have access to health services.

Senegal's Commitment to Growth with Equity

As the Reform Plan indicates, the Government is showing a strong commitment toward growth and to the equitable distribution of the benefits of that growth. Without major growth of the economy, few real gains for the poor will be possible.

Specifically, how do these reforms and other governmental actions promote equitable economic growth? Below, we respond to specific points raised in AID/W's guidance cable regarding the 102 d (commitment section) for the FY 83 CDSS.

Employment generation -- The Government has been active in its efforts to create more employment. Senegal's investment code requires that to earn tax benefits, a company must assure not only a minimum capital investment but also a minimum number of jobs created. The Government has given assurances that most of the development of irrigation in the Senegal River Valley will be carried out using labor-intensive small perimeter methods. Only in a limited area in the lower river delta where the heavy soils require mechanization will capital-intensive agriculture be undertaken.

Government's action under the Reform to institute de facto devaluation of the CFA franc through import duties and export subsidies will encourage more labor-intensive development. In addition, the Government is increasingly aware of the need to use the informal sector for employment creation and has established special agencies to help in this effort through credit and training programs.

Access to Productive Resources -- The Administrative Reform of 1973, coupled with the National Land Act of the same year, provided that local rural councils should henceforth make all allocations of lands for cultivation. This legislation has meant that land can be more rationally divided up among those who work on it and who make an effort to make it productive. With the exception of religious land holdings in the Northern Peanut Basin, all land is subdivided into small family farm units. Access to land has not been a major problem except in some areas of the Peanut Basin, where over-population has resulted in insufficient land for those who want to use it.

Because the prior credit system organized through the government cooperatives has broken down, the new Reform will institute a more locally-based credit system. One of Government's major objectives under the Reform will be to disengage from the regulation of the rural economy and to shift control and responsibility for agriculture development to the local level. This deregulation should play an important role in guaranteeing greater incentives and more equitable growth, particularly between urban and rural areas.

Equitable access to health and education -- The Government has sought increasingly to make basic health care available to the rural poor. Programs such as the USAID Sine Saloum health program and others by UN, Belgium, Holland, Canada, UNICEF, and France have helped to improve health care for the rural population.

In the area of education while Senegal's education system has been patterned upon a formal French system, the Government is preparing to expand functional literacy programs in indigenous languages. The literacy service has prepared materials in each of Senegal's six national languages. About 30 professionals are trained and ready to undertake work especially at the level of farmers groups and cooperatives when financing is secured. The USAID will study this possibility closely.

Effectiveness of the administrative structure -- An important thrust of the Reform Plan is to streamline the operation of the Rural Development Agencies and other official institutions. Towards this end, the Government will institute new data collection methods and controls in the form of program contracts signed with the various parastatal services. These contracts will contain specific objectives assigned to the bodies, the resulting financial obligations, and the period in which the work will be carried out. The Government has also established a new planning and evaluation system financed by the World Bank. Under this system, a special unit within the Ministry of Plan will scrutinize all projects over $500,000 to assure that only the most productive projects receive public investments. Furthermore, this unit will evaluate projects to modify or cancel them when their performance falls below expectations.

As it does in most developing countries, corruption exists in Senegal but is actively punished when exposed. For example, a number of cases of corruption by high governmental officials in the national marketing board, ONCAD, were brought to trial in 1980. ONCAD was subsequently abolished, largely because of public indignation. The press plays an active role in rooting out suspected cases of corruption. The highly independent legal system assures thorough investigation.

Natural resource depletion -- Senegal has, since the drought, carried out an active program of reforestation in addition to other programs to protect against encroaching desertification. Because of the increased price of petroleum products, a special unit of the Ministry of Commerce has set up an active program of energy conservation with radio, TV and newspaper ads. The Ministry uses contests and other promotional methods to encourage greater conservation of energy. An AID/Peace Corps program to promote the use of Lonerz type stoves began in 1980 and has enjoyed a very positive response from the rural population.

High fertility rates -- This is an area of great political and cultural sensitivity. Since the Prime Minister and other top government officials have spoken out forcefully on the need to lower population growth rates, the Government is moving in a determined but cautious way towards the implementation of population programs. A Population Council has formed to advise the Government on questions related to population growth. The Government has activated a private local group for the "Well Being of the Family" to look into the religious and other constraints on population questions. This group is seeking the opinions of leading religious figures on the question of family planning and is encouraging their public support for child spacing techniques. On a limited scale, direct delivery programs have started in the urban areas. Only three years ago such services were technically illegal. The Government has thus made a major move forward in this area.

Responsiveness of the political sector -- Senegal's political system is structured from the grass-roots up to be responsive to the interests and needs of its people. At the local level, elected rural communities choose budgets for infrastructure improvements, set local development goals and, most importantly, control use of the land. Within these rural communities, cooperatives and sub-cooperatives are the key structures for organizing agriculture production. At the departmental and regional levels, delegates from these rural communities meet with administrative officials in committees which periodically review developmental programs in their area and annually enumerate development objectives. Upon assuming the Presidency in January 1980, Abdou Diouf revived the position of Secretary of State for Relations with Assemblies. The main task of this new minister will be to improve liaison and communications between the central government and national, regional and local assemblies.

At the national level, the reality of opposition politics has kept the majority Socialist Party active in the hustings to ensure its holds on loyalties of partisans. Party leaders are consequently unusually sensitive to critiques from the opposition that find resonance in popular opinion. Recent changes in Government economic policy, and especially the break-up of ONCAD, was in part Government's response to problems keenly felt by the people and first voiced by the opposition. A free press, nationally televised debate in the National Assembly, and numerous other meetings for debate and dialogue guarantee that the voice of the opposition is heard and the Government kept on its toes.

Should the Government overstep its authority, an independent judiciary is always there to strike down Government decrees. In the past year, the court system found some 60 such decrees and regulations to be unconstitutional or abusive of Government prerogatives. Although the Senegalese political system has been highly-centralized, the effect of political and administrative

reforms in the last decade has been to point policy toward decentralization, greater sensitivity to local opinion, and dependence on rural communities and cooperatives for development action.

Mobility of the society -- Senegal is a highly mobile society both physically, as detailed in the Senegambia Migration Study, and socially. Ethnic lines are often drawn by location and language. Serer move to Oualof country and become Oualof, and vice versa. While the Oualof is the major group in the country, no one group has complete dominance over another. As an example, one can note that this predominantly Moslem country has been led since Independence, until January 1981, by a Catholic President.

Free flow of information -- The press and other forms of information is one of the freest in Africa. Senegalese value and support "dialogue" and there is an open exchange of a wide range of options and views. The opposition press is active and alive. Foreign press is readily available. There are no political prisoners and four political parties operate legally in the country.

Resource Papers Prepared for Joint Assessment of U.S. Assistance Programs in Senegal

Title	Author	Date
1. Private Initiatives in the Senegalese Economy Potential Modes of AID Assistance	Lucie Colvin	July 25, 1980
2. Analysis and Evaluation of Roles played by Promotion Humaine, Regional Development Agencies, and Local Institutions, in Promoting Rural Development in Senegal and Prospects for Future USAID Collaboration.	Sheldon Gellar	Aug. 11, 1980
3. Report on the Political Implications of the Joint Assessment and U.S. Aid to Senegal	Henry Bienen	Aug. 11, 1980
4. Strategy Options and Economic Considerations towards a Strategy Analysis Matrix for Use in USAID/Dakar Programming	Craig Olson	Aug. 24, 1980
5. An Analysis of Nutrition in Senegal: Three Views		
- Food Consumption and Nutrition Components of Development Efforts in Senegal	Marvin Miracle	Sept. 1980
- A Nutrition Strategy for USAID/Senegal	James Pines	Oct. 1980
- The Nutrition Factor in Senegal	Linda Worthington	June 1980
6. Population and Development in Senegal: Some Thoughts on USAID's Role and the Place of Family Planning	John Tomaro	Sept. 30, 1980

Title	Author	Date
7. Progress Report of the Administrative Reform-1971, The Rural Communes	Joe Carvin	Oct. 24, 1980
8. Casamance - A Resource Review	Axel Magnuson	Oct. 1980
9. Agricultural and Rural Development Strategy for USAID/Senegal	Don Brown Axel Magnuson	8 Nov. 1980
10. Proposed USAID Support for the Private Sector in Assisting Senegalese Development	Mark Weber	Nov. 1980
11. The Plan de Redressement: Rural Sector Reform and Its Implications	Francis LeBeau	Dec. 1980
12. Education and Training in Senegal	Joe Carvin	Jan. 1981

TABLE II. TABULAR SUMMARY OF SOCIO-ECONOMIC ANALYSIS

AREA	SOCIO-ECONOMIC INDICATORS	CHARACTERISTICS
Cap Vert	-Population: 1,100,000 all urban -Growth rate: 7% -Per capita $1000 for region but 75% population below $400/p.c. -Caloric intake 2,500 per day -Medical infrastructure: 73% doctors, 82% dentists, 66% midwives	-Heavy indebtedness -Substandard housing and clothing -Limited schooling -Overburdened public services -Social instability -High (25-50%) unemployment -Ethnically mixed
Peanut Basin	-Population: 2.57million, 15% urban -Source of 2/3rds of Senegal's revenue -Per capita income $75 in northern zone to $250 in southern zone -Social infrastructure somewhat available in northern region to almost non-existant in southern region	-Northern region, mostly Wolof peanut farmers with some Peuhl herdsmen -Central region, most overpopulated with ethnic mix of Wolof and Serer farmers. Extensive outmigration -Southern region, mostly Serer farmers/herdsmen -Areas of highest productivity and in-migration
Fleuve	-Population: 580,000, 17% of which are in St. Louis -Rural per capita income $40-80 -Income from migrant workers in France and Dakar major source of income, 25 to 50% in Upper Fleuve -Area of poorest of rural poor (with sylvo-pastoral zone)	-Lower Senegal River (Delta) mostly Wolof, Middle Senegal River Tukulor and Upper Senegal River Soninke ethnic groupings -Complete dependency on highly erratic climatic variables and river flow -Lack of infrastructure limits development of irrigation potential -Low technology now used on farms.
Casamance	-Population 790,000 -Nutrition level higher than rest of rural Senegal -High child mortality and other health problems due to endemic tropical diseases -High rainfall and undeveloped regions indicate high ag. potential -Higher literacy due to missionary schools	-Region isolated from rest of country -Major ethnic groups are Diola in Lower Casamance, Mandinge in Middle and Peulh in Upper Casamance -Large migration from Lower Casamance to Dakar and other regions -Low level of technology employed in production, low productivity
Eastern	-Population 770,000, underpopulated -Per capita income $40-150 -Social infrastructure non-existant -Communication infrastructure still limited -Major agriculture potential	-A region of forgotten people -Population made up of Peulh, Saracole and other smaller ethnic groups
Sylvo-Pastoral	-Limited population -Per capita income $30-80, poorest of the poor -Mainly Peulh herders -No infrastructure	-Population highly independent in nature, resistant to integrate into national economy -Complete dependency on highly variable climate -Directly affected by desertification and Sahelian Drought.

TABLE III - SUMMARY OF MAJOR DONOR ON-GOING COMMITMENTS
BY SECTOR AND REGION IN 1980 (IN MILLION U.S. $)

Region / Sector	Non Region Specific	Cap Vert	Peanut Basin	Fleuve	Eastern Senegal	Casamance	Sylvo-Pastoral	T O T A L
Agriculture/ Nutrition	13.7	32.4	34.3	94.8	23.6	45	21.3	265.1
Health & Population	-	6.7	18.8	8.7	-	-	3.0	37.2
Education	39.5	84	15.3	3.1	-	-	-	141.9
Infrastructure (Communication)	55.8	53.1	1.7	-	-	42.1	12.9	165.6
Industry	-	60.2	10.6	-	-	-	-	70.8
Other	12.5	22.8	13.5	-	1.3	-	-	50.1
TOTAL	121.5	259.2	94.2	106.6	24.9	87.1	37.2	730.7

Source: 1980 - UNDP Resident Representative Report on Donor Assistance; Ministry of Plan and Cooperation, Bulletin d'Information sur l'Exécution du Plan volume 4-7.

TABLE IV. TABLEAU OF PRESENT MAJOR ONGOING DONOR COMMITMENTS TO SENEGAL BY SECTOR AND REGION AS OF 1980 (Amount in Parenthesis in Million US $)

(Donor Assistance listed does not include food aid)

Regions / Sectors	Non-Region Specific	Cap Vert	Peanut Basin	Fleuve	Eastern Senegal	Casamance	Sylvo-Pastoral
AGRICULTURE and NUTRITION	-Cold Storage Units (2.0) CIDA -Fishing Equipment (3.2) Japan -Feeder Roads (6.6) IBRD -Storage Support for UMCAO (0.9) KFW	-Horticultural center (10.1) FAO -Traditional Fishing (0.8) FAO -Horticultural center Cambérène (6.1) Belgium -Traditional fishing (10.1) CIDA -Pest control (1.3) FAO -Fishing boats (1.3) CCCE -Fertilizer factory (2.8) FIB	-Ag diversification (14) IBRD/IDA -Fruit production M'Boro (5.7) FED -Pilot farms (1.1) Belgium -Ag diversification (9.4) CCCE -Wheat research (0.8) UNDP -Grain storage (1.5) CCCE -Forestation (1.1) CCCE -ISRA (0.7) FAC	-Debi-Lampsar Irr. (6.4) Kuwait -Debi-Lampsar Irr. (20) IDA -Niayes (8.1) FED -Water Canal Improvement (8.0) CCCE -Small Perimeter Podor/Matam (3.3) CCCE -Small Perimeters (2.0) Netherlands -Bakel Small Perimeters (4.6) USAID -SAED Training (4.5) USAID -Agronomic Research (1.4) FAO -Delta Perimeters (1.5) Japan -Support SAED (1.8) CCCE -Irrigation (6.9) FAC -Matam (5.8) FAC -N'Dombo Thiayo Basin (4.1) FAC - " " " (4.4) CCCE -SAED (3.8) FAC -Matam (6.2) CCCE	-New Lands II (2) IDA -Livestock (4.2) IDA -Cotton prod. (8.0) FED -Livestock E.S. (1.7) ABEDA -Livestock E.S. (4.8) Kuwait -Integrated Rural Dev. (2.9) FAC	-Sedhiou II (6.3) IDA -Forest Protection (1.3) CIDA -Sedhiou II (3.3) CCCE -Anambe Basin (4.2) Saudi Fund -Hydro-geologic study of Cas. Basin (1.3) FED -Lower Casamance (23.7) USAID -Integrated rural dev. (1.0) Belgium -Seed service (3.9) FED	-Bakel livestock (3.1) USAID -SOUEST (8.0) USAID -Livestock surveillance [illegible] FAO -Reforestation (3.1) USAID -SOUFSP (0.5) FAC -Reforestation (4.6) Germany Canada
HEALTH and POPULATION		Basic health Fibine (2.9) Belgium Water supply (2.3) ADB Dakar Hospital (1.5) FED	-Basic Health (0.7) CIDA -Village level health (3.8) USAID -Family health (1.4) USAID -Village water (7.0) Belgium	-Hospital at Matam (2.2) Belgium -Hospital in Fleuve (6.5) FED			-Village water (3.0) KFW
EDUCATION and HUMAN RESOURCE DEVELOPMENT	-Secondary education (15.0) IDA -Primary Education (2.5) FED -Primary education (22) IDA	-Senegal institute for home economics (1.3) UNESCO -Scholarships (6.6) FED -Polytech. School Thies (16.2) CIDA -Computer center (9.3) CIDA -Scholarships (7.2) FAC -Tech. Training (1.4) Switzerland -Technical Assistance (41.4 year) FAC -Vocational training (1.9) USAID -Scholarships (2.2) Belgium -University of Dakar (3.5) FAC	-Rural Development Institute Thies (6.7) FLCF -Technical schools (10.6) FED	-Socio-economic study (0.8) UNDP -University of St-Louis (2.3) FAC			
OTHERS (Infrastructure, Industrial Development, etc.)	-Railroad improvement (6.4) IBRD -Tele-communications (8.2) IBRD -Tele-communications (3.5) CCCE -Highways II (8.0) IDA -Highways III (15.0) IBRD -Railroads III (11.0) IBRD -Improve secondary roads (1.2) UNDP -Penaflex (8.2) CIDA -Train engines (4.5) CCCE Planning assistance (9.1) UNDP) -Administrative reform (0.7) UNDP -Census report (1.4) UNFPA -Land resource survey (1.1) UNDP	-Site & Service (8.0) IDA -SONEDIT II (4.2) IBRD -Para-Public sector (6.3) IDA -Free trade zone (0.8) FED -Fish dock (7.2) ABEDA - " " (7.0) CCCE -Tuna storage (0.6) Spain -Ocean fishing (10.6) Spain -City Buses (6.9) Consortium -Dakar Marine (7.8) Consortium -Dock repair (27) Norway -Autoroute (41.6) Saudi Arabia -Airport (2.0) CCCE -Electricity (2.6) CCCE -Generator (3.5) CCCE	-Petite Côte Tourism (13.6) IBRD -Foundry Thies (1.5) UNDP -Peanut crushing plant Dicurbel (9.3) CCCE -Telephone kanlack (1.7) ADB		-Iron ore study (1.3) EIB	-Ziguinchor-Cap Skirring road (4.4) ADB & (7.4) Islamic Bank -Bridges Zig-Cap Skirring road (6.5) ADF -Paving Kolda/Velingara road (14.4) FED -Rural electrification (9.4) Denmark	-Road Louga (12.9) Japan

TABLE V - MATRIX OF U.S. ASSISTANCE INSTRUMENTS

BY SECTORS - FY 1981 Units $1000

SECTORS \ INSTRUMENTS	DEVELOPMENT ASSISTANCE	TITLE II	TITLE III	PEACE CORPS	PVO'S	TOTALS
1. Agriculture Dryland Irrigated Livestock	7,682	709	2,190	495	286	11,362
2. Institutional Building Research	2,800		2,730			5,530
3. Nutrition		3,784		353	49	4,186
4. Population/Health Rural Health Population	500	1,833		91	35	2,459
5. Renewable Energy (Reforestation)	1,230		2,080	40	70	3,420
6. Human Resource Development	1,588			313	428	2,329
TOTAL	13,800	6,326	7,000	1,292	868	29,286

RELATIONSHIP OF MAJOR DONOR PROGRAMS TO SENEGAL'S ECONOMIC CONSTRAINTS (1979 - 1980) (a)

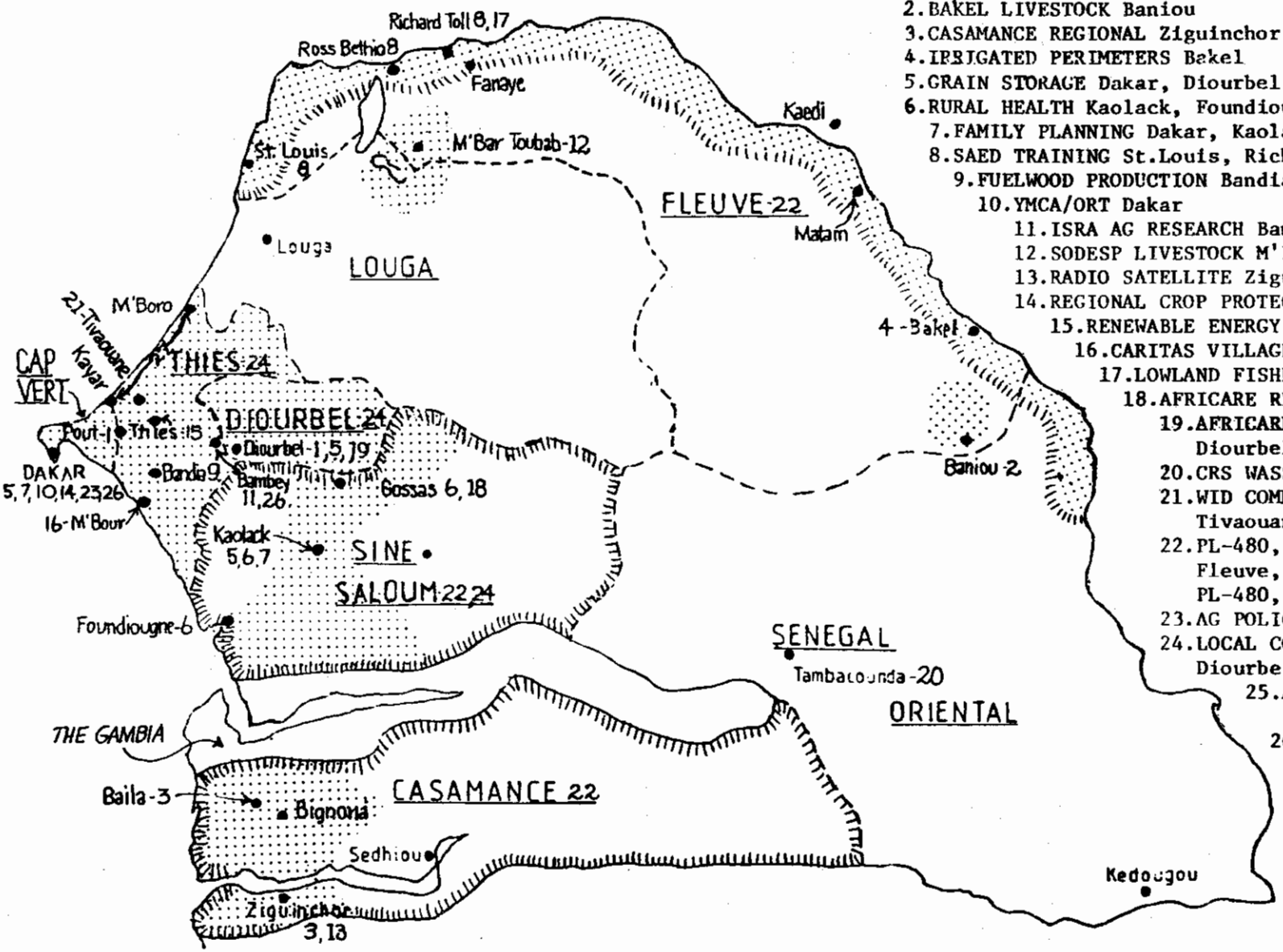
(parentheses refer to million $)

	MACRO - ECONOMIC			RESOURCES		OTHER	
	MONETARY (Revenue)	SAVING / INVESTMENT	BALANCE OF PAYMENT	HUMAN RESOURCES	PHYSICAL / NATURAL RESOURCES	TECHNOLOGY	
Description of Constraints	-Burdensome Para-Public Sector -Large and growing Debt -Limited tax/base/lack of economic growth	-Low propensity to invest (private) -Low level public/private savings -High capital/output ratio -Limited employment opportunities -Limited off-farm employment -Limited social/productive/communication infrastructure (rural)	-Limited foreign reserve -Trade deficit -Dependence on high cost fossil fuel -Lack of diversification of economy & export trade	-Limited practical/vernacular education -Low productivity of wage force -Over extended government management capacity -Urban migration/Population growth -Labor shortage/Rural exodus -Inappropriate education	-Variable climate-limited rainfall -Declining fertility of soil -Limited alternatives for other crops -Presence of endemic diseases -Heavy clay, saline, soils -Ferrogenous crust	-Inappropriate technical packages	
	Balance of Payment Support (OPEC) IMF Stand-by (234) IBRD Program Loan (60)	-Feeder Roads (6.6) IBRD -Highways III (16.0) IBRD -Railroads III (11.0) IBRD -Railroad improvement (6.4) IBRD - Telecommunications (6.2) IBRD -Petite Côte Tourism (13.6) IBRD -SOFISEDIT (3.0) IBRD -SOFISEDIT II (4.2) IBRD -Port of Dakar (6.0) IBRD -Para-Public Sector (6.3) IDA -Site & Service (8.0) IDA -Highways II (8.0) IDA -Electricity St.Louis (3.8) AfDB -Bridges Zig-Zag Skirting road (6.5) AfDB -Road Longa (5.2) ADF -Airport (13.2) Citibank -Road Tambacounda (14.4) Citibank -Road (2.3) Citibank -Airplane (18.2) Citibank -Road (8.9) First Nat. Dallas -Road (3.9) BN Paris -Fish Dock (7.3) ABEDA -Teranga Hotel (1.9) EIB -Peanut crushing plant Diourbel (31.1) Consortium BNP -City Buses (2.4) Consortium -Dakar Marines (6.3) Consortium	-Fertilizer factory (2.8) EIB -Ag diversification (16) IBRD/IDA	-Secondary education (15.0) IDA -Water supply (5.9) AfDB -Lycee Pikine (13.5) Consortium	-Agricultural Credit (8.2) IDA -Bohi-Lampsar Irr. (2.0) IDA -New Lands II (2) IDA -Livestock (4.2) IDA -Sedhiou II (6.3) IDA -Guidel Valley (2.4) ADF -Livestock E.S. (1.7) ABEDA	-Reorganized Ag. research (10.0) IBRD	DONOR GROUPS BANKS
		-Planning assistance (1.1) UNDP -Administrative Reform (0.7) UNDP -Foundry Thies (1.1) UNDP -Improve secondary roads (1.2) UNDP	-Horticultural center (5.6) FAO -Traditional fishing (0.8) FAO	-Senegal Institute for home economics (1.3) UNESCO -Census Report (1.4) UNFPA	-Forestry (0.7) FAO		U.N. AGENCIES
	Exceptional AID package (106) France	-Phosphate extraction (9.4) CCCE -Improve Petite Côte (2.3) CCCE -Peanut crushing plant Diourbel (9.3) CCCE -Fish Dock (7.0) CCCE -Cable Dakar/Casablanca (7.0) CCCE -Cable Dakar/Abidjan (5.4) CCCE -Electricity (2.4) CCCE -Generator (8.5) CCCE -Telecommunications (3.8) CCCE -Train engines (1.5) CCCE -Free Trade Zone (2.4) CCCE -Zig-Zag Skirting road (1.4) CCCE & (1.3) Islamic Bank	-Ag. Diversification (9.4) CCCE	-ITA (0.8) CCCE -Electrical Tech. School (2.4) CCCE -Soumbedioune power (1.5) CCCE -Dakar water (0.8) CCCE -University of Dakar (3.5) FAC -Scholarships (1.9) FAC -Technical Assistance (28.7 yrs.) FAC	-Support SAED (1.8) CCCE -N'Dombo Thiaye Basin (4.1) CCCE -Water Canal Improvement (8.0) CCCE -Small Perimeter Podor/Matam (3.3) CCCE -Matam (6.7) CCCE -Sedhiou II (3.3) CCCE -Iron ore study (7.2) FAC -SAED (3.8) FAC -Irrigation (6.9) FAC -Matam (5.8) FAC -N'Dombo Thiaye Basin (4.1) FAC -Integrated Rural Development (2.9) FAC	-ISRA (0.7) FAC -ISRA (0.7) FAC	FRANCE
	STABEX (83) EEC	-Zigouinchor bridge (8.6) FED -Paving Kolda/Velingara road (7.2) FED	-Fruit Production (5.8) FED -Confectionary peanuts (5.5) FED -Cotton production (8.0) FED -Fruit production N'Boro (5.2) FED	-Scholarships (2.6) FED -Primary Education (5.4) FED -Hospital in Fleuve (6.5) FED -Soumbedioune sewer (4.9) FED -Village water (6.2) FED	-Niayes (7.8) FED -Seed service (3.9) FED -Hydro-geologic study of Casamance Basin (1.3) FED -Livestock in Ferlo zone (8.5) FED		COMMON MARKET
		-Pancffel (3.2) CIDA -Cold storage units (2.2) CIDA -Storage support for ONCAD (0.9) KFW -Dakar industry (3.5) KFW -SOFISEDIT II (2.5) KFW -SOMETI (1.2) KFW -Tuna storage (0.6) Spain -Ocean fishing (10.6) Spain -Fishing Port St. Louis (3.1) Poland -Ocean fishing (6.5) USSR -Airplane (3.0) CIO Netherlands	-Traditional fishing (10.1) CIDA -Horticultural center Cambérène (8.1) Belgium -Pilot farms (1.1) Belgium	-Polytechnic School Thies (15.3) CIDA -Computer center (6.1) CIDA -Basic Health (0.7) CIDA -Pediatric center (0.9) CIDA -Dantec hospital (2.0) KFW -Village water (3.0) KFW -Village water (7.0) Belgium -Scholarships (2.7) Belgium -Basic Health Pikine (2.9) Belgium -Tech. Training (2.3) Switzerland -Sewer Rufisque (1.3) Italy	-Forest protection (1.3) CIDA -Reforestation (4.6) Germany/Canada -Small Perimeters (2.0) Netherlands -Bohi-Lampsar Irr. (6.4) Kuwait -Livestock E.S. (4.8) Kuwait -Anambe Basin (4.2) Saudi Fund		BI-LATERAL
		-Warehouse for ONCAD (4.4) USAID	(a) This includes indicative major donor activity.	-Village level health (1.3) USAID -SAED Training (1.7) USAID	-Cereals Production (4.2) USAID -Bakel Small Perimeters (6.6) USAID -OMVS Environmental Study (3.0) USAID -Bakel livestock (3.1) USAID -SUDEXP (0.8) USAID -Lower Casamance (23.7) USAID	-Ag Research & Planning (5) USAID -OMVS Ag Research (2.0) USAID	USAID

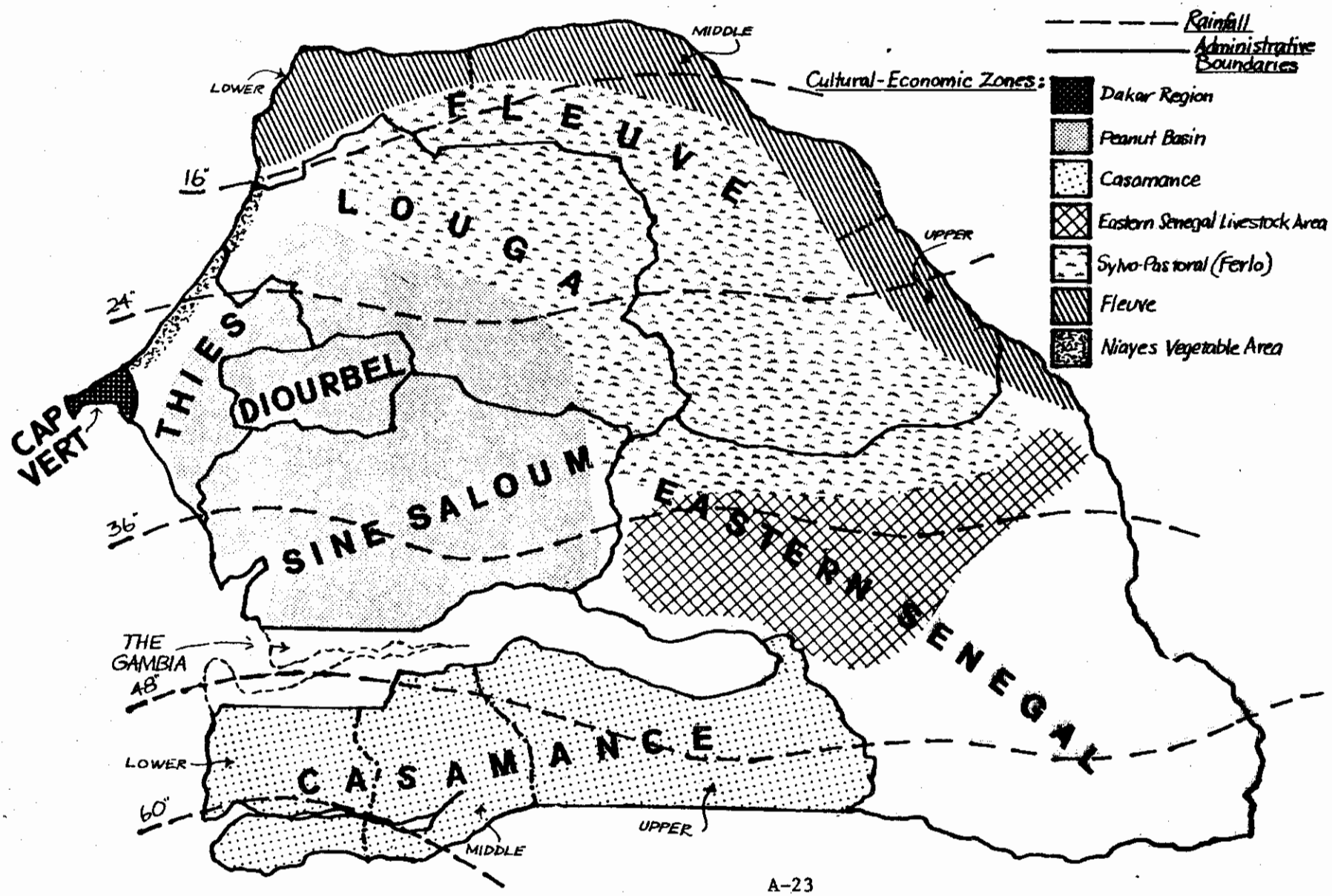
A.I.D. Programs in Senegal

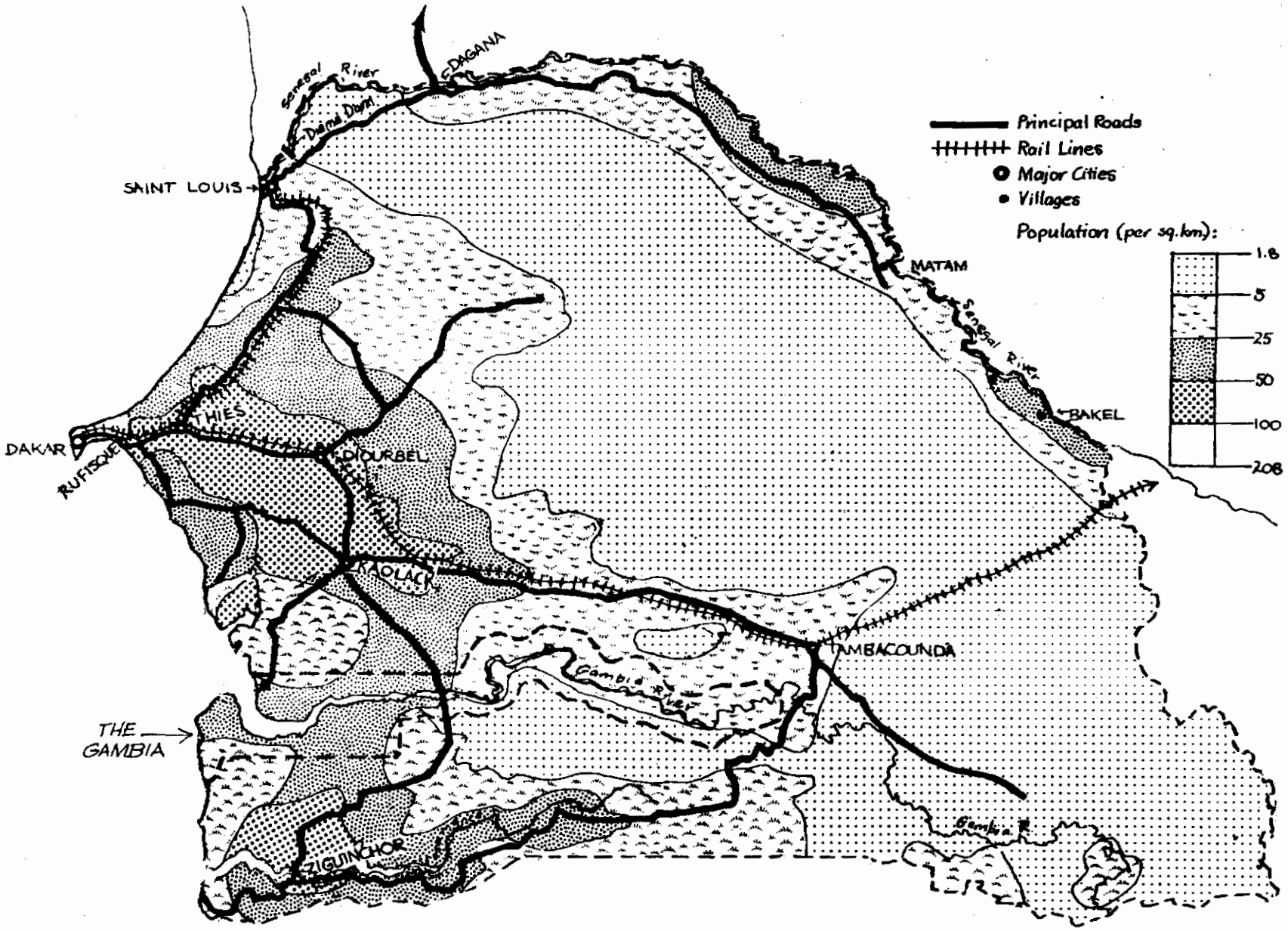
Boundaries of proposed A.I.D. emphasis zones:
Regional Boundaries: ----

A.I.D. Programs:
1. SODEVA CEREALS Diourbel, Pout
2. BAKEL LIVESTOCK Baniou
3. CASAMANCE REGIONAL Ziguinchor, Baila
4. IRRIGATED PERIMETERS Bakel
5. GRAIN STORAGE Dakar, Diourbel, Kaolack
6. RURAL HEALTH Kaolack, Foundiougne, Gossas
7. FAMILY PLANNING Dakar, Kaolack
8. SAED TRAINING St.Louis, Richard Toll, Ross Bethio
9. FUELWOOD PRODUCTION Bandia
10. YMCA/ORT Dakar
11. ISRA AG RESEARCH Bambey
12. SODESP LIVESTOCK M'Bar Toubab
13. RADIO SATELLITE Ziguinchor
14. REGIONAL CROP PROTECTION Dakar
15. RENEWABLE ENERGY Thies
16. CARITAS VILLAGE M'Bour
17. LOWLAND FISHERIES Richard Toll
18. AFRICARE REFORESTATION Gossas
19. AFRICARE/PEACE CORPS WOODLOTS Diourbel
20. CRS WASSADOU Tambacounda
21. WID COMMUNITY DEVELOPMENT Tivaouane
22. PL-480, TITLE II Fleuve, Sine Saloum, Casamance
    PL-480, TITLE III:
23. AG POLICY STUDIES Dakar
24. LOCAL COOPERATIVE STORAGE Diourbel, Sine Saloum, Thies
25. AG RESEARCH PLANNING (nationwide)
26. RURAL TECH. SCHOOLS Dakar, Bambey
27. REFORESTATION & DUNE STABILIZATION Kayar to M'Boro



Administrative Boundaries ~ Cultural-Economic Zones ~ Rainfall





Senegal ~ Communication Links ~ Population