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Country Development Strategy Statement

FY 1989

SENEGAL

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I. EXECUTIVE SUMMARY

Three Basic U.S. Interests in Senegal

The United States has three basic interests which the AID program helps to support in Senegal (apart from humanitarian considerations). These are Senegal's functioning democracy, its leadership position, and its strategic importance. Our assistance program is designed to stimulate economic growth, which in turn should help Senegal maintain its stability and democratic traditions.

Firstly, rare among Third World nations, Senegal is a functioning democracy which has maintained and staunchly defended its democratic traditions since Independence. Secondly, Senegal maintains a leadership position in international affairs; its voice of reason and moderation is respected not only in the Third World but among the entire international community. And thirdly, Senegal has strategic importance for the West: Its geographic position, shared with Brazil, as the closest link across the southern Atlantic is significant, as we witnessed during the Second World War and more recently during the Falkland's crisis; Senegal also provides the primary alternative site for U.S. space shuttles if they do not reach orbit; and Senegal and the U.S. have a long history of friendly relations, long predating Independence, which have intensified in recent years.

The Current Development Situation in Senegal

Senegal is implementing a structural adjustment program designed to restore fiscal and financial integrity and to lay the groundwork for a development program which will promote real growth. In the wake of its first consultative group meeting held December 1984, Senegal is intensifying implementation of this program. Major donors, building upon a strong and growing consensus and an active dialogue, have indicated their willingness to support this program to the extent Senegal actively implements the agreed-upon reforms. "Adjustment will come... either it will be an unplanned adjustment with unfortunate social and other consequences or a managed adjustment with the support of the international community," stated a World Bank report.

Senegal's current situation is grim and its problems seem close to intractable. Its economy is stagnant with the lowest GDP growth of any African state not affected by war or civil strife: GDP is currently estimated at minus 4% for 1984 and at an overall average growth rate since Independance of 2.3% per annum. Agricultural production per capita is declining and unemployment is rising. Unemployment is conservatively estimated at 20% of the workforce but in all likelihood is much higher. Food imports, both commercial and emergency, are steadily growing, and population is growing at more than 3% per year. The situation is further complicated by large numbers of neighbouring populations (Malian, Mauritanian and Guinean) coming to Senegal to seek employment for themselves and pasturage for their herds.

These trends have persisted despite a plethora of development plans, investment strategies, reform plans and one of the highest per capita aid flows in the world, averaging $500 million per annum for the early years of this decade. There is a great temptation to ascribe conditions to cumulative years of drought and the international economic situation. However, the critical factors, ones which the government can change, have been counter-productive economic policies, high emphasis on consumption (public and private), and inadequate attention to productivity and discipline. Senegal is also faced with environmental deterioration which can to a large extent be ascribed to human activities aggravated by continuing drought. An indication of the seriousness of this deterioration is that the northern most extent of vegetation in the region has receded south by about 200 kilometers in the last ten years.

The Government of Senegal (GOS) with the help of the World Bank has designed a third and more ambitious action program to get the economy moving. This latest program calls for (a) restoring domestic and external financial equilibrium, (b) improving the overall efficiency of investment, and (c) stimulating increases in agricultural production. This program is described by the Government's New Agricultural Policy (NAP), published in the spring of 1984, and Medium and Long Term Economic Program (Action Plan) delivered to the Paris Consultative Group. The NAP, developed by Senegal jointly with its

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donors, calls for (a) reduction of the role of the rural development agencies; (b) increased efficiency in the supply of agricultural inputs; (c) alternative production strategies; (d) more financing for rural development; and (e) environmental protection.

The GOS realizes that it cannot have a healthy economy without growth in the agricultural sector. Its agricultural sector employs 70% of its population, contributes less than 20% to its GDP, and produces less than half of its staple food even in good rainfall years. Further, production of its major cash crop (peanuts) has been stagnating. The GOS is deregulating the agricultural sector at the same time that it is trying to get its financial house in order by increasing the mobilization of domestic resources, reducing subsidies, cutting government expenditures, and reducing the size of government. Regarding the latter, the GOS is for the first time in its history no longer the major employer of new college level entrants into the labor force.

The U.S. Development Strategy in Senegal

This CDSS proposes an annual level of about $50 million for the U.S. contribution to the development effort. The World Bank estimates that overall donor resources of roughly $500 million per year are needed to help Senegal effectively implement its action plan and cushion the disruptive impact upon the social order. Attainment of the objectives of the Plan will require not only substantial donor resources, but close collaboration and coordination among the donor community and, more importantly, a steadfast determination by the GOS. Difficult decisions will have to be made. Donor assistance should be focused on assisting the GOS to make and implement those decisions while at the same time assisting in meeting the costs associated with structural adjustments for sustained growth.

We propose in this CDSS that the short-term objective for the Senegalese economy by the end of the CDSS period be achievement of a positive per capita rate of increase in the Gross Domestic Product. This will be achieved through the interaction of efforts in support of three subsidiary targets: (a) a generally improved economic performance, in large part resulting from

structural reform; (b) a minimum of a 3% increase per year in cereals production resulting from timely and adequate provision of inputs, water and marketing; and (c) a decrease in the fertility rate of from 48/1000 to 42/1000, derived from family planning efforts. The long range goal of food self-reliance remains unchanged.

United States' assistance for the past ten years has focused on geographic area development and primary health care programs. GOS adoption of the New Agricultural Policy makes many of these programs obsolete; therefore, we propose a new generation of activities designed to effectively (a) develop technology, (b) transfer technology to farmers and rural enterprises, and (c) support production expansion through free market structures. These new programs will help provide the technical tools needed to fully implement the NAP. The GOS determination to resolve its economic problems and the nature of the donor/GOS dialogue are converging to allow a consensus on the reforms to be taken. Simultaneously many of the earlier generation of projects in USAID's portfolio are both producing research results and coming to an orderly close, thus clearing the deck for more knowledgeable support of the GOS reform and development plan.

Our major effort, through all our programs and projects, during the CDSS period, will be to stimulate a major change in the "idea" structure. The Senegalese bureaucracy and policy-makers have as their heritage the statist, socialist (government can do everything best) mindset inherited from European social philosophers and consistent with African social values. If the economy is to grow and develop, then this mindset will have to change. A greater emphasis will be stressed in our program design and implementation on (a) learning from Third World countries which have progressed; and (b) appreciating the importance of creative individualism. This process has already begun through U.S.-supported exposure of key individuals to successful experiences in family planning and agriculture in the Third World. We propose that USAID intensify its cooperation with USIS and the other U.S. agencies in Senegal to stimulate the intelligentsia and policy-makers towards growth-related philosophies.

Four Elements of the USAID Support Strategy

The AID strategy of assistance in this CDSS period will concentrate on (a) supporting GOS structural and financial reform measures; (b) assisting the GOS to implement these measures by reducing institutional and infrastructural problems which impede the growth of agricultural production; (c) supporting GOS efforts to create income-generating activities which contribute both to environmental protection and increased production; and (d) continuing support for activities designed to increase human productive capacity and improve the quality of life through health, nutrition and a reduction in the rate of population growth.

A key aspect of the entire program and common to each of these four elements will be the continuation and intensification of donor dialogue covering both overall structural reforms and sectoral activities. Unemployment is high and growing; we will therefore focus throughout the program on income-generating activities. Even those employed generally suffer low incomes; this condition does not stimulate spontaneous development. Specific income-generating activities are proposed to complement the steady growth in cereals production which will provide greater income for the farm family and resultant increases in non-farm activities (e.g. village blacksmiths, shops, service industries, etc). The combination of policy reform and emphases on productivity and the population restraint, should allow food imports (557,000 tons in 1984) to stabilize by the end of the CDSS period. A brief discussion of each strategy element follows.

Support for Structural Reform: The first element of the USAID strategy of assistance in Senegal is support for the GOS structural reform and financial equilibrium program. Our assistance will be composed of non-project assistance and some technical assistance. USAID is considering a multi-year Economic Support Fund (ESF) program, subordinated to and conditioned on key systems reforms and follow-through performance factors as identified by AID and other donors based on the GOS Action Plan. We propose, for example, to support continuing GOS efforts (a) to disengage government bureaucracies from direct interventions in agriculture, as a means of assuring that farmers have timely access to inputs through competitive mechanisms; (b) to deregulate the

local cereals trade; (c) to increase domestic resource mobilization; and (d) to rationalize investment towards growth, etc. Periodic ESF disbursements will be made depending upon progress in meeting intermediate goals of the Plan. The PL 480 Title I program will complement the multi-year ESF package by focusing on complementary key reforms and by providing local currency to implement the reforms. The Technology Transfer and Support Project will provide short-term technical assistance and training in areas of policy reform, and institutional analyses in related areas to provide knowledge needed for full implementation of the reform plan.

Support to Alleviate Institutional and Infrastructural Problems: The second element of the USAID strategy of assistance in Senegal is assistance to the GOS to reduce institutional and infrastructural problems which impede the growth of agricultural production. This package will provide the technology needed in the implementation of the structural reforms. The problems revolve around the fact that agricultural production is severely hindered by the lack of both adequate and timely supplies of seed, fertilizer, water and tools. Farmers, due to lack of satisfactory inputs and marketing arrangements, cannot apply technical packages which offer gains in production and income, nor respond adequately to various incentives e.g. price, which might be developed. Incentive pricing at the farmgate level is necessary. Tight marketing control and disincentive farmgate prices combined in the past with large imports of cheap cereals have seriously discouraged local cereals production.

Sensitive to these problems, the GOS has announced that there will be a complete decontrol of the local cereals market. Applying the conditionality in its FY 1984 non-project assistance, the USAID has begun supporting, along with other donors, the GOS and the private sector, the implementation of this liberalizing policy. We propose to continue to support the amelioration of the cereals marketing environment in Senegal. Inasmuch as the private sector is presently ill-equipped to pick up the burden, we propose to assist through the provision of resources that will reduce the stresses of this public to private sector transition. Strong emphasis will be placed on working simultaneously with the GOS and the Senegalese private sector to develop both effective and economical delivery systems for agricultural inputs.

Another institutional dimension is the ineffectiveness of agricultural research. More effective systems for providing practical research results to the farmers need to be developed. AID and other major donors (France, World Bank, etc.) will be working during the CDSS period through existing projects with the Senegalese research network to improve its technology transfer methods. Objectives will be to provide new and improved varieties and techniques for local production and to strengthen the linkage between research and production on the farm and within rural enterprise. Positive results could lead to a proposal towards the end of the CDSS period for a new USAID-funded research effort.

Another major constraint to increased agricultural production is the lack of water and the unpredictability of rainfall. Because of insufficient infrastructure, water is not available in adequate and timely amounts to farmers in two regions of Senegal (Casamance and the Fleuve), where water is plentiful, relatively speaking. The irrigation and water management projects in the North and the restructured and focused water resources project in the South will concentrate on cost effective systems of irrigation. Completion of the Manantali and the Diama dams, anticipated during the CDSS period, will speed the development of irrigation on the Fleuve. USAID will support these efforts by putting 10,000 hectares into irrigated production and protecting another 20,000 hectares from salt water intrusion in the South.

Support for Income Generation and Environmental Protection: The third element of the USAID strategy of assistance in Senegal has a double focus, income generation and environmental protection. The problems: Environmental degradation in Senegal is a serious and growing problem. There have been many pilot projects and much talk (conferences) but insufficient concerted action. At the same time, unemployment is a serious and growing problem, especially with a population growth rate of about 3%. Each year up to 200,000 youths may enter the job market, swelling the ranks of the unemployed. The GOS has until recently absorbed the majority of the educated youth into the civil service with the bulk of the others remaining unemployed or seriously underemployed. However, now that stabilization, if not reduction, of the GOS workforce is an important element in the government's adjustment program, the primary outlet

is the private sector. Employment should be created in both the general and the agricultural parts of the private sector as the GOS Action Plan is implemented and the economy begins to grow. Unemployment will remain a serious and chronic problem until this happens.

USAID assistance will partially alleviate unemployment through several mechanisms: Support for the ongoing Community Development and Private Enterprise Project of the GOS is designed to stimulate the creation of small enterprises in the rural areas; assistance to new projects will be implemented to the extent possible through the local private sector or by using labor-intensive methods thus creating new job opportunities. The U.S. and other donors will support a simultaneous attack on unemployment and environmental degradation through a large scale program of reforestation and agroforestry, also using labor-intensive methods. This latter program will also impact on soil quality and income production through its agroforestry (e.g. tree crops) component. However, the largest impact upon employment should result from increasing farmer incomes and their resultant demands for goods and services.

Support for Rural Health Programs: The last element of the USAID strategy of assistance in Senegal is a continuation and expansion of our very successful support for the GOS rural health program, especially the U.S.-supported Rural Health Project, which has demonstrated that recipients will pay for health care. We also propose continuing our support for the initiation of an expanded family planning project because of the evidence of strong demand in the countryside; and continuation of the PL 480 Title II-financed Maternal Child Health program because of the positive correlation between the program and child health.

General Considerations for the USAID Assistance Strategy

The Mission will attempt to broaden its knowledge in key areas of the economy during the CDSS period. We will be seeking to expand our knowledge base of, for example, the totality of constraints to a greater role for the private sector; we have little information about current private sector interactions or alternative enterprises. It is also necessary to investigate

further the potential for alternative cash crops to peanuts, for which long-range prospects are poor. Other areas of study and analysis are how to stimulate fruit and vegetable production and processing for export, and how to obtain greater use of existing resources and enterprises which can capture increased value added, using available labor and management. Senegal possesses a large pool of trained human resources particularly in law, medicine and public administration; however, the Mission believes that attention must be directed more at the skills of business management and technical trades plus agricultural enterprises to support the new economic and trade patterns that will develop. Skills and knowledge must be developed which are relevant to the current and future needs of the country. This includes appropriate emphasis in rural programs on literacy and numeracy.

The participant training components of our assistance, including such regional assistance as the Sahel Manpower Development and the Financial Management projects, will respond to many of these training requirements. We propose to support other targets in addition to those of academic degree and technical skills training in the priority areas of agriculture and health; we will press for adoption of sound technology and management practices, particularly for private sector application and at varied levels from the computer room to the village cooperative. Cutting across the elements of the strategy the Mission plans to continue and expand its cooperation in project implementation with Private and Voluntary Organizations (PVOs) and the Peace Corps (PC) as well as to strengthen activities directly related to the private sector. Removal of constraints to agricultural production and family planning (i.e. private clinics), for example, will require close involvement of the private sector. Both the Peace Corps and PVOs are eminently suited to work in income-generating and reforestation activities.

A. FINANCIAL AND ECONOMIC MANAGEMENT CRISES

Economic Policies Since Independence

Senegalese governmental focus on questions of equity and justice led to its playing a predominant and ever-increasing role in the economy since Independance in 1960. Nevertheless, according to the World Bank Senegal's economic performance has been the worst of any African country not affected by war and civil strife although its performance has been good with respect to the provision of urban social services, the establishment of transport and communications infrastructure, and the maintainance of a free and open society. Inappropriate economic policies and consistently poor management have resulted in economic stagnation and the current financial crisis.

Preservation of social equity and the relative position of various economic groups has dominated the process of decision-making and management in recent years as the economic situation worsened. The GOS attempted, for example, to preserve the purchasing power of the population despite sharp decreases in agricultural production and national revenues. Farmers' debts were forgiven in 1978 and again in 1980; the public wage bill was raised by 36% in 1979 and every year since then has been adjusted for inflation with increases of 3-10%. Increases in world prices of key imports such as rice and sugar have been absorbed by government subsidies until the recent January '85 increase in the price of rice. Consumption, often financed by commercial borrowing, has slowly but steadily increased as a percentage of GDP. It reached a peak of 104.7% of GDP in 1981, but even with recent austerity measures, it is not estimated to have gone below 95%.

Public Sector Management

Poor management in the public sector, particularly within the numerous parastatals, served to enlarge Senegal's economic and fiscal difficulties. The principal parastatal in the agricultural sector, ONCAD, with a monopoly on the provision of inputs to farmers, was disbanded by the GOS in 1980, leaving the government owing $350 million (in 1980 dollars) to the domestic banking sector. The GOS price stabilization agency (CPSP), responsible for procurement, importation, and wholesale distribution of basic foodstuffs also

accumulated important deficits and continues to do so. A pattern has developed in which the government and the parastatals constantly operate with significant arrears owed to each other, the banks, and supplier firms. [Example: The GOS has accumulated arrears to the state electric company SENELEC, which in turn owes money to its fuel supplier (50% state-owned), which in turn has accumulated large arrears to the partially state-owned national refinery SAR, which in turn has been forced to refinance its short-term lines of credit to the banks.]

Economic Trends

The progressive inability of the GOS since 1978 to pay its way, even with much higher than average levels of donor assistance, has severely depressed economic activity and left the government unable to continue to subsidize the basic standard of living. Senegal benefited from high world prices for several years in the early 1970s for its phosphate and peanut product exports and was able to borrow on the Eurodollar market on the basis of prospects for continuing high prices for those commodities. Prices fell, however, and Senegal was left with a dollar-denominated debt aggravated by the CFA depreciation vis-a-vis the dollar.

Senegal was able to pay for 80% of its imports with its exports in the first years after Independence but in recent years that figure has hovered around 50%. Using constant 1977 prices as the base, Senegal's three million people in 1960 had a per capita income of 101,475 CFA francs whereas Senegal's six million people in 1982 had a per capita income of only 90,000 CFA. A significant indicator of the change in the economy as a whole in that period is the resource gap, the difference between the total investment of the economy and its domestic savings. The gap was 1% of Senegal's GDP for 1960; by 1982 it had grown to 14% of GDP, a marked deterioration. The level of gross domestic savings fell from 15% of GDP for 1960 to negative percentages for the early 1980s. Maintainance of the Senegalese people's relatively comfortable standard of living has been increasingly dependent upon external resource flows since Independence. Official Development Assistance (ODA) and Other Official Flows (OOF) paid for all investment and 6% of consumption during 1981, for example.

Debt Situation

The total internal arrears of the GOS and parastatals (including ONCAD), amounted to $300 million by June 1981 at the then-prevailing exchange rate. Then, the GOS made an impressive effort to reduce its arrears but over the last four years these have increased rather than diminished, particularly during the second half of 1984. Today GOS arrears, without counting those of the parastatals, are probably at least 20% of GDP. The public sector has as a result increasingly encroached upon the limited credit available to the Senegalese economy within the system of the West African Monetary Union and under the strictures based on credit availability by the IMF standby arrangements. Prior to 1977 the GOS made only marginal drawings on the domestic credit market. Now it is a significant borrower with about 14% of the outstanding credit. The loser has been the private sector. Credit to the sector expanded during the 1970s on an average of over 20% per year. It expanded at a more moderate rate of approximately 14% per year from 1979 through 1983. The average rate of growth of private sector credit has declined precipitously, however to 3% per year during the last two years.

Financial Crisis Summary

Population growth, now believed to be over 3% per year, persistant drought (five out of the last eight harvests), declining international prices for Senegal's major exports of peanut products and phosphates, progressive devaluation of Senegal's currency (the French-franc-based CFA franc, vis-a-vis the U.S. dollar in which Senegal's major imports of petroleum and rice are priced), declining per capita agricultural production, increasing public consumption and consistently poor economic policies all have massively contributed to the persistence and intensification of Senegal's economic and financial crises.

B. RESPONSES TO THESE CRISES

IMF Involvement

Senegal called upon the IMF early on in its financial crisis and, with IMF help, bilateral donor assistance and relief through four Paris Club, and two London Club reschedulings of its international debt, the GOS has managed to

keep Senegal from international default. The GOS successfully stabilized its accounts under the discipline of the 1983-84 IMF standby arrangement. It achieved this stabilization and has attempted to maintain it through the implementation of difficult, but essentially short-term, measures such as price increases, credit restrictions and new tax measures. However, the GOS has only recently begun to come to grips with the structural reforms necessary to alleviate the country's financial and economic crisis and deal with the external vicissitudes of weather and the world economy. This, despite the fact that current planning represents the third major attempt to deal with the situation (i.e. 1977 Food Investment Strategy and 1979 Plan de Redressement.)

Need for Reforms

The severity of the current financial crisis is apparent; even industries with export possibilities find it difficult to obtain credit required to operate at capacity, let alone expand. The growth rate in manufacturing has averaged less than 1% per year over the last decade, and merchandise exports, excluding peanuts and fish, have declined by almost 20% in real terms over the last seven years. Even the national refinery, SAR, and the GOS agency responsible for importation of rice, CPSP, are finding that short-term lines of credit to finance imports are drying up. Reforms such as liberalization of producer and consumer price mechanisms, improvement in tax assessment and collection, reduction in claims of the para-public sector on budget resources, and more judicious allocation of credit to priority sectors have required more commitment from the GOS than it has to date been able to muster, although it has made substantial progress in removing subsidies.

Recent GOS Actions

It was driven home to the GOS, at the December 1984 Paris Consultative Group meeting of the bilateral and multilateral donors with the GOS, that the time for bold action had arrived. The GOS has since committed itself to major reductions in its rural development parastatals and to greater market liberalization. It is preparing to examine ways in which the private sector can take over economic functions in which the state structure has been engaged. A new IMF standby arrangement for 1985-86 and another Paris Club

debt rescheduling conference were approved January 1985. The adjustment process is underway though there is a urgent need for continued aggressive implementation of reform on the part of the GOS. The price of rice, the largest imported staple food commodity and now a mainstay of the Senegalese diet, was increased 63% between February 1982 and August 1983 and by an additional 23% during January 1985. Other prices were adjusted as well: Sugar by 15%, edible oils by 20% and petroleum products by 18% during Senegal's 1983-84 fiscal year, and edible oils by another 50% and petroleum by 13% in the first half of the 1984-85 fiscal year. The January 1985 belt-tightening also included increases of 20% in bus fares, a substantial increase of 20-60% in vehicle tax, a new 12.5% tax on telephone calls, and a general increase in the licensing fees for industrial and commercial business. Thus, the GOS has taken, and is taking, strong and politically difficult actions to bring the country's consumption in line with its ability to pay.

Future Prospects

Senegal should be able to keep its head financially above water by applying its best efforts and continued assistance from its bilateral and multilateral donors. That will not be enough, there must also be growth. Seventy percent of Senegal's population live in the rural sector and agricultural production, although it contributes less than 20% to GDP, has and will continue to represent the pivotal point with respect to balancing the accounts. Medium and longer term adjustment cannot take place without prosperity in the agricultural sector.

C. THE MEDIUM AND LONG-TERM ECONOMIC AND FINANCIAL ADJUSTMENT PROGRAM

Background

The GOS has realized, during the course of the last year, that the 1979 stabilization program, while taking many positive actions, had not accomplished its objectives of economic and financial stabilization and growth. Future projections, assuming a continuation of present policies, indicate a steadily deteriorating situation. The GOS therefore developed its New Agricultural Policy (NAP), announced in the spring of 1984, and the Medium

and Long-Term Economic Program (Action Plan), presented to the donors at the December 1984 Consultative Group meeting. The main purpose of the Action Plan is to restore, by means of structural reforms, conditions conducive to sustained economic growth and domestic and external financial equilibrium. The Plan proposes an annual GDP growth of 3.2%, substantial reduction in budgetary and balance-of-payment deficits, repayment of the majority of the GOS internal debt, a substantial increase in agricultural production, continued increases in income from fisheries and tourism, and a revitalization of industry.

The Medium and Long-Term Economic Program (Action Plan)

The Action Plan objectives are to:

(a) improve fiscal performance and public sector management particularly as applied to public enterprises, as a means of raising the rate of domestic savings, reducing consumption and improving the efficiency of the economy;

(b) raise the overall efficiency and the volume of investment by strengthening the programming and administration of public sector investment, reorienting them towards the fuller use of existing assets and applying stricter profitability criteria for new investments; and

(c) support economic reform by providing growth points in agriculture, the fishing industry, and tourism with improved incentives for exportable or import substitution production in the private sector.

Action Plan Targets: The Plan sets an extensive array of targets, listed below, but it sets no priorities or implementation actions. Donor coordination will presumably be applied to sifting through the options contained in the Plan to determine the order in which these options will be supported. The targets are as follows:

(a) The Government has decided to diversify the economy in sectors which have high growth potential, e.g. fishing, tourism and industry.

(b) The plan assumes that both public and private consumption must be reduced. It anticipates that household consumption will decrease in rate of growth from 2.7% to 2.4%; and that the government consumption rate of growth will be reduced from 3.9%

to 1.0%. These adjustments should allow the domestic savings rate to increase to 13.7% by 1992 thus increasing the proportion of investments financed through domestic resources.

(c) The GOS will take strong measures to increase revenues. The Plan calls for an acceleration of the existing rate of collection of taxes and duties, ensuring that taxes owed (real estate, professional income) are paid. Increased earning will be derived from taxes on profits as a result of growth in the economy. The GOS estimates that direct taxes can increase by 7% per year through 1987 and in the following years could increase to a 9% annual growth rate. The GOS also plans to broaden the tax base by placing non-essential imported products in higher duty categories, abolishing exceptional exemptions, and improving customs administration at the Port of Dakar. Indirect taxes (sales and value-added) will be increased substantially.

(d) The Plans calls for substantial efforts to reduce expenditures. An effort is already underway to limit the rate of growth in the civil service which is projected to be only 1% for both 1985-1986 and 1986-1987. The objective is to reduce overall current government wages which now take 50% of State revenues to only 41% by 1991-1993. The GOS also plans to reduce substantially amounts spent on government housing, both residences and offices, to reduce the costs of the motorpool, and to reduce subsidies to semipublic enterprises. Measures will be taken to tighten up management of special government accounts which have been regularly in a deficit position.

Special attention will be paid to the CPSP particularly since revenues expected to be generated by the CPSP have not been deposited within the Treasury. (Studies are now in process to determine measures necessary to restore financial stability to this organization).

(e) The GOS plans to promote the cultivation and use of local cereals by developing competitively priced consumer products that respond to local needs and tastes. The aim is to reduce costs associated with rice and wheat imports which run approximately $100 million per year. The GOS plans to accomplish this reduction by developing a more favorable pricing differential between local and imported cereals, applying temporary and degressive production subsidies to stimulate local products for a period not to exceed three years, and promoting programs to test the public acceptance of processed local products.

The New Agricultural Policy (NAP)

A key element of the Reform Plan is the New Agricultural Policy which aims to move agriculture from a position of stagnation to a position of growth, although probably at a modest rate for the near future. We should stress that

the NAP came into being as a result of an analysis of the requirements for stimulating agricultural growth, an analysis conducted by the major donors working closely with the GOS and each other. A major objective of this policy is to remove the state from its current position of excessive involvement in the agricultural economy to a role of catalyst and initiator. The private sector, including both business and farmer organizations, are thus expected to play a major role in the management, supply and marketing aspects of the agricultural economy. The policy consists of five elements for which implementation plans are currently being developed in cooperation with the donor community. These five are (a) reduction of the role of the rural development agencies; (b) increased efficiency in the supply of agricultural inputs; (c) alternative production strategies; (d) more financing for rural development; and (e) environmental protection. Each is discussed in greater detail in the following paragraphs:

(a) Reduction of the Role and Structure of the RDAs:

(1) Certain agencies are to be terminated and other agencies reorganized into planning/extension organizations only. Implementation is underway: Even now, one GOS parastatal (SODEVA) is reducing its personnel by 55%; and the remaining functions of SONAR were transfered to the oil crushing firms and SONAR has been dismantled. We understand the Society for New Lands will be dismantled in March and major reductions in SOMIVAC and SODAGRI will be phased over the next three years. SAED, according to the contract plan signed in December 1984, has already spelled out mechanisms by which its production, processing and marketing functions will be turned over to the private sector. Short term assistance to new rural enterprises may also be one of the new RDA functions.

(2) All agricultural input supply and marketing services may now be undertaken by the private sector and producer groups (true cooperatives under new legislation). A first step has been taken to provide the rural population with the autonomy to manage its own affairs. Village sections, accountable to the cooperatives and the Ministry of Rural Development, have been created. These should be able to function independently for purposes of supplying members with: inputs and consumer goods, primary transportation of production, primary processing if needed, credit, mutual benefit insurance, training, education and management, and other services as decided by the Section.

(3) The GOS has passed a law in Spring 1984 providing for and regulating economic interest groups. That law represents the legal foundation for the establishment of producer groups. These economic interest groups, like the village sections, have juridical status and fiscal autonomy.

(b) Increased Efficiency in the Supply of Agricultural Inputs: The poor performance of the agricultural sector has been blamed on the poor quality of services provided by the RDAs and the government. Drought has been a contributing factor, but untimely delivery of credit and implement supply and an almost complete breakdown of the development and supply of improved seeds were serious factors.The GOS recognizes that the costs and management of input subsidies and supply services is beyond its capability.

(1) Fertilizer: The NAP recognizes the potential of the private sector to supply inputs more efficiently than present structures permit and calls for distribution of fertilizer by the private sector. Fertilizer use in recent years has been very low (30,000 tons). It is estimated that 285,000 to 300,000MT are required to fertilize all cultivable land. Possibilities for increasing fertilizer use are now under study. These possibilities include reducing the cost of production through economies of scale at the expanded fertilizer plant, importing fertilizer if domestic production is not competitive with the world market, and providing a subsidy to be gradually reduced over a four-year period indexed to a progressive increase of cereals' prices.

(2) Seeds: The GOS plans to increase production of high quality seed stock (groundnuts, millet, sorghum, corn and rice) by contract farmers; the transfer of responsibility for replenishment and management of groudnut seed material to the oil mills (this contract was signed in December 1984); and the stimulation of the village sections and producers groups to store their own cereals and groundnut seed by providing warehouses and technical assistance.

(c) Alternative Crop Production Strategies: Domestic production needs to be increased. Reasons noted include the diminishing potential of peanut exports, high prospects for continued price increases in the international cereals market (although currently the quality of rice that Senegal imports is selling cheaply), the economic benefits from increasing the proportion of domestically produced food, and the political benefits from expanding the market linkages of different regions of the country. Discussion is focused upon means of phasing out the current cheap food policy and reducing the consumer preference for 100% broken rice. This issue goes beyond the agriculture sector and becomes a consumer issue of political importance. The action program forthis aspect of the NAP will be the most crucial but most difficult to develop.

(d) Financing Rural Development: The rural share of government investment and the terms of trade for the rural sector have not been rational. Resources allocated to agriculture have often leaked away

though excessive bureaucracy or poor administration. Input subsidies and administrative costs have become astronomical with questionable benefits. The Casamance and the Fleuve development objectives will require major sums for infrastructure that must be paid for from future production. All of these questions will require considerable study to ensure that costs are brought into line with resources.

(e) Environmental Protection: Composed of topsoil blowing away, dust storms of increasing severity and increasing frequency have become the most visible sign of environmental degradation. Reduced crop yields, difficulty in finding good wells, and scarcity of fuelwood are also serious related problems which are getting worse. These problems are quite well known but insufficient human and financial resources have yet to be devoted to producing solutions. A few trees are being planted, some wells are being improved and some research is underway; but, there is a need for an action program to turn the situation around. The donor community has not had sufficient time to respond although the GOS has produced a draft action program.

This combination of targets endorsed by the NAP and the Action Plan, including the augmentation of revenues, stabilization of expenditures, expansion of production, and external debt rescheduling, should allow the GOS to generate the surpluses needed to pay off its substantial debt to the private and banking sectors. Foundations should be laid at the same time for steady growth of the economy, particularly in the agricultural economy.

D. THE AGRICULTURE ECONOMY: PROBLEMS AND POTENTIALITIES

General Status of the Agricultural Sector

The agricultural sector has been and remains the pivotal point with respect to the economic health of Senegal. Performance in this sector most affects overall economic performance despite the small contribution to GDP which has ranged during the last decade from a high of 18.4% in 1977 to approximately 7.0% in drought years. Three simple factors make this so: First, Senegal's people depend upon agriculture for their livelihood; the impact on economic performance of 70% of the people producing 7% to 20% of GDP is impossible to ignore. Second, agricultural exports have provided a significant portion of Senegal's foreign exchange earnings, ranging from a high of 83% in 1961 to a low of 7% in 1981. And third, the decline since Independence in per capita food production represents the single most alarming economic fact facing the nation. Senegal produced 65 to 70% of its cereals

requirement at Independence but now over 30% of the cereals consumed are being imported. This means that the rural sector is no longer producing enough food to feed itself, much less the urban population. This ever-increasing failure of the agricultural sector to meet the nation's food requirements places the nation in ever-increasing jeopardy.

Agricultural Environment

A major question for both the Senegalese and the donors is why, in spite of substantial investments in the agriculture sector, the sector's performance has been declining. Part of the answer lies of course in the devastating pattern of insufficient rainfall and environmental degradation. Senegal is a small country with a surprisingly large number of diverse ecological systems (see Annex 3) which in recent years, due to drought, population pressure and inappropriate policy decisions, have been deteriorating at an accelerating rate. Satellite imagery shows that the northern extent of vegetation in the region has been pushed approximately two hundred kilometers south in the past ten years. The loss of vegetative cover results in an increase in soil erosion, reduced soil fertility, and an inability of the land to absorb and retain what little rain does fall. Average annual rainfall for the years since 1968 has fallen to half of what was previously considered "normal". The drought has reduced once productive agricultural land to marginal conditions on which crop production is risky and unprofitable.

The speed of the change in Senegal's natural resource endowment has not only frustrated planners, but the farmers themselves are finding that time-tested practices no longer work. Much land which had produced crops of millet, sorghum and peanuts is now suitable only for grazing. Not only have crop lands been lost, but also forested areas are now under siege by farmers demanding access to still productive sites. Livestock including large Mauritanian herds driven ever southward systematically sweep the agricultural land during the dry season eating any crop residues. Potentially beneficial manure deposited by livestock is often collected for fuel. These heavy demands placed upon the land deplete the soil resource, reduce crop yields, diminish vegetative cover, increase erosion, lower carrying capacity for an expanding population and create shortages of fuelwood, traditional medicines,

fencing material and forage. The drought has also been responsible for a lowering in the water table to depths which are often inadequate for groundwater recharge. Traditional wells dry up for months on end and reduced soil moisture speeds the death of the less drought resistant trees.

Cutting across the multiplicity of ecological systems and the myriad of other problems are the questions of water management and soil conservation. Water management, soil conservation and reforestation are an integral part of the process of maintaining or increasing agricultural output in a country whose pasture land is rapidly changing to desert and whose farm land is rapidly changing to pasture. There is a need in the south for numerous salt water dikes to reclaim and/or to protect farm land which is being threatened by salt water intrusion due to a reduction in the flow of the numerous river and stream systems. There is a need throughout the country to deepen and dig new wells for human, animal and plant consumption and to regenerate vegetative cover to protect the soil and help absorb and retain the limited rainfall. The potential for irrigated agriculture in the north is substantial, estimated at 250,000 hectares or more. Development of this potential could change the food balance sheet and the quality of the diet. Only an estimated 30,000 hectares are irrigated at present and nearly 1/4th of this is developed for sugar cane production.

Food Crop Production

Agricultural production in Senegal is characterized by an overwhelming dependence upon dryland crops. Approximately 2.4 million hectares are under cultivation and the GOS estimates that as much as 3.7 million hectares are potentially cultivable. Nevertheless, to date, less than 50% of Senegal's annual requirements for staple cereals have been produced domestically. Commercial and food aid imports account for the difference. The division of the crop area is: peanuts - 47%, millet/sorghum - 44%, rice - 3%, maize - 2%, cotton - 2% and cowpeas - 2%. Millet accounts for the bulk of domestic cereals production. Fruit and vegetable production occupies some land around urban areas, but individual plots are small and marketing is weak. Livestock and forestry are of considerably less importance in terms of contribution to GDP.

The dominant agricultural enterprise of Senegal has been that of peanut/millet production in the central drylands (peanut basin). Peanut production has been supported with extensive infrastructure and incentive prices leading to an expansion of area. Millet production in this system is primarily consumed by the peanut farmers themselves and has been indirectly supported by groundnut inputs. Occasional millet marketing programs have maintained some parity between the two crops, however division of land between these two crops tends to be about equal, depending upon the farmer's assessment of his food requirements.

Production is highly variable with rainfall; even in years of good rainfall, yields have been low, much lower than the performance for like crops elsewhere. Average yields during good rainfall years for rice have been 1.3+ ton/ha, for millet 0.57 tons/ha, and for corn 0.34 tons/ha. The GOS policy of relying on imports of cheap food, combined with excessive government control has probably been the critical factor discouraging food production. The relative cheapness of imported rice has perpetuated low domestic cereals prices which in turns have necessitated low prices for inputs and farm services. Unattractive commodity margins and input prices have discouraged private initiative in agricultural marketing and services.

Rice production has been receiving increasing attention due to the irrigation potential which will result from the dams on the Senegal River. A technical team from the International Rice Research Institute considered conditions on the Fleuve to be favorable for a modern system of intensive rice cultivation. Early investments in rice production proved to be disappointing, however improved management and new intensificated policies established in 1980 have had a favorable impact; yields have almost doubled. Even efforts to intensify rice production in the Casamance, initially frustrated by lack of infrastructure and difficult soil problems, are now meeting with excellent results where new technical packages are being applied.

Export Crop Production

Production of peanuts, the traditional major export crop, was also declining at the same time that per capita food production was declining, in

spite of major governmental attention to the peanut sector. Exports of basically peanut products during the early years of Independence were sufficient to cover imports, both food and non food. However, earnings from peanuts have declined sharply since 1977 (even in good rainfall years) as a result of poor production and variable world market prices (see Table I, page 32). Current prospects for peanuts are dim. The market for peanut oil is being eroded by sunflower, palm and soya oil, and thus the peanut niche in the oil seeds market is becoming narrower and less profitable.

The Government of Senegal has attempted to diversify its agricultural exports, basically fish and cotton. Fish exports have increased remarkably (over threefold) in the period '77-'84 while cotton has increased only slightly. Diversification efforts should and will continue to contribute to increased agricultural exports, but it is clear that will not be enough. Senegal must reduce its dependence on food imports, which have more than doubled in the last ten years. Senegal imports not only 50% of staple cereals, but also sugar, vegetable oil, fruits and vegetables.

GOS Strategy in Agriculture Since Independence

The public sector selection of technology and the methods of dealing with farmers have tended to be heavy-handed and quite ineffective. The GOS has used the structure of official and parastatal organizations to supply subsidized inputs and maintain controlled prices to the farmer. Seeds, fertilizer, machinery and markets were managed by various inefficient and expensive government or quasi-government entreprises. Unfortunately, insufficient priority was given to the definitions of the goals or structure of these parastatal organizations. They were found convenient by the donors for supporting large integrated development projects after the drought of the early '70s, but, the costs of these organizations and the operations they supported had grown by 1980 beyond the government's financial capability to maintain them. Increases in production being delivered were so small that per capita availability of food was falling.

Three routes have been pursued by the GOS in expanding cereals production. Crop diversification or improved cereals production in the peanut basin

was the first foreign aid supported effort extending across the entire peanut basin. Poor implementation, unfortunate government policies, inadequate research and inconsistent administration have caused these projects to have only modest impact on millet and sorghum production. Another tack was to develop irrigated rice production along the Senegal River. An investment of $150 million added 13,000 irrigated hectares producing yields of only two and one-half tons per hectare. Since 1980 a shift in attention to productivity, rather than expansion, has raised rice yields to four tons per hectare on 20,000 hectares. This new modest investment route has been hampered by the same policy, administrative and infrastructure problems that constrained dryland efforts. The third approach has been to develop the Casamance, the highest rainfall area. Unfortunately the infrastructure in this region is poor and the administrative support weak. Inappropriate and inefficient government policies which reduce incentives and strangle the provision of inputs, have further inhibited attainment of full potential in this region.

There has been little agronomic research and hard data available to support many of the proposed new technical packages in spite of substantial investments in research. Even for the new technologies such as improved variaties, nitrogen fixation plants, etc., there have been insufficient research extension linkages. Key inputs such as fertilizer and seeds, for example, have been late in reaching the farmer, often poor in condition, and minimal in benefit over traditional practices. There have even been cases in which the technology eventually delivered to farmers differed from that recommended by the Rural Development Agency which in turn differed from that suggested by the research organization.

Minimum Production Targets

Senegal requires about 36,000 additional tons (based upon good year production) of cereals per annum to maintain current per capita consumption given a population growth rate of at least 3.0% per year. A 4% growth rate in cereal production would be possible for the millet zone if inputs, extension services and markets were functioning. However, this would supply only 24,000 tons (good rainfall) of additional cereals per year. Land and infrastructure improvement for irrigated agriculture requires approximately $10,000 per

hectare using current practices and institutions and a program to provide 36,000 additional tons per year would require 10,000 hectares per year costing $100 million. Costs possibly could be cut $50 million per year using revised development practices. Senegal has chosen to pursue both dryland and irrigated development to minimize costs and achieve maximum increases in food production.

Formula for the Future in Agriculture

Solutions are clear, though not simple. They include (a) reduced direct government interventions in favor of market incentives and expanded private sector involvement; (b) accurate and timely input supply; (c) improved water management; (d) better research and linkage to the farmers; and (e) active environmental protection.

(a) Policy changes to remove GOS stranglehold on agriculture and provide incentives to farmers: The Minister of Rural Development, convened department heads, agency heads, donor representatives and others interested in the agricultural sector for a wide ranging discussion of the problems and approaches November 1983. The donors individually and collectively expressed their reluctance to provide further support to the agriculture sector unless major policy reforms were undertaken. This led to the donors working with the government in developing a new policy through a series of working sessions.

The New Agricultural Policy (NAP) that resulted from the dialogue and which incorporates important reforms jointly recommended by AID, the French and the World Bank was adopted, after debate by the Cabinet, April 1984. The government then appointed five commissions to develop implementation plans for each element of this policy as described in Section II-C above.

Perhaps no issue is more critical to the future of the agriculture sector than price policy for the cereal crops, particularly for rice. The government recognizes that it cannot maintain its present price/subsidy structure and donors are in no mood to support this policy either directly or indirectly. Key policymakers now accept that the present disparity among cereals prices will have to cease if the agricultural economy is to grow. Price increases

announced January 11, 1985 set a new context for agriculture and planting decisions in the 1984-85 crop season. Farmers' responses will be important to future planning.

(b) Adequate and timely input supply is essential to increased production: The efficacy of this requires no additional discussion.

(c) Improved water management (where water is available): The potential for improvement in irrigation methods and the returns expected from increased dependence upon irrigation are very promising in both the Senegal River Basin and in the Casamance. It has been estimated that about 250,000 hectares of irrigable land in the Senegal River Basin can be developed by the improved water control that will be provided by the Diama and Manantali dams. Feasibility analyses for improvement of land and installation of irrigation systems indicate that the cost can be reduced to under $5,000 per hectare and raise rice yields to six tons per hectare per year. (Some experts believe that even more land can be developed at lower costs and with higher production potentials therefore irrigation research and pilot studies will be undertaken to explore this potential and set goals for future CDSS periods.) This CDSS visualizes average land development costs in the Basin at $6,000 per hectare and rice yields of five tons per hectare per year on land which is double cropped and four tons per hectare on land which is single cropped in rice.

It is clear that the GOS does not have the resources to fully develop this region. However, the GOS can have a catalytic effect on the private sector by testing new techniques and alternative cropping strategies.

We have seen dramatic increases in yield in the Casamance region from water control including tidal flood protection and runoff irrigation by regulated flow of rainfall. These systems are being constructed by a few enterprising farm communities with modest technical input and they have succeeding in raising rice yields from one ton per hectare to more than two tons per hectare at a total cost of about $50 per improved hectare. We propose to support further development of the dams and dikes with the development of supplementary well irrigation where up-land sites make it

feasible to use wells in stabilizing the water supply and ensuring maximum yields.

(d) Increased agricultural research and better linkage to the farmer: Despite the problems with the research establishment, some very interesting results have been identified based upon research that is available, pilot work in various development projects and adaptation from similar agro-economic situations. The maize program in the Casamance, for example, has shown that yields of maize can exceed that of upland rice, thus major expansion of maize is possible in that region. There has also been promising work in rice planting methods which have resulted in higher yields. Along the Senegal River, there have been successful experimental plots of maize, sorghum, wheat and vegetables. There are a number of promising tree species which provides a basis for soil conservation and agroforestry.

(e) Environmental protection including especially reforestation and soil/water protection: As mentioned earlier, there have been numerous pilot projects in the domain of reforestation, Howedver, what is needed is a national campaign to promote tree planting and agroforestry. Consciousness in the importance of tree planting can be raised by a variety of techniques, but, particularly in the initial stages, by concentrating on income generating tree varieties which farmers will maintain and protect.

Thus this CDSS is written at a time when a policy framework is defined which USAID supports. The new factor in this present situation is a strong consensus among the donors about the problems and the courses of action and a willingness at the Presidential level to make the necessary difficult decisions. The translation of the policies to action programs which will implement those policies will be a difficult process and will require closer coordination among donors on both sectoral and project levels. The Government appears committed to making the necessary policy changes, and as of this writing major steps have been taken (Section II-B). While Senegal's agricultural resources are not favored by the gods, it can substantially increase its food production and consequently incomes for the rural majority.

E. HEALTH AND POPULATION

Population Growth Rate

Senegal's present population is already straining the country's ability to provide jobs, and assure food, basic health and social services for its people. Senegal's current Population Growth Rate (PGR) is undoubtedly in excess of 3.0%; however, official projections, themselves alarming, are based on the 1978 World Fertility Survey in which the rate was determined to be 2.8%. The population will reach 15 million within a mere 15 years (2010). A population of 15 million would include a labor force of 5.2 million (30% of the 1982 labor force of only 3.4 million was unemployed). The number of dependent children under 14 years of age will equal Senegal's total current population of 5.9 million and the country's cereals requirements will reach 3.3 million metric tons, six times current availability. This PGR is totally incompatible with the resources that the GOS has for improving or maintaining the quality of life of its people. If the people of Senegal do not come to grips with this situation over the next five years, then inevitably they must face an accelerated decline in per capita GDP and further long term erosion of the national resource base, the environment and living standards.

A recent study indicates that only 6% of women reported having used contraceptives in the past and one half of them had used traditional methods only. However, 22.5% of these sexually active married women of reproductive age did not wish to get pregnant at the time of the survey. It is clear that a need for family planning services exists.

GOS Health Programs and Mortality

It is also becoming apparent that current GOS-sponsored health programs are having an impact on mortality. An excellent study, conducted in the former Sine Saloum region in late 1982, for example, indicates that the death rates for children aged from 12 months to 60 months may have fallen from the World Fertility Service (WFS) level of 191/1000 to a level of 153/1000 or fallen by 20%.

Infant mortality (deaths from zero to 11 months) is high (100-130/1000) and life expectancy is only 50 years. Diarrhea causes 23.8% of all deaths whereas malaria (9%), measles (6.9%), tetanus (5.4%), meningitis (3.5%) and polio (1.2%) combined only cause 26.0%. Diarrhea is, by far, the leading though easily preventable killer of children under five. The major cause of death in children which is not easily preventable is the respiratory disease complex which causes 23.0% of deaths. Malnutrition among young children varies from year to year and from region to region. Data from children monitored in a PL 480 feeding program indicate that, during the season prior to harvest, between 7% and 15% of children are below 70% of their expected weight - i.e. acutely and severely malnourished. These rates vary from 4% to 7% during the period of plentiful food supply. A more controlled random sampling of children revealed only 4.4% of children under 80% and 0.5% under 70% of their expected weight. However, the MOH believes that this survey and its more optimistic findings is suspect because of methodological errors and the fact that it was conducted during the season following the best harvest during the past ten years.

Illness among the adult workforce is not well understood. Malaria is undoubtedly the single most important cause of lost work during the growing season. Wound infections, malnutrition (particularly inadequate nutritional levels in pregnant women), and chronic infections such as tuberculosis also enfeeble adult laborers. Schistosomiasis is not now an important public health problem but may become one with the development of irrigated agriculture. Both morbidity and mortality peak at the end of the rainy season due to an increase in the prevalance of diarrhea and malaria superimposed on a malnourished population which has no food reserves from the previous harvest and no money left to buy food.

Health/Population Sector Resources

The Health/Population sector in Senegal is plagued by: a totally inadequate budget ($3.25/capita/year); a concentration of both human and financial resources in the urban areas; an inadequate number of well trained personnel; and an austerity program prohibiting significant increases in personnel. Health's share of the national budget has shown a steady decline

since 1972, when it was 8.6%, to this past year when it was 5.14%. Senegal devotes a large percent (63.1) of its budget to personnel salaries and support. It is estimated that the amount of money in real terms devoted to non-personnel expenses fell by 20% between 1978/79 and 1982/83. (A practical result of this stringency is discontent among the personnel in the Ministry resulting in strikes among physicians and nurses last year over salaries and working conditions.) A physician directing a health center and ten peripheral health posts has a non-personnel expense budget of $120,000 per year with which to provide health services to a population of 200,000.

The GOS, with USAID support, was among the first of African governments to initiate universal payment of user fees. It remains among the very few governments which encourage decentralized management of these fees by locally elected groups, it continues to embrace the training of village health workers, even those remunerated by the villagers, not by the state. And, Senegal is mounting an aggressive family planning program intended to provide contraceptive services to people outside the capital city. It is the first francophone West African country to do so.

Health Care System

The basic unit in the health care system is the health center (HC). It is staffed by a physician, two to three midwives, and nurses each and ten to 15 other paramedical personnel. Each HC serves approximately 200,000 people. Peripheral to the HC is the Health Post (HP) staffed by a male nurse who usually, but not always, has training equivalent to that of the registered nurse (RN) in the U.S. Each HP serves approximately 10,000 to 20,000 people. The GOS is committed, at the village level, to training a male first aid worker and a female birth attendant. When trained, these become the community health worker (CHW) team. These minimally trained, often illiterate individuals provide very simple but sometimes lifesaving services to approximately 1000 people in one core and two satellite villages. Senegal now has approximately 50 HC, 500 HP and 700 CHW teams.

Medical Training

Senegal has a relatively well developed network of training institutions in the health sector. The medical school, the first in Francophone Africa, is still unarguably the best, though budgetary constraints have compromised its quality. It graduates approximately 20 Senegalese physicians and five physicians from neighboring countries each year. There are also schools of nursing (90 graduates annually), midwifery (40 graduates annually), sanitation and environmental hygiene, and the World Health Organization (WHO)-supported CESSI (Centre d'Enseignement Supérieur en Soins Infirmiers) which graduates four Senegalese nurses and six nurses from other countries each year. CESSI graduates have two years postgraduate training in health care administration and pedagogy.

Table I

BALANCE OF TRADE 1977-1984

(in billions of CFAF)

	1977	1978	1979	1980	1981	1982	1983	1984
Exports								
Groundnut products	75.5	23.5	41.7	19.9	9.2	44.3	59.4	54.8
-unrefined oil	(40.2)	(13.0)	(25.5)	(11.9)	(6.0)	(33.9)	(38.8)	37.1
-refined oil	[illegible]	(3.4)	(3.5)	(1.8)	(0.2)	(0.2)	(1.6)	(2.4)
-cake	[illegible]	(6.3)	(10.2)	(5.9)	(2.8)	(9.5)	(14.0)	(14.3)
-peanuts	([illegible])	(0.8)	(2.5)	(0.3)	(0.1)	(0.7)	(4.7)	(1.0)
Cotton	4.9	3.4	3.5	2.2	2.0	5.0	9.7	5.7
Fish	16.4	17.6	21.3	21.2	37.5	-8.0	-7.8	33.9
Non-Ag. products	67.1	46.3	49.9	60.4	90.3	71.5	73.5	100.6
Total Export Earnings	163.9	90.8	116.4	103.7	139.0	166.8	195.4	229.7
Imports								
Rice	11.2	12.6	14.3	13.1	27.1	24.8	22.0	21.8
Wheat	4.6	2.9	5.4	4.5	4.8	5.1	8.2	8.5
Sugar	5.5	3.7	3.8	5.4	2.8	1.8	2.1	1.4
Other food products	13.1	14.3	16.5	12.3	17.3	21.8	21.6	23.5
Non-Agr. products	135.3	134.5	140.4	164.7	221.7	225.9	259.3	234.4
Total Import Costs	169.8	168.0	181.3	205.5	274.7	282.1	314.2	313.6
TRADE BALANCE	-25.9	-77.2	-64.9	-101.8	-135.7	-115.3	-118.8	-83.9
AGRICULTURAL TRADE BALANCE								
A. Including fish	52.3	10.0	25.0	2.5	-4.3	42.1	42.0	38.9
B. Excluding fish	45.9	-7.6	8.4	-18.8	-41.3	-5.9	-5.8	-16.7

TABLE II - PRODUCTION OF MAJOR CROPS, 1961-1985

YEARS[1]	PEANUTS		MILLET/SORGHUM		RICE		MAIZE		COWPEAS		COTTON		Total Cultivated Area (1000 Ha)[2]	
	Production (1000 Tons)	Area Planted (1000 Ha)	Production (1000 Tons)	Area Planted (1000 Ha)	Production (1000 Tons)	Area Planted (1000 Ha)	Production (1000 Tons)	Area Planted (1000 Ha)	Production (1000 Tons)	Area Planted (1000 Ha)	Production (1000 Tons)	Area Planted (1000 Ha)		
1961	922.5	977.8	392.3	683.2	71.2	67.8	27.4	30.6	28.7	45.2	0.08	0.99	1,804.79	(48.4)
1962	992.8	1025.5	406.6	839.8	83.5	73.4	28.4	32.8	15.1	56.2	0.11	1.01	2,027.91	(54.4)
1963	893.9	1013.0	423.7	864.7	89.9	71.5	26.8	31.5	12.8	49.3	0.11	0.87	2,030.87	(54.5)
1964	952.4	1084.2	478.4	959.5	105.2	74.3	26.7	32.7	14.2	51.3	0.29	2.14	2,204.14	(59.1)
1965	1019.3	1055.0	513.8	1010.8	108.3	86.3	37.1	47.2	16.8	56.3	0.52	1.69	2,257.29	(60.5)
1966	1122.1	1182.1	560.1	1069.4	121.9	82.1	40.8	54.2	13.7	53.5	0.70	1.45	2,372.75	(63.6)
1967	857.1	1114.1	423.5	996.7	124.7	87.2	41.8	53.9	18.2	68.8	1.92	2.28	2,322.98	(62.3)
1968	1005.2	1163.0	655.0	1155.5	133.9	100.8	56.8	71.7	30.4	99.2	4.27	4.04	2,595.04	(69.6)
1969	819.5	1193.1	449.3	1053.6	61.1	76.9	25.3	36.4	17.1	67.8	9.75	6.69	2,434.49	(65.3)
1970	788.8	963.1	634.7	1037.3	140.1	103.7	48.9	55.4	22.5	71.2	11.50	9.81	2,240.51	(60.1)
1971	582.0	1049.7	382.0	966.5	93.1	89.3	33.1	50.8	17.7	63.1	11.61	13.62	2,233.02	(59.9)
1972	985.4	1060.4	583.2	970.4	107.5	84.0	37.6	48.8	25.9	71.0	21.16	18.33	2,252.93	(60.4)
1973	570.0	1071.4	322.0	936.1	37.9	53.3	20.2	32.4	10.8	86.4	23.31	20.36	2,199.96	(59.0)
1974	657.0	1025.1	510.2	1102.9	65.2	64.8	33.8	39.2	15.2	52.9	32.61	28.12	2,012.02	(54.0)
1975	980.7	1052.2	796.2	1144.7	120.4	85.2	43.2	48.6	22.3	56.4	40.60	37.96	2,425.06	(65.0)
1976	1434.1	1312.5	616.4	964.5	130.2	93.5	44.4	58.1	24.8	60.8	30.49	39.21	2,520.61	(67.6)
1977	1186.3	1285.1	507.6	948.9	126.0	88.6	43.5	48.6	16.2	63.4	45.22	41.85	2,476.45	(66.4)
1978	509.3	1161.2	360.2	942.8	63.0	63.3	33.2	53.6	11.7	57.2	37.17	47.11	2,325.21	(62.4)
1979	1050.7	1154.3	752.0	1054.7	146.4	91.3	54.1	56.4	18.2	62.4	33.81	48.31	2,467.41	(66.2)
1980	672.9	1047.9	520.6	967.5	96.6	78.7	46.2	67.7	18.8	55.4	27.23	30.91	2,248.11	(60.3)
1981	521.3	1064.6	545.0	1116.7	64.7	67.1	57.0	78.4	17.1	54.3	20.96	29.92	2,411.02	(64.7)
1982	869.9	1010.1	736.4	1176.9	120.0	69.1	68.0	35.8	28.8	68.5	33.72	39.28	2,419.68	(64.9)
1983	1091.7	1121.1	585.2	990.9	105.2	68.2	82.2	86.2	12.6	50.3	43.66	36.07	2,352.77	(63.1)
1984[3]	568.8	987.5	351.8	783.6	108.5	52.0	60.6	70.5	12.9	39.4	31.00	33.36	1,966.33	(52.7)
1985[3]	682.4	884.1	471.5	1002.9	135.8	66.1	98.5	82.7	15.8	52.5	33.80	48.20	2,136.50	(57.3)

KEITA, M. (1984), Agricultural Development Office, USAID, Dakar, Senegal

[1]The year refers to the crop year; i.e., 1961 refers to the crop year 1960/61 planting mid 1960, harvest end 1960.

[2]Figures in parentheses represent the percentage in total arable land areas under cultivation. The total arable land areas are estimated to be 3,728,000 hectares.

[3]Preliminary estimate of Ministry of Rural Development as of October 1984.

TABLE III

SENEGAL: SELECTED EXPORTS, 1977 - 1982[1]

(Volume in metric tons)

	1977	1978	1979	1980	1981	1982[2]
Peanut products	661,217	219,133	401,195	175,279	56,793	331,134
unroasted peanuts	81,633	5,439	10,247	2,723	2,904	4,559
unprocessed oil	192,334	52,726	120,565	62,530	22,594	151,485
refined oil	34,995	12,307	15,369	11,233	432	153
peanut meal	332,254	148,131	255,314	98,368	31,363	194,877
Non-peanut Products	2,642,611	2,473,920	2,438,482	2,324,777	2,074,257	2,061,323
of which:						
fresh fish	37,552	22,343	36,386	49,295	46,316	44,982
shellfish	6,349	6,380	6,722	6,532	5,226	5,369
processed fish	16,316	13,223	11,695	11,537	13,176	15,413
fresh vegetables	12,353	7,698	4,466	11,985	7,173	10,121
flour	6,086	21,007	3,390	3	203	431
gum arabic	746	362	2,239	484	152	300
leather and skins	741	953	1,256	1,114	1,350	1,110
cotton in bulk	12,588	10,505	9,345	3,327	4,190	10,311
TOTAL	3,203,328	2,698,053	2,359,677	2,560,156	2,131,030	2,412,012

(Value in millions of CFAF)

	1977	1978	1979	1980	1981	1982[2]
Peanut products	75,509	22,539	42,254	17,571	9,143	41,918
unroasted peanuts	10,411	795	1,970	463	384	642
unprocessed oil	40,206	13,033	27,046	11,324	6,236	31,125
refined oil	8,295	3,425	3,772	1,583	126	51
peanut meal	16,597	6,286	12,466	4,197	1,899	10,100
Non-peanut Products	77,411	71,720	71,604	83,196	126,731	138,119
of which:						
fresh fish	4,614	5,690	6,288	7,157	10,093	10,496
shellfish	4,035	5,331	6,079	6,437	6,828	7,457
processed fish	7,807	6,622	6,352	7,310	10,642	11,695
fresh vegetables	1,244	743	722	371	393	1,098
flour	460	1,598	1	-	21	59
gum arabic	195	139	124	126	76	173
leather and skins	402	514	732	616	729	649
cotton in bulk	4,876	3,415	2,943	2,168	1,991	4,770
TOTAL	152,920	95,259	113,858	100,767	135,876	180,037
Memorandum Item CFAF/$1	235.3	209.0	201.0	225.8	272.0	328.6

Sources: 1977-1980: Ministère de l'Economie et des Finances, Direction de la Statistique, Analyse du Commerce Extérieur du Sénégal en 1979 et 1980, tableau no. 3, p. 15.
1981-1982: Direction de la Statistique, Division du Commerce Extérieur.

[1]Some figures do not agree with those of Table 1.11.
[2]Figures for 1982 are provisional.

TABLE IV

SELECTED AGRICULTURAL IMPORTS, 1977 - 1982[1]

Products	(Volume in metric tons) 1977	1978	1979	1980	1981	1982[2]
Dairy products; honey	17,058	14,364	13,344	12,375	n.a.	n.a.
Fruits and vegetables	41,976	45,617	51,172	42,703	28,267	44,587
Wheat	95,963	142,154	122,860	97,136	121,769	99,166
Maize	13,781	12,027	9,384	23,232	4,464	5,735
Rice	248,0[illegible]	238,996	321,360	302,536	339,815	341,516
Kola nuts	9,[illegible]	8,150	10,707	7,954	6,328	7,430
Sugar	61,6[illegible]	55,647	53,322	54,188	51,742	37,578
Canned fruits/vegetables	9,517	8,403	11,383	5,424	3,640	5,563
Fats and oils	15,294	23,123	16,706	36,836	67,693	69,399
Beverages	14,145	12,736	12,391	9,076	12,537	9,178
Tobacco	2,905	3,090	2,912	2,514	3,001	2,589
All other Imports	1,304,[illegible]58	1,380,777	1,346,369	1,239,447	n.a.	n.a.
of which:						
Petroleum Products	(814,559)	(921,772)	(911,273)	(949,288)	(989,642)	(914,158)
TOTAL	1,834,698	1,945,584	2,003,110	1,843,939	2,084,312	1,870,530

Products	(Value in millions of CFAF) 1977	1978	1979	1980	1981	1982[2]
Dairy products; honey	3,796	3,164	3,169	3,962	n.a.	n.a.
Fruits and vegetables	3,497	3,202	3,783	3,644	4,305	5,135
Wheat	4,609	2,855	3,377	4,966	5,794	4,134
Maize	382	283	339	811	284	266
Rice	11,263	12,610	14,796	18,102	25,996	25,495
Kola nuts	820	573	590	611	1,300	1,513
Sugar	5,533	3,708	3,351	5,369	6,963	3,730
Canned fruits/vegetables	1,771	1,482	2,874	1,091	849	1,363
Fats and oils	1,822	2,993	2,155	5,150	11,585	11,537
Beverages	1,400	1,321	1,739	1,228	1,380	1,492
Tobacco	1,709	2,065	1,816	2,115	2,607	3,286
All other Imports	150,725	136,058	137,790	175,132	n.a.	n.a.
of which:						
Petroleum Products	(23,380)	(23,881)	(22,644)	(58,228)	(80,740)	(75,310)
TOTAL	187,547	170,114	197,979	222,256	292,341	325,935
Memorandum Item CFAF/$1	215.3	209.0	201.0	225.8	272.0	328.6

Sources: 1977-1980: Ministère de l'Economie et des Finances, Direction de la Statistique, Analyse du Commerce Extérieur du Sénégal en 1979 et 1980, tableau no. 3, p. 13.
1981-1982: Direction de la Statistique, Division du Commerce Extérieur.

[1]Some figures do not agree with those of Table I.11.
[2]Figures for 1982 are provisional.

III. U.S. DEVELOPMENT STRATEGY

A. USAID OBJECTIVES

Primary Objectives

The overriding long-term objective of USAID in Senegal remains to support Senegal's goal of achieving food self-reliance, meaning the capacity to feed its people by domestic production and trade, even in drought years. The short-term objective of USAID in Senegal is to participate in a cooperative effort with the GOS and other donors to restructure the Senegalese economy and lay the groundwork for positive growth. This necessitates USAID formulating a very simple, pragmatic and measurable goal, namely, "a positive per capita rate of increase in Gross Domestic Product."

Subsidiary Targets

This is line with the medium-term action program which the GOS presented to the donor community December 1984. This program, prepared with World Bank assistance, focuses on financial equilibrium and income growth both at national and individual levels. Its specific growth target is achievement of an average GDP growth rate of 3.2% in the coming period through 1991. Achievement of this goal, as far as USAID support is concerned, will be the result of the interaction of efforts directed at three subsidiary targets: (a) Generally improved economic performance resulting in large part from structural reform; (b) a 5% yearly increase in cereals production resulting from adequate inputs, water and marketing; and (c) a decrease in the fertility rate of 48/1000 to 42/1000 derived from the family planning efforts.

Prospects for This CDSS Period

The average GDP growth rate since 1960 has been extremely low and declining, averaging roughly 2.3% per year. It is estimated at 3.4% for 1984. When compared to the population growth rate, currently over 3%, the overall per capita GDP growth rate has been negative. It is not possible during the next five years to decrease the population growth rate because health programs have decreased and will continue to decrease the mortality

rate. However, it is possible to decrease the fertility rate during this CDSS period and in that way lay the groundwork for a reduced rate of population increase by 1990 and beyond of no more than 2.5%.

Thus, a positive rate of growth, albeit small, should be established by the 1990s. A key indicator will be the rate of growth of food imports which have more than doubled in the last ten years. If the 5% annual growth in cereals production can be attained, then the level of food imports of 557,000 tons in 1984 should stabilize or slightly decline by the end of this CDSS period.

B. PROGRAM STRATEGY

Program History

The current program was established in response to the great drought of the late 60s and early 70s. USAID (with other donors) has supported area-specific activities directed at increased food production and a reversal of the tide of environmental degradation. Much has been accomplished on this area-specific basis but little, if any, progress has been made towards improving the overall situation with respect to agricultural production and reversal of environmental degradation. The situation has worsened sharply in fact. The last year has been one of reevaluation and analysis by the GOS and the donor community. AID completed a major assessment of the agricultural sector in September 1984. This assessment represents a compilation and analysis of what is known about the dynamics within the rural sector. The report confirms that the focus of the AID program has been appropriate, but that it has been conducted within an inappropriate policy atmosphere. This current program is speedily coming to an orderly end, thus clearing the way for a new program directed at eliminating the constraints to increased agricultural production and associated economic activity. Eighteen of the twenty-three bilateral SDP projects being administered by this Mission during FY 84 have or are scheduled to terminate before the end of FY 1986. (See final page, Section IV.)

New Strategy Elements

Much of the strategy contained in the FY 83 CDSS is still valid. The most significant changes proposed in this CDSS are:

(a) Emphases on removing constraints to agricultural production (rather than on area-specific interventions);

(b) a greater emphasis on income generation in the rural sector;

(c) the launching of an important program of reforestation and soil regeneration to be based largely on the pilot efforts of the last few years; and

(d) a reduced emphasis on public sector institutional growth.

Continuing Strategy Elements

An element of the earlier CDSS which will be strengthened in all the programs and projects is the exposure to Senegalese policy makers and intellectual leaders to new and different ideas and methodologies. Senegal as a nation was born out of the aftermath of the political ferment in Europe and Africa which spawned numerous experiments directed at creating socially equitable societies. Senegal's leaders were part of these movements and they have experimented with their own form of African socialism since independence. There are many commendable aspects to the resulting social order, but economically, the model has broken down.

It is obvious, today, that much of the top leadership of the nation is committed to economic reform; they need exposure to new ideas and models at all levels in the bureaucracy to bring about the internal ferment which will result in the development of a new consensus and a spirit of cooperation and determination to implement reform. USAID proposes to strengthen our on-going emphasis on dialogue, seminars and discussion groups, and the provision of technical assistance, short-term training and observation tours responsive to this need and tailored to key leaders.

Program Composition

We are proposing a program of about $50 million a year, divided evenly between project and non-project assistance. The program will be composed of

ESF and PL 480 Title I components, devoted to structural policy reform, and SDP and PL 480 Title II components, devoted to services delivery, technology transfer, institutional development (primarily for the private sector) and investments. The program will be comprised of fewer but larger projects designed to impact on productivity constraints. The program, with respect to both policies and investments, will be concentrated on the rural sector. Increasing emphasis will be placed on employment generation and environmental rehabilitation, while the earlier emphasis on agricultural production, health and family planning will be maintained.

Strategy Origins

The Strategy is based on the GOS "Medium and Long Term Economic and Financial Adjustment Program (Action Plan)," the World Bank "Country Economic Memorandum," USAID analyses of weaknesses within the economy, and the Mission's analysis of AID's strengths and other donor inputs. USAID/Senegal's four-pronged approach is aimed at helping the GOS put the rural economy back to work. If in this process the economy reaches a state of financial equilibrium and if the structural problems are resolved, then the basis should be laid for a slow but steady real per capita GDP growth in the '90s and beyond.

C. THE FOUR ELEMENTS OF THE USAID STRATEGY

The AID strategy of assistance in Senegal in this CDSS period will concentrate on (a) supporting GOS structural adjustment and reform measures; (b) assisting the GOS to reduce institutional and infrastructure problems which impede the growth of agricultural production; (c) creating income-generating activities which contribute both to environmental protection and increased production; and (d) continuing activities designed to increase human productive capacity and improve the quality of life through health, nutrition and a reduction in the rate of population growth. Each of these strategy elements is discussed in detail in the following paragraphs.

We will focus throughout the program on income-generating activities. Specific projects are proposed but we believe that the steady growth in cereals production will also have substantial income and employment generation effects. The combination of policy reform and emphases on productivity and the population restraint should allow food imports to stabilize by the end of the CDSS period.

(a) Supporting GOS Structural Adjustment and Reform Measures: The GOS has developed a detailed program (described in Section II-C) to redress its financial problems. This plan was reviewed by all the donors in Senegal's first Consultative Group meeting in December 1984. The U.S. and other major donors expressed support for this Plan while stressing the importance of aggressive implementation. This institutional reform and development effort will require constant dialogue, monitoring and timely provision of technical assistance. We plan to use ESF, PL 480 Title I, and selected technical assistance in support of the program in this CDSS period. We will concentrate during the first three years of the period on activities supporting GOS efforts:

(1) to implement the new agricultural policy;
(2) to tighten fiscal control and mobilize greater domestic resources;
(3) to restore liquidity to the banking sector;
(4) to develop and implement a national cereals policy; and
(5) to privatize fertilizer, seed and equipment distribution.

We will be proposing a three-year ESF Program, which will encourage an orderly implementation of reforms, with disbursements tied to and dependent upon performance. The PL 480 Title I Program, while supporting the Reform and Stabilization Programs through conditionality and foreign exchange saving, will also provide the local currency required for implementation. It will also promote the use of local cereals. A market will develop for the additional local production of these cereals as urban and semi-urban populations develop a taste for corn and sorghum. We anticipate by this time that the Millet Transformation project (PACD 5/86) will have established the feasibility and suitability of the use of processed millet in easy commercial

preparations. We will be proposing a second multi-year ESF program towards the end of the CDSS period depending upon progress on the reform program by the GOS. The second multi-year ESF, while continuing to maintain emphasis on implementation of policy reform, will be used to finance elements of the GOS investment plan, particularly those related to agricultural production and environmental rehabilitation.

Implications of Reform Measures

There will be an increasing need for specialists to work with the GOS on specific elements of the reform plan as it moves into full implementation. A considerable effort will be required to set priorities and perform the analyses required to implement the various elements of the plan, although much of the process of identifying the problems which must be solved and identifying the general direction in which the GOS must move has already been articulated. Considerable coordination and discussion will be required with the leading donors and ministries concerned with macroeconomic and agricultural performance.

U.S. technical capabilities may also be in demand in such areas as disinvestiture of public-owned corporations, fiscal reform, etc. USAID capabilities to respond to GOS requests for assistance in the areas of policy analysis, management and operation studies, audits, regulations and procedures and follow-up training will be augmented by the Technology Transfer Support Project. We will make every effort to ensure that these public sector developments move forward. All avenues for tapping U.S. analytical and management expertise will also be explored. The GOS has indicated in the current Adjustment Program that, for example, it will be disinvesting itself of part of the stock which it holds (currently valued at roughly 68.5 billion CFA) in Senegalese corporations. The GOS will need assistance in this process. USAID will explore assistance options such as the International Executive Service Corps (IESC) and Project Sustain which can provide practical private sector experience. [If Senegal continues to implement its reform and stabilization program, then it might be an excellent candidate for additional ESF funds devoted to policy reform. However, prior to making a firm recommendation, we would like more experience with current GOS efforts].

(b) Assisting the GOS to Reduce Institutional and Infrastructural constraints Which Impede the Growth of Agricultural Production: This element of the program will provide the technological complement to policy reform. The challenge is to facilitate within the agricultural sector an orderly transition from government control to new, free-market/private-sector based enterprises. The GOS has taken a major step forward in beginning to dismantle the highly centralized, inefficient state mechanisms which have overcontrolled the rural sector. Emphasis is now being placed on farmer initiatives and private sector participation. However, there are still serious constraints to substantial increases in cereals production. New structures, preferably private and competitive must develop for the delivery of agricultural inputs (fertilizer, seed, farm machinery, credit, etc.) and for the marketing of farm outputs. New institutional relationships between farmers, private entrepreneurs, cooperatives and government must be created to serve the needs of the rural communities as the current RDAs are trimmed back, reorganized and/or abolished.

Production Potential

The removal of the RDAs and the increased freedom and opportunity for farmers is expected to release a level of energy that has been encumbered for some time by ineffective supply of inputs and services . It is expected that farmers can raise cereals production about 5% per year through sound applications of available technology such as Souna III millet, chemical fertilizer and improved water management. This CDSS provides for concentration on realizing these benefits by assuring the supply of the essential inputs and enabling the GOS to carry out its reform of rural infrastructure. The program in conjunction with the anticipated inputs of other donors will enable the GOS to achieve a broad-based program of economic growth in the rural sector.

Agricultural Production Support Project

USAID proposes to use several projects in a coordinated program to achieve the production benefits expected in this CDSS period. The mainline project in this group will be the proposed Agricultural Production Support Project.

This project will facilitate the establishment of alternative channels for input distribution and farm services. It will assist private and cooperative groups to set up sales and service outlets for seeds, fertilizer and implements. It is noted that the New Agricultural Policy opens the door for private initiative and at the same time reduces state interventions in these activities.

The key factor for future growth will be the establisnment of dynamic rural supply and service networks to respond to existing commercial demand for inputs. Technical assistance will be provided where necessary to guide and plan this new infrastructure; however, the major participants in the Agricultural Production Support project will be the agro-commercial banks and the farm service enterprises. The project will assist in establishment of commercial distribution channels, practices and facilities through technical assistance and financing. Commodities such as foundation seed material and fertilizer ingrediants may be imported to expand the supply produced by existing channels. The local currency proceeds from such imports will be recycled through banking channels to serve as new working capital for expansion of the volume of goods and services available to the farmer.

Irrigation and Water Management Project

The Irrigation and Water Management Project for the Senegal River Valley and the Southern Zone Water Management Project will provide complementary, region-specific inputs in achieving the production goals of this CDSS.

Senegal River Valley

AID has been planning for ten years a major contribution to the development of the Senegal River Valley. USAID will launch a development effort early in 1985 based to a substantial degree on the successful Bakel Irrigation Project (which has substantially increased yields from two to four tons per hectares) and on the many studies of the River. We plan to participate in the irrigation program in the Fleuve region to the tune of 10,000 hectares, in the central and upper reaches of the Valley.

The NAP provides for privatization of future irrigation and USAID believes this offers significant possibilities for future expansion and improvement of performance. Interest in private farm development has increased as the construction of the dams (the Diama dam in Senegal to be completed in 1986 and the Manantali dam in Mali to be completed in 1989) has progressed. USAID-supported irrigation projects will concentrate on the exploration of more efficient construction techniques, the improvement of water and input management, and the development of alternate crops yielding a higher rate of return, while expanding acreage. These projects propose to stimulate private sector investment through policy reform (e.g. land tenure, investment codes, marketing, etc.), improved extension and infrastructure development. Projects will be experimenting with the higher, lighter soils, although some of the lower clay soils will be developed for rice production. Alternate (reduced water demand) crops such as fruit trees, vegetables, millet and maize will be explored. Development of the proposed 10,000 hectares will be designed to demonstrate that there are alternative crops and alternate irrigation systems; irrigation systems which cost less per hectare to construct and operate, and crops that yield a high return on investment. As part of our efforts in this region we will place priority on streamlining and improving the efficiency of SAED including privatization of current holdings (approx. 13,000 hectares of irrigated land, two rice mills and a large construction capacity).

Water Management Project

It is clear to USAID that throughout the country the non-availability of water at appropriate times and in appropriate amounts is a major constraint. Senegal cannot continue to count on rainfall, which is sporadic and highly variable at best. There exists substantial opportunity for better management of existing water through anti-salt dams, deep wells, and small impoundments. Several of these techniques have been tested very successfully under the AID-supported Casamance Development Project, scheduled for completion in 1985. Research has shown that adequate water control can increase production by as much as 25% even without improved inputs. Improved technical packages have been developed, however, for farming under adequate water and input conditions; under these, yields have increased substantially, as witness the

maize and rice experiments cited in Section II. USAID is planning to develop a six-year FY 86 program for improved water management for the Southern half of the country, where adequate supplies of underground water and higher rainfall exist. This program would build on these successful experiments. Emphases will be placed on small anti-salt dams, to protect 20,000 hectares of cropland, small catchment dams, to ensure adequate water supply on another 10,000 hectares, and deep wells.

River Basin Development

It should also be [illegible] that this USAID is managing a number of regional planning and monitoring projects which impact upon the development of the Senegal and Gambia River Basins. Although these projects in themselves will not have a near-term impact upon production, they are key to our overall efforts to develop institutional capacity for improved water management on a regional basis.

Potential Grain Marketing Initiative

An important factor in substantially increasing production of cereals is the lack of an effective marketing system. The movement and pricing of grains was strictly controlled by the government until recently, in an attempt to keep prices down for the urban consumer. Farmers rarely received an incentive price for their production. Since liberalization of the cereals' trade is part of the NAP, it will be important to survey closely farm-gate prices to ensure that farmers do receive a remunerative price. The GOS is concerned that because of seasonal availabilities private traders will take advantage of both rural and urban populations.

The GOS has therefore expressed an interest in developing mechanisms which will place a floor and a ceiling on grain prices possibly through interventions in the market place. It is studying the cereals marketing sector to determine if there is or is not a need for a stabilization mechanism. USAID feels in general that the GOS's control over rice pricing and availability (50% of grain requirement) can be used as a tool to affect the value of other grains, but we will explore with the GOS the economic viability of various policy options. It is possible that after a few years of

experience with a liberalized market, and as production begins to increase, USAID might wish to participate in a stabilization effort. This could lead to a possible grain marketing initiative during this CDSS period.

Agricultural Research Activities*

A final constraint to increased agricultural production is insufficient and inappropriate research. The GOS has a very complex research network which, however, is not providing sufficient research results on cereals production or alternative cash crops. Further, the limited results that are available are not readily getting to the farmer because of an inadequate research extension linkage. USAID has now in implementation three research activities: Farming Systems Research with Michigan State University, the Casamance research activities and a research activity in the context of SAED on the Senegal River.

The Agricultural Research Project will continue the institution building in the micro (farming systems) and macro (policy analysis) levels in the agricultural economics department of the national research institute and will provide critical technical assistance for other disciplines to accelerate the output of adapted technology. The USAID inputs are an integral element of a coordinated multi-donor program which is building hopefully a center of excellence for agricultural research in the Sahelian zone. USAID will also continue to draw heavily upon and expand the existing linkages between

research programs in Senegal and the programs at international centers and U.S. Universities, particularly the programs being conducted at the International Institute of Tropical Agriculture (Nigeria), the International Center for the Agriculture of the Semi Arid Tropics (India), the West Africa Rice Development Authority (Liberia), the Beans and Cowpeas Collaborative Research Support Program (California), the Sorghum and Millet CRSP (Nebraska), the Peanut CRSP (Texas A & M) and several other projects supported by the S & T Bureau.

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* See also Section III-D, Research Agenda, below.

USAID will integrate its management of these activities while at the same time working with the research establishment to improve management and insure that additional attention is directed towards cereals, alternative crops, more effective applied research programs, and research extension linkages. Based upon progress in the development of an effective research and extension system which is responsive to farmer needs, the Mission may propose a new research project towards the end of the CDSS period.

(c) Focusing on Income-Generating Activities Which Contribute Both to Environmental Protection and Increased Production: USAID/Senegal considers a continuation and intensification of efforts to stabilize the environment to be of the utmost priority. Senegal is suffering accelerating environmental degradation resulting from drought, from deforestation and from poor land management. Effects are strongest in the northern half of the country, although they're being felt in the South as well. The desert is advancing rapidly, topsoil is being blown away, and over-cropped soils are losing fertility.

Programs to date have been of a small pilot nature, but there have been numerous minor successes. The process of dune stabilization by the GOS in the coastal area north of Dakar (Niayes) is well on its way towards successful completion. The development of village woodlots with AID funding by the Peace Corps, Africare and Catholic Relief Services are highly successful pilot efforts. Also, we are anticipating positive research results from the two million dollar agro-forestry and soil conservation activity currently being funded under the Ceresls II project. This experimental effort includes alley cropping, windbreaks, woodlots and general village tree planting.

Employment Generation and Environmental Protection Combined

The tragic fact remains that each year Senegal is losing 100,000 hectares of forest cover and unknown but substantial amounts of topsoil. At the same time, Senegal is faced with a serious and growing problem of unemployment (30% of the work force) and underemployment. Even if the stabilization program is effective and the economy starts to grow in the short-term (CDSS period), growth will not keep pace with population increases. The GOS is stringently

limiting the growth of the government bureaucracy as part of the stabilization program and, in fact, is starting the process of laying off excess personnel (in January 687 personnel were released from SODEVA, 600 plus from SONAR, and planning is underway for the reduction of other RDAs). USAID is concerned to help generate large numbers of employment opportunities in the short-term and to assist creation of more economically viable and sustainable employment in the long-term.

Therefore, we are proposing for FY 1986 a bold program to be financed by several donors of environmental protection in the Northern half of the country that will (a) provide for substantial tree-planting in a variety of modes -- forest upgrading, dune stabilization, village woodlots, orchards and agroforestry; (b) lay the groundwork for an on-going self sustaining program of reforestation which is income generating; and (c) provide employment opportunities for the rural and urban unemployed and underemployed.

Such a project per se cannot solve the environmental problems of Senegal. It can however stimulate the process which will be necessary for continued and sustaining environmental activity. We see the requirements for a self sustaining program as threefold: (a) A large scale and rapid planting program to begin to arrest or slow down the accelerating rate of soil loss; (b) a nationwide information campaign to convince each Senegalese that tree planting/maintenance is in his/her own economic interest; and (c) a widespread system of nurseries which produce economically valuable seedlings (fruits, nuts, timber, nitrogen fixing, resinous, etc.) readily available to all Senegalese at reasonable prices.

The first requirement, <u>large scale planting</u>, is relatively simple and can be managed through the private sector inclusive of cooperatives, farmers, producers groups, PVOs and the Peace Corps. We propose a five-year, multi-donor effort. We estimate that up to 50,000 hectares could be planted, 50,000 hectares of cropland protected (through windbreaks and nitrogen fixing trees), and substantial short-term employment provided under such a program.

The second requirement, a mass information campaign, will require a high degree of commitment and organization on the part of the government. Efforts will have to involve all types of social, political and religious organizations to get the message across in a convincing fashion. This element, if successful, will provide the incentive for continuous planting and replanting long after the project is over. (Research and observation has shown that farmers and villagers will maintain and protect trees if they feel it is in their interest.)

The third element, widespread development of nurseries, will be a joint effort between the government and the private sector. We believe in the long-run there is great potential for private sector nursery development which will permit the continuing availability of trees without donor/GOS support. There will continue to be an important role for the forestry service, however, in continuing research into fast growing, drought resistant, highly productive trees, both native and imported varieties.

It is clear that there is tremendous potential for increased farmer income directly through production of fruits, oils, gum arabic, nuts, and construction materials, as well as indirectly through improved soil quality. Our objectives and the potential impacts of such a program are therefore multiple: (a) Environmental protection; (b) rural income generation; (c) setting the framework for a continuing program; and (d) opening up private sector employment opportunities.

Other Employment Opportunities

We will also examine ongoing and new projects for opportunities to contract with local firms and/or use labor extensive implementation techniques. For example, under the new irrigation project labor-intensive perimeter construction and maintenance will be fully used. Our primary area of focus will be the farmer with respect to longer-term, economically viable job creation. Farms must become economically viable production units generating surpluses which can be used in the marketplace and thus stimulate further employment. The farmers' ability to demand and pay for services can create thousands of jobs in the rural sector. The creation of off-farm

service and productive activities will, to a limited extent, be initiated through the Community and Enterprise Development Project (685-0260), a project which is just starting. This project (LOP $9 million) is designed to assist village groups to develop income-generating activities with the assistance of PVOs. If this approach is successful, then we plan to build and expand upon it.

(d) Improving the Productive Capacity of Rural Workers and the Quality of Life Through the Provision of Health and Family Planning Services: The last element of the USAID strategy of assistance in Senegal is based upon methodical evolution during a seven-year period in which the GOS, with USAID assistance, has developed low-cost health and family planning delivery systems. Emphasis has been and continues to be on the expansion of both the services offered and the territory covered. The expansion must be in such a way as to ensure that the local population not only wants the services but is willing and capable of paying for them. It has been determined that the current systems are having a positive impact upon health and will have an impact upon fertility at a price which the GOS and rural population can afford. USAID also believes that the delivery of simple curative and preventable health services to the village level will interrupt the vicious cycle of infectious disease and malnutrition, increase productivity and help slow the rural exodus. This element of the program consists of two projects: The Rural Health II Services Project, approved in FY 1984 and the Family Health Services II Project, scheduled to begin in the spring of 1985 as well as a continuation of the PL 480 Title II MCH program. These will be the only health activities during the CDSS period with one possible exception described below.

Senegal Rural Health II

The much heralded success of the "Sine Saloum" or Senegal Rural Health I Project (SRH I) project is primarily the result of policy reforms undertaken by the MOH in response to lessons learned (in the first SRH project) and to a willingness on the part of the MOH to collaboratively search for new solutions to chronic problems such as how one pays the recurrent costs of providing health services in rural areas. The fully funded five-year Senegal Rural

Health II (SRH II) project, initiated in FY 1984 (LOP $9.2 million), will be implemented during the CDSS period and a follow-on project will be considered for FY 1990. Three important problems remain to be resolved with the model USAID has been supporting in the Sine Saloum despite progress to date in the project and possibly the most positive policy environment in Africa (payment of user fees and decentralized, non-governmental control of the proceeds).

First, local communities must determine if, and how, they can pay the recurrent costs of supervision, e.g. transport of the Community Health Workers (CHW) by the dispensary nurse. USAID and the MOH are convinced that sufficient resources exist at the community level to amortize, maintain, and fuel a moped, if communities choose to spend their minimal discretionary funds in this way. The GOS must, at the same time, remove the remaining administrative barriers to their doing so. SRH II will define a reasonable system for local assumption of these costs and test the communities' willingness to pay them.

Second, much work remains to be done to assure that selected PHC technologies, i.e. oral rehydration therapy (ORT), immunization (EPI), growth monitoring and family planning, are introduced at the village level in an effective way. SRH II will emphasize introduction of the first three technologies and the SFH/DA, the fourth.

Lastly, SRH II will allow the GOS to continue to grapple with the problem of defining the ideal mix of skills necessary at each level of the system to assure effective implementation of the program. The GOS must redefine what is practical in terms of staffing patterns in the face of overall reductions in the civil service being imposed by the economic crisis.

Senegal Family Health and Demographic Analysis

It is obvious that Senegal must reduce its Population Growth Rate (PGR) if the average citizen's life is to improve, or even if Senegal is to avoid a reduction in the standard of living during the next quarter century. An agressively implemented, effective program to sensitize couples to the value

of spacing births and the provision of contraceptives to those wanting to use them, will allow Senegal to have an impact on family health.

The new seven-year Senegal Family Health and Demographic Analysis (SFH/DA) project, which will be authorized in FY 1985 at a level of $20 million, will have three elements: (a) Support to the development of the national family planning service delivery system; (b) support to the National Census Bureau (BNR) to conduct the next census and appropriate demographic analysis designed to better determine the relationship between the PGR and socio-economic development; and (c) support to PVOs and individuals in the private sector who provide family planning services. The PID for this project was approved in January 1985.

The goal of the SFH/DA project is to raise the prevalence of usage of modern contraception from the current estimated level of three percent to 15% of married couples. After almost one full year of active family planning services delivery in 20 centers, the current SFH I project (LOP $2.5 million PACD 6/30/85) has provided services to about 10,000 clients. Achieving the 15% prevalence level will require that 200,000 couples receive family planning services. This expanded effort will require hard work, good will and coordination on the part of numerous organizations and individuals both within and outside the GOS. Since the role and status of women are intimately linked to questions of family planning, this new project will not only include pilot efforts to improve the status of women through income generation and training, but will seek out women to fill as many project management positions as possible.

While the impact of this program on the PGR will be minimal, it will lay the groundwork for a nationwide program with more ambitious goals. A lessening of the distrust and suspicion prevalent in this traditional conservative Islamic society with respect to family planning should result from this new effort. If mortality rates remain the same and the 15% prevalence level is reached, then the PGR will be reduced from 3% to 2.4% and the time that it takes for the population to double will be increased from only three years to 29 years. Increased programming in the health area is

expected to reduce general mortality levels (especially infant mortality) significantly over the next five years. Should this occur and the contraceptive prevalence goal of 15% be reached, PGR will probably remain at their current levels. USAID is spending much time and effort with the GOS discussing the linkages between health and family planning programming. At the same time, USAID is emphasizing the need to regard the SFH/DA project as just one mechanism to approach the increasingly urgent need to provide family planning services to families throughout Senegal.

To complement this project, the USAID will count heavily on a core group of carefully selected, centrally financed projects such as the RAPID project, the JHPIEGO project, the RSSA with the CDC's Family Planning Evaluation Division, the Johns Hopkins PCS project to provide expertise in the communications aspects of the family planning program, and the demographic studies project.

Maternal and Child Health PL 480 Title II

Another major element of our overall health strategy is the PL-480 Title II program being carried out by the nutritional unit in the Ministry of Health (SANAS) with support from Catholic Relief Services (CRS). A positive correlation was found between participation in the program and improvements in the nutritional status of children in a recent evaluation of this maternal child health program. The evaluation also found that participants in the program more frequently than non-participants were vaccinated and received proper treatment for illnesses. This CRS program is very supportive of our overall objectives to improved health, the strength of the work force and the quality of life. USAID plans to continue this program at roughly the same level with 5-10% yearly increases, depending on the availability of GOS financial resources to support logistical costs. The possibility of the project's becoming logistically self-supporting through contributions by recipients will also be explored.

Possible New Initiative

The one possible new initiative in the health sector that the USAID will consider in the CDSS period is an immunization program referred to at this

time as the "Bellagio Program." It is so named because it dates from a meeting, in Bellagio, Italy, in late 1983, of the chief executive officers of the World Bank, UNICEF, WHO, UNDP, USAID, and a few other bilateral donors to discuss strategies to assure "Child Survival" throughout the world. This group, led by Robert MacNamara and Jonas Salk and which included the AID Administrator and the Senegalese Minister of Health, named Senegal as the lead country in Africa to develop a model child-survival program, i.e. nationwide immunization program.

USAID shares the Administrator's commitment to programs designed to improve child survival and agrees that immunization is probably the most important child survival technology. However, Senegal is currently proposing an overly ambitious, fast moving and expensive strategy. Therefore, outside of the SRH-II project which includes an immunization component, USAID has not committed itself to providing additional resources. USAID believes, however, that the MOH is open to discussing alternative strategies which would be more affordable, contain realistic targets and include the introduction of some other essential technologies such as oral rehydration and family planning. If the MOH does modify its proposal, then USAID intends to consider financing a small share of the program, perhaps 20% of what will probably be an eight to ten million dollar five-year program.

D. RESEARCH AGENDA

USAID is pursuing vigorously the four principal elements of its strategy; at the same time it is supporting and adjusting its programs based on the results of research in areas that are key to generating development yet in which data are fragmentary or non-existent. This modus operandi dictates that further analysis and study be focused on the macroeconomic situation, the agriculture sector, the private sector and human resource development.

Macroeconomic Analyses

Preliminary analysis conducted by the USAID and other major donors indicates that five macroeconomic areas should be carefully examined:

First, alternatives to the present budgetary policy model should be explored in an effort to produce a general reform in the model itself. Where elements of, for example, a model used by other successfully developing countries would be appropriate in the Senegalese context, then they will be studied and incorporated.

Second and corollary to this, the entire price establishing mechanism needs to be re-evaluated in order to determine the least costly and most productive commodity pri[illegible] strategy. This is desirable in part because the GOS has stated its int[illegible] to modify imported and local cereals prices. It would include, for exam[illegible] prices of all consumer goods and imported inputs for manufacturing.

Third, and closely related to the first two areas, is the GOS resource allocation process. Detailed research is needed to clarify resource origins for each section of the economy as well as to determine their full costs, including, for example, subsidies and monopoly positions.

Fourth, several areas in the banking sector need to be examined closely and in-depth, areas such as the manner by which the Central Bank applies fiscal rules fixed by the West African Monetary Union, the reasons why local banks have been relatively unsuccessful in attracting domestic savings or why banks remain unresponsive to small and medium-size businesses. Such examinations should include comprehensive analyses of the financial health of the portfolios of specific banks.

And, fifth, the macroeconomic impact of the agricultural sector will need continuous research with regard to the reform process underway since the publication of the NAP (New Agricultural Policy).

Agricultural Sector Analyses

USAID will continue its research activities in agriculture directed at improving existing crops and exploring viable crop alternatives for export and local consumption. Complementary research on cereals', fruit and vegetable marketing will be conducted to determine a productive system within the

Senegal context. Two irreplaceable resources, essential to Senegal's development, that must be protected and managed are water and the environment. Both groundwater reserves and the management of irrigated agriculture, particularly after the completion of the Diama (1986) and Manantali (1989) dams on the Senegal River, must continue to be studied in order to fill known information gaps and to serve as an adjustment measure as various irrigation models and activities are executed. Losing 50,000 to 100,000 hectares annually to desertification, Senegal must execute a long-range resource management plan that incorporates an integrated approach to soil conservation, reforestation, animal traction, crop diversification, and human sociology.

Private Sector Analyses

Much of the USAID's recent programming has been in support of decentralization and divestiture by the GOS and of a more vibrant and dynamic private sector. Nevertheless, there are legal, administrative, and labor constraints to the further development of this sector and recognized knowledge gaps that must be filled to allow full functioning of private entrepreneurship.

Human Resources Analyses

Finally, human resources must be appropriately developed to support a productive economy. Systems and content of education and training will be increasingly re-analyzed by the donors to steer them toward a more technical, practical and problem-solving model. Corollary to this, more appropriate methods of technology and information transfer, based on efficient and accurate demographic and related data, must be developed and used.

USAID intends to continue to pursue necessary research, often in conjunction with Senegal's other major donors, insofar as it is supportive of attainment of a productive economy.

IV. RESOURCE REQUIREMENTS

A. BUDGET AT AAPL*

Program Elements - Proposed Projects	FY86	FY87	FY88	FY89	FY90
			(millions of dollars)		
Structural Reform					
Tech. Transfer Services	2.0	2.0	2.0	2.0	2.0
Economic Support Fund	15.0	15.0	15.0	15.0	15.0
PL 480 Title I	8.0	9.0	10.0	10.0	10.0
SUB TOTALS:	25.0	26.0	27.0	27.0	27.0
Agricultural Constraints					
Ag. Production Support	5.0	5.0	5.0	5.0	5.0
Irrigation (Fleuve)	3.0	2.0	9.0	-	3.0
Southern Zone Water Mgt.	5.0	3.0	3.0	3.0	3.0
Agric. Res. & Extension	1.5	-	-	3.0	2.0
Grain Marketing	-	-	-	-	2.0
SUB TOTALS:	14.5	10.0	18.0	11.0	15.0
Environment/Employment					
Reforestation	3.5	2.5	3.0	1.0	-
Enterprise Dev.	-	-	-	4.0	2.0
PL 480 Title II	1.5	1.5	1.6	1.8	1.8
Peace Corps (SPA)	**	**	**	**	**
SUB TOTALS:	5.0	4.0	4.6	6.8	3.8
Health and Family Planning					
Family Planning	-	5.5	-	5.0	-
Rural Health	-	1.0	-	-	5.0
PL 480 Title II	6.2	5.9	6.5	7.1	7.2
SUB TOTALS:	6.2	12.4	6.5	12.1	12.2
Sahel Dev. Program *	20.0	21.0	22.0	23.0	24.0
Economic Support Fund	15.0	15.0	15.0	15.0	15.0
PL 480 Title I	8.0	9.0	10.0	10.0	10.0
PL 480 Title II	7.7	7.4	8.1	8.9	9.0
GRAND TOTALS	49.7	52.4	55.1	56.9	58.8

NOTE: Inflation in Senegal is expected to continue at an average of 7 to 8% per year. This means that in real terms, the value of the program proposed for this CDSS period actually decreases, despite the slight annual increases in actual figures.

* USAID has made a very small adjustment to the AAPL levels for the period 1987-90. Approximately $20 million per year was being programmed under the Sahel Regional Program for River Basin Development at the time the AAPL levels were set. Senegal was to receive close to half of this $20 million per year. The decision to bilateralize the development of the Senegal River Basin was made after approval of the 1986 ABS and the AAPL levels. Therefore, the Mission has added a very modest $8.3 million in lieu of the $20 to $50 million that it would have expected to receive during this period. Also we have not adjusted FY 86, although our Senegal River Basin program will be underway.

** PC Small Project Assistance to be funded at annual level of $40,000.

B. DISCUSSION OF HOW PROGRAM EMPHASIS WOULD SHIFT BOTH ABOVE AND BELOW AAPL

We feel that the AAPL levels cited above are appropriate, but the proposed program strategy has been laid out to accommodate increases or decreases resulting from funding availabilities during the CDSS period. If funding availabilities were to drop, for example, then the time frame for developing irrigation on the Senegal River would be lengthened. Thus, the program would move forward, but much of the proposed effort would be completed during the next CDSS period. If additional funds were to become available, on the other hand, then both the proposed efforts, reforestation and soil conservation, would be expanded and implementation accelerated.

C. GOS CONTRIBUTION AND RECURRENT COST ANALYSIS OF PROGRAM

The generally low level of GOS contributions to AID-supported projects and the doubtful capacity of the GOS to shoulder recurrent costs of these projects upon completion are tied to weaknesses in the GOS' budgeting process and fiscal performance as well as a lack of firmness on the part of donors. The Mission intends to support and carefully monitor efforts proposed by the GOS at the Paris Consultative Group meeting, efforts that constitute part of its Action Plan. These efforts include: (a) reform of the budgeting process to assess more systematically the recurrent cost implications of new projects; (b) introduction of budgeting by objective; and (c) establishment of an institution, like the OMB in the U.S., that can arbitrate conflicting budgetary demands among Ministries. The GOS Action Plan also proposes to increase revenues for investment through contributions by beneficiaries for water, health and education. These actions parallel closely the basic responses to recurrent cost problems raised by the AID Policy Paper on Recurrent Costs.

USAID believes that a studied and coordinated approach among all donors aimed at establishing budgetary and fiscal discipline within the GOS is needed. This concept of donor coordination is essential since one donor's attempts to demand more from the GOS regarding host country contributions,

while other donors continue to finance such contributions, will provide little incentive for the GOS to respond favorably. While working in this direction with other donors, USAID/Senegal has set its own course designed to move the GOS to assume more responsibility for contributing to AID-supported projects and planning for future recurrent costs financing. The Mission is addressing the recurrent cost question during project design and within project papers. We will be insisting on increased financial and in-kind contributions from the GOS. The Mission has recently initiated this posture by revising its indemnity policy; AID has now formally notified all concerned that we will no longer be funding indemnities, only certain per diems, for GOS civil service personnel assigned to AID-supported projects.

D. STAFFING REQUIREMENTS AND O.E. IMPLICATIONS

Emphasis on policy dialogue, donor coordination, technology transfer, rationalization and streamlining of institutions and the development of the private sector under the new USAID/Senegal Program will necessitate adjustments in how the Mission is organized and staffed. Management emphasis will of necessity shift from a project to a program focus. This new focus will place an increased burden upon the Mission senior staff and will require that it be backed up with greater Mission analytical capability. However, at the same time, the Mission will be significantly reducing the number of individual projects which must be managed, thus clearing the way for direct hire and contract personnel changes designed to support the new program emphasis.

We anticipate being able to make these changes within the currently projected personnel ceilings; Operating Expenses requirements should not increase substantially. Cuts imposed in the FY 1985 O.E. Budget to the level of $4,700,000 bring it $715,000 below projected needs and may force deferall of needed NXP procurement to FY 1986. If that becomes the case, then FY 86 O.E. requirements will increase to $5,361,000. FY 1987 O.E. requirements are estimated at $5,500,000. Beginning in FY 1987, the Mission anticipates initial payments of approximately $400,000 per year pursuant to a currently

planned lease-purchase agreement for new USAID offices. Subtracting current office rents will mean a net increase of $100,000 in this category. Factoring in general wage and price increases of 3% and 7% respectively for each year and after taking into consideration the cost savings derived from efficiency of the new building and the use of Wang PCs, O.E. requirements will be stabilized at about $5,300,000 for fiscal years 1988, 1989, 1990.

LIST OF BILATERAL PROJECTS ACTIVE DURING FY 1984

Project Number	Project Title	PACD	Continuing Beyond FY 1986
685 - Sahel Development Program			
0202	Range & Livestock Development	02/25/85	
0205	Casamance Regional Development	06/30/85	
0208	Small Irrigated Perimeters	12/31/85	
0209	Grain Storage	12/31/83	
0210	Rural Health I	03/31/84	
0217	Family Health I	06/30/85	
0218	SAED Training	03/31/86	
0219	Fuelwood Production	12/31/84	
0222	Youth Job Development	09/30/85	
0223	Agricultural Research & Planning - MSU	12/31/86	continuing
0224	SODESP Livestock	06/30/84	
0226	Patte d'Oie Housing	09/30/84	
0233	National Plan for Land Use	06/30/85	
0235	Cereals Production II (SODEVA)	12/31/87	continuing
0242	Rural Health Services II	04/01/89	continuing
0249	Ag. Development Assistance	09/30/85	
0250	Millet Transformation	05/31/86	
0254	Fisheries Resources Assessment	12/31/84	
0255	Data and Management of Research	12/31/84	
0260	Community & Enterprise Development	09/30/89	continuing
0270	AID/PC Small Project Assistance	04/12/86	
0937.7	Renewable Energy	12/31/84	
0957	Senegal Agricultural Research II (OMVS)	06/30/90	continuing

ANNEX A: ECONOMIC ANALYSIS

I. INTRODUCTION

Senegal's economic and financial situation is far from stabilized despite four years of successive stabilization programs with the IMF. A dramatic illustration of this is the state of the economy as a result of the five-month delay before reaching agreement with the IMF on a new eighteen-month program. The hiatus demonstrated that Senegal's economy remains extremely dependent on annual debt reschedulings and substantial amounts of budgetary/balance of payments support to remain solvent.

Senegal's present economic and financial deterioration follows a year of exemplary performance on the 1983-84 Standby Agreements; all performance criteria for each quarter were met. The IMF Standby was successful in stabilizing GOS accounts through short-term measures over the twelve-month period from the beginning of July 1983 to the end of June 1984; However, it was not effective in addressing the structural causes of macro-economic disequilibria. The GOS has a better track record with respect to price increases, credit restrictions and the introduction of new tax measures, than it does with longer term reforms such as liberalization of the price mechanism, improvement in tax assessment and collection, reduction in claims of the para-public sector on budget resources, and more judicious allocation of credit to priority sectors. Structural measures such as the latter require more continous effort and commitment from the GOS; the decision to undertake and implement short-term measures, on the other hand, can be made relatively quickly at the highest political levels. Despite Senegal's less-than-impressive record with respect to implementation of structural reforms, there is scope for optimism due to more focussed GOS reflection on priority reforms and improved donor coordination on a core policy reform agenda.

This economic analysis will focus on the present status of macroeconomic performance, the impact of this performance on the agricultural sector in general, and, finally, on specific components of the agricultural sector that are most in need of reform.

II. MACROECONOMIC SITUATION

Public Finances

Deficit Improvements: Successful performance on the 1983-84 IMF Standby Agreement reduced Senegal's budget deficit on a commitments basis from 8.2% of GDP for 1982-83 to 4.7% of GDP for 1983-84 while the operating budget's deficit was cut from 4.2% of GDP to 1.2% of GDP. These improvements can be attributed to a number of short-term factors including: (a) an increase in grant budget support which is accounted for as government receipts; (b) an improvement of deposits in the special treasury accounts; and (c) a marked improvement in the financial status of the CPSP and other correspondents of the treasury due to favorable trends in the international price of groundnuts and the impact of increases in domestic prices of consumer goods.

Public Finance Deterioration: However, there has been a rapid deterioration in the public finance position since July 1984, a deterioration which is at least partially explained by: (a) the fact that major components of the budget such as the magnitude of salary payments and of fiscal receipts had not been substantially improved in 1983-84; (b) the positive effects of price increases have been eroded by the 9.5% appreciation of the dollar against the CFAF; and (c) the interest on public external debt which is a current expenditure has increased significantly from 36.4 billion CFAF to 45.2 billion CFAF or by 24%.

Expenditures: The public sector wage bill continues to increase in nominal terms at a rate of 8 to 10% per year. Measures have been introduced to contain this growth by limiting entry into the civil service but it will probably take at least four to five years before this policy impacts directly and positively on the wage bill. The level of expenditures on supplies and transfers, on the other hand, appears to be stabilizing at about 68.0 billion CFAF which is only 7% above the amount for 1979-80. There is, however, some indication that this figure has been kept relatively low through a build-up in arrears on transfers to parastatals, such as SAED and SONAR, and through an accumulation of the general GOS stock of arrears to suppliers.

Revenues: The GOS revenue performance has been disappointing. Government receipts as a percentage of GDP declined from 23% for 1979-80 to 19% in 1984-85 despite the introduction of new tax measures encouraged by the IMF over the last three fiscal years. Government revenue was revised downward by 10.0 billion CFAF or 5% with respect to the original IMF projections for 1983-84. The shortfall can be attributed to the weaknesses in the GOS tax collection process, particularly with respect to customs duties, income taxes and real estate taxes. Income tax receipts as a percentage of GDP have declined steadily from 5.1% for 1979-80 to 3.9% for 1983-84. Customs duties actually collected have also declined from 8.2% of GDP for 1979-80 to 7.6% for 1983-84.

Arrears: Another aspect of the public finance situation which has a negative impact on the banking and private sectors in particular is arrears. The GOS has a stock of arrears to the private and parapublic sector estimated at 60 billion CFAF in addition to its ONCAD debt of an estimated 140 billion CFAF. The GOS accumulated considerable arrears during 1979-80 and 1980-81. It then made an impressive effort to reimburse them during 1981-82 and accumulated additional arrears during 1982-83 which were partially reimbursed during 1983-84. According to these estimates, the total stock of arrears is probably at least 20% of GDP. The actual figure is considerably higher if the arrears of parastatals are included. Internal financial circuits have been virtually paralyzed by the complex morass of debts: Example: The GOS has accumulated arrears to the state electric company SENELEC which in turn owes money to the company that distributes fuel which in turn has accumulated arrears vis-a-vis the national refinery (SAR) which in turn is unable to reimburse its short-term lines of credit to the banks.

The Balance of Payments

Background: Senegal's balance of payments position does not affect the overall economic situation as directly as do public finances; this is because of the safety net provided by the French Treasury's guarantee of the convertibility of the CFAF. Senegal's access to foreign exchange is determined not by its capacity to earn foreign exchange through exports but by the availability of local currency which is a function of domestic credit expansion.

Export Trends: An examination of the structure of the balance of payments over the past eight years reveals a gradual but continuous reduction in dependency on agricultural exports to provide essential earnings. Proceeds from the export of groundnut products continue to be a prominent feature but in most years since [illegible] receipts from the export of fish products have been larger. Tourism is also a dynamic sector with export earnings growing at an average annual rate of 14% over the last five years. This confirms that there has been a certain amount of diversification in the structure of Senegalese exports, especially since 1980.

The reduced volume of groundnut exports in 1984, which resulted from a 50% drop in production between 1982-83 and 1983-84, was offset by the spectacular 80% increase in the world price of groundnut products between April 1983 and October 1983. Export earnings from groundnuts will drop by only 7-8% between 1983 and 1984 according to the most recent projections. The trade balance for 1985 is expected to deteriorate by approximately 15%, in part as a result of low levels of groundnuts marketed through official channels this year. An active parallel groundnut market has developed where farmers can sell for up to 140% more than if they marketed directly to the oil crushing firms. This is a result of increases in the domestic consumer price of groundnut oil and continued high world prices. Thus, the oil millers will be crushing only 54% of last year's quantities even though the groundnut crop was projected to be approximately 18% higher than in 1983-84.

Import Trends: The three major imports are: Petroleum products, food, and intermediate goods. Combined these represent about 80% of Senegal's import bill. Imports have risen very little in volume over the last four years, but the value has increased at an average annual rate of approximately 8%. The trade balance as a percentage of GDP has a tendency to fluctuate; however, over the last three years, this deficit has decreased from 14.6% of GDP for 1982 to a projected 10.8% for 1984.

Service Account: The major problem area of the balance of payments is the services account whose deficit has increased from 18.7 billion CFAF for 1982 to 57.2 billion CFAF for 1984. The explanation for this deterioration is found in the impact of interest payments on external debt. More alarming is the fact that the deterioration has been experienced despite three successive debt reschedulings in 1981, 1982, and 1983. The services balance is likely to move further into deficit reflecting Senegal's rising debt service obligations. Thus, despite a recent improvement in the trade balance, the

current account deficit as a percentage of GDP remains stationary at about 11 to 12% of GDP.

Capital Account: The capital account is in surplus and even improved between 1982 and 1984. This improvement reflected an increase in capital inflows particularly in the form of budget support and savings as a result of annual debt rescheduling. The overall balance as a percentage of GDP has improved consistently over the last four years from 6.7% for 1981 to a projected 2.0% for 1984.

Credit Expansion

Credit expansion during the 1979 to 1982 period averaged approximately 22% per year while domestic price inflation over the same period averaged 12.1%. This rate of expansion has declined significantly in the last two years to 9.7% as compared to a domestic price inflation rate of 9.3%. The above figures reveal a marked decline to a negative real rate of credit expansion. This shift can be explained by a reduction in the rate of increase of credit availability both to the private and public sectors. Between 1979 and 1982, credit to the Government increased at an annual average rate of 97% as compared to a rate of 23% in the last two years. Whereas, the GOS was only a marginal borrower in domestic credit markets before the early 1980s, it now has become a significant actor with about 24% of total outstanding credit. Private sector credit expansion which increased more modestly during the 1979-1982 period at an average annual rate of 14.3% also has declined significantly in the past two years to an average growth rate of 5%.

The allocation of increased credit availability as reflected by the IMF's credit ceilings for government borrowing and overall domestic credit expansion has been skewed in favor of the public sector. Excluding short-term lending for crop credit, private sector expansion has been limited to 12.8 billion CFAF for 1984 as compared to 24.7 billion CFAF for the government. The GOS was, however, able to limit the increase in its credit liabilities through June 1984 to 120.4 billion CFAF or 4.5 billion below the IMF ceiling. Due to the lack of external financing in the July 1 to November 30, 1984 period, the GOS was required to use the totality of this extra margin in its borrowing capacity plus an additional 4.3 billion CFAF based on deposits made by multilateral Arab aid agencies, the University of Dakar and the National Assembly. Given the relatively high rate of public sector borrowing during the first six months of the 1984-85 fiscal year and in view of the provisional IMF credit ceilings for the last six months of the fiscal year, GOS borrowing will be limited to 8.0 billion CFAF. Private sector borrowing, excluding crop credit, from the banking sector will be limited to 3.4 billion CFAF.

III. THE MACROECONOMIC IMPACT ON THE AGRICULTURE SECTOR

Agricultural Development Prospects

Senegal's development prospects will continue to be heavily influenced by the macroeconomic situation. Austerity measures to reduce GOS expenditures and improve the balance of payments have affected the agricultural sector more

than any other. Conversely, accumulated agricultural debt and the rising costs of government intervention in this sector have contributed to Senegal's present economic difficulties. One of the motivations for Senegal's new agricultural policy was the recognition that the GOS could no longer afford to continue its current level of subsidies to the agricultural sector, particularly given the insignificant impact of these subsidies on agricultural production. A phasing-out of government involvement will leave farmers without the financial cushion they have come to expect during drought years. On the other hand, delays in the release of state funding have caused serious problems for farmers and for RDAs. Thus if effective alternative systems are created, then a reduction in government involvement could eliminate some major obstacles and allow a dynamic, productive agricultural sector to emerge.

Government Overextension in Agriculture

The GOS has been overextending itself in four key areas since the beginning of the 1980s. Clearly, the GOS cannot continue to: (a) manage and subsidize the national seed stock which costs approximately 12.0 billion CFAF per year; (b) distribute and subsdize fertilizer which cost 3.0 billion CFAF in the peak year of 1981-82; (c) subsidize operating expenses of agricultural parastatals which cost approximately 11.2 billion CFAF in 1982-83 and (d) assume financial liabilities of the liquidated ONCAD estimated at 140 billion CFAF. The result of this overextension has been the declining quality of services provided to the agricultural sector which has manifested itself in increasing delays in the provision of inputs, the breakdown of the agricultural credit scheme provided by certain RDAs and the increasing inability of extension agencies to function effectively due to a lack of funds to cover operating expenses.

Agricultural Credit

Another related impact of the macroeconomic difficulties stemming from past abuses is the lack of liquidity in the banking sector for agricultural lending. Government decisions to cancel farmers' debts to ONCAD over a number of drought years, farmers' refusal or inability to reimburse short-term credit obtained for purchases of inputs and food, the refusal of oil crushing firms to reimburse crop credit in a timely fashion particularly when the GOS owed subsidy payments to these companies, and the inability of RDAs such as SAED to reimburse loans from the domestic banking sector according to schedule have not only reduced the general availability of funds but have also convinced local bankers that lending to agriculture is in fact a bad risk. Thus, the share of agriculture in total outstanding domestic bank credit has declined from 7.2% for 1978 to 3.0% for 1981.

Agricultural Input Subsidies

The use of cereals pricing mechanisms has been reviewed as a result of the GOS' inability to continue to subsidize inputs from budgetary resources. The producer price of groundnuts was reduced from 70 CFAF per kg to 50 CFAF per kg, with the 20 CFAF difference being allocated to defray some of the costs of the

seed stock and most of the costs of fertilizer distribution. The GOS does not assume the expenses of input distribution with respect to food crops and it has recently increased producer prices to reflect partially the increase in the cost price of fertilizer. These relatively ad hoc price measures should be adjusted following a comprehensive study of agricultural pricing at each stage of production and for each crop.

GOS Pricing Interventions

The GOS' financial difficulties have also undermined its ability to achieve the redistribution objectives formulated for the CPSP. Based on the price equalization function, the CPSP's mandate is to: (a) maintain reasonable prices for imports of basic staple goods and stabilize the consumer prices of these goods against short term fluctuations in international prices; (b) protect a stable producer price for Senegal's agricultural exports (groundnuts and cotton) against short-term fluctuations; and (c) guarantee profit margins to agricultural processing companies (e.g. oil crushing firms, tomato plants, sugar company) against risk resulting from either international price fluctuations in the face of fixed producer prices or from high overhead costs in the case of low agricultural production. The CPSP was basically able to balance its accounts in the period from Independence through the late 1970s, and in some instances generate a surplus through profits earned from groundnut sector production. These profits were used to defray subsidies on imported consumer staples and to provide transfer payments to other processing industries such as sugar refining. The CPSP has been operating on a very tight cash flow basis since 1978-79; This has prevented it from continuing to guarantee relatively high producer prices for export crops and simultaneously reasonable consumer prices for imported rice, sugar and vegetable oil.

IV. THE AGRICULTURAL SITUATION

Drought Costs

Senegal's agricultural situation is highly dependent on both the quantity and spacing of rainfall. The drought in 1983-84 was the primary explanatory factor behind the dramatic decline in agricultural output of both export and food crops. According to the most recent GOS data, export crop production fell by almost one half between 1982-83 and 1983-84 with the brunt being borne by groundnuts. Cereals production declined by approximately 30% between 1982-1983 and 1983-84; average rainfall decreased by 36% between 1982-83 and 1983-84 which put these levels below the mean rainfall for the 1961 to 1984 period. The drought severely affected on-farm income particularly in view of the reduction in the net producer price of groundnuts from 60 CFAF per kg to 50 CFAF per kg or by 16.6%. GOS practices in earlier drought years (e.g. inputs subsidies, debt cancellations, low interest credit, food loans) essentially cushioned farmers from the real costs of drought and transferred some of these costs to the government. However, a significant portion of the costs of the 1983-84 drought was borne by the farmers as a result of the significant decline in subsidies on inputs causing a doubling and sometimes tripling of costs to the producer and with the demise of the national credit

scheme. Preliminary calculations for 1983-84 indicate that on-farm rural incomes from cash crops decreased 60 to 70% from the previous year.

Drought's Most Recent Impact

The agricultural situation in 1984-85 is, according to provisional GOS figures, significantly improved from that of 1983-84; although the productive capacity was in fact a good deal higher. Average rainfall in the groundnut basin was 407.5 mm or 30% above 1983-84 levels; however, delays in the delivery of inputs, particularly fertilizer, to farmers were such that farmers were unable to take advantage of early and plentiful rains. Furthermore, a three week interruption in rains during the month of August caused reduced yields. Groundnut production appears to have been most affected with only an 18% increase in production from 559,820 metric tons 1/ during 1983-84 to an estimated 669,230 metric tons during 1984-85. Gross cereals production increased by 35% from a total of 533,800 metric tons during 1983-84 to approximately 721,520 metric tons during 1984-85. The greatest increases were registered with maize and millet. The increase in cereals production can be explained partially by an increase in yields due to higher rainfall but alsoas a result of a shift in area cultivated from export crops to foodcrops. Whereas only approximately 48% of the total land area was cultivated for foodcrops in 1983-84, this percentage increased in 1984-85 to 56%. The shift in cropping patterns can be attributed both to the necessity to restore farmer grain stocks following a drought year and to the farmer response to the late arrival of groundnut seeds.

Immediate Challenges in the Agricultural Sector

The problems of input supply, extension services, organization of rural level production, cereals pricing and marketing, and price stabilization mechanisms therefore need to be immediately addressed both seperately and as components of a rational agricultural production network able to withstand climatic variation.

a) Input Supply and Pricing: Input supply was handled primarily by the GOS either through the RDAs or through the Government input supply company SONAR through 1984-85. The GOS maintains a national groundnut seed stock of between 130,000 and 120,000 metric tons. The costs of the seed stock are to be defrayed by a levy or retained earnings system whereby farmers contribute 15 CFAF per kg of groundnuts marketed. The maintenance of the stock costs the

1/ The figures represent gross crop production, without provision for crop wastes/losses and seed requirements. Proportions of gross production corresponding to wastes/losses and seed requirements are estimated to be for groundnuts: 21.5%; for cereals: millet/sorghum and corn: 17%; cowpeas: 15%; paddy rice: 21.5%. An additional 35% represents the milling loss for this latter crop (i.e., from paddy to milled rice).

government approximately 12 billion CFAF per year which means that the seed stock can be entirely financed through the retained earnings system only in years where 300,000 tons of groundnuts are marketed through official channels. According to statistics on quantities of groundnuts marketed, this level was reached only eight times over the last 15 years. Thus, the present system for covering and managing the groundnut seed stock is not financially self-sustaining and requires regular government subsidies. Furthermore, farmers regard groundnut seeds as an input to be provided by the government and thus is not valued at any specific price. The retained earnings system, as it is presently implemented, requires more efficient farmers to pay more for their seeds than that paid by the less efficient ones, and does not provide flexibility for the farmers to decide whether or not they will participate in the government system. The system has also maintained groundnut cultivation in marginal areas where other more drought-resistant crops are in fact more suitable.

Only 342,300 metric tons of groundnuts were marketed during 1981-84, generating approximately 5.1 billion CFAF in revenue to defray the costs of the seed stock. The deficit therefore was approximately 6.9 billion CFAF. The seed stock is also projected to be in deficit during 1984-85 based on the assumption that approximately 440,000 metric tons of groundnuts will be marketed through official channels.

The basic GOS objectives with respect to seed policy have been: (1) to encourage continued cultivation of groundnuts; (2) to protect farmers in drought years by providing seeds centrally; (3) to distribute seeds so as not to discriminate against less efficient farmers and marginal production areas; and (4) to provide a relatively "painless" means for farmers to "purchase" seeds in the absence of credit. These objectives may be desirable from a social point of view, but the current system does not allow farmers to respond according to their perceived economic advantage. Furthermore, the current monopoly role of the GOS in seed distribution does not stimulate efficiency and in fact exposes farmers unnecessarily to the risk of delays in seed deliveries or to a deterioration in the quality of seeds due to poor storage conditions.

While the GOS has devoted considerable attention to groundnut seed multiplication and distribution, provision for cereals seeds has been ad hoc and varies considerably depending on the area of the country and the responsible rural development agency (RDA). In fact the shortage of quality seeds for cereals is a major obstacle to the realization of the GOS' objective of promoting domestic cereals production. Where RDAs provide cereals seeds to farmers (e.g. SOMIVAC and SODAGRI for rice seed in the Casamance, SAED for rice seed in the Senegal River Basin, and SODEFITEX for corn in Senegal Oriental), a system of payment similar to the retained earnings system for groundnuts is used. This net price system, where the cost of seeds is deducted from the proceeds to be obtained through the sale of the crop, does not allow farmers to make decisions based on economic criteria. Furthermore with the exception of millet in the Groundnut Basin, where no organized system exists, the other regions are subject to a monopoly system of seed distribution by the corresponding RDA.

further the potential for alternative cash crops to peanuts, for which long-range prospects are poor. Other areas of study and analysis are how to stimulate fruit and vegetable production and processing for export, and how to obtain greater use of existing resources and enterprises which can capture increased value added, using available labor and management. Senegal possesses a large pool of trained human resources particularly in law, medicine and public administration; however, the Mission believes that attention must be directed more at the skills of business management and technical trades plus agricultural enterprises to support the new economic and trade patterns that will develop. Skills and knowledge must be developed which are relevant to the current and future needs of the country. This includes appropriate emphasis in rural programs on literacy and numeracy.

The participant training components of our assistance, including such regional assistance as the Sahel Manpower Development and the Financial Management projects, will respond to many of these training requirements. We propose to support other targets in addition to those of academic degree and technical skills training in the priority areas of agriculture and health; we will press for adoption of sound technology and management practices, particularly for private sector application and at varied levels from the computer room to the village cooperative. Cutting across the elements of the strategy the Mission plans to continue and expand its cooperation in project implementation with Private and Voluntary Organizations (PVOs) and the Peace Corps (PC) as well as to strengthen activities directly related to the private sector. Removal of constraints to agricultural production and family planning (i.e. private clinics), for example, will require close involvement of the private sector. Both the Peace Corps and PVOs are eminently suited to work in income-generating and reforestation activities.

A. FINANCIAL AND ECONOMIC MANAGEMENT CRISES

Economic Policies Since Independence

Senegalese governmental focus on questions of equity and justice led to its playing a predominant and ever-increasing role in the economy since Independence in 1960. Nevertheless, according to the World Bank Senegal's economic performance has been the worst of any African country not affected by war and civil strife although its performance has been good with respect to the provision of urban social services, the establishment of transport and communications infrastructure, and the maintainance of a free and open society. Inappropriate economic policies and consistently poor management have resulted in economic stagnation and the current financial crisis.

Preservation of social equity and the relative position of various economic groups has dominated the process of decision-making and management in recent years as the economic situation worsened. The GOS attempted, for example, to preserve the purchasing power of the population despite sharp decreases in agricultural production and national revenues. Farmers' debts were forgiven in 1978 and again in 1980; the public wage bill was raised by 36% in 1979 and every year since then has been adjusted for inflation with increases of 3-10%. Increases in world prices of key imports such as rice and sugar have been absorbed by government subsidies until the recent January '85 increase in the price of rice. Consumption, often financed by commercial borrowing, has slowly but steadily increased as a percentage of GDP. It reached a peak of 104.7% of GDP in 1981, but even with recent austerity measures, it is not estimated to have gone below 95%.

Public Sector Management

Poor management in the public sector, particularly within the numerous parastatals, served to enlarge Senegal's economic and fiscal difficulties. The principal parastatal in the agricultural sector, ONCAD, with a monopoly on the provision of inputs to farmers, was disbanded by the GOS in 1980, leaving the government owing $350 million (in 1980 dollars) to the domestic banking sector. The GOS price stabilization agency (CPSP), responsible for procurement, importation, and wholesale distribution of basic foodstuffs also

accumulated important deficits and continues to do so. A pattern has developed in which the government and the parastatals constantly operate with significant arrears owed to each other, the banks, and supplier firms. [Example: The GOS has accumulated arrears to the state electric company SENELEC, which in turn owes money to its fuel supplier (50% state-owned), which in turn has accumulated large arrears to the partially state-owned national refinery SAR, which in turn has been forced to refinance its short-term lines of credit to the banks.]

Economic Trends

The progressive inability of the GOS since 1978 to pay its way, even with much higher than average levels of donor assistance, has severely depressed economic activity and left the government unable to continue to subsidize the basic standard of living. Senegal benefited from high world prices for several years in the early 1970s for its phosphate and peanut product exports and was able to borrow on the Eurodollar market on the basis of prospects for continuing high prices for those commodities. Prices fell, however, and Senegal was left with a dollar-denominated debt aggravated by the CFA depreciation vis-a-vis the dollar.

Senegal was able to pay for 80% of its imports with its exports in the first years after Independence but in recent years that figure has hovered around 50%. Using constant 1977 prices as the base, Senegal's three million people in 1960 had a per capita income of 101,475 CFA francs whereas Senegal's six million people in 1982 had a per capita income of only 90,000 CFA. A significant indicator of the change in the economy as a whole in that period is the resource gap, the difference between the total investment of the economy and its domestic savings. The gap was 1% of Senegal's GDP for 1960; by 1982 it had grown to 14% of GDP, a marked deterioration. The level of gross domestic savings fell from 15% of GDP for 1960 to negative percentages for the early 1980s. Maintainance of the Senegalese people's relatively comfortable standard of living has been increasingly dependent upon external resource flows since Independence. Official Development Assistance (ODA) and Other Official Flows (OOF) paid for all investment and 6% of consumption during 1981, for example.

Debt Situation

The total internal arrears of the GOS and parastatals (including ONCAD), amounted to $500 million by June 1981 at the then-prevailing exchange rate. Then, the GOS made an impressive effort to reduce its arrears but over the last four years these have increased rather than diminished, particularly during the second half of 1984. Today GOS arrears, without counting those of the parastatals, are probably at least 20% of GDP. The public sector has as a result increasingly encroached upon the limited credit available to the Senegalese economy within the system of the West African Monetary Union and under the strictures imposed on credit availability by the IMF standby arrangements. Prior to 1977 the GOS made only marginal drawings on the domestic credit market. Now it is a significant borrower with about 1-4 of the outstanding credit. The loser has been the private sector. Credit to the sector expanded during the 1970s on an average of over 20% per year. It expanded at a more moderate rate of approximately 14% per year from 1979 through 1981. The average rate of growth of private sector credit has declined precipitously, however to 3% per year during the last two years.

Financial Crisis Summary

Population growth, now believed to be over 3% per year, persistent drought (five out of the last eight harvests), declining international prices for Senegal's major exports of peanut products and phosphates, progressive devaluation of Senegal's currency (the French-franc-based CFA franc, vis-a-vis the U.S. dollar in which Senegal's major imports of petroleum and rice are priced), declining per capita agricultural production, increasing public consumption and consistently poor economic policies all have massively contributed to the persistence and intensification of Senegal's economic and financial crises.

B. RESPONSES TO THESE CRISES

IMF Involvement

Senegal called upon the IMF early on in its financial crisis and, with IMF help, bilateral donor assistance and relief through four Paris Club, and two London Club reschedulings of its international debt, the GOS has managed to

keep Senegal from international default. The GOS successfully stabilized its accounts under the discipline of the 1983-84 IMF standby arrangement. It achieved this stabilization and has attempted to maintain it through the implementation of difficult, but essentially short-term, measures such as price increases, credit restrictions and new tax measures. However, the GOS has only recently begun to come to grips with the structural reforms necessary to alleviate the country's financial and economic crisis and deal with the external vicissitudes of weather and the world economy. This, despite the fact that current planning represents the third major attempt to deal with the situation (i.e. 1977 Food Investment Strategy and 1979 Plan de Redressement.)

Need for Reforms

The severity of the current financial crisis is apparent; even industries with export possibilities find it difficult to obtain credit required to operate at capacity, let alone expand. The growth rate in manufacturing has averaged less than 1% per year over the last decade, and merchandise exports, excluding peanuts and fish, have declined by almost 20% in real terms over the last seven years. Even the national refinery, SAR, and the GOS agency responsible for importation of rice, CPSP, are finding that short-term lines of credit to finance imports are drying up. Reforms such as liberalization of producer and consumer price mechanisms, improvement in tax assessment and collection, reduction in claims of the para-public sector on budget resources, and more judicious allocation of credit to priority sectors have required more commitment from the GOS than it has to date been able to muster, although it has made substantial progress in removing subsidies.

Recent GOS Actions

It was driven home to the GOS, at the December 1984 Paris Consultative Group meeting of the bilateral and multilateral donors with the GOS, that the time for bold action had arrived. The GOS has since committed itself to major reductions in its rural development parastatals and to greater market liberalization. It is preparing to examine ways in which the private sector can take over economic functions in which the state structure has been engaged. A new IMF standby arrangement for 1985-86 and another Paris Club

debt rescheduling conference were approved January 1985. The adjustment process is underway though there is a urgent need for continued aggressive implementation of reform on the part of the GOS. The price of rice, the largest imported staple food commodity and now a mainstay of the Senegalese diet, was increased 63% between February 1982 and August 1982 and by an additional 23% during January 1985. Other prices were adjusted as well: Sugar by 15%, edible oils by 20% and petroleum products by 18% during Senegal's 1983-84 fiscal year, and edible oils by another 50% and petroleum by 13% in the first half of the 1984-85 fiscal year. The January 1985 belt-tightening also included increases of 20% in bus fares, a substantial increase of 20-60% in vehicle tax, a new 12.5% tax on telephone calls, and a general increase in the licensing fees for industrial and commercial business. Thus, the GOS has taken, and is taking, strong and politically difficult actions to bring the country's consumption in line with its ability to pay.

Future Prospects

Senegal should be able to keep its head financially above water by applying its best efforts and continued assistance from its bilateral and multilateral donors. That will not be enough, there must also be growth. Seventy percent of Senegal's population live in the rural sector and agricultural production, although it contributes less than 20% to GDP, has and will continue to represent the pivotal point with respect to balancing the accounts. Medium and longer term adjustment cannot take place without prosperity in the agricultural sector.

C. THE MEDIUM AND LONG-TERM ECONOMIC AND FINANCIAL ADJUSTMENT PROGRAM

Background

The GOS has realized, during the course of the last year, that the 1979 stabilization program, while taking many positive actions, had not accomplished its objectives of economic and financial stabilization and growth. Future projections, assuming a continuation of present policies, indicate a steadily deteriorating situation. The GOS therefore developed its New Agricultural Policy (NAP), announced in the spring of 1984, and the Medium

and Long-Term Economic Program (Action Plan), presented to the donors at the December 1984 Consultative Group meeting. The main purpose of the Action Plan is to restore, by means of structural reforms, conditions conducive to sustained economic growth and domestic and external financial equilibrium. The Plan proposes an annual GDP growth of 3.2%, substantial reduction in budgetary and balance-of-payment deficits, repayment of the majority of the GOS internal debt, a substantial increase in agricultural production, continued increases in income from fisheries and tourism, and a revitalization of industry.

The Medium and Long-Term Economic Program (Action Plan)

The Action Plan objectives are to:

(a) improve fiscal performance and public sector management particularly as applied to public enterprises, as a means of raising the rate of domestic savings, reducing consumption and improving the efficiency of the economy;

(b) raise the overall efficiency and the volume of investment by strengthening the programming and administration of public sector investment, reorienting them towards the fuller use of existing assets and applying stricter profitability criteria for new investments; and

(c) support economic reform by providing growth points in agriculture, the fishing industry, and tourism with improved incentives for exportable or import substitution production in the private sector.

Action Plan Targets: The Plan sets an extensive array of targets, listed below, but it sets no priorities or implementation actions. Donor coordination will presumably be applied to sifting through the options contained in the Plan to determine the order in which these options will be supported. The targets are as follows:

(a) The Government has decided to diversify the economy in sectors which have high growth potential, e.g. fishing, tourism and industry.

(b) The plan assumes that both public and private consumption must be reduced. It anticipates that household consumption will decrease in rate of growth from 2.7% to 2.4%; and that the government consumption rate of growth will be reduced from 3.9%

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to 1.0%. These adjustments should allow the domestic savings rate to increase to 13.7% by 1992 thus increasing the proportion of investments financed through domestic resources.

(c) The GOS will take strong measures to increase revenues. The Plan calls for an acceleration of the existing rate of collection of taxes and duties, ensuring that taxes owed (real estate, professional income) are paid. Increased earning will be derived from taxes on profits as a result of growth in the economy. The GOS estimates that direct taxes can increase by 7% per year through 1987 and in the following years could increase to a 9% annual growth rate. The GOS also plans to broaden the tax base by placing non-essential imported products in higher duty categories, abolishing exceptional exemptions, and improving customs administration at the Port of Dakar. Indirect taxes (sales and value-added) will be increased substantially.

(d) The Plans calls for substantial efforts to reduce expenditures. An effort is already underway to limit the rate of growth in the civil service which is projected to be only 1% for both 1985-1986 and 1986-1987. The objective is to reduce overall current government wages which now take 50% of State revenues to only 41% by 1992-1993. The GOS also plans to reduce substantially amounts spent on government housing, both residences and offices, to reduce the costs of the motorpool, and to reduce subsidies to semipublic enterprises. Measures will be taken to tighten up management of special government accounts which have been regularly in a deficit position.

Special attention will be paid to the CPSP particularly since revenues expected to be generated by the CPSP have not been deposited within the Treasury. (Studies are now in process to determine measures necessary to restore financial stability to this organization).

(e) The GOS plans to promote the cultivation and use of local cereals by developing competitively priced consumer products that respond to local needs and tastes. The aim is to reduce costs associated with rice and wheat imports which run approximately $100 million per year. The GOS plans to accomplish this reduction by developing a more favorable pricing differential between local and imported cereals, applying temporary and degressive production subsidies to stimulate local products for a period not to exceed three years, and promoting programs to test the public acceptance of processed local products.

The New Agricultural Policy (NAP)

A key element of the Reform Plan is the New Agricultural Policy which aims to move agriculture from a position of stagnation to a position of growth, although probably at a modest rate for the near future. We should stress that

the NAP came into being as a result of an analysis of the requirements for stimulating agricultural growth, an analysis conducted by the major donors working closely with the GOS and each other. A major objective of this policy is to remove the state from its current position of excessive involvement in the agricultural economy to a role of catalyst and initiator. The private sector, including both business and farmer organizations, are thus expected to play a major role in the management, supply and marketing aspects of the agricultural economy. The policy consists of five elements for which implementation plans are currently being developed in cooperation with the donor community. These five are (a) reduction of the role of the rural development agencies; (b) increased efficiency in the supply of agricultural inputs; (c) alternative production strategies; (d) more financing for rural development; and (e) environmental protection. Each is discussed in greater detail in the following paragraphs:

(a) Reduction of the Role and Structure of the RDAs:

(1) Certain agencies are to be terminated and other agencies reorganized into planning/extension organizations only. Implementation is underway: Even now, one GOS parastatal (SODEVA) is reducing its personnel by 55%; and the remaining functions of SONAR were transfered to the oil crushing firms and SONAR has been dismantled. We understand the Society for New Lands will be dismantled in March and major reductions in SOMIVAC and SODAGRI will be phased over the next three years. SAED, according to the contract plan signed in December 1984, has already spelled out mechanisms by which its production, processing and marketing functions will be turned over to the private sector. Short term assistance to new rural enterprises may also be one of the new RDA functions.

(2) All agricultural input supply and marketing services may now be undertaken by the private sector and producer groups (true cooperatives under new legislation). A first step has been taken to provide the rural population with the autonomy to manage its own affairs. Village sections, accountable to the cooperatives and the Ministry of Rural Development, have been created. These should be able to function independently for purposes of supplying members with: inputs and consumer goods, primary transportation of production, primary processing if needed, credit, mutual benefit insurance, training, education and management, and other services as decided by the Section.

(3) The GOS has passed a law in Spring 1984 providing for and regulating economic interest groups. That law represents the legal foundation for the establishment of producer groups. These economic interest groups, like the village sections, have juridical status and fiscal autonomy.

(b) Increased Efficiency in the Supply of Agricultural Inputs: The poor performance of the agricultural sector has been blamed on the poor quality of services provided by the RDAs and the government. Drought has been a contributing factor, but untimely delivery of credit and implement supply and an almost complete breakdown of the development and supply of improved seeds were serious factors.The GOS recognizes that the costs and management of input subsidies and supply services is beyond its capability.

(1) Fertilizer: The NAP recognizes the potential of the private sector to supply inputs more efficiently than present structures permit and calls for distribution of fertilizer by the private sector. Fertilizer use in recent years has been very low (30,000 tons). It is estimated that 185,000 to 300,000MT are required to fertilize all cultivable land. Possibilities for increasing fertilizer use are now under study. These possibilities include reducing the cost of production through economies of scale at the expanded fertilizer plant, importing fertilizer if domestic production is not competitive with the world market, and providing a subsidy to be gradually reduced over a four-year period indexed to a progressive increase of cereals' prices.

(2) Seeds: The GOS plans to increase production of high quality seed stock (groundnuts, millet, sorghum, corn and rice) by contract farmers; the transfer of responsibility for replenishment and management of groundnut seed material to the oil mills (this contract was signed in December 1984); and the stimulation of the village sections and producers groups to store their own cereals and groundnut seed by providing warehouses and technical assistance.

(c) Alternative Crop Production Strategies: Domestic production needs to be increased. Reasons noted include the diminishing potential of peanut exports, high prospects for continued price increases in the international cereals market (although currently the quality of rice that Senegal imports is selling cheaply), the economic benefits from increasing the proportion of domestically produced food, and the political benefits from expanding the market linkages of different regions of the country. Discussion is focused upon means of phasing out the current cheap food policy and reducing the consumer preference for 100% broken rice. This issue goes beyond the agriculture sector and becomes a consumer issue of political importance. The action program forthis aspect of the NAP will be the most crucial but most difficult to develop.

(d) Financing Rural Development: The rural share of government investment and the terms of trade for the rural sector have not been rational. Resources allocated to agriculture have often leaked away

though excessive bureaucracy or poor administration. Input subsidies and administrative costs have become astronomical with questionable benefits. The Casamance and the Fleuve development objectives will require major sums for infrastructure that must be paid for from future production. All of these questions will require considerable study to ensure that costs are brought into line with resources.

(e) Environmental Protection: Composed of topsoil blowing away, dust storms of increasing severity and increasing frequency have become the most visible sign of environmental degradation. Reduced crop yields, difficulty in finding good wells, and scarcity of fuelwood are also serious related problems which are getting worse. These problems are quite well known but insufficient human and financial resources have yet to be devoted to producing solutions. A few trees are being planted, some wells are being improved and some research is underway; but, there is a need for an action program to turn the situation around. The donor community has not had sufficiant time to respond although the GOS has produced a draft action program.

This combination of targets endorsed by the NAP and the Action Plan, including the augmentation of revenues, stabilization of expenditures, expansion of production, and external debt rescheduling, should allow the GOS to generate the surpluses needed to pay off its substantial debt to the private and banking sectors. Foundations should be laid at the same time for steady growth of the economy, particularly in the agricultural economy.

D. THE AGRICULTURE ECONOMY: PROBLEMS AND POTENTIALITIES

General Status of the Agricultural Sector

The agricultural sector has been and remains the pivotal point with respect to the economic health of Senegal. Performance in this sector most affects overall economic performance despite the small contribution to GDP which has ranged during the last decade from a high of 18.4% in 1977 to approximately 7.0% in drought years. Three simple factors make this so: First, Senegal's people depend upon agriculture for their livelihood; the impact on economic performance of 70% of the people producing 7% to 20% of GDP is impossible to ignore. Second, agricultural exports have provided a significant portion of Senegal's foreign exchange earnings, ranging from a high of 83% in 1961 to a low of 7% in 1981. And third, the decline since Independence in per capita food production represents the single most alarming economic fact facing the nation. Senegal produced 65 to 70% of its cereals

requirement at Independence but now over 30% of the cereals consumed are being imported. This means that the rural sector is no longer producing enough food to feed itself, much less the urban population. This ever-increasing failure of the agricultural sector to meet the nation's food requirements places the nation in ever-increasing jeopardy.

Agricultural Environment

A major question for both the Senegalese and the donors is why, in spite of substantial investments in the agriculture sector, the sector's performance has been declining. Part of the answer lies of course in the devastating pattern of insufficient rainfall and environmental degradation. Senegal is a small country with a surprisingly large number of diverse ecological systems (see Annex 3) which in recent years, due to drought, population pressure and inappropriate policy decisions, have been deteriorating at an accelerating rate. Satellite imagery shows that the northern extent of vegetation in the region has been pushed approximately two hundred kilometers south in the past ten years. The loss of vegetative cover results in an increase in soil erosion, reduced soil fertility, and an inability of the land to absorb and retain what little rain does fall. Average annual rainfall for the years since 1968 has fallen to half of what was previously considered "normal". The drought has reduced once productive agricultural land to marginal conditions on which crop production is risky and unprofitable.

The speed of the change in Senegal's natural resource endowment has not only frustrated planners, but the farmers themselves are finding that time-tested practices no longer work. Much land which had produced crops of millet, sorghum and peanuts is now suitable only for grazing. Not only have crop lands been lost, but also forested areas are now under siege by farmers demanding access to still productive sites. Livestock including large Mauritanian herds driven ever southward systematically sweep the agricultural land during the dry season eating any crop residues. Potentially beneficial manure deposited by livestock is often collected for fuel. These heavy demands placed upon the land deplete the soil resource, reduce crop yields, diminish vegetative cover, increase erosion, lower carrying capacity for an expanding population and create shortages of fuelwood, traditional medicines,

fencing material and forage. The drought has also been responsible for a lowering in the water table to depths which are often inadequate for groundwater recharge. Traditional wells dry up for months on end and reduced soil moisture speeds the death of the less drought resistant trees.

Cutting across the multiplicity of ecological systems and the myriad of other problems are the questions of water management and soil conservation. Water management, soil conservation and reforestation are an integral part of the process of maintaining or increasing agricultural output in a country whose pasture land is rapidly changing to desert and whose farm land is rapidly changing to pasture. There is a need in the south for numerous salt water dikes to reclaim and/or to protect farm land which is being threatened by salt water intrusion due to a reduction in the flow of the numerous river and stream systems. There is a need throughout the country to deepen and dig new wells for human, animal and plant consumption and to regenerate vegetative cover to protect the soil and help absorb and retain the limited rainfall. The potential for irrigated agriculture in the north is substantial, estimated at 250,000 hectares or more. Development of this potential could change the food balance sheet and the quality of the diet. Only an estimated 30,000 hectares are irrigated at present and nearly 1/4th of this is developed for sugar cane production.

Food Crop Production

Agricultural production in Senegal is characterized by an overwhelming dependence upon dryland crops. Approximately 2.4 million hectares are under cultivation and the GOS estimates that as much as 3.7 million hectares are potentially cultivable. Nevertheless, to date, less than 50% of Senegal's annual requirements for staple cereals have been produced domestically. Commercial and food aid imports account for the difference. The division of the crop area is: peanuts - 47%, millet/sorghum - 44%, rice - 3%, maize - 2%, cotton - 2% and cowpeas - 2%. Millet accounts for the bulk of domestic cereals production. Fruit and vegetable production occupies some land around urban areas, but individual plots are small and marketing is weak. Livestock and forestry are of considerably less importance in terms of contribution to GDP.

The dominant agricultural enterprise of Senegal has been that of peanut/millet production in the central drylands (peanut basin). Peanut production has been supported with extensive infrastructure and incentive prices leading to an expansion of area. Millet production in this system is primarily consumed by the peanut farmers themselves and has been indirectly supported by groundnut inputs. Occasional millet marketing programs have maintained some parity between the two crops, however division of land between these two crops tends to be about equal, depending upon the farmer's assessment of his food requirements.

Production is highly variable with rainfall; even in years of good rainfall, yields have been low, much lower than the performance for like crops elsewhere. Average yields during good rainfall years for rice have been 1.1 ton/ha, for millet 0.57 tons/ha, and for corn 0.34 tons/ha. The GOS policy of relying on imports of cheap food, combined with excessive government control has probably been the critical factor discouraging food production. The relative cheapness of imported rice has perpetuated low domestic cereals prices which in turns have necessitated low prices for inputs and farm services. Unattractive commodity margins and input prices have discouraged private initiative in agricultural marketing and services.

Rice production has been receiving increasing attention due to the irrigation potential which will result from the dams on the Senegal River. A technical team from the International Rice Research Institute considered conditions on the Fleuve to be favorable for a modern system of intensive rice cultivation. Early investments in rice production proved to be disappointing, however improved management and new intensificated policies established in 1980 have had a favorable impact; yields have almost doubled. Even efforts to intensify rice production in the Casamance, initially frustrated by lack of infrastructure and difficult soil problems, are now meeting with excellent results where new technical packages are being applied.

Export Crop Production

Production of peanuts, the traditional major export crop, was also declining at the same time that per capita food production was declining, in

spite of major governmental attention to the peanut sector. Exports of basically peanut products during the early years of Independence were sufficient to cover imports, both food and non food. However, earnings from peanuts have declined sharply since 1977 (even in good rainfall years) as a result of poor production and variable world market prices (see Table I, page 32). Current prospects for peanuts are dim. The market for peanut oil is being eroded by sunflower, palm and soya oil, and thus the peanut niche in the oil seeds market is becoming narrower and less profitable.

The Government of Senegal has attempted to diversify its agricultural exports, basically fish and cotton. Fish exports have increased remarkably (over threefold) in the period '77-'84 while cotton has increased only slightly. Diversification efforts should and will continue to contribute to increased agricultural exports, but it is clear that will not be enough. Senegal must reduce its dependence on food imports, which have more than doubled in the last ten years. Senegal imports not only 50% of staple cereals, but also sugar, vegetable oil, fruits and vegetables.

GOS Strategy in Agriculture Since Independence

The public sector selection of technology and the methods of dealing with farmers have tended to be heavy-handed and quite ineffective. The GOS has used the structure of official and parastatal organizations to supply subsidized inputs and maintain controlled prices to the farmer. Seeds, fertilizer, machinery and markets were managed by various inefficient and expensive government or quasi-government entreprises. Unfortunately, insufficient priority was given to the definitions of the goals or structure of these parastatal organizations. They were found convenient by the donors for supporting large integrated development projects after the drought of the early '70s, but, the costs of these organizations and the operations they supported had grown by 1980 beyond the government's financial capability to maintain them. Increases in production being delivered were so small that per capita availability of food was falling.

Three routes have been pursued by the GOS in expanding cereals production. Crop diversification or improved cereals production in the peanut basin

was the first foreign aid supported effort extending across the entire peanut basin. Poor implementation, unfortunate government policies, inadequate research and inconsistent administration have caused these projects to have only modest impact on millet and sorghum production. Another tack was to develop irrigated rice production along the Senegal River. An investment of $150 million added 13,000 irrigated hectares producing yields of only two and one-half tons per hectare. Since 1980 a shift in attention to productivity, rather than expansion, has raised rice yields to four tons per hectare on 20,000 hectares. This new modest investment route has been hampered by the same policy, administrative and infrastructure problems that constrained dryland efforts. The third approach has been to develop the Casamance, the highest rainfall area. Unfortunately the infrastructure in this region is poor and the administrative support weak. Inappropriate and inefficient government policies which reduce incentives and strangle the provision of inputs, have further inhibited attainment of full potential in this region.

There has been little agronomic research and hard data available to support many of the proposed new technical packages in spite of substantial investments in research. Even for the new technologies such as improved varieties, nitrogen fixation plants, etc., there have been insufficient research extension linkages. Key inputs such as fertilizer and seeds, for example, have been late in reaching the farmer, often poor in condition, and minimal in benefit over traditional practices. There have even been cases in which the technology eventually delivered to farmers differed from that recommended by the Rural Development Agency which in turn differed from that suggested by the research organization.

Minimum Production Targets

Senegal requires about 36,000 additional tons (based upon good year production) of cereals per annum to maintain current per capita consumption given a population growth rate of at least 3.0% per year. A 4% growth rate in cereal production would be possible for the millet zone if inputs, extension services and markets were functioning. However, this would supply only 24,000 tons (good rainfall) of additional cereals per year. Land and infrastructure improvement for irrigated agriculture requires approximately $10,000 per

hectare using current practices and institutions and a program to provide 36,000 additional tons per year would require 10,000 hectares per year costing $100 million. Costs possibly could be cut $50 million per year using revised development practices. Senegal has chosen to pursue both dryland and irrigated development to minimize costs and achieve maximum increases in food production.

Formula for the Future in Agriculture

Solutions are clear, though not simple. They include (a) reduced direct government interventions in favor of market incentives and expanded private sector involvement; (b) adequate and timely input supply; (c) improved water management; (d) better research and linkage to the farmers; and (e) active environmental protection.

(a) Policy changes to remove GOS stranglehold on agriculture and provide incentives to farmers: The Minister of Rural Development, convened department heads, agency heads, donor representatives and others interested in the agricultural sector for a wide ranging discussion of the problems and approaches November 1983. The donors individually and collectively expressed their reluctance to provide further support to the agriculture sector unless major policy reforms were undertaken. This led to the donors working with the government in developing a new policy through a series of working sessions.

The New Agricultural Policy (NAP) that resulted from the dialogue and which incorporates important reforms jointly recommended by AID, the French and the World Bank was adopted, after debate by the Cabinet, April 1984. The government then appointed five commissions to develop implementation plans for each element of this policy as described in Section II-C above.

Perhaps no issue is more critical to the future of the agriculture sector than price policy for the cereal crops, particularly for rice. The government recognizes that it cannot maintain its present price/subsidy structure and donors are in no mood to support this policy either directly or indirectly. Key policymakers now accept that the present disparity among cereals prices will have to cease if the agricultural economy is to grow. Price increases

announced January 11, 1985 set a new context for agriculture and planting decisions in the 1984-85 crop season. Farmers' responses will be important to future planning.

(b) Adequate and timely input supply is essential to increased production: The efficacy of this requires no additional discussion.

(c) Improved water management (where water is available): The potential for improvement in irrigation methods and the returns expected from increased dependence upon irrigation are very promising in both the Senegal River Basin and in the Casamance. It has been estimated that about 250,000 hectares of irrigable land in the Senegal River Basin can be developed by the improved water control that will be provided by the Diama and Manantali dams. Feasibility analyses for improvement of land and installation of irrigation systems indicate that the cost can be reduced to under $5,000 per hectare and raise rice yields to six tons per hectare per year. (Some experts believe that even more land can be developed at lower costs and with higher production potentials therefore irrigation research and pilot studies will be undertaken to explore this potential and set goals for future CDSS periods.) This CDSS visualizes average land development costs in the Basin at $6,000 per hectare and rice yields of five tons per hectare per year on land which is double cropped and four tons per hectare on land which is single cropped in rice.

It is clear that the GOS does not have the resources to fully develop this region. However, the GOS can have a catalytic effect on the private sector by testing new techniques and alternative cropping strategies.

We have seen dramatic increases in yield in the Casamance region from water control including tidal flood protection and runoff irrigation by regulated flow of rainfall. These systems are being constructed by a few enterprising farm communities with modest technical input and they have succeeding in raising rice yields from one ton per hectare to more than two tons per hectare at a total cost of about $50 per improved hectare. We propose to support further development of the dams and dikes with the development of supplementary well irrigation where up-land sites make it

feasible to use wells in stabilizing the water supply and ensuring maximum yields.

(d) Increased agricultural research and better linkage to the farmer: Despite the problems with the research establishment, some very interesting results have been identified based upon research that is available, pilot work in various development projects and adaptation from similar agro-economic situations. The maize program in the Casamance, for example, has shown that yields of maize can exceed that of upland rice, thus major expansion of maize is possible in that region. There has also been promising work in rice planting methods which have resulted in higher yields. Along the Senegal River, there have been successful experimental plots of maize, sorghum, wheat and vegetables. There are a number of promising tree species which provides a basis for soil conservation and agroforestry.

(e) Environmental protection including especially reforestation and soil/water protection: As mentioned earlier, there have been numerous pilot projects in the domain of reforestation, Howedver, what is needed is a national campaign to promote tree planting and agroforestry. Consciousness in the importance of tree planting can be raised by a variety of techniques, but, particularly in the initial stages, by concentrating on income generating tree varieties which farmers will maintain and protect.

Thus this CDSS is written at a time when a policy framework is defined which USAID supports. The new factor in this present situation is a strong consensus among the donors about the problems and the courses of action and a willingness at the Presidential level to make the necessary difficult decisions. The translation of the policies to action programs which will implement those policies will be a difficult process and will require closer coordination among donors on both sectoral and project levels. The Government appears committed to making the necessary policy changes, and as of this writing major steps have been taken (Section II-B). While Senegal's agricultural resources are not favored by the gods, it can substantially increase its food production and consequently incomes for the rural majority.

E. HEALTH AND POPULATION

Population Growth Rate

Senegal's present population is already straining the country's ability to provide jobs, and assure food, basic health and social services for its people. Senegal's current Population Growth Rate (PGR) is undoubtedly in excess of 3.0%; however, official projections, themselves alarming, are based on the 1978 World Fertility Survey in which the rate was determined to be 2.8%. The population will reach 15 million within a mere 25 years (2010). A population of 15 million would include a labor force of 5.2 million (30% of the 1982 labor force of only 3.4 million was unemployed). The number of dependent children under 14 years of age will equal Senegal's total current population of 5.9 million and the country's cereals requirements will reach 3.3 million metric tons, six times current availability. This PGR is totally incompatible with the resources that the GOS has for improving or maintaining the quality of life of its people. If the people of Senegal do not come to grips with this situation over the next five years, then inevitably they must face an accelerated decline in per capita GDP and further long term erosion of the national resource base, the environment and living standards.

A recent study indicates that only 6% of women reported having used contraceptives in the past and one half of them had used traditional methods only. However, 22.5% of these sexually active married women of reproductive age did not wish to get pregnant at the time of the survey. It is clear that a need for family planning services exists.

GOS Health Programs and Mortality

It is also becoming apparent that current GOS-sponsored health programs are having an impact on mortality. An excellent study, conducted in the former Sine Saloum region in late 1982, for example, indicates that the death rates for children aged from 12 months to 60 months may have fallen from the World Fertility Service (WFS) level of 191/1000 to a level of 153/1000 or fallen by 20%.

Infant mortality (deaths from zero to 11 months) is high (100-130/1000) and life expectancy is only 50 years. Diarrhea causes 23.8% of all deaths whereas malaria (9%), measles (6.9%), tetanus (5.4%), meningitis (3.5%) and polio (1.2%) combined only cause 26.0%. Diarrhea is, by far, the leading though easily preventable killer of children under five. The major cause of death in children which is not easily preventable is the respiratory disease complex which causes 23.0% of deaths. Malnutrition among young children varies from year to year and from region to region. Data from children monitored in a PL 480 feeding program indicate that, during the season prior to harvest, between 7% and 15% of children are below 70% of their expected weight - i.e. acutely and severely malnourished. These rates vary from 4% to 7% during the period of plentiful food supply. A more controlled random sampling of children revealed only 4.4% of children under 80% and 0.5% under 70% of their expected weight. However, the MOH believes that this survey and its more optimistic findings is suspect because of methodological errors and the fact that it was conducted during the season following the best harvest during the past ten years.

Illness among the adult workforce is not well understood. Malaria is undoubtedly the single most important cause of lost work during the growing season. Wound infections, malnutrition (particularly inadequate nutritional levels in pregnant women), and chronic infections such as tuberculosis also enfeeble adult laborers. Schistosomiasis is not now an important public health problem but may become one with the development of irrigated agriculture. Both morbidity and mortality peak at the end of the rainy season due to an increase in the prevalance of diarrhea and malaria superimposed on a malnourished population which has no food reserves from the previous harvest and no money left to buy food.

Health/Population Sector Resources

The Health/Population sector in Senegal is plagued by: a totally inadequate budget ($3.25/capita/year); a concentration of both human and financial resources in the urban areas; an inadequate number of well trained personnel; and an austerity program prohibiting significant increases in personnel. Health's share of the national budget has shown a steady decline

since 1972, when it was 8.6%, to this past year when it was 5.14%. Senegal devotes a large percent (63.1) of its budget to personnel salaries and support. It is estimated that the amount of money in real terms devoted to non-personnel expenses fell by 20% between 1978/79 and 1982/83. (A practical result of this stringency is discontent among the personnel in the Ministry resulting in strikes among physicians and nurses last year over salaries and working conditions.) A physician directing a health center and ten peripheral health posts has a non-personnel expense budget of $120,000 per year with which to provide health services to a population of 200,000.

The GOS, with USAID support, was among the first of African governments to initiate universal payment of user fees. It remains among the very few governments which encourage decentralized management of these fees by locally elected groups, it continues to embrace the training of village health workers, even those remunerated by the villagers, not by the state. And, Senegal is mounting an aggressive family planning program intended to provide contraceptive services to people outside the capital city, it is the first Francophone West African country to do so.

Health Care System

The basic unit in the health care system is the health center (HC). It is staffed by a physician, two to three midwives, and nurses each and ten to 15 other paramedical personnel. Each HC serves approximately 200,000 people. Peripheral to the HC is the Health Post (HP) staffed by a male nurse who usually, but not always, has training equivalent to that of the registered nurse (RN) in the U.S. Each HP serves approximately 10,000 to 20,000 people. The GOS is committed, at the village level, to training a male first aid worker and a female birth attendant. When trained, these become the community health worker (CHW) team. These minimally trained, often illiterate individuals provide very simple but sometimes lifesaving services to approximately 1000 people in one core and two satellite villages. Senegal now has approximately 50 HC, 500 HP and 700 CHW teams.

Medical Training

Senegal has a relatively well developed network of training institutions in the health sector. The medical school, the first in Francophone Africa, is still unarguably the best, though budgetary constraints have compromised its quality. It graduates approximately 20 Senegalese physicians and five physicians from neighboring countries each year. There are also schools of nursing (90 graduates annually), midwifery (40 graduates annually), sanitation and environmental hygiene, and the World Health Organization (WHO)-supported CESSI (Centre d'Enseignement Supérieur en Soins Infirmiers) which graduates four Senegalese nurses and six nurses from other countries each year. CESSI graduates have two years postgraduate training in health care administration and pedagogy.

Table I

BALANCE OF TRADE 1977-1984

(in billions of CFAF)

	1977	1978	1979	1980	1981	1982	1983	1984
Exports								
Groundnut products	75.5	23.5	41.7	19.9	9.2	44.3	39.4	54.3
-unrefined oil	(40.2)	(13.0)	(25.5)	(11.9)	(6.0)	(33.9)	(38.8)	(37.1)
-refined oil	(8.3)	(3.4)	(3.5)	(1.8)	(0.3)	(0.2)	(1.6)	(3.4)
-cake	(16.6)	(6.3)	(10.2)	(5.9)	(2.8)	(9.5)	(14.2)	(14.2)
-peanuts	(10.4)	(0.8)	(2.5)	(0.3)	(0.1)	(0.7)	(4.7)	(-)
Cotton	4.9	3.4	3.5	2.2	2.0	5.0	5.7	5.7
Fish	16.4	17.4	21.3	21.2	37.5	48.0	47.8	55.9
Non-Ag. products	67.1	46.3	49.9	60.4	90.3	71.5	78.3	110.4
Total Export Earnings	163.9	90.8	116.4	103.7	139.0	168.8	195.4	229.7
Imports								
Rice	11.3	12.6	14.3	13.1	27.1	26.3	30.2	27.8
Wheat	4.6	2.9	5.4	4.5	4.8	5.3	5.2	5.5
Sugar	5.5	3.7	3.8	5.4	3.8	1.8	2.1	1.4
Other food products	13.1	14.3	16.5	12.3	17.3	21.5	21.4	28.5
Non-Agr. products	135.3	134.5	140.4	164.7	221.7	225.9	229.5	234.4
Total Import Costs	169.8	168.0	181.3	205.5	274.7	282.1	314.2	313.6
TRADE BALANCE	-25.9	-77.2	-64.9	-101.8	-135.7	-113.3	-118.8	-83.9

AGRICULTURAL TRADE BALANCE

A. Including fish	52.3	10.0	26.0	2.5	-4.3	42.1	42.0	38.9
B. Excluding fish	45.9	-7.6	8.4	-18.8	-41.3	-5.9	-5.8	-16.7

TABLE II - PRODUCTION OF MAJOR CROPS, 1961-1985

YEARS[1]	PEANUTS		MILLET/SORGHUM		RICE		MAIZE		COWPEAS		COTTON		Total Cultivated Area (1000 Ha)[2]	
	Production (1000 Tons)	Area Planted (1000 Ha)	Production (1000 Tons)	Area Planted (1000 Ha)	Production (1000 Tons)	Area Planted (1000 Ha)	Production (1000 Tons)	Area Planted (1000 Ha)	Production (1000 Tons)	Area Planted (1000 Ha)	Production (1000 Tons)	Area Planted (1000 Ha)		
1961	922.5	977.0	392.3	683.2	71.2	67.8	27.4	30.6	28.7	45.2	0.08	0.99	1,804.79	(48.4)
1962	992.0	1025.5	406.6	839.8	83.5	73.4	28.4	32.0	15.1	56.2	0.11	1.01	2,027.91	(54.4)
1963	893.9	1013.0	423.7	864.7	89.9	71.5	26.8	31.5	12.8	49.3	0.11	0.87	2,030.87	(54.5)
1964	952.4	1004.2	478.4	959.5	105.2	74.3	26.7	32.7	14.2	51.3	0.29	2.14	2,204.14	(59.1)
1965	1019.3	1055.0	513.8	1010.8	100.3	86.3	37.1	47.2	16.8	56.3	0.52	1.69	2,257.29	(60.5)
1966	1122.1	1112.1	560.1	1069.4	121.9	82.1	40.8	54.2	13.7	53.5	0.70	1.45	2,372.75	(63.6)
1967	857.1	1114.1	423.5	996.7	124.7	87.2	41.8	53.9	18.2	68.8	1.92	2.28	2,322.90	(62.3)
1968	1005.2	1163.8	655.0	1155.5	133.9	100.8	56.8	71.7	30.4	99.2	4.27	4.04	2,595.04	(69.6)
1969	819.5	1193.1	449.3	1053.6	61.1	76.9	25.3	36.4	17.1	67.8	9.75	6.69	2,434.49	(65.3)
1970	788.8	963.1	634.7	1037.3	140.1	103.7	48.9	55.4	22.5	71.2	11.50	9.81	2,240.51	(60.1)
1971	582.0	1049.7	382.0	966.5	93.1	89.3	33.1	50.8	17.7	63.1	11.61	13.62	2,233.02	(59.9)
1972	985.4	1060.4	583.2	970.4	107.5	84.0	37.6	48.8	25.9	71.0	21.16	18.33	2,252.91	(60.4)
1973	570.0	1071.4	322.0	938.1	37.9	53.3	20.2	32.4	10.8	86.4	23.31	20.36	2,199.96	(59.0)
1974	657.0	1025.1	510.2	1102.9	65.2	64.8	33.8	39.2	15.2	52.9	32.61	20.12	2,012.02	(54.0)
1975	988.7	1052.2	796.2	1144.7	120.4	85.2	43.2	48.6	22.3	56.4	40.60	37.96	2,425.06	(65.0)
1976	1434.1	1312.5	616.4	964.5	130.2	93.5	44.4	50.1	24.8	60.8	30.69	39.21	2,520.61	(67.6)
1977	1186.3	1285.1	507.6	948.9	126.0	88.6	43.5	48.6	16.2	63.4	45.22	41.85	2,476.45	(66.4)
1978	509.3	1161.2	360.2	942.8	63.0	63.3	33.2	53.6	11.7	57.2	37.17	47.11	2,325.21	(62.4)
1979	1050.7	1154.3	752.0	1054.7	146.4	91.3	54.1	56.4	18.2	62.4	33.81	40.31	2,467.41	(66.2)
1980	672.9	1047.9	520.6	967.5	96.6	78.7	46.2	67.7	18.8	55.4	27.23	30.91	2,248.11	(60.3)
1981	521.3	1064.6	545.0	1116.7	64.7	67.1	37.0	78.4	17.1	54.3	20.96	29.92	2,411.02	(64.7)
1982	869.9	1010.1	736.4	1176.9	120.0	69.1	68.0	55.8	28.8	68.5	33.72	39.28	2,419.68	(64.9)
1983	1091.7	1121.1	585.2	990.9	105.2	68.2	82.2	84.2	12.6	50.3	43.46	36.07	2,352.77	(63.1)
1984[3]	568.8	987.5	351.8	783.6	108.5	52.0	60.6	70.5	12.9	39.4	31.00	33.36	1,966.33	(52.7)
1985[3]	682.4	884.1	471.5	1002.9	135.8	66.1	98.5	82.7	15.8	52.5	33.80	48.20	2,136.50	(57.3)

KEITA, M. (1984), Agricultural Development Office, USAID, Dakar, Senegal

[1]The year refers to the crop year; i.e., 1961 refers to the crop year 1960/61: planting mid 1960, harvest end 1960.

[2]Figures in parentheses represent the percentage to total arable land areas under cultivation. The total arable land areas are estimated to be 3,728,000 hectares.

[3]Preliminary estimate of Ministry of Rural Development as of October 1984.

TABLE III

SENEGAL: SELECTED EXPORTS, 1977 - 1982[1]

(Volume in metric tons)

	1977	1978	1979	1980	1981	1982[2]
Peanut products	661,227	219,133	401,195	175,379	56,793	331,134
unroasted peanuts	81,633	5,459	10,247	2,723	2,904	4,659
unprocessed oil	192,334	52,726	120,565	62,580	22,594	151,485
refined oil	34,995	12,307	15,069	11,203	432	163
peanut meal	332,254	148,131	255,314	98,368	31,363	194,877
Non-peanut Products	2,642,611	2,473,920	2,438,482	2,334,777	2,074,257	2,361,828
of which:						
fresh fish	37,552	22,343	36,886	49,295	46,016	44,982
shellfish	6,849	6,380	6,721	6,532	6,226	6,369
processed fish	16,316	13,223	11,695	11,557	13,175	13,412
fresh vegetables	12,853	7,698	4,466	11,985	7,173	10,121
flour	6,036	22,007	3,290	3	203	431
gum arabic	746	562	2,239	484	152	500
leather and skins	741	953	1,256	1,114	1,350	1,110
cotton in bulk	12,588	10,505	9,345	5,827	4,190	10,111
TOTAL	3,303,828	2,698,053	2,859,677	2,560,156	2,131,050	2,413,012

(Value in millions of CFAF)

	1977	1978	1979	1980	1981	1982[2]
Peanut products	75,509	22,539	42,254	17,571	9,145	41,918
unroasted peanuts	10,411	795	1,970	463	584	642
unprocessed oil	40,206	13,033	27,046	11,324	6,226	31,125
refined oil	8,295	3,425	3,772	1,585	126	51
peanut meal	16,597	6,286	12,466	4,197	1,899	10,100
Non-peanut Products	77,411	71,720	71,604	82,196	126,731	138,119
of which:						
fresh fish	4,614	5,690	6,288	7,157	10,093	10,496
shellfish	4,035	5,351	6,079	6,437	6,828	7,457
processed fish	7,807	6,622	6,352	7,310	10,642	11,695
fresh vegetables	1,244	743	722	371	893	1,098
flour	460	1,598	1	-	21	59
gum arabic	195	139	124	126	76	173
leather and skins	402	514	732	616	729	649
cotton in bulk	4,876	3,415	2,943	2,168	1,991	4,770
TOTAL	152,920	95,259	113,858	100,767	135,876	180,037
Memorandum Item CFAF/$1	235.3	209.0	201.0	225.8	272.0	328.6

Sources: 1977-1980: Ministère de l'Economie et des Finances, Direction de la Statistique, Analyse du Commerce Extérieur du Sénégal en 1979 et 1980, tableau no. 3, p. 15.
1981-1982: Direction de la Statistique, Division du Commerce Extérieur.

[1]Some figures do not agree with those of Table 1.11.
[2]Figures for 1982 are provisional.

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TABLE IV

SELECTED AGRICULTURAL IMPORTS, 1977 - 1982[1]

Products	1977	1978	1979	1980	1981	1982[2]
	(Volume in metric tons)					
Dairy products; honey	17,058	14,564	13,544	12,575	n.a.	n.a.
Fruits and vegetables	41,976	45,617	51,172	42,703	28,267	44,587
Wheat	95,963	142,354	122,860	97,156	121,769	99,156
Maize	13,781	12,027	9,384	23,232	4,464	5,735
Rice	248,018	238,996	151,360	302,536	339,815	341,516
Kola nuts	9,364	8,130	10,707	7,954	6,318	7,410
Sugar	61,619	55,647	53,122	34,186	31,742	37,678
Canned fruits/vegetables	9,817	8,403	11,283	5,424	3,640	5,563
Fats and oils	15,294	23,123	16,706	36,836	67,693	69,399
Beverages	14,145	12,736	12,891	9,076	12,537	9,373
Tobacco	2,905	3,090	2,912	2,514	3,001	2,589
All other Imports	2,304,558	1,380,777	1,346,369	1,239,447	n.a.	n.a.
of which:						
Petroleum Products	(814,539)	(921,771)	(911,273)	(949,288)	(989,642)	(814,153)
TOTAL	1,834,698	1,945,584	2,003,110	1,863,939	2,064,912	1,870,330

Products	1977	1978	1979	1980	1981	1982[2]
	(Value in millions of CFAF)					
Dairy products; honey	3,796	3,164	3,169	3,982	n.a.	n.a.
Fruits and vegetables	3,497	3,202	3,783	3,644	4,303	5,195
Wheat	4,609	2,855	3,377	4,966	5,794	4,134
Maize	382	233	339	811	284	256
Rice	11,263	12,610	14,796	18,102	25,996	25,495
Kola nuts	820	573	590	611	1,300	1,512
Sugar	5,533	3,708	3,351	3,369	6,963	3,730
Canned fruits/vegetables	1,771	1,482	2,874	1,091	849	1,363
Fats and oils	1,822	2,993	2,355	5,150	11,885	11,637
Beverages	1,400	1,321	1,739	1,228	1,380	1,492
Tobacco	1,709	2,065	1,816	2,115	2,607	3,286
All other Imports	130,725	136,058	157,790	175,132	n.a.	n.a.
of which:						
Petroleum Products	(23,380)	(23,881)	(32,644)	(38,228)	(80,740)	(75,510)
TOTAL	187,547	170,114	197,979	222,256	292,341	125,935
Memorandum Item CFAF/$1	235.3	209.0	201.0	225.8	272.0	325.6

Sources: 1977-1980: Ministère de l'Economie et des Finances, Direction de la Statistique, Analyse du Commerce Extérieur du Sénégal en 1979 et 1980, tableau no. 3, p. 15.
1981-1982: Direction de la Statistique, Division du Commerce Extérieur.

[1]Some figures do not agree with those of Table I.11.
[2]Figures for 1982 are provisional.

III. U.S. DEVELOPMENT STRATEGY

A. USAID OBJECTIVES

Primary Objectives

The overriding long-term objective of USAID in Senegal remains to support Senegal's goal of achieving food self-reliance, meaning the capacity to feed its people by domestic production and trade, even in drought years. The short-term objective of USAID in Senegal is to participate in a cooperative effort with the GOS and other donors to restructure the Senegalese economy and lay the groundwork for positive growth. This necessitates USAID formulating a very simple, pragmatic and measurable goal, namely, "a positive per capita rate of increase in Gross Domestic Product."

Subsidiary Targets

This is line with the medium-term action program which the GOS presented to the donor community December 1984. This program, prepared with World Bank assistance, focuses on financial equilibrium and income growth both at national and individual levels. Its specific growth target is achievement of an average GDP growth rate of 3.2% in the coming period through 1991. Achievement of this goal, as far as USAID support is concerned, will be the result of the interaction of efforts directed at three subsidiary targets: (a) Generally improved economic performance resulting in large part from structural reform; (b) a 5% yearly increase in cereals production resulting from adequate inputs, water and marketing; and (c) a decrease in the fertility rate of 48/1000 to 42/1000 derived from the family planning efforts.

Prospects for This CDSS Period

The average GDP growth rate since 1960 has been extremely low and declining, averaging roughly 1.3% per year. It is estimated at 0.4% for 1984. When compared to the population growth rate, currently over 3%, the overall per capita GDP growth rate has been negative. It is not possible during the next five years to decrease the population growth rate because health programs have decreased and will continue to decrease the mortality

rate. However, it is possible to decrease the fertility rate during this CDSS period and in that way lay the groundwork for a reduced rate of population increase by 1990 and beyond of no more than 2.5%.

Thus, a positive rate of growth, albeit small, should be established by the 1990s. A key indicator will be the rate of growth of food imports which have more than doubled in the last ten years. If the 5% annual growth in cereals production can be attained, then the level of food imports of 557,000 tons in 1984 should stabilize or slightly decline by the end of this CDSS period.

B. PROGRAM STRATEGY

Program History

The current program was established in response to the great drought of the late 60s and early 70s. USAID (with other donors) has supported area-specific activities directed at increased food production and a reversal of the tide of environmental degradation. Much has been accomplished on this area-specific basis but little, if any, progress has been made towards improving the overall situation with respect to agricultural production and reversal of environmental degradation. The situation has worsened sharply in fact. The last year has been one of reevaluation and analysis by the GOS and the donor community. AID completed a major assessment of the agricultural sector in September 1984. This assessment represents a compilation and analysis of what is known about the dynamics within the rural sector. The report confirms that the focus of the AID program has been appropriate, but that it has been conducted within an inappropriate policy atmosphere. This current program is speedily coming to an orderly end, thus clearing the way for a new program directed at eliminating the constraints to increased agricultural production and associated economic activity. Eighteen of the twenty-three bilateral SDP projects being administered by this Mission during FY 84 have or are scheduled to terminate before the end of FY 1986. (See final page, Section IV.)

New Strategy Elements

Much of the strategy contained in the FY 83 CDSS is still valid. The most significant changes proposed in this CDSS are:

(a) Emphases on removing constraints to agricultural production (rather than on area-specific interventions);

(b) a greater emphasis on income generation in the rural sector;

(c) the launching of an important program of reforestation and soil regeneration to be based largely on the pilot efforts of the last few years; and

(d) a reduced emphasis on public sector institutional growth.

Continuing Strategy Elements

An element of the earlier CDSS which will be strengthened in all the programs and projects is the exposure to Senegalese policy makers and intellectual leaders to new and different ideas and methodologies. Senegal as a nation was born out of the aftermath of the political ferment in Europe and Africa which spawned numerous experiments directed at creating socially equitable societies. Senegal's leaders were part of these movements and they have experimented with their own form of African socialism since independence. There are many commendable aspects to the resulting social order, but economically, the model has broken down.

It is obvious, today, that much of the top leadership of the nation is committed to economic reform; they need exposure to new ideas and models at all levels in the bureaucracy to bring about the internal ferment which will result in the development of a new consensus and a spirit of cooperation and determination to implement reform. USAID proposes to strengthen our on-going emphasis on dialogue, seminars and discussion groups, and the provision of technical assistance, short-term training and observation tours responsive to this need and tailored to key leaders.

Program Composition

We are proposing a program of about $50 million a year, divided evenly between project and non-project assistance. The program will be composed of

ESF and PL 480 Title I components, devoted to structural policy reform, and SDP and PL 480 Title II components, devoted to services delivery, technology transfer, institutional development (primarily for the private sector) and investments. The program will be comprised of fewer but larger projects designed to impact on productivity constraints. The program, with respect to both policies and investments, will be concentrated on the rural sector. Increasing emphasis will be placed on employment generation and environmental rehabilitation, while the earlier emphasis on agricultural production, health and family planning will be maintained.

Strategy Origins

The Strategy is based on the GOS "Medium and Long Term Economic and Financial Adjustment Program (Action Plan)," the World Bank "Country Economic Memorandum," USAID analyses of weaknesses within the economy, and the Mission's analysis of AID's strengths and other donor inputs. USAID/Senegal's four-pronged approach is aimed at helping the GOS put the rural economy back to work. If in this process the economy reaches a state of financial equilibrium and if the structural problems are resolved, then the basis should be laid for a slow but steady real per capita GDP growth in the '90s and beyond.

C. THE FOUR ELEMENTS OF THE USAID STRATEGY

The AID strategy of assistance in Senegal in this CDSS period will concentrate on (a) supporting GOS structural adjustment and reform measures; (b) assisting the GOS to reduce institutional and infrastructure problems which impede the growth of agricultural production; (c) creating income-generating activities which contribute both to environmental protection and increased production; and (d) continuing activities designed to increase human productive capacity and improve the quality of life through health, nutrition and a reduction in the rate of population growth. Each of these strategy elements is discussed in detail in the following paragraphs.

We will focus throughout the program on income-generating activities. Specific projects are proposed but we believe that the steady growth in cereals production will also have substantial income and employment generation effects. The combination of policy reform and emphases on productivity and the population restraint should allow food imports to stabilize by the end of the CDSS period.

(a) Supporting GOS Structural Adjustment and Reform Measures: The GOS has developed a detailed program (described in Section II-C) to redress its financial problems. This plan was reviewed by all the donors in Senegal's first Consultative Group meeting in December 1984. The U.S. and other major donors expressed support for this Plan while stressing the importance of aggressive implementation. This institutional reform and development effort will require constant dialogue, monitoring and timely provision of technical assistance. We plan to use ESF, PL 480 Title I, and selected technical assistance in support of the program in this CDSS period. We will concentrate during the first three years of the period on activities supporting GOS efforts:

(1) to implement the new agricultural policy;
(2) to tighten fiscal control and mobilize greater domestic resources;
(3) to restore liquidity to the banking sector;
(4) to develop and implement a national cereals policy; and
(5) to privatize fertilizer, seed and equipment distribution.

We will be proposing a three-year ESF Program, which will encourage an orderly implementation of reforms, with disbursements tied to and dependent upon performance. The PL 480 Title I Program, while supporting the Reform and Stabilization Programs through conditionality and foreign exchange saving, will also provide the local currency required for implementation. It will also promote the use of local cereals. A market will develop for the additional local production of these cereals as urban and semi-urban populations develop a taste for corn and sorghum. We anticipate by this time that the Millet Transformation project (PACD 5/86) will have established the feasibility and suitability of the use of processed millet in easy commercial

preparations. We will be proposing a second multi-year ESF program towards the end of the CDSS period depending upon progress on the reform program by the GOS. The second multi-year ESF, while continuing to maintain emphasis on implementation of policy reform, will be used to finance elements of the GOS investment plan, particularly those related to agricultural production and environmental rehabilitation.

Implications of Reform Measures

There will be an increasing need for specialists to work with the GOS on specific elements of the reform plan as it moves into full implementation. A considerable effort will be required to set priorities and perform the analyses required to implement the various elements of the plan, although much of the process of identifying the problems which must be solved and identifying the general direction in which the GOS must move has already been articulated. Considerable coordination and discussion will be required with the leading donors and ministries concerned with macroeconomic and agricultural performance.

U.S. technical capabilities may also be in demand in such areas as disinvestiture of public-owned corporations, fiscal reform, etc. USAID capabilities to respond to GOS requests for assistance in the areas of policy analysis, management and operation studies, audits, regulations and procedures and follow-up training will be augmented by the Technology Transfer Support Project. We will make every effort to ensure that these public sector developments move forward. All avenues for tapping U.S. analytical and management expertise will also be explored. The GOS has indicated in the current Adjustment Program that, for example, it will be disinvesting itself of part of the stock which it holds (currently valued at roughly 68.5 billion CFA) in Senegalese corporations. The GOS will need assistance in this process. USAID will explore assistance options such as the International Executive Service Corps (IESC) and Project Sustain which can provide practical private sector experience. [If Senegal continues to implement its reform and stabilization program, then it might be an excellent candidate for additional ESF funds devoted to policy reform. However, prior to making a firm recommendation, we would like more experience with current GOS efforts].

(b) Assisting the GOS to Reduce Institutional and Infrastructural constraints Which Impede the Growth of Agricultural Production: This element of the program will provide the technological complement to policy reform. The challange is to facilitate within the agricultural sector an orderly transition from government control to new, free-market/private-sector based enterprises. The GOS has taken a major step forward in beginning to dismantle the highly centralized, inefficient state mechanisms which have overcontrolled the rural sector. Emphasis is now being placed on farmer initiatives and private sector participation. However, there are still serious constraints to substantial increases in cereals production. New structures, preferably private and competitive, must develop for the delivery of agricultural inputs (fertilizer, seed, farm machinery, credit, etc.) and for the marketing of farm outputs. New institutional relationships between farmers, private entrepreneurs, cooperatives and government must be created to serve the needs of the rural communities as the current RDAs are trimmed back, reorganized and/or abolished.

Production Potential

The removal of the RDAs and the increased freedom and opportunity for farmers is expected to release a level of energy that has been encumbered for some time by ineffective supply of inputs and services . It is expected that farmers can raise cereals production about 5% per year through sound applications of available technology such as Souna III millet, chemical fertilizer and improved water management. This CDSS provides for concentration on realizing these benefits by assuring the supply of the essential inputs and enabling the GOS to carry out its reform of rural infrastructure. The program in conjunction with the anticipated inputs of other donors will enable the GOS to achieve a broad-based program of economic growth in the rural sector.

Agricultural Production Support Project

USAID proposes to use several projects in a coordinated program to achieve the production benefits expected in this CDSS period. The mainline project in this group will be the proposed Agricultural Production Support Project.

This project will facilitate the establishment of alternative channels for input distribution and farm services. It will assist private and cooperative groups to set up sales and service outlets for seeds, fertilizer and implements. It is noted that the New Agricultural Policy opens the door for private initiative and at the same time reduces state interventions in these activities.

The key factor for future growth will be the establisnment of dynamic rural supply and service networks to respond to existing commercial demand for inputs. Technical assistance will be provided where necessary to guide and plan this new infrastructure; however, the major participants in the Agricultural Production Support project will be the agro-commercial banks and the farm service enterprises. The project will assist in establishment of commercial distribution channels, practices and facilities through technical assistance and financing. Commodities such as foundation seed material and fertilizer ingrediants may be imported to expand the supply produced by existing channels. The local currency proceeds from such imports will be recycled through banking channels to serve as new working capital for expansion of the volume of goods and services available to the farmer.

Irrigation and Water Management Project

The Irrigation and Water Management Project for the Senegal River Valley and the Southern Zone Water Management Project will provide complementary, region-specific inputs in achieving the production goals of this CDSS.

Senegal River Valley

AID has been planning for ten years a major contribution to the development of the Senegal River Valley. USAID will launch a development effort early in 1985 based to a substantial degree on the successful Bakel Irrigation Project (which has substantially increased yields from two to four tons per hectares) and on the many studies of the River. We plan to participate in the irrigation program in the Fleuve region to the tune of 10,000 hectares, in the central and upper reaches of the Valley.

The NAP provides for privatization of future irrigation and USAID believes this offers significant possibilities for future expansion and improvement of performance. Interest in private farm development has increased as the construction of the dams (the Diama dam in Senegal to be completed in 1986 and the Manantali dam in Mali to be completed in 1989) has progressed. USAID-supported irrigation projects will concentrate on the exploration of more efficient construction techniques, the improvement of water and input management, and the development of alternate crops yielding a higher rate of return, while expanding acreage. These projects propose to stimulate private sector investment through policy reform (e.g. land tenure, investment codes, marketing, etc.), improved extension and infrastructure development. Projects will be experimenting with the higher, lighter soils, although some of the lower clay soils will be developed for rice production. Alternate (reduced water demand) crops such as fruit trees, vegetables, millet and maize will be explored. Development of the proposed 10,000 hectares will be designed to demonstrate that there are alternative crops and alternate irrigation systems; irrigation systems which cost less per hectare to construct and operate, and crops that yield a high return on investment. As part of our efforts in this region we will place priority on streamlining and improving the efficiency of SAED including privatization of current holdings (approx. 13,000 hectares of irrigated land, two rice mills and a large construction capacity).

Water Management Project

It is clear to USAID that throughout the country the non-availability of water at appropriate times and in appropriate amounts is a major constraint. Senegal cannot continue to count on rainfall, which is sporadic and highly variable at best. There exists substantial opportunity for better management of existing water through anti-salt dams, deep wells, and small impoundments. Several of these techniques have been tested very successfully under the AID-supported Casamance Development Project, scheduled for completion in 1985. Research has shown that adequate water control can increase production by as much as 25% even without improved inputs. Improved technical packages have been developed, however, for farming under adequate water and input conditions; under these, yields have increased substantially, as witness the

maize and rice experiments cited in Section II. USAID is planning to develop a six-year FY 86 program for improved water management for the Southern half of the country, where adequate supplies of underground water and higher rainfall exist. This program would build on these successful experiments. Emphases will be placed on small anti-salt dams, to protect 20,000 hectares of cropland, small catchment dams, to ensure adequate water supply on another 10,000 hectares, and deep wells.

River Basin Development

It should also be noted that this USAID is managing a number of regional planning and monitoring projects which impact upon the development of the Senegal and Gambia River Basins. Although these projects in themselves will not have a near-term impact upon production, they are key to our overall efforts to develop institutional capacity for improved water management on a regional basis.

Potential Grain Marketing Initiative

An important factor in substantially increasing production of cereals is the lack of an effective marketing system. The movement and pricing of grains was strictly controlled by the government until recently, in an attempt to keep prices down for the urban consumer. Farmers rarely received an incentive price for their production. Since liberalization of the cereals' trade is part of the NAP, it will be important to survey closely farm-gate prices to ensure that farmers do receive a remunerative price. The GOS is concerned that because of seasonal availabilities private traders will take advantage of both rural and urban populations.

The GOS has therefore expressed an interest in developing mechanisms which will place a floor and a ceiling on grain prices possibly through interventions in the market place. It is studying the cereals marketing sector to determine if there is or is not a need for a stabilization mechanism. USAID feels in general that the GOS's control over rice pricing and availability (50% of grain requirement) can be used as a tool to affect the value of other grains, but we will explore with the GOS the economic viability of various policy options. It is possible that after a few years of

experience with a liberalized market, and as production begins to increase, USAID might wish to participate in a stabilization effort. This could lead to a possible grain marketing initiative during this CDSS period.

Agricultural Research Activities*

A final constraint to increased agricultural production is insufficient and inappropriate research. The GOS has a very complex research network which, however, is not providing sufficient research results on cereals production or alternative cash crops. Further, the limited results that are available are not readily getting to the farmer because of an inadequate research extension linkage. USAID has now in implementation three research activities: Farming Systems Research with Michigan State University, the Casamance research activities and a research activity in the context of OMVS on the Senegal River.

The Agricultural Research Project will continue the institution building in the micro (farming systems) and macro (policy analysis) levels in the agricultural economics department of the national research institute and will provide critical technical assistance for other disciplines to accelerate the output of adapted technology. The USAID inputs are an integral element of a coordinated multi-donor program which is building hopefully a center of excellence for agricultural research in the Sahelian zone. USAID will also continue to draw heavily upon and expand the existing linkages between

research programs in Senegal and the programs at international centers and U.S. Universities, particularly the programs being conducted at the International Institute of Tropical Agriculture (Nigeria), the International Center for the Agriculture of the Semi Arid Tropics (India), the West Africa Rice Development Authority (Liberia), the Beans and Cowpeas Collaborative Research Support Program (California), the Sorghum and Millet CRSP (Nebraska), the Peanut CRSP (Texas A & M) and several other projects supported by the S & T Bureau.

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* See also Section III-D, Research Agenda, below.

USAID will integrate its management of these activities while at the same time working with the research establishment to improve management and insure that additional attention is directed towards cereals, alternative crops, more effective applied research programs, and research extension linkages. Based upon progress in the development of an effective research and extension system which is responsive to farmer needs, the Mission may propose a new research project towards the end of the CDSS period.

(c) Focusing on Income-Generating Activities Which Contribute Both to Environmental Protection and Increased Production: USAID/Senegal considers a continuation and intensification of efforts to stabilize the environment to be of the utmost priority. Senegal is suffering accelerating environmental degradation resulting from drought, from deforestation and from poor land management. Effects are strongest in the northern half of the country, although they're being felt in the South as well. The desert is advancing rapidly, topsoil is being blown away, and over-cropped soils are losing fertility.

Programs to date have been of a small pilot nature, but there have been numerous minor successes. The process of dune stabilization by the GOS in the coastal area north of Dakar (Niayes) is well on its way towards successful completion. The development of village woodlots with AID funding by the Peace Corps, Africare and Catholic Relief Services are highly successful pilot efforts. Also, we are anticipating positive research results from the two million dollar agro-forestry and soil conservation activity currently being funded under the Cereals II project. This experimental effort includes alley cropping, windbreaks, woodlots and general village tree planting.

Employment Generation and Environmental Protection Combined

The tragic fact remains that each year Senegal is losing 100,000 hectares of forest cover and unknown but substantial amounts of topsoil. At the same time, Senegal is faced with a serious and growing problem of unemployment (30% of the work force) and underemployment. Even if the stabilization program is effective and the economy starts to grow in the short-term (CDSS period), growth will not keep pace with population increases. The GOS is stringently

limiting the growth of the government bureaucracy as part of the stabilization program and, in fact, is starting the process of laying off excess personnel (in January 687 personnel were released from SODEVA, 600 plus from SONAR, and planning is underway for the reduction of other RDAs). USAID is concerned to help generate large numbers of employment opportunities in the short-term and to assist creation of more economically viable and sustainable employment in the long-term.

Therefore, we are proposing for FY 1986 a bold program to be financed by several donors of environmental protection in the Northern half of the country that will (a) provide for substantial tree-planting in a variety of modes -- forest upgrading, dune stabilization, village woodlots, orchards and agroforestry; (b) lay the groundwork for an on-going self sustaining program of reforestation which is income generating; and (c) provide employment opportunities for the rural and urban unemployed and underemployed.

Such a project per se cannot solve the environmental problems of Senegal. It can however stimulate the process which will be necessary for continued and sustaining environmental activity. We see the requirements for a self sustaining program as threefold: (a) A large scale and rapid planting program to begin to arrest or slow down the accelerating rate of soil loss; b) a nationwide information campaign to convince each Senegalese that tree planting/maintenance is in his/her own economic interest; and (c) a widespread system of nurseries which produce economically valuable seedlings (fruits, nuts, timber, nitrogen fixing, resinous, etc.) readily available to all Senegalese at reasonable prices.

The first requirement, <u>large scale planting</u>, is relatively simple and can be managed through the private sector inclusive of cooperatives, farmers, producers groups, PVOs and the Peace Corps. We propose a five-year, multi-donor effort. We estimate that up to 50,000 hectares could be planted, 60,000 hectares of cropland protected (through windbreaks and nitrogen fixing trees), and substantial short-term employment provided under such a program.

The second requirement, a mass information campaign, will require a high degree of commitment and organization on the part of the government. Efforts will have to involve all types of social, political and religious organizations to get the message across in a convincing fashion. This element, if successful, will provide the incentive for continuous planting and replanting long after the project is over. (Research and observation has shown that farmers and villagers will maintain and protect trees if they feel it is in their interest.)

The third element, widespread development of nurseries, will be a joint effort between the government and the private sector. We believe in the long-run there is great potential for private sector nursery development which will permit the continuing availability of trees without donor/GOS support. There will continue to be an important role for the forestry service, however, in continuing research into fast growing, drought resistant, highly productive trees, both native and imported varieties.

It is clear that there is tremendous potential for increased farmer income directly through production of fruits, oils, gum arabic, nuts, and construction materials, as well as indirectly through improved soil quality. Our objectives and the potential impacts of such a program are therefore multiple: (a) Environmental protection; (b) rural income generation; (c) setting the framework for a continuing program; and (d) opening up private sector employment opportunities.

Other Employment Opportunities

We will also examine ongoing and new projects for opportunities to contract with local firms and/or use labor extensive implementation techniques. For example, under the new irrigation project labor-intensive perimeter construction and maintenance will be fully used. Our primary area of focus will be the farmer with respect to longer-term, economically viable job creation. Farms must become economically viable production units generating surpluses which can be used in the marketplace and thus stimulate further employment. The farmers' ability to demand and pay for services can create thousands of jobs in the rural sector. The creation of off-farm

service and productive activities will, to a limited extent, be initiated through the Community and Enterprise Development Project (685-0260), a project which is just starting. This project (LOP $9 million) is designed to assist village groups to develop income-generating activities with the assistance of PVOs. If this approach is successful, then we plan to build and expand upon it.

(d) Improving the Productive Capacity of Rural Workers and the Quality of Life Through the Provision of Health and Family Planning Services: The last element of the USAID strategy of assistance in Senegal is based upon methodical evolution during a seven-year period in which the GOS, with USAID assistance, has developed low-cost health and family planning delivery systems. Emphasis has been and continues to be on the expansion of both the services offered and the territory covered. The expansion must be in such a way as to ensure that the local population not only wants the services but is willing and capable of paying for them. It has been determined that the current systems are having a positive impact upon health and will have an impact upon fertility at a price which the GOS and rural population can afford. USAID also believes that the delivery of simple curative and preventable health services to the village level will interrupt the vicious cycle of infectious disease and malnutrition, increase productivity and help slow the rural exodus. This element of the program consists of two projects: The Rural Health II Services Project, approved in FY 1984 and the Family Health Services II Project, scheduled to begin in the spring of 1985 as well as a continuation of the PL 480 Title II MCH program. These will be the only health activities during the CDSS period with one possible exception described below.

Senegal Rural Health II

The much heralded success of the "Sine Saloum" or Senegal Rural Health I Project (SRH I) project is primarily the result of policy reforms undertaken by the MOH in response to lessons learned (in the first SRH project) and to a willingness on the part of the MOH to collaboratively search for new solutions to chronic problems such as how one pays the recurrent costs of providing health services in rural areas. The fully funded five-year Senegal Rural

Health II (SRH II) project, initiated in FY 1984 (LOP $9.2 million), will be implemented during the CDSS period and a follow-on project will be considered for FY 1990. Three important problems remain to be resolved with the model USAID has been supporting in the Sine Saloum despite progress to date in the project and possibly the most positive policy environment in Africa (payment of user fees and decentralized, non-governmental control of the proceeds).

First, local communities must determine if, and how, they can pay the recurrent costs of supervision, e.g. transport of the Community Health Workers (CHW) by the dispensary nurse. USAID and the MOH are convinced that sufficient resources exist at the community level to amortize, maintain, and fuel a moped, if communities choose to spend their minimal discretionary funds in this way. The GOS must, at the same time, remove the remaining administrative barriers to their doing so. SRH II will define a reasonable system for local assumption of these costs and test the communities' willingness to pay them.

Second, much work remains to be done to assure that selected PHC technologies, i.e. oral rehydration therapy (ORT), immunization (EPI), growth monitoring and family planning, are introduced at the village level in an effective way. SRH II will emphasize introduction of the first three technologies and the SFH/DA, the fourth.

Lastly, SRH II will allow the GOS to continue to grapple with the problem of defining the ideal mix of skills necessary at each level of the system to assure effective implementation of the program. The GOS must redefine what is practical in terms of staffing patterns in the face of overall reductions in the civil service being imposed by the economic crisis.

Senegal Family Health and Demographic Analysis

It is obvious that Senegal must reduce its Population Growth Rate (PGR) if the average citizen's life is to improve, or even if Senegal is to avoid a reduction in the standard of living during the next quarter century. An agressively implemented, effective program to sensitize couples to the value

of spacing births and the provision of contraceptives to those wanting to use them, will allow Senegal to have an impact on family health.

The new seven-year Senegal Family Health and Demographic Analysis (SFH/DA) project, which will be authorized in FY 1985 at a level of $20 million, will have three elements: (a) Support to the development of the national family planning service delivery system; (b) support to the National Census Bureau (BNR) to conduct the next census and appropriate demographic analysis designed to better determine the relationship between the PGR and socio-economic development; and (c) support to PVOs and individuals in the private sector who provide family planning services. The PID for this project was approved in January 1985.

The goal of the SFH/DA project is to raise the prevalence of usage of modern contraception from the current estimated level of three percent to 15% of married couples. After almost one full year of active family planning services delivery in 20 centers, the current SFH I project (LOP $2.5 million PACD 6/30/85) has provided services to about 10,000 clients. Achieving the 15% prevalence level will require that 200,000 couples receive family planning services. This expanded effort will require hard work, good will and coordination on the part of numerous organizations and individuals both within and outside the GOS. Since the role and status of women are intimately linked to questions of family planning, this new project will not only include pilot efforts to improve the status of women through income generation and training, but will seek out women to fill as many project management positions as possible.

While the impact of this program on the PGR will be minimal, it will lay the groundwork for a nationwide program with more ambitious goals. A lessening of the distrust and suspicion prevalent in this traditional conservative Islamic society with respect to family planning should result from this new effort. If mortality rates remain the same and the 15% prevalence level is reached, then the PGR will be reduced from 3% to 2.4% and the time that it takes for the population to double will be increased from only three years to 29 years. Increased programming in the health area is

expected to reduce general mortality levels (especially infant mortality) significantly over the next five years. Should this occur and the contraceptive prevalence goal of 15% be reached, PGR will probably remain at their current levels. USAID is spending much time and effort with the GOS discussing the linkages between health and family planning programming. At the same time, USAID is emphasizing the need to regard the SFH/DA project as just one mechanism to approach the increasingly urgent need to provide family planning services to families throughout Senegal.

To complement this project, the USAID will count heavily on a core group of carefully selected, centrally financed projects such as the RAPID project, the JHPIEGO project, the RSSA with the CDC's Family Planning Evaluation Division, the Johns Hopkins PCS project to provide expertise in the communications aspects of the family planning program, and the demographic studies project.

Maternal and Child Health PL 480 Title II

Another major element of our overall health strategy is the PL-480 Title II program being carried out by the nutritional unit in the Ministry of Health (SANAS) with support from Catholic Relief Services (CRS). A positive correlation was found between participation in the program and improvements in the nutritional status of children in a recent evaluation of this maternal child health program. The evaluation also found that participants in the program more frequently than non-participants were vaccinated and received proper treatment for illnesses. This CRS program is very supportive of our overall objectives to improved health, the strength of the work force and the quality of life. USAID plans to continue this program at roughly the same level with 5-10% yearly increases, depending on the availability of GOS financial resources to support logistical costs. The possibility of the project's becoming logistically self-supporting through contributions by recipients will also be explored.

Possible New Initiative

The one possible new initiative in the health sector that the USAID will consider in the CDSS period is an immunization program referred to at this

time as the "Bellagio Program." It is so named because it dates from a meeting, in Bellagio, Italy, in late 1983, of the chief executive officers of the World Bank, UNICEF, WHO, UNDP, USAID, and a few other bilateral donors to discuss strategies to assure "Child Survival" throughout the world. This group, led by Robert MacNamara and Jonas Salk and which included the AID Administrator and the Senegalese Minister of Health, named Senegal as the lead country in Africa to develop a model child-survival program, i.e. nationwide immunization program.

USAID shares the Administrator's commitment to programs designed to improve child survival and agrees that immunization is probably the most important child survival technology. However, Senegal is currently proposing an overly ambitious, fast moving and expensive strategy. Therefore, outside of the SRH-II project which includes an immunization component, USAID has not committed itself to providing additional resources. USAID believes, however, that the MOH is open to discussing alternative strategies which would be more affordable, contain realistic targets and include the introduction of some other essential technologies such as oral rehydration and family planning. If the MOH does modify its proposal, then USAID intends to consider financing a small share of the program, perhaps 20% of what will probably be an eight to ten million dollar five-year program.

D. RESEARCH AGENDA

USAID is pursuing vigorously the four principal elements of its strategy; at the same time it is supporting and adjusting its programs based on the results of research in areas that are key to generating development yet in which data are fragmentary or non-existent. This modus operandi dictates that further analysis and study be focused on the macroeconomic situation, the agriculture sector, the private sector and human resource development.

Macroeconomic Analyses

Preliminary analysis conducted by the USAID and other major donors indicates that five macroeconomic areas should be carefully examined:

First, alternatives to the present budgetary policy model should be explored in an effort to produce a general reform in the model itself. Where elements of, for example, a model used by other successfully developing countries would be appropriate in the Senegalese context, then they will be studied and incorporated.

Second and corollary to this, the entire price establishing mechanism needs to be re-evaluated in order to determine the least costly and most productive commodity pricing strategy. This is desirable in part because the GOS has stated its intention to modify imported and local cereals prices. It would include, for example, prices of all consumer goods and imported inputs for manufacturing.

Third, and closely related to the first two areas, is the GOS resource allocation process. Detailed research is needed to clarify resource origins for each section of the economy as well as to determine their full costs, including, for example, subsidies and monopoly positions.

Fourth, several areas in the banking sector need to be examined closely and in-depth, areas such as the manner by which the Central Bank applies fiscal rules fixed by the West African Monetary Union, the reasons why local banks have been relatively unsuccessful in attracting domestic savings or why banks remain unresponsive to small and medium-size businesses. Such examinations should include comprehensive analyses of the financial health of the portfolios of specific banks.

And, fifth, the macroeconomic impact of the agricultural sector will need continuous research with regard to the reform process underway since the publication of the NAP (New Agricultural Policy).

Agricultural Sector Analyses

USAID will continue its research activities in agriculture directed at improving existing crops and exploring viable crop alternatives for export and local consumption. Complementary research on cereals', fruit and vegetable marketing will be conducted to determine a productive system within the

Senegal context. Two irreplaceable resources, essential to Senegal's development, that must be protected and managed are water and the environment. Both groundwater reserves and the management of irrigated agriculture, particularly after the completion of the Diama (1986) and Manantali (1989) dams on the Senegal River, must continue to be studied in order to fill known information gaps and to serve as an adjustment measure as various irrigation models and activities are executed. Losing 50,000 to 100,000 hectares annually to desertification, Senegal must execute a long-range resource management plan that incorporates an integrated approach to soil conservation, reforestation, animal traction, crop diversification, and human sociology.

Private Sector Analyses

Much of the USAID's recent programming has been in support of decentralization and divestiture by the GOS and of a more vibrant and dynamic private sector. Nevertheless, there are legal, administrative, and labor constraints to the further development of this sector and recognized knowledge gaps that must be filled to allow full functioning of private entrepreneurship.

Human Resources Analyses

Finally, human resources must be appropriately developed to support a productive economy. Systems and content of education and training will be increasingly re-analyzed by the donors to steer them toward a more technical, practical and problem-solving model. Corollary to this, more appropriate methods of technology and information transfer, based on efficient and accurate demographic and related data, must be developed and used.

USAID intends to continue to pursue necessary research, often in conjunction with Senegal's other major donors, insofar as it is supportive of attainment of a productive economy.

IV. RESOURCE REQUIREMENTS

A. BUDGET AT AAPL*

Program Elements - Proposed Projects	FY86	FY87	FY88	FY89	FY90
			(millions of dollars)		
Structural Reform					
Tech. Transfer Services	2.0	2.0	2.0	2.0	2.0
Economic Support Fund	15.0	15.0	15.0	15.0	15.0
PL 480 Title I	8.0	9.0	10.0	10.0	10.0
SUB TOTALS:	25.0	26.0	27.0	27.0	27.0
Agricultural Constraints					
Ag. Production Support	5.0	5.0	5.0	5.0	5.0
Irrigation (Fleuve)	3.0	2.0	9.0	-	3.0
Southern Zone Water Mgt.	5.0	3.0	3.0	3.0	3.0
Agric. Res. & Extension	1.5	-	-	3.0	2.0
Grain Marketing	-	-	-	-	2.0
SUB TOTALS:	14.5	10.0	18.0	11.0	15.0
Environment/Employment					
Reforestation	3.5	2.5	3.0	1.0	-
Enterprise Dev.	-	-	-	4.0	2.0
PL 480 Title II	1.5	1.5	1.6	1.8	1.8
Peace Corps (SPA)	**	**	**	**	**
SUB TOTALS:	5.0	4.0	4.6	6.8	3.8
Health and Family Planning					
Family Planning	-	5.5	-	5.0	-
Rural Health	-	1.0	-	-	5.0
PL 480 Title II	6.2	5.9	6.5	7.1	7.2
SUB TOTALS:	6.2	12.4	6.5	12.1	12.2
Sahel Dev. Program *	20.0	21.0	22.0	23.0	24.0
Economic Support Fund	15.0	15.0	15.0	15.0	15.0
PL 480 Title I	8.0	9.0	10.0	10.0	10.0
PL 480 Title II	7.7	7.4	8.1	8.9	9.0
GRAND TOTALS	49.7	52.4	55.1	56.9	58.8

NOTE: Inflation in Senegal is expected to continue at an average of 7 to 8% per year. This means that in real terms, the value of the program proposed for this CDSS period actually decreases, despite the slight annual increases in actual figures.

* USAID has made a very small adjustment to the AAPL levels for the period 1987-90. Approximately $20 million per year was being programmed under the Sahel Regional Program for River Basin Development at the time the AAPL levels were set. Senegal was to receive close to half of this $20 million per year. The decision to bilateralize the development of the Senegal River Basin was made after approval of the 1986 ABS and the AAPL levels. Therefore, the Mission has added a very modest $8.3 million in lieu of the $20 to $50 million that it would have expected to receive during this period. Also we have not adjusted FY 86, although our Senegal River Basin program will be underway.

** PC Small Project Assistance to be funded at annual level of $40,000.

B. DISCUSSION OF HOW PROGRAM EMPHASIS WOULD SHIFT BOTH ABOVE AND BELOW AAPL

We feel that the AAPL levels cited above are appropriate, but the proposed program strategy has been laid out to accommodate increases or decreases resulting from funding availabilities during the CDSS period. If funding availabilities were to drop, for example, then the time frame for developing irrigation on the Senegal River would be lengthened. Thus, the program would move forward, but much of the proposed effort would be completed during the next CDSS period. If additional funds were to become available, on the other hand, then both the proposed efforts, reforestation and soil conservation, would be expanded and implementation accelerated.

C. GOS CONTRIBUTION AND RECURRENT COST ANALYSIS OF PROGRAM

The generally low level of GOS contributions to AID-supported projects and the doubtful capacity of the GOS to shoulder recurrent costs of these projects upon completion are tied to weaknesses in the GOS' budgeting process and fiscal performance as well as a lack of firmness on the part of donors. The Mission intends to support and carefully monitor efforts proposed by the GOS at the Paris Consultative Group meeting, efforts that constitute part of its Action Plan. These efforts include: (a) reform of the budgeting process to assess more systematically the recurrent cost implications of new projects; (b) introduction of budgeting by objective; and (c) establishment of an institution, like the OMB in the U.S., that can arbitrate conflicting budgetary demands among Ministries. The GOS Action Plan also proposes to increase revenues for investment through contributions by beneficiaries for water, health and education. These actions parallel closely the basic responses to recurrent cost problems raised by the AID Policy Paper on Recurrent Costs.

USAID believes that a studied and coordinated approach among all donors aimed at establishing budgetary and fiscal discipline within the GOS is needed. This concept of donor coordination is essential since one donor's attempts to demand more from the GOS regarding host country contributions,

while other donors continue to finance such contributions, will provide little incentive for the GOS to respond favorably. While working in this direction with other donors, USAID/Senegal has set its own course designed to move the GOS to assume more responsibility for contributing to AID-supported projects and planning for future recurrent costs financing. The Mission is addressing the recurrent cost question during project design and within project papers. We will be insisting on increased financial and in-kind contributions from the GOS. The Mission has recently initiated this posture by revising its indemnity policy; AID has now formally notified all concerned that we will no longer be funding indemnities, only certain per diems, for GOS civil service personnel assigned to AID-supported projects.

D. STAFFING REQUIREMENTS AND O.E. IMPLICATIONS

Emphasis on policy dialogue, donor coordination, technology transfer, rationalization and streamlining of institutions and the development of the private sector under the new USAID/Senegal Program will necessitate adjustments in how the Mission is organized and staffed. Management emphasis will of necessity shift from a project to a program focus. This new focus will place an increased burden upon the Mission senior staff and will require that it be backed up with greater Mission analytical capability. However, at the same time, the Mission will be significantly reducing the number of individual projects which must be managed, thus clearing the way for direct hire and contract personnel changes designed to support the new program emphasis.

We anticipate being able to make these changes within the currently projected personnel ceilings; Operating Expenses requirements should not increase substantially. Cuts imposed in the FY 1985 O.E. Budget to the level of $4,700,000 bring it $715,000 below projected needs and may force deferall of needed NXP procurement to FY 1986. If that becomes the case, then FY 86 O.E. requirements will increase to $5,361,000. FY 1987 O.E. requirements are estimated at $5,500,000. Beginning in FY 1987, the Mission anticipates initial payments of approximately $400,000 per year pursuant to a currently

planned lease-purchase agreement for new USAID offices. Subtracting current office rents will mean a net increase of $100,000 in this category. Factoring in general wage and price increases of 8% and 7% respectively for each year and after taking into consideration the cost savings derived from efficiency of the new building and the use of Wang PCs, O.E. requirements will be stabilized at about $5,300,000 for fiscal years 1988, 1989, 1990.

LIST OF BILATERAL PROJECTS ACTIVE DURING FY 1984

Project Number	Project Title	PACD	Continuing Beyond FY 1986
685 - Sahel Development Program			
0202	Range & Livestock Development	02/25/85	
0205	Casamance Regional Development	06/30/85	
0208	Small Irrigated Perimeters	12/31/85	
0209	Grain Storage	12/31/83	
0210	Rural Health I	03/31/84	
0217	Family Health I	06/30/85	
0218	SAED Training	03/31/86	
0219	Fuelwood Production	12/31/84	
0222	Youth Job Development	09/30/85	
0223	Agricultural Research & Planning - MSU	12/31/86	continuing
0224	SODESP Livestock	06/30/84	
0226	Patte d'Oie Housing	09/30/84	
0233	National Plan for Land Use	06/30/85	
0235	Cereals Production II (SODEVA)	12/31/87	continuing
0242	Rural Health Services II	04/01/89	continuing
0249	Ag. Development Assistance	09/30/85	
0250	Millet Transformation	05/31/86	
0254	Fisheries Resources Assessment	12/31/84	
0255	Data and Management of Research	12/31/84	
0260	Community & Enterprise Development	09/30/89	continuing
0270	AID/PC Small Project Assistance	04/12/86	
0937.7	Renewable Energy	12/31/84	
0957	Senegal Agricultural Research II (OMVS)	06/30/90	continuing

ANNEX A: ECONOMIC ANALYSIS

I. INTRODUCTION

Senegal's economic and financial situation is far from stabilized despite four years of successive stabilization programs with the IMF. A dramatic illustration of this is the state of the economy as a result of the five-month delay before reaching agreement with the IMF on a new eighteen-month program. The hiatus demonstrated that Senegal's economy remains extremely dependent on annual debt reschedulings and substantial amounts of budgetary/balance of payments support to remain solvent.

Senegal's present economic and financial deterioration follows a year of exemplary performance on the 1983-84 Standby Agreements; all performance criteria for each quarter were met. The IMF Standby was successful in stabilizing GOS accounts through short-term measures over the twelve-month period from the beginning of July 1983 to the end of June 1984; However, it was not effective in addressing the structural causes of macro-economic disequilibria. The GOS has a better track record with respect to price increases, credit restrictions and the introduction of new tax measures, than it does with longer term reforms such as liberalization of the price mechanism, improvement in tax assessment and collection, reduction in claims of the para-public sector on budget resources, and more judicious allocation of credit to priority sectors. Structural measures such as the latter require more continous effort and commitment from the GOS; the decision to undertake and implement short-term measures, on the other hand, can be made relatively quickly at the highest political levels. Despite Senegal's less-than-impressive record with respect to implementation of structural reforms, there is scope for optimism due to more focussed GOS reflection on priority reforms and improved donor coordination on a core policy reform agenda.

This economic analysis will focus on the present status of macroeconomic performance, the impact of this performance on the agricultural sector in general, and, finally, on specific components of the agricultural sector that are most in need of reform.

II. MACROECONOMIC SITUATION

Public Finances

Deficit Improvements: Successful performance on the 1983-84 IMF Standby Agreement reduced Senegal's budget deficit on a commitments basis from 8.2% of GDP for 1982-83 to 4.7% of GDP for 1983-84 while the operating budget's deficit was cut from 4.2% of GDP to 1.2% of GDP. These improvements can be attributed to a number of short-term factors including: (a) an increase in grant budget support which is accounted for as government receipts; (b) an improvement of deposits in the special treasury accounts; and (c) a marked improvement in the financial status of the CPSP and other correspondents of the treasury due to favorable trends in the international price of groundnuts and the impact of increases in domestic prices of consumer goods.

Public Finance Deterioration: However, there has been a rapid deterioration in the public finance position since July 1984, a deterioration which is at least partially explained by: (a) the fact that major components of the budget such as the magnitude of salary payments and of fiscal receipts had not been substantially improved in 1983-84; (b) the positive effects of price increases have been eroded by the 9.5% appreciation of the dollar against the CFAF; and (c) the interest on public external debt which is a current expenditure has increased significantly from 36.4 billion CFAF to 45.2 billion CFAF or by 24%.

Expenditures: The public sector wage bill continues to increase in nominal terms at a rate of 8 to 10% per year. Measures have been introduced to contain this growth by limiting entry into the civil service but it will probably take at least four to five years before this policy impacts directly and positively on the wage bill. The level of expenditures on supplies and transfers, on the other hand, appears to be stabilizing at about 68.0 billion CFAF which is only 7% above the amount for 1979-80. There is, however, some indication that this figure has been kept relatively low through a build-up in arrears on transfers to parastatals, such as SAED and SONAR, and through an accumulation of the general GOS stock of arrears to suppliers.

Revenues: The GOS revenue performance has been disappointing. Government receipts as a percentage of GDP declined from 23% for 1979-80 to 19% in 1984-85 despite the introduction of new tax measures encouraged by the IMF over the last three fiscal years. Government revenue was revised downward by 10.0 billion CFAF or 3% with respect to the original IMF projections for 1983-84. The shortfall can be attributed to the weaknesses in the GOS tax collection process, particularly with respect to customs duties, income taxes and real estate taxes. Income tax receipts as a percentage of GDP have declined steadily from 5.1% for 1979-80 to 3.9% for 1983-84. Customs duties actually collected have also declined from 8.2% of GDP for 1979-80 to 7.6% for 1983-84.

Arrears: Another aspect of the public finance situation which has a negative impact on the banking and private sectors in particular is arrears. The GOS has a stock of arrears to the private and parapublic sector estimated at 60 billion CFAF in addition to its ONCAD debt of an estimated 140 billion CFAF. The GOS accumulated considerable arrears during 1979-80 and 1980-81. It then made an impressive effort to reimburse them during 1981-82 and accumulated additional arrears during 1982-83 which were partially reimbursed during 1983-84. According to these estimates, the total stock of arrears is probably at least 20% of GDP. The actual figure is considerably higher if the arrears of parastatals are included. Internal financial circuits have been virtually paralyzed by the complex morass of debts: Example: The GOS has accumulated arrears to the state electric company SENELEC which in turn owes money to the company that distributes fuel which in turn has accumulated arrears vis-a-vis the national refinery (SAR) which in turn is unable to reimburse its short-term lines of credit to the banks.

The Balance of Payments

Background: Senegal's balance of payments position does not affect the overall economic situation as directly as do public finances; this is because of the safety net provided by the French Treasury's guarantee of the convertibility of the CFAF. Senegal's access to foreign exchange is determined not by its capacity to earn foreign exchange through exports but by the availability of local currency which is a function of domestic credit expansion.

Export Trends: An examination of the structure of the balance of payments over the past eight years reveals a gradual but continuous reduction in dependency on agricultural exports to provide essential earnings. Proceeds from the export of groundnut products continue to be a prominent feature but in most years since 1980 receipts from the export of fish products have been larger. Tourism is also a dynamic sector with export earnings growing at an average annual rate of 14% over the last five years. This confirms that there has been a certain amount of diversification in the structure of Senegalese exports, especially since 1980.

The reduced volume of groundnut exports in 1984, which resulted from a 50% drop in production between 1982-83 and 1983-84, was offset by the spectacular 80% increase in the world price of groundnut products between April 1983 and October 1983. Export earnings from groundnuts will drop by only 7-8% between 1983 and 1984 according to the most recent projections. The trade balance for 1985 is expected to deteriorate by approximately 15%, in part as a result of low levels of groundnuts marketed through official channels this year. An active parallel groundnut market has developed where farmers can sell for up to 140% more than if they marketed directly to the oil crushing firms. This is a result of increases in the domestic consumer price of groundnut oil and continued high world prices. Thus, the oil millers will be crushing only 34% of last year's quantities even though the groundnut crop was projected to be approximately 18% higher than in 1983-84.

Import Trends: The three major imports are: Petroleum products, food, and intermediate goods. Combined these represent about 80% of Senegal's import bill. Imports have risen very little in volume over the last four years, but the value has increased at an average annual rate of approximately 8%. The trade balance as a percentage of GDP has a tendency to fluctuate; however, over the last three years, this deficit has decreased from 14.6% of GDP for 1982 to a projected 10.8% for 1984.

Service Account: The major problem area of the balance of payments is the services account whose deficit has increased from 18.7 billion CFAF for 1982 to 57.2 billion CFAF for 1984. The explanation for this deterioration is found in the impact of interest payments on external debt. More alarming is the fact that the deterioration has been experienced despite three successive debt reschedulings in 1981, 1982, and 1983. The services balance is likely to move further into deficit reflecting Senegal's rising debt service obligations. Thus, despite a recent improvement in the trade balance, the

current account deficit as a percentage of GDP remains stationary at about 11 to 12% of GDP.

Capital Account: The capital account is in surplus and even improved between 1982 and 1984. This improvement reflected an increase in capital inflows particularly in the form of budget support and savings as a result of annual debt rescheduling. The overall balance as a percentage of GDP has improved consistently over the last four years from 6.7% for 1981 to a projected 2.0% for 1984.

Credit Expansion

Credit expansion during the 1979 to 1982 period averaged approximately 22% per year while domestic price inflation over the same period averaged 12.1%. This rate of expansion has declined significantly in the last two years to 9.7% as compared to a domestic price inflation rate of 9.3%. The above figures reveal a marked decline to a negative real rate of credit expansion. This shift can be explained by a reduction in the rate of increase of credit availability both to the private and public sectors. Between 1979 and 1982, credit to the Government increased at an annual average rate of 97% as compared to a rate of 23% in the last two years. Whereas, the GOS was only a marginal borrower in domestic credit markets before the early 1980s, it now has become a significant actor with about 24% of total outstanding credit. Private sector credit expansion which increased more modestly during the 1979-1982 period at an average annual rate of 14.3% also has declined significantly in the past two years to an average growth rate of 3%.

The allocation of increased credit availability as reflected by the IMF's credit ceilings for government borrowing and overall domestic credit expansion has been skewed in favor of the public sector. Excluding short-term lending for crop credit, private sector expansion has been limited to 12.8 billion CFAF for 1984 as compared to 24.7 billion CFAF for the government. The GOS was, however, able to limit the increase in its credit liabilities through June 1984 to 120.4 billion CFAF or 4.5 billion below the IMF ceiling. Due to the lack of external financing in the July 1 to November 30, 1984 period, the GOS was required to use the totality of this extra margin in its borrowing capacity plus an additional 4.3 billion CFAF based on deposits made by multilateral Arab aid agencies, the University of Dakar and the National Assembly. Given the relatively high rate of public sector borrowing during the first six months of the 1984-85 fiscal year and in view of the provisional IMF credit ceilings for the last six months of the fiscal year, GOS borrowing will be limited to 8.0 billion CFAF. Private sector borrowing, excluding crop credit, from the banking sector will be limited to 3.4 billion CFAF.

III. THE MACROECONOMIC IMPACT ON THE AGRICULTURE SECTOR

Agricultural Development Prospects

Senegal's development prospects will continue to be heavily influenced by the macroeconomic situation. Austerity measures to reduce GOS expenditures and improve the balance of payments have affected the agricultural sector more

than any other. Conversely, accumulated agricultural debt and the rising costs of government intervention in this sector have contributed to Senegal's present economic difficulties. One of the motivations for Senegal's new agricultural policy was the recognition that the GOS could no longer afford to continue its current level of subsidies to the agricultural sector, particularly given the insignificant impact of these subsidies on agricultural production. A phasing-out of government involvement will leave farmers without the financial cushion they have come to expect during drought years. On the other hand, delays in the release of state funding have caused serious problems for farmers and for RDAs. Thus if effective alternative systems are created, then a reduction in government involvement could eliminate some major obstacles and allow a dynamic, productive agricultural sector to emerge.

Government Overextension in Agriculture

The GOS has been overextending itself in four key areas since the beginning of the 1980s. Clearly, the GOS cannot continue to: (a) manage and subsidize the national seed stock which costs approximately 12.0 billion CFAF per year; (b) distribute and subsdize fertilizer which cost 3.0 billion CFAF in the peak year of 1981-82; (c) subsidize operating expenses of agricultural parastatals which cost approximately 11.2 billion CFAF in 1982-83 and (d) assume financial liabilities of the liquidated ONCAD estimated at 140 billion CFAF. The result of this overextension has been the declining quality of services provided to the agricultural sector which has manifested itself in increasing delays in the provision of inputs, the breakdown of the agricultural credit scheme provided by certain RDAs and the increasing inability of extension agencies to function effectively due to a lack of funds to cover operating expenses.

Agricultural Credit

Another related impact of the macroeconomic difficulties stemming from past abuses is the lack of liquidity in the banking sector for agricultural lending. Government decisions to cancel farmers' debts to ONCAD over a number of drought years, farmers' refusal or inability to reimburse short-term credit obtained for purchases of inputs and food, the refusal of oil crushing firms to reimburse crop credit in a timely fashion particularly when the GOS owed subsidy payments to these companies, and the inability of RDAs such as SAED to reimburse loans from the domestic banking sector according to schedule have not only reduced the general availability of funds but have also convinced local bankers that lending to agriculture is in fact a bad risk. Thus, the share of agriculture in total outstanding domestic bank credit has declined from 7.2% for 1978 to 3.0% for 1981.

Agricultural Input Subsidies

The use of cereals pricing mechanisms has been reviewed as a result of the GOS' inability to continue to subsidize inputs from budgetary resources. The producer price of groundnuts was reduced from 70 CFAF per kg to 50 CFAF per kg, with the 20 CFAF difference being allocated to defray some of the costs of the

seed stock and most of the costs of fertilizer distribution. The GOS does not assume the expenses of input distribution with respect to food crops and it has recently increased producer prices to reflect partially the increase in the cost price of fertilizer. These relatively ad hoc price measures should be adjusted following a comprehensive study of agricultural pricing at each stage of production and for each crop.

GOS Pricing Interventions

The GOS' financial difficulties have also undermined its ability to achieve the redistribution objectives formulated for the CPSP. Based on the price equalization function, the CPSP's mandate is to: (a) maintain reasonable prices for imports of basic staple goods and stabilize the consumer prices of these goods against short term fluctuations in international prices; (b) protect a stable producer price for Senegal's agricultural exports (groundnuts and cotton) against short-term fluctuations; and (c) guarantee profit margins to agricultural processing companies (e.g. oil crushing firms, tomato plants, sugar company) against risk resulting from either international price fluctuations in the face of fixed producer prices or from high overhead costs in the case of low agricultural production. The CPSP was basically able to balance its accounts in the period from Independence through the late 1970s, and in some instances generate a surplus through profits earned from groundnut sector production. These profits were used to defray subsidies on imported consumer staples and to provide transfer payments to other processing industries such as sugar refining. The CPSP has been operating on a very tight cash flow basis since 1978-79; This has prevented it from continuing to guarantee relatively high producer prices for export crops and simultaneously reasonable consumer prices for imported rice, sugar and vegetable oil.

IV. THE AGRICULTURAL SITUATION

Drought Costs

Senegal's agricultural situation is highly dependent on both the quantity and spacing of rainfall. The drought in 1983-84 was the primary explanatory factor behind the dramatic decline in agricultural output of both export and food crops. According to the most recent GOS data, export crop production fell by almost one half between 1982-83 and 1983-84 with the brunt being borne by groundnuts. Cereals production declined by approximately 30% between 1982-1983 and 1983-84; average rainfall decreased by 34% between 1982-83 and 1983-84 which put these levels below the mean rainfall for the 1961 to 1984 period. The drought severely affected on-farm income particularly in view of the reduction in the net producer price of groundnuts from 60 CFAF per kg to 50 CFAF per kg or by 16.6%. GOS practices in earlier drought years (e.g. inputs subsidies, debt cancellations, low interest credit, food loans) essentially cushioned farmers from the real costs of drought and transferred some of these costs to the government. However, a significant portion of the costs of the 1983-84 drought was borne by the farmers as a result of the significant decline in subsidies on inputs causing a doubling and sometimes tripling of costs to the producer and with the demise of the national credit

scheme. Preliminary calculations for 1983-84 indicate that on-farm rural incomes from cash crops decreased 60 to 70% from the previous year.

Drought's Most Recent Impact

The agricultural situation in 1984-85 is, according to provisional GOS figures, significantly improved from that of 1983-84; although the productive capacity was in fact a good deal higher. Average rainfall in the groundnut basin was 407.5 mm or 30% above 1983-84 levels; however, delays in the delivery of inputs, particularly fertilizer, to farmers were such that farmers were unable to take advantage of early and plentiful rains. Furthermore, a three week interruption in rains during the month of August caused reduced yields. Groundnut production appears to have been most affected with only an 18% increase in production from 559,820 metric tons 1/ during 1983-84 to an estimated 669,230 metric tons during 1984-85. Gross cereals production increased by 35% from a total of 533,800 metric tons during 1983-84 to approximately 721,520 metric tons during 1984-85. The greatest increases were registered with maize and millet. The increase in cereals production can be explained partially by an increase in yields due to higher rainfall but alsoas a result of a shift in area cultivated from export crops to foodcrops. Whereas only approximately 48% of the total land area was cultivated for foodcrops in 1983-84, this percentage increased in 1984-85 to 56%. The shift in cropping patterns can be attributed both to the necessity to restore farmer grain stocks following a drought year and to the farmer response to the late arrival of groundnut seeds.

Immediate Challenges in the Agricultural Sector

The problems of input supply, extension services, organization of rural level production, cereals pricing and marketing, and price stabilization mechanisms therefore need to be immediately addressed both seperately and as components of a rational agricultural production network able to withstand climatic variation.

a) Input Supply and Pricing: Input supply was handled primarily by the GOS either through the RDAs or through the Government input supply company SONAR through 1984-85. The GOS maintains a national groundnut seed stock of between 130,000 and 120,000 metric tons. The costs of the seed stock are to be defrayed by a levy or retained earnings system whereby farmers contribute 15 CFAF per kg of groundnuts marketed. The maintenance of the stock costs the

1/ The figures represent gross crop production, without provision for crop wastes/losses and seed requirements. Proportions of gross production corresponding to wastes/losses and seed requirements are estimated to be for groundnuts: 21.5%; for cereals: millet/sorghum and corn: 17%; cowpeas: 15%; paddy rice: 21.5%. An additional 35% represents the milling loss for this latter crop (i.e., from paddy to milled rice).

government approximately 12 billion CFAF per year which means that the seed stock can be entirely financed through the retained earnings system only in years where 800,000 tons of groundnuts are marketed through official channels. According to statistics on quantities of groundnuts marketed, this level was reached only eight times over the last 15 years. Thus, the present system for covering and managing the groundnut seed stock is not financially self-sustaining and requires regular government subsidies. Furthermore, farmers regard groundnut seeds as an input to be provided by the government and thus is not valued at any specific price. The retained earnings system, as it is presently implemented, requires more efficient farmers to pay more for their seeds than that paid by the less efficient ones, and does not provide flexibility for the farmers to decide whether or not they will participate in the government system. The system has also maintained groundnut cultivation in marginal areas where other more drought-resistant crops are in fact more suitable.

Only 342,300 metric tons of groundnuts were marketed during 1983-84, generating approximately 5.1 billion CFAF in revenue to defray the costs of the seed stock. The deficit therefore was approximately 6.9 billion CFAF. The seed stock is also projected to be in deficit during 1984-85 based on the assumption that approximately 440,000 metric tons of groundnuts will be marketed through official channels.

The basic GOS objectives with respect to seed policy have been: (1) to encourage continued cultivation of groundnuts; (2) to protect farmers in drought years by providing seeds centrally; (3) to distribute seeds so as not to discriminate against less efficient farmers and marginal production areas; and (4) to provide a relatively "painless" means for farmers to "purchase" seeds in the absence of credit. These objectives may be desirable from a social point of view, but the current system does not allow farmers to respond according to their perceived economic advantage. Furthermore, the current monopoly role of the GOS in seed distribution does not stimulate efficiency and in fact exposes farmers unecessarily to the risk of delays in seed deliveries or to a deterioration in the quality of seeds due to poor storage conditions.

While the GOS has devoted considerable attention to groundnut seed multiplication and distribution, provision for cereals seeds has been ad hoc and varies considerably depending on the area of the country and the responsible rural development agency (RDA). In fact the shortage of quality seeds for cereals is a major obstacle to the realization of the GOS' objective of promoting domestic cereals production. Where RDAs provide cereals seeds to farmers (e.g. SOMIVAC and SODAGRI for rice seed in the Casamance, SAED for rice seed in the Senegal River Basin, and SODEFITEX for corn in Senegal Oriental), a system of payment similar to the retained earnings system for groundnuts is used. This net price system, where the cost of seeds is deducted from the proceeds to be obtained through the sale of the crop, does not allow farmers to make decisions based on economic criteria. Furthermore with the exception of millet in the Groundnut Basin, where no organized system exists, the other regions are subject to a monopoly system of seed distribution by the corresponding RDA.

The methods of fertilizer distribution and payment have been modified frequently over the last ten years making it difficult to assess the viability of any one system. Fertilizer consumption has also varied dramatically from one year to another from a low of 14,820 metric tons during 1970-71 to a high of 93,316 metric tons during 1976-77. In 1984-85, the GOS cancelled its agreement with the private firm SSEPC which was responsible for fertilizer distribution and returned to the previous system of distribution by SONAR. A retained earnings system was introduced for fertilizer as well as for seeds for the peanut farmer with a levy of 5 CFAF per kg of groundnuts marketed being used to cover the full costs of fertilizer purchase and distribution. The groundnut sector has been in essence taxed to finance fertilizer use in groundnut producing regions. However, fertilizer application produces higher increases in yields on cereals than on groundnuts. The system as implemented this year has proved to be highly unsatisfactory. There are several cumulative and newly introduced reasons for this: (1) The frequent shift in institutional arrangements for distribution; (2) the effect of an abrupt removal of the subsidy on fertilizer which created a situation whereby the cost to the farmers increased from 25 CFAF per kg during 1981-82 to 120 CFAF per kg during 1984-85 or by 380% over three years while producer prices for export and food crops increased on average approximately 13% over the same time period; and (3) the impact of the absence of credit for fertilizer purchases.

There was approximately 1.75 billion CFAF to purchase fertilizer for the groundnut basin as a result of the retained earnings system during crop year 1983-84. Given the cost price of 100 CFAF per kg (lowered from 120 because of the U.S.-supported subsidy of 20 CFAF per kg) SONAR was able to purchase 17,500 metric tons of fertilizer. Other purchases by RDAs were approximately 10,000 metric tons for a total level of fertilizer consumption of about 27,500 metric tons. Thus, the quantities distributed through the retained earning system were negligible. The delivery of fertilizer, not to mention the small amount of fertilizer available under the present system, was late so that there was insufficient impact on production. Delays can be attributed to difficulties in obtaining the proceeds from retained earnings from the oil crushing firms who are responsible for collecting groundnuts. The point of contention was that SONAR had contracted debts with the oil crushing firms in connection with the seed stock and thus these firms were reluctant to release the proceeds from retained earnings for fertilizer until these debts had been reimbursed. Nevertheless, under pressure from the GOS, the 1.75 billion CFAF was finally released despite outstanding SONAR liabilities but the time lost in the dispute was vital to SONAR's delivery schedule.

Another difficulty encountered this year was the poor quality of record keeping at the village level regarding the actual amount of groundnuts marketed in 1983-84. This difficulty resulted in serious irregularities in the distribution of fertilizer to individual farmers. Perhaps one of the most important developments stemming from the difficulties encountered this year is that there is widespread discontent among the farmers which has convinced the GOS that change is essential.

The situation with respect to fertilizer distribution for cereals is essentially identical to that for seeds. Where RDAs are active (e.g. in most regions except the Groundnut Basin) fertilizer is distributed directly to farmers and the cost of the input is either deducted from the proceeds from crop sales, or the farmer reimburses the fertilizer cost in kind. In the Groundnut Basin there is no specific distribution of fertilizer for cereals, with the exception of isolated donor-financed projects; however, farmers may and in fact do choose to utilize fertilizer obtained through the groundnut retained earnings system on millet. SSEPC, a marketing subsidiary of the domestic fertilizer producer SICS, provided small quantities of fertilizer in the countryside on a cash sales basis during 1983. This system at least allowed farmers to complement fertilizer distribution carried out under the auspices of RDAs. Unfortunately, the experiment was abandoned by 1984. Measures are required to establish one or several alternative distribution systems for fertilizer to achieve substantial increases in cereals production.

(b) Extension Services Provided by RDAs: An analysis of the major deficiencies of the RDAs was included in the PAAD for the FY84 ESF package 1/. The problems were in fact exacerbated during 1984-85 due to the inability of the GOS to provide budgeted operating subsidies. Thus, the RDAs spent an overwhelming proportion of their resources to pay a plethora of personnel rather than to cover costs such as vehicles, gasoline and other supplies and equipment necessary to carry out their extension function. The already low operating efficiency of the RDAs was on the whole decreased even further. The RDAs, with the exception of SAED, have maintained their centralized top down approach permeated by the basic philosophy that they must impose development on the farmers.

The RDAs control of actual production functions including input purchase and distribution, land preparation, in some cases marketing and transformation of agricultural produce, and credit has been maintained in 1984-85. However, GOS failure to disburse operating subsidies and the lack of creditworthiness of most of the RDAs and thus the inability to obtain resources from the domestic banking sector have severely undermined the RDAs capacity to actually fulfill these functions. SAED, for example, in the face of reduced GOS subsidies, attempted to obtain a loan from a local bank to purchase fertilizer for distribution to farmers who are supposed to reimburse SAED with proceeds from the sale of produce. Given SAED's inability to obtain credit, it decided to withdraw its cash deposit from the bank and use the resources to meet the salary cost of personnel.

RDA effectiveness during 1984-85 was most certainly undermined by a number of factors: (1) the lack of operating subsidies; (2) the unresponsiveness of local banks and suppliers to requests for credit; and (3) the uncertainty surrounding their future contribution to the agricultural sector and the understandable impact of this uncertainty on staff morale. In many respects RDAs are currently and perhaps to a certain extent unjustifiably taking the

1/ See PAAD 685-0273, pages 23 - 25.

brunt of criticism for poor agricultural performance in Senegal over the past ten years. High level government officials including President Abdou Diouf and Minister of Finance Touré as well as many donors have come to the conclusion that RDAs must be pared down substantially and direct production activities turned over to the farmers and the private sector. USAID shares these views, although it is clear that certain core extension functions must continue to be provided through government subsidized organizations. However, the overall cost of the extension function proposed must be compatible with the GOS' ability to provide budget subsidies.

c) Organization of the Rural Sector: The GOS has proceeded with a policy of decentralizing the cooperative movement over the past twelve months through the creation of 4,472 village sections. These sections now cover the entire country and are being delegated activities such as input distribution at the local level. In addition, an alternative system of producers organizations known as Economic Interest Groups (GIE) was authorized through legislation adopted May 1984. This law permits groups to form and register independently from the cooperative movement which has traditionally been dominated by powerful political elites in the countryside and which has been characterized by an extremely poor record with respect to credit reimbursement. The legislation sets no minimum limit to the size of the groups and requires no endorsement from the Ministry of Rural Development or from GOS representatives in rural areas. The key to the success of these groups is in how the legislation is interpreted and applied. Farmers are theoretically supposed to provide the initiative for the creation of these groups and for subsequent applications for credit from the new agricultural credit bank (CNCAS).

d) Cereals Pricing and Marketing: Although the GOS formulated a plan for achieving food self-sufficiency in 1977, very few concrete measures have been introduced to: (1) promote production and consumption of domestic cereals; (2) liberalize cereals marketing; or (3) to promote industrial transformation of cereals in order to make them competitive with imported broken rice. At the heart of the problem is the political trade-off between the present policy of importing relatively inexpensive sources of food for the urban population and the recommended policy of creating a market for domestic cereals which would most probably lead to an increase in the cost of food for the urban consumer.

As a means of stimulating production, the GOS has increased the producer price for all cereals while maintaining the producer prices for export crops at current levels. Thus, in October, 1984 the producer price of paddy was increased from 60 CFAF per kg to 66 CFAF per kg or by 10%; the price of millet/sorghum was increased from 55 CFAF per kg to 60 CFAF per kg or by 9%; the price of corn increased from 50 CFAF per kg to 60 CFAF per kg or by 20%; and the price of cowpeas increased from 43 CFAF per kg to 60 CFAF per kg or by 17%. As a precondition to the 18-month IMF Standby Agreement approved January 1985, the GOS increased the consumer price of rice from 130 CFAF per kg to 160 CFAF per kg or by 23%. Donors have also committed themselves to addressing needs and reforms in the cereals sector including production, marketing, storage, transformation and the subsequent marketing of the final products.

The French CCCE has already completed an initial survey of how the cereals sector should be reorganized.

On the supply side, areas cultivated in food crops appear to have increased during the past crop season as a percentage of total area planted. This appears to be in response, however, to last year's drought and its impact on village cereal stocks rather than as a result of any significant shifts in policy.

On the demand side, although the GOS has been reluctant to use price as a mechanism for shifting consumer preference, it has now stated its willingness to employ price changes to encourage a productive balance between cash crops, food crops and food imports. This will probably be accomplished progressively by raising consumer prices for imported cereals to stimulate local production and to secure the necessary resources to invest in other areas such as irrigated agriculture until such time as yields improve and unit production costs decrease.

Presently, the pricing question is a difficult one to resolve because of the lack of reliable empirical data regarding the price elasticities of supply and demand for various cereals. Nevertheless, most donors are convinced that cereals pricing and marketing problems can only be overcome through the simultaneous pursuit of demand and supply side policies.

Experimental projects are currently underway to determine the price differential which would encourage consumers to shift to local cereals. USAID, for example, is financing a project designed to produce affordable millet grits that will be readily consumed by the urban population. Corn provided as food aid is being transformed and placed on the rural and urban markets to test consumer response.

With regard to marketing, the GOS has yet to clarify the status of private traders in the cereals sector or to define the limits of government intervention. These questions are presently being researched by ISRA with the assistance of Michigan State University macro-economist.

(e) The CPSP: The role and deficiencies of the CPSP were described in some detail in the FY84 PAAD. One of the primary objectives of the adjustment measures introduced in the context of the 1983-84 IMF Standby Agreement was to redress the financial situation of the CPSP. According to the latest IMF figures the deficit of the CPSP improved from 8.7 billion CFAF during 1982-83 to 3.3 billion CFAF during 1983-84. However, the CPSP's actual cash flow position does not reflect this apparent improvement. There are a number of explanations for this discrepancy: (1) The IMF table does not accurately reflect costs of peripheral activities such as contributions to capital increases of various agro-processing businesses and the costs of sorghum imports; (2) the IMF table does not distinguish sufficiently between commitments and disbursement; (3) the CPSP is unable to provide reliable figures that permit the monitoring of the status of any one sector at any given period in time; (4) contractual agreements between the CPSP and various

agro-industries such the oil crushing firms, tomato processors and SAED's rice mill are generally concluded ex post-facto rendering it difficult to project the CPSP financial obligations or financial receipts with respect to these industries; (5) management is inadequate; and (6) the accounting system, such as it is, is in shambles. Furthermore, CPSP stabilizing functions are ill-defined and its direct commercial functions (e.g. grain importing) tend to distract it from its original economic/financial role.

The GOS has been one of the victims of the lack of financial clarity in the CPSP. According to IMF figures, the CPSP was to generate 4.9 billion CFAF in customs duties on rice imports and a surplus of 2.6 billion CFAF on the rice account for a total of 7.5 billion CFAF. In reality, the GOS received only 1.9 billion CFAF in customs duties for FY83-84. The GOS has requested USAID to finance an audit to determine the reasons for this resource shortfall. Similar difficulties have occurred in other sectors such as groundnuts.

The shortcomings in the operations of the CPSP cannot entirely be attributed to factors internal to the CPSP itself. The complex function of price stabilization requires the anunciation of a coherent pricing policy and the existence of an effective mechanism for adjusting prices in response to shifts in domestic and international market conditions.

The GOS now has a set of reform plans jointly developed and supported by the donors. If implemented, the new agricultural policy will help stabilize the economy, rationalize the agricultural sector, and reduce vulnerability to meteorologic variation. Nevertheless, even with the implementation of new policies, the GOS must still continue progressively and systematically to reduce its expenditures, liquidate outstanding arrears and stimulate the private sector. Given the magnitude of the financial and restructural problems, the GOS will need the sustained and sizeable support of its major donors to achieve economic stabilization and growth during this difficult transition period.

ANNEX B: AGRICULTURAL POTENTIAL OF SENEGALESE ECOLOGICAL SYSTEMS

I. The Fleuve (Kidira to St-Louis)

The dam projects Diama and Manantali will be completed in 1986 and 1989 respectively. Large new tracts of land will become available for irrigated agriculture during the next five years The private sector has expressed some interest in developing large irrigated farms especially between Ross Bethio and St-Louis. AID has available soils maps and soils capability (ratings) maps for this entire zone and analysis suggests large areas with high potential for production of export crops. Further upstream, the OMVS strategy calls for developing irrigated perimeters to increase food production.

II. The Ferlo.

This area is one of the least known resources of Senegal with some potential for high export cash earning based on livestock product. Poor range management and lack of water at certain times of the year currently limit production. Large deep wells in the northern Ferlo have increased cattle production around these sites, however large sections remain ungrazed while areas adjacent to the wells suffer from overgrazing. The addition of deep wells, after analysis of the available water resource of the Maestrichtian acquifer, in the triangle between Bakel-Barkedji and Tambacounda could provide for expansion of livestock. However, Peul herders would have to be induced to produce cattle for sale. It would also be necessary to couple possible cattle sales with stock yards and processing facilities near cities such as Linguere and Tamoacounda. Disease control is also required. Recent work has identified possible intermediate acquifers in fossil valleys of the eastern Ferlo. These, after confirmation, could be tapped for mixed farming of livestock and cereals.

There is also a possibility that the Ferlo River drainage system could be turned into a "green belt" providing for a much larger cattle population in the "middle" ferlo as well as providing water for small truck farming operations along its borders. Soils analysis is however generally inadequate for evaluating the potential of this strategy. The main feature of this project would be a station to pump from the Senegal River and discharge into the headwaters of the Ferlo 12 km West of Diamounguel. The difference in elevation is ± 80 meters and the total distance less than 20 km from the Senegal to the headwaters of the Ferlo.

III. The Northern Peanut Basin (Lac de Guiers-Louga Area)

This area suffers repeatedly from drought. The soils of the area are well suited to irrigation as has been shown east of Louga where large scale potato production is taking place under circular irrigation. It could be possible to develop large irrigated acreage for both local consumption and exports crops with the additional water supplies expected after the construction of the Diama Dam on the Senegal River. The Maestrichtian acquifer in this region, although it occurs at 200-400 meters, appears to have great potential but additional testing is required. Reforestation particularly windbreaks are

required in conjunction with agricultural development. Soils analysis and mapping is also generally inadequate for the region of the western and southern Ferlo. A complete evaluation of irrigation methods would be required to verify the economic potential of this zone.

IV. The Peanut Basin.

This heavily-populated region is suffering from a series of economic, cultural and resource constraints which make assessment difficult.

(a) Water: Most villages have barely enough water to supply the human needs. Wells are (typically) dug until water is located and then immediately "cased" in order to avoid endangering the lives of the well digger. Only the superficial part of the water table is reached, and the water table drops below the well bottom during the severe dry seasons. A great deal of "folklore" is associated with wells often resulting in abandonment instead of deepening. The depth of the acquifers is highly variable sometimes changing within 50 meters horizontal distance. A general lack of knowledge of the acquifers as well as other variables influenced by geologic condition, such as high salt content (not recent marine incursions) suggest that a water resources survey may be needed.

(b) Deteriorating soils: Soils are deteriorating in the region for a number of reasons i.e., soil depleting crops (peanuts), reduced fallowing, deforestation, wind erosion, inadequate fertilization, etc. Alternate cropping practices must be developed for the region as a whole in the long run.

(c) Development of lands in the Kaffrine, Tambacounda axis: Many forest and previously unused lands are being distributed and developed in this area. Little concern for soils types, maintaining forest breaks and water resources is being demonstrated in this settlement. Many of these lands would lend themselves to more diversified cropping practices but millet and peanuts are being sown.

(d) Development of Niayes: This coastal area has strong potential but is faced with four major problems:

(1) Lack of water during certain periods continues to constrain truck farming. For several months of the year water can be reached at 1-3 meters. However, up to 1/4 of the arable land is dug up and taken out of cultivation in an effort to locate water during the dry season. Poor soils are brought to the surface in this wild well digging. These soils then are wind blown and contribute to the degradation process. Stable, deep wells are required to increase productivity and avoid the abuse of arable land. Most seed vegetable varieties although locally adapted by natural selection produce fruit which is not very marketable and travels poorly. Research on hybrids and other resistent new varieties is required to find more suitable commercial varieties. Sanddune incursion continues as the major problem facing the truck gardener, thus additional reforestation is required. Inadequate transport to many of the coastal and inland Niayes limits marketing and contributes to high spoilage and loss. An analysis of the transport system linking the most productive areas to the main arteries is needed.

V. Low and Middle Casamance.

This area is extremely complex and insufficient development work has been accomplished. Two possibilities for improved agriculture production appear to be most promising because of the dark soils and generous rainfall of the area. Salt water incursion dams at the mouths of the estuaries of the Casamance could develop thousands of hectares to riziculture. This land has been cleared and developed particularly in the area of Ziguinchor and towards Cap Skirring, but can not be used consistently because of salt water incursion. Oil palm plantations have not been developed in this area to any significant extent and potential exists to exploit this important cash crop.

VI. Upper Casamance.

This region has a tremendous forest resource which is poorly developed and not managed at all. The possibility of development of a charcoal/lumber industry coupled with reforestation and forest management needs study. Also large areas north of Kolda have potential for high intensity corn production but lack of transport has hampered the development of this area.

VII. The Niokolo Koba.

This area, a national park, has possibilities for increased tourism but paving the road from Missira to Kedougou and the concommittant construction of appropriate tourism facilities would be required. Earnings could provide resources for better control over the park and the reduction of poaching.

VIII. Eastern Senegal.

The main potential of this area could be in the development of the mineral resources sector which includes gold deposits, marble, iron, ect. Tourism would also be a possibility but a transportation network would have to be developed.

ANNEX C: DETERMINANTS OF GDP AND GRAIN PRODUCTION TARGETS

The wide variations in weather patterns and in international commodity prices have masked both the good and bad performance of the Senegalese economy for years. Groundnut production for example dropped by 50% in 1983 from its level of the previous year. However, between April and October of 1983, world prices for groundnuts increased by 80% over the previous years. Swings of this magnitude make it extremly difficult to look at a single factor such as the GDP growth rate and make a judgement with respect to Senegalese economic performance. Despite the potential magnitude of the swings we have chosen a positive per capita GDP growth rate as our primary target for this CDSS period. This is accompanied by other targets which can also be effected by rain and commodity price fluctuations; however, we do not feel that these fluctuations invalidate our targets. At the same time, we recognize that it will be necessary for this Mission to analyze performance results at year's end to attempt to determine the degree to which they have been influenced positively or negatively by fluctuation in factors over which the Senegalese have no control. Below are two charts one for international commodity prices and the other for domestic agricultural production; these depict the expected magnitude of swings in each.

AGRICULTURAL PRODUCTION

CROP SYSTEM	RAINFALL EFFECT		PRODUCTION BASE		INPUT	ANNUAL INCREASE FOR
	GOOD YEAR (82/83) (TONS)	POOR YEAR(*) (83/84) (TONS)	TEN-YEAR AVERAGE (70/71 - 80/81) (TONS)		PRODUCTION INCREASE FACTOR	NORMALE RAINFALL (TONS)
Peanuts	1,091,701	548,000	850,000	X	2%	17,000
Cotton	43,660	33,000	33,000	X	5%	1,650
Millet	736,412	351,812	600,000	X	4%	24,000
Rice	103,312	108,540	100,000	X	12%	12,000
Maize	71,256	60,594	70,000	X	8%	5,600
Other	58,000	22,000	50,000	X	4%	2,000
Total Food	968,980	542,946	820,100	X		43,800

(*) Cotton benefitted from an intensive program to increase production thus the crop maintained an average-year level in spite of inadequate rainfall. The irrigated rice program was also rapidly increasing production which more than compensated for the decrease in Casamance rainfed rice production.

COMMODITY PRICES FLUCTUATIONS
(In constant 1980 Prices)

COMMODITY	LOW		HIGH	
	YEAR	PRICE	YEAR	PRICE
Peanut	1982	$467/MT	1974	$2067/MT
Phosphate	1983	$ 26.5/MT	1975	$ 117.8/MT
Rice	1983	$198/MT	1974	$1039/MT
Petrolum	1970	$ 3.82/Barrel	1981	$ 28.74/Barrel

The World Bank faced with these same problems of variation (see above charts), calculates real GDP growth rates using the "least-squares method. However, this method is most meaningfull when the time series is sufficiently long (e.g. five or ten years). The least-squares growth rate is calculated by regressing the annual values of real GDP in the relevant time period using the logrithmic form: Log X = a + bt + et, where X is the variable, a is the intercept, b is the slope coefficient, t is time and e is the error term. The growth rate is equal to (antilog b) - 1. Although USAID concurs in this method and will use it to compare the CDSS period with the previous five years, it will be necessary on a yearly basis to use other methods of analysis for comparative purposes.

With respect to our cereals production targets cited in Section III-A - Objectives, we are not trying to be overly scientific. It is our best judgement that these yearly increases can be achieved given normal rainfall, an improved pricing structure and slowly increasing agricultural inputs availabilities. The targets which are set forth are for what we consider to be normal years. However, the same percentage can be applied to both poor years and good years thus providing rough targets for those years. Considering the fact that quantity of rain and both the geographic and monthly rainfall distribution vary widely it will also be necessary to interpret the yearly production statistics to determine the degree to which uncontrollable factors have affected our targets.

USAID firmly believes that in the past significant changes in rainfall and commodicity prices have been used by both the GOS and the donor community to excuse poor performance on the part of the government. Although these are factors in the current situation, USAID is convinced that the significant factor has been GOS performance. We believe that the program laid out in this CDSS will impact positively on both Agricultural production and GDP. At the same time, we agree that common sense must be applied in analysing statistics to measure the real impact of our program. This we will do.

ANNEX D: DONOR COORDINATION AND ASSISTANCE FLOWS

I. DONOR COMMUNITY

Aid commitments to Senegal averaged over half a billion dollars annually during the years 1981-83. This assistance has come from nearly three dozen different donors who span the ideological spectrum, but about 85% of the total amount came from 12 major donors: France, the World Bank, the European Communities, the United States, West Germany, Canada, Italy, the United Nations, Belgium, Japan, Saudi Arabia and Kuwait.

II. STATUS OF DONOR ASSISTANCE

Kinds of Assistance

The composition of aid flows has fluctuated considerably from year to year, but about three-fourths of all foreign aid to Senegal in 1981-83 was in the form of project assistance (i.e. funds for infrastructure, scholarships, operating materials and expenses, and technical assistance). This project orientation was also reflected in the number of projects in progress at any one time. The 12 major donors made over 130 project commitments a year and were involved in over 200 ongoing projects simultaneously. A great number of these projects have been similar or complementary, but lack of coordination has resulted in competition for scarce Senegalese government resources. There has been a general consensus among donors on priorities, however lack of coordination has resulted in less than optimal results.

Problems with Assistance

The scope of development project activities has led to two types of problems. First, the GOS has been unable to cover the cost of its legitimate operating expenses nor provide local currency for part of the normally expected from a host country. Virtually every development project has some obligations which are expected to be financed out of the Senegalese National Equipment Budget (BNE). However, in fiscal years 1981-82 and 1982-83, the GOS only financed 4.5% of the BNE out of its own revenues, relying on foreign lending to cover the 95.5%. The inability of the GOS to meet counterpart requirements has become such a familiar story for most donors that many have been seeking ways to reduce the counterpart burden on the GOS. Second, the multiplicity of development projects has created an enormous recurrent cost and management burden for the GOS. Most projects do not generate sufficient revenues to cover ongoing operating and maintenance costs of the entity created by the project. The state should at a minimum pick up these costs at project end. However, GOS budget deficits have made it difficult if not impossible for it to do so. In many cases, the GOS has believed that the donors would provide financing for recurrent costs when they saw the completed project deteriorating or that another donor would finance rehabilitation of the facility. For example, the GOS has tended to neglect the maintenance of roads in anticipation that a later project would rebuild them.

Non-Project Assistance

Several donors have begun experimenting with new forms of assistance and with greater amounts of non-project assistance (NPA). Donor opinions on the merits of NPA vary widely. Opponents regard it as funding of functions which the recipient government should be supporting. Those in favor of NPA see it as flexible assistance, providing support where it is most needed, whether the balance of payments, the BNE, the general operating budget, or a particular sector. Others argue that it is an effective tool for bringing about macro-economic policy reform. Smaller donors tend to have entirely project-oriented aid programs and, until the December 1984 Consultative Meeting in Paris, almost entirely shied away from the macroeconomic policy dialogue. Policy dialogue has been left to an inner circle of donors: France, the United States, the World Bank, and to a lesser extent the European Communities, with the IMF playing a major role through its stabilization programs. Other major donors (Saudia Arabia and Kuwait) have not involved themselves in the policy dialogue, holding that they adhere to a philosophy of non-interventionism.

Donor Coordination

Donor coordination remains inadequate, although increasing efforts are being made by the major donors to improve the situation. While we have coordinated with various donors through formal organized mechanisms such as the Club du Sahel, CDA, the IBRD Consultative Group and the CMVS and CMVO Consultative Committees, informal regular and ad hoc meetings have also occurred more and more frequently indicating a more general willingness by donors to use their common interests and resources to achieve common goals. It is interesting to note that the most successful coordination efforts have resulted from a loosely structured efforts at the field level.

This increased momentum of donor coordination which began in late 1983 has produced concrete results at both the policy and technical levels. Two catalytic forces generated this increased cooperation. First, there has a growing frustration on the part of the donors based on the realization that their high levels of financial support had so far culminated in little or no development. This lack of actual development was continuing despite the existence of an excellent plan for economic stabilization. The second was a venting of donor frustration at the Club du Sahel and the World Bank convoked series of meetings to discuss the agricultural sector and the rural development agencies. For three consecutive weeks of virtual all-day meetings, the attention of the GOS and the major donors was rivetted on the stagnation of the agricultural sector. This was followed two weeks later by a visit of the IMF team whose purpose was to review the GOS performance toward meeting the Stand-By Agreement criteria of December 1983. It is encouraging to note that this concerted effort by the major donors and the GOS culminated in the New Agricultural Policy (NAP) of April 1984 which established the policy framework for a basic restructuring of the agricultural sector.

Thus began a process of resource and planning coordination by donors whose purpose was and is clearly to stimulate economic development. Far greater opportunity for development exists through the synergetic effects of coordination. Coordinating development activities is the most fundamental way to increase the effectiveness of foreign aid. Given the limited local representation of many donors, the commitment to communicate and coordinate with other donors most often must be made at a high level. However, local representatives and project managers must continue to be encouraged to exploit all avenues for informal and formal communication, coordination and cooperation. Whether development actually occurs or not will depend upon the foresight, and commitment of the Senegalese government.

III. TOTAL AID TO SENEGAL

Senegal has received an average of over half a billion dollars a year in external assistance in recent years. About 62% of this aid came from OECD nations, 23% from Arab donors, and 15% from multilateral institutions, although the contribution of each group has fluctuated considerably from year to year.

(See AID Flows and AID by Sectors Tables on following pages.)

ANNEX D, TABLE I

Aid Flows by Donor Group, 1981-83
(millions of dollars U.S.)

DONOR/DONOR GROUP	1981	1982	1983
I. OECD			
France	174.4	132.4	115.9
EEC	69.5	58.2	16.9
USA	22.8	31.5	33.3
Germany	34.5	36.5	20.2
Canada	22.4	31.3	18.7
Italy	0.7	160.1*	2.1
Belgium	3.1	2.6	7.8
Japan	4.0	10.6	11.6
Other	3.9	1.6	n.a.
SUB-TOTALS:	334.3	466.8	226.5***
II. MULTILATERAL INSTITUTIONS			
World Bank	93.3	44.3	39.1
UN System	12.7	12.3	16.3
AfDB	21.2	12.4	1.3
AfDF	6.2	4.2	12.7
WADB	3.1	2.0	1.8
SUB-TOTALS:	133.7	73.2	69.2
III. ARAB DONORS			
Saudi Arabia	50.0	69.1	20.9
Kuwait	0.0	46.9	30.4
Oman	0.0	30.0	2.0
Abu Dhabi	0.0	22.7	0.0
Iraq	7.6	0.0	1.2
OPEC Fund	14.0	10.0	9.3
IsDB	9.4**	21.7	9.6
ABEDA	10.0	0.0	5.0
SUB-TOTALS:	91.0	210.4	82.6
GRAND TOTALS:	574.0	752.6	378.9***

* Italy committed entire amount in 1982 for 1983-85 period.
** IsDB 1981 figure is uncertain - ranges between $5.2 and $13.5 million
*** estimated

ANNEX D, Table II

Aid by Sectors: 1981-1982 Combined

Sectors/Sub Sectors	Percent of Total Aid
I. Agriculture and Natural Resources	
Rural Development	6.8
Crop Production	6.8
Livestock	0.8
Fishing	6.6
Hydraulics	19.0
Forestry and Soil	1.8
Energy	1.8
SUB TOTALS:	43.4
II. Industry and Infrastructure	
Industry, Mining and Tourism	7.0
Trade and Investment Promotion	0.9
Transportation	2.8
Telecommunications	1.2
Housing and Urban Development	2.3
SUB-TOTALS:	12.2
III. Human Resources and Social Services	
Development Planning and Management	2.2
Health	1.2
Primary and Secondary Education	3.5
Advanced Education and Vocational Training	7.9
Culture and Sports	0.1
Science, Technology and Research	1.8
SUB-TOTALS:	16.7
IV. Non-Project Assistance	
Sectoral Support	5.6
Budget and/or Balance of Payments Support	17.9
Food Aid	4.5
Non-Food Emergency Aid	0.0
SUB-TOTALS:	28.0
GRAND TOTAL	100.0

NOTE: Categorizing aid flows by sector is a highly imperfect process. Certain contributions fit easily in several sectors; others fit comfortably in none; still others may have multi-sector purposes. Presenting a sectoral breakdown of aid flows serves only as a rough outline of development priorities.

ANNEX E: PROFILE OF SENEGAL'S HUMAN RESOURCE

I. EDUCATION:

It is estimated that about 72% of Senegal's population is functionally illiterate. Of Senegal's school age children 51% enter primary school; 17% enter Secondary; and 3% enter the University. These figures favor males at a ratio of about 2:1. The education system itself, with the exception of a few noble experiments, urbanizes students and school leavers are not inclined to seek rural employment. The system is designed to channel Senegal's elite into the bureaucracy.

Literacy and Numeracy

Literacy and numeracy in local languages was not a priority until quite recently. The emphasis has been on formal or technical education in French. Now literacy/numeracy training is being provided but it is under-funded, disorganized and largely uncoordinated. At least eight GOS services are involved in village level literacy training, with limited success. Senegal has also created some 21 specialized training centers to focus upon agriculture, fishing, rural enterprise and literacy in which wives participate. These institutions function at less than 50% of capacity due to funding constraints.

Technical Training

The recently constructed and currently functional National School for Rural Development (INDR) and Advanced School for Management and Business Administration (ESGE) are very positive developments. The GOS has recognized that the lack of skilled management and accounting cadre is a constraint to national development. It is also intensifying training of mid to high level researchers and practitioners in agronomy, plant pathology, and range management. On the other hand, Senegal's university continues to emphasize literature, economics and political science, and graduates of these programs have difficulty finding employment.

Future of Education in Senegal

The GOS in 1982 sponsored a series of broad reaching meetings (les Etats Généraux) on the future of education and training in Senegal. These meetings which involved the public, the Government, and the private sector triggered a national debate on new directions in curriculum development and education. A new and thoroughly revised national policy statement on formal and non-formal education is expected in early 1985.

II. THE FAMILY PRODUCTION UNIT AND THE ROLE OF WOMEN

The family in Senegal is the principal rural production unit. The basic production decisions are made by the head of a multi-family group or the single family head. The former has more responsibility for allocation of

land, available equipment, and inputs for millet production. The heads of the nuclear families have responsibility for allocating these resources for cash crops, principally groundnuts. Migrant workers, who owe the families labor in return for the right to grow cash crops are considered part of these groupings.

Agricultural production is organized on three types of land. Closest to family dwellings are millet and vegetable fields which are farmed collectively and benefit from manure and organic waste. Further away are collectively farmed cash crop fields, which are gradually being depleted due to lower applications of organic matter. Farthest from the dwellings are the bush fields cultivated by single men, migrants, and women for cash. The population pressure on the land, the reduction of fallow periods, the limited labor time women have available, and the allocation of as few inputs as possible to these fields is resulting in rapid fertility loss. Remittances from urban migrants and off-farm activities such as artisanry, trade, services, and marabout-healer activities, represent a major source of rural family income. These off-farm activities generate between 44 and 53% of all rural monetary revenue.

Senegalese women marry young (16.4 years), have their first child within the next year, live almost constantly in marital union (67% of women age 40-44 live in polygamous unions), want many children (20.7% of women over 35 with six or more children declared that they wanted more children), and have an average of 7.1 live births. The many traditional tasks of women such as child care, hauling water, pounding and preparing millet, and gathering wood require great amounts of time leaving little time for women to cultivate their bush fields. There is a great need to find ways to reduce the time women spend on traditional tasks and reallocate their labor for the well being of the family.

III. ETHNIC COMPOSITION OF POPULATION

Senegal has a multiplicity of geographically separated ethnic groups with varying cultivation, land tenure, and non-farm practices. They generally have in common the historical social divisions found throughout West Africa of nobles, farmers, and artisans or casted people. The caste system no longer exists officially; however, its informal influence is felt at village level and resistance exists to moving into the occupation of another "caste."

The Groundnut Basin which contains the bulk of Senegal's population is peopled principally by the Wolof and Serer ethnic groups. Both carry on millet and peanut cultivation, but the Serer use a more balanced system of crop rotation, fallowing, manuring, and diverse crop and tree production to protect fertility. The Wolof, (two-thirds of the population), have tended to cultivate with more environmentally damaging agricultural techniques.

The Fleuve Region includes two main ethnic groups in addition to Wolof inhabitants in the delta — the Tukulor are in the majority in the lower and middle Senegal valley and the Soninke in the Upper Valley. In the Tukulor areas, the continuing existence of the traditional land tenure system means

that farmers rent land from noble and fishermen families who own most suitable land. In the Upper Valley, a large number of Soninke men have emigrated to France remitting cash, but also resulting in labor shortages in many villages.

The Casamance region is dominated by the Diola in the Lower, the Mandinka in the Middle, and sedentary Fulbe or Peul in the Upper parts. The Diola cultivate rice whereas the Mandinka prefer upland crops of millet, maize, and peanuts. The Fulbe in the Upper Casamance combine livestock with millet and rice farming as well as peanut and cotton production.

The Senegal Oriental in the South-East has a fast-growing ethnically diverse population because of immigration from the Casamance, Guinea, and Mali.

The Sylvo-Pastoral zone in the North is predominantly peopled by Fulbe cattle herders. The Fulbe sell milk products, cattle, as well as other animal products. Women may cultivate millet in the wet season while men take cattle elsewhere.

IV. RELIGIOUS COMPOSITION OF SENEGAL

Islam is a persuasive force in Senegal and because over 80% of Senegalese are Muslim, the religion provides a homogeneous aspect to counterbalance ethnic diversity. There are aspects of the faith which are not positive economically, the subservient role of women, a fatalistic view of life, a prohibition against interest rates, and religious observance during the month of Ramadan which slows economic activity. Islam in Senegal also includes the phenomenon of the existence of two major Sufi or mystical Muslim brotherhoods, the Tijaniyya and the Mouride. The Tijaniyya include about 60% of Senegalese Muslims whereas the Mourides include about 30%.

The Mourides

The Mourides are more important in agriculture. The leaders of the Mourides are marabouts who are local political and religious authorities. They control most of the few large peanut estates of 20-10,000 hectares, have a large and organized labor force, greater access to risk capital than other agricultural producers, and a higher level of cash flow. Thus, they dominate the medium to large-scale private sector in the agriculture economy. Many agricultural cooperatives in the Groundnut Basin are under the patronage of a marabout family, and marabouts control much of the distribution of agricultural inputs and credit (when they exist). Their role and influence has been seen as tending to perpetuate feudalism and rural inequities, but recent studies have suggested that, on balance, their influence is more benign. Further, it is possible to envision ways in which donors could work with marabouts to introduce more intensive and environmentally sound agricultural practices. Their control of the land, risk capital, and labor availability, place them in a position to invest in environmental protection. They can also reach large numbers of farmers for whom they serve a priestly religious function by radio, pastoral visits, sermons. Since they are traditional religious figures important to large numbers of rural people,

marabouts may be able to play a progressive development role in increased production and environmental regeneration as long as their own interests are not threatened.

V. MIGRATION

Roughly 30% of Senegal's work force is unemployed and the search for income undoubtedly is a major factor contributing to high levels of migration. Migration in Senegal involves (a) rural-urban migration, mainly to the Dakar/Cap Vert area; (b) seasonal migration; (c) some permanent rural migration from depleted land to new lands; and (d) certain limited but significant international migration. The most striking form of rural-urban migration is that from rural areas to the Dakar/Cap Vert area. The Dakar Cap Vert and the adjacent Thies region have more than one-fourth of Senegal's total population. The Cap Vert population is growing at a rate of 5% and Dakar at 3% about half of which is caused by migration. This growth is contributing to rising unemployment, the growth of shanty-towns, and pressure on urban social services.

Seasonal migration related to the agricultural calendar is the dominant form of movement. Workers from poor Senegalese rural areas, Guinea and Guinea-Bissau move to the Groundnut Basin to cultivate cash crops on land owned by other farmers and share that family's food. However, pressure on the land is decreasing this type of migration. Additionally, labor moves from the Casamance to the Groundnut Basin to harvest and thresh peanuts. This migration includes Senegalese, Gambian, Guinean, Guinean-Bissau, and Malian families. There is also a large movement of people from rural areas to cities in the dry season to find work.

International migration for education and income is common. For example workers in France (over 50,000 Soninke from the Upper Senegal Valley alone remit large amounts of money to their families. There are also smaller movements of Senegalese entrepreneurs to other countries, primarily those in West and Central Africa.

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ANNEX G - LIST OF ACRONYMS

A & M	Agricultural and Mechanical University
AAPL	Approved Assistance Planning Level
ABEDA	Arab Bank for Economic Development in Africa
ABS	Annual Budget Submission
ADO	Agricultural Development Office
AfDF	African Development Fund
BNE	Budget National de l'Equipement
BNR	Bureau National de Recensement (National census bureau)
CCCE	Caisse Centrale de Coopération Economique (major French government aid organization)
CDC	Center for Disease Control
CESSI	Centre d'Enseignement Supérieur en Soins Infirmiers (nursing school)
CFAF	Communauté Financière Africaine Franc (Local currency)
CHW	Community Health Worker
CIP	Commodity Import Program
CNCAS	Caisse Nationale de Crédit Agricole du Sénégal (Rural credit fund)
CPSP	Caisse de Péréquation et de Stabilisation des Prix (equalization and stabilization fund)
CRS	Catholic Relief Services
CRSP	Collaborative Research Support program
EEC	European Economic Community
EPI	Economic Policy Initiative
ESF	Economic Support Fund
ESGE	Ecole Supérieure de Gestion des Entreprises (Graduate school for business management)
FP	Family Planning
FY	Fiscal Year
GDP	Gross Domestic Product
GIE	Groupe d'Intérets Economiques
GOS	Government of Senegal
H/P	Health/Population
HC	Health Center
HP	Health Post
IESC	International Executive Service Corps
IMF	International Monetary Fund
INDR	Institut National de Developpement Rural (National Institute for Rural Development)

ISRA	Institut Sénégalais de Recherches Agricoles (government agricultural research institute)
IsDB	Islamic Development Bank
JHPIEGO	John Hopkins Program for International Education in Gynecology and Obstetrics
LOP	Life of Project
MCH	Maternal and Child Health Centers
MOH	Ministry of Health
NAP	New Agricultural Policy
NPA	Non-Project Assistance
NXP	Non-Expendable Property
O.E.	Operating Expenses
ODA	Official Development Assistance
OMB	Office of Management and Budget
OMVG	Organisation pour la Mise en Valeur du Fleuve Gambie (Gambia River Basin Development Organization)
OMVS	Organisation pour la Mise en Valeur du Fleuve Sénégal (Senegal River Basin Development Organization)
ONCAD	Office National de Coopération et d'Assistance au Développement (governmental Peanut marketing board)
OOF	Other Official Flows
OPEC	Organization of Petroleum Exporting Countries
ORT	Oral Rehydration Therapy
PAAD	Project Assistance Approval Document
PACD	Project Activity Completion Date
PC	Peace Corps
PCS	Population Communication Services
PGR	Population Growth Rate
PHC	Primary Health Care
PID	Project Implementation Document
PL 480	Public Law
PVO	Private Voluntary Organization
RBDO	River Basin Development Office
RDA	Regional Development Agency
RN	Registered Nurse
RSSA	Resource Support Services Agreement
S & T	Science and Technology
SAED	Société d'Aménagement et d'Exploitation des Terres du Delta (Government regional development agency for the Senegal River Valley)
SAR	Société Africaine de Raffinage (Oil refinery)
SDP	Sahel Development Projects

SEIB	Société Electrique et Industrielle du Baol (Peanut oil refinery)
SENELEC	Société Sénégalaise de Distribution d'Energie Electrique (National electricity company)
SFH/DA	Senegal Family Health/Demographic Analysis
SHR	Senegal Rural Health
SIES	Société Industrielle des Engrais au Sénégal (fertilizer industry)
SODAGRI	Société de développement Agricole et Industriel du Sénégal (Government company engaged in rice development project in Senegal Oriental and the Casamance)
SODEFITEX	Société pour le Developpement des Fibres Textiles (Parastatal to develop East Senegal-started with cotton development)
SODEVA	Société de Développement et de Vulgarisation Agricole (Regional development agency for the Peanut Basin)
SOMIVAC	Société de la Mise en Valeur de la Casamance (Regional development agency for the Casamance)
SONACOS	Société Nationale de Commercialisation des Oléagineux du Sénégal (Government agency responsible for marketing peanut products)
SONAR	Société Nationale d'Approvisionnement du Monde Rural (replaced ONCAD)
SONEES	Société nationale des Eaux et Electricité du Sénégal (Government water company)
SOTRAC	Société des Transport en Commun (Urban transport company)
SPA	Small Project Assistance
SSEPC	Société Sénégalaise d'Engrais et de Produits Chimiques (French fertilizer and insecticide importer)
STN	Société des Terres Neuves (GOS Organization to resettle farmers in East Senegal)
TTS	Transfer of Technical Services
UNDP	United Nations' Development Program
UNICEF	United Nations' International Children's Emergency Fund
WAfDB	West African Development Bank
WFS	World Fertility Service
WHO	World Health Organization

donors, calls for (a) reduction of the role of the rural development agencies; (b) increased efficiency in the supply of agricultural inputs; (c) alternative production strategies; (d) more financing for rural development; and (e) environmental protection.

The GOS realizes that it cannot have a healthy economy without growth in the agricultural sector. Its agricultural sector employs 70% of its population, contributes less than 20% to its GDP, and produces less than half of its staple food even in good rainfall years. Further, production of its major cash crop (peanuts) has been stagnating. The GOS is deregulating the agricultural sector at the same time that it is trying to get its financial house in order by increasing the mobilization of domestic resources, reducing subsidies, cutting government expenditures, and reducing the size of government. Regarding the latter, the GOS is for the first time in its history no longer the major employer of new college level entrants into the labor force.

The U.S. Development Strategy in Senegal

This CDSS proposes an annual level of about $50 million for the U.S. contribution to the development effort. The World Bank estimates that overall donor resources of roughly $500 million per year are needed to help Senegal effectively implement its action plan and cushion the disruptive impact upon the social order. Attainment of the objectives of the Plan will require not only substantial donor resources, but close collaboration and coordination among the donor community and, more importantly, a steadfast determination by the GOS. Difficult decisions will have to be made. Donor assistance should be focused on assisting the GOS to make and implement those decisions while at the same time assisting in meeting the costs associated with structural adjustments for sustained growth.

We propose in this CDSS that the short-term objective for the Senegalese economy by the end of the CDSS period be achievement of a positive per capita rate of increase in the Gross Domestic Product. This will be achieved through the interaction of efforts in support of three subsidiary targets: (a) a generally improved economic performance, in large part resulting from

structural reform; (b) a minimum of a 3% increase per year in cereals production resulting from timely and adequate provision of inputs, water and marketing; and (c) a decrease in the fertility rate of from 48/1000 to 42/1000, derived from family planning efforts. The long range goal of food self-reliance remains unchanged.

United States' assistance for the past ten years has focused on geographic area development and primary health care programs. GOS adoption of the New Agricultural Policy makes many of these programs obsolete; therefore, we propose a new generation of activities designed to effectively (a) develop technology, (b) transfer technology to farmers and rural enterprises, and (c) support production expansion through free market structures. These new programs will help provide the technical tools needed to fully implement the NAP. The GOS determination to resolve its economic problems and the nature of the donor/GOS dialogue are converging to allow a consensus on the reforms to be taken. Simultaneously many of the earlier generation of projects in USAID's portfolio are both producing research results and coming to an orderly close, thus clearing the deck for more knowledgeable support of the GOS reform and development plan.

Our major effort, through all our programs and projects, during the CDSS period, will be to stimulate a major change in the "idea" structure. The Senegalese bureaucracy and policy-makers have as their heritage the statist, socialist (government can do everything best) mindset inherited from European social philosophers and consistent with African social values. If the economy is to grow and develop, then this mindset will have to change. A greater emphasis will be stressed in our program design and implementation on (a) learning from Third World countries which have progressed; and (b) appreciating the importance of creative individualism. This process has already begun through U.S.-supported exposure of key individuals to successful experiences in family planning and agriculture in the Third World. We propose that USAID intensify its cooperation with USIS and the other U.S. agencies in Senegal to stimulate the intelligentsia and policy-makers towards growth-related philosophies.