PD-ABP-538 CUNT

94598 TECH RESPONSES

DUE 3/16/95

Assessment of Program Impact

USAID/Dakar

March 1, 1995

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BACKGROUND

Senegal is a small, relatively poor, semi-arid country on the Western-most portion of sub-Saharan Africa's Atlantic coast. Senegal's population is 8.1 million (1994) people, and is growing at an annual rate of 2.7 percent. Senegal's land area is 197,000 square kilometers (19.7 million hectares). The root cause of Senegal's poverty is the fundamental imbalance between the increased requirements of the rapidly rising population for food, for jobs, for education, and for health services on the one hand, and the deterioration of the natural resources base caused largely by unsustainable exploitation by humans exacerbated by the inexorable southward march of sands of the Sahel.

Aggregate numbers always conceal great diversity. Senegal is divided into ten administrative regions. While the average population density for the country as a whole is 41 persons per square kilometer, the Dakar region boasts a population density of 3376 persons per square kilometer while the population density for the much larger Tambacounda region is only 8 persons per square kilometer. Women outnumber men in all the regions of Senegal.

The vast majority of the people are poor. Average per capita income is only $490 per year (1994 GNP estimate converted at CFAF 530 per $1.00). Again, regional disparities are masked by an average figure; average income per household in the Dakar region is four times as high as that of the region of Tambacounda. Poverty is largely a rural phenomenon: in April 1994, the World Bank issued a study on poverty in Senegal. According to that study, of the 2.4 million persons classified as poor in the Senegalese context, almost 1.9 million live in rural areas.

The Human Development Index published in 1993 by the United Nations Development Program (UNDP) ranks Senegal as 150 of 173 countries. Life expectancy at birth in 1992 was 50 years for women and 48 years for men. The 1992/93 Demographic and Health Survey II shows that infant (0-12 months) and juvenile (12-60 months) mortality rates both are 68 per 1,000 live births and that child (0-60 months) mortality is 131 per 1,000 live births. Maternal mortality in 1988 was 750 per 100,000 live births; this dropped substantially to 510 in 1992/93.

Of Senegal's total surface area, only 3.8 million hectares (19%) are suitable for agriculture; only 300,000 hectares (1.5%) are suitable for irrigation. Actual irrigated area is under 23,000 hectares (0.1%). Production on most irrigated lands is, however, very expensive.

The bulk of Senegal's agricultural production is on rainfed lands. Over the last several decades the rains have diminished as desertification has pushed southward. There are two principal

implications. Large parts of northern Senegal are far less productive now than they were just a few decades ago. And in the south, diminished rains have reduced the flow of key river systems; resulting salt water intrusion from the ocean has marginalized some of these lands as well. Senegal's agricultural potential is further constrained by substantial variations in annual rainfall on the order of 20-30 percent per year.

Within Senegal, average annual rainfall levels increase and the reliability of rainfall improves as one travels from north to south. Sustainable rainfed agricultural is possible in the area south of the 400 millimeter rainfall isohyet (roughly a line drawn across the middle of the country). USAID/Dakar concentrates its natural resources management based agricultural interventions in this "zone of reliable rainfall."

In February, 1991, USAID/Washington approved USAID/Dakar's strategic plan, a plan which covered the 1992 to 1997 period. As mentioned above, this plan was based on the fundamental imbalance between the rising requirements of Senegal's rapidly growing population and the deterioration of its natural resource base. The objective tree for this strategic plan is presented in Appendix I. In the Action Plan submitted to USAID/Washington in July, 1994, USAID/Dakar indicated that our forthcoming Assessment of Program Impact (API), that is to say, this document, would reflect a slight modification of this strategy. The modification involves a consolidation of Strategic Objectives 2 and 3. Appendix II contains our new objective tree. Appendix III contains the new table for Strategic Objectives 2 and 3 for the newly consolidated strategic objective. This API also describes a proposed change in the indicator adopted to measure Strategic Objective 1; this change is discussed in the text, below. Following the guidance contained in paragraph 6 of 94 STATE 333895, this API submission reflects USAID/Dakar's current strategy.

USAID/Dakar is implementing a long-term strategy that was originally designed to address a fundamental imbalance impeding the development of Senegal. Because that fundamental imbalance remains largely the same, so too does our strategy.

SECTION I: SPECIAL FACTORS AFFECTING THE USAID/SENEGAL PROGRAM

USAID/Dakar's November, 1993, API described how the 1992-93 election year consumed resources and energy, postponing serious attention by the Government of Senegal (GOS) to pressing development issues. It also noted how civil unrest in the Casamance disrupted development activities, including an important USAID project, in the Ziguinchor Region. The same API noted some positive last minute developments.

In the sixteen months since that API was prepared, those positive developments have taken hold. There is a feeling of optimism about the government's commitment to reform and about the people's capacity to make important changes in their own lives that was absent even as little as a year ago. The feeling is fragile, but it is real.

The Devaluation and Related Events:

By far the most important event of the last sixteen months was the 50 percent devaluation of the CFA Franc (CFAF) against the French Franc that occurred on January 12, 1994. The devaluation largely eliminated the single most important price impediment to the economic development of Senegal. Within a year, the devaluation of the CFAF resulted in sharply increased revenues from tourism and key exports such as groundnut (peanut) products, fish and phosphoric acid; on the down side, the devaluation reduced GOS customs duties on imports such as petroleum and rice. The trade balance, although still showing a large deficit, has slightly improved. The GOS has asked the Bretton Woods institutions for help in resolving its problems with the fiscal deficit.

The International Monetary Fund (IMF) and the World Bank strongly supported the devaluation. The IMF approved a three year Enhanced Structural Adjustment Funds (ESAF) agreement with Senegal on August 29, 1994, replacing the stand-by agreement that had been signed in March, 1994. Under this ESAF agreement, Senegal is entitled to draw $192 million, of which $70 million will be available during 1994-1995. The World Bank has just approved the first of two substantial structural adjustment loans to Senegal. Senegal probably will be able to renegotiate its external public debt through the Paris club in the spring of 1995.

These financings will alleviate the government's current severe liquidity crisis. As a result, the GOS expects to be able to release local counterpart funds (host country contributions) to donor-assisted activities whose implementation has been hampered. The GOS also expects to fully honor its external debt obligations; Senegal should not face Brooke amendment sanctions as it did during fiscal year 1994.

The support of the Bretton Woods institutions bear witness to the Government of Senegal's progress on implementing policy reforms on several important topics. The GOS has recently adopted a more flexible labor code, revised some special agreements (e.g., eliminating long-standing legal monopolies in fertilizer, tomato paste, cotton, textiles and cement), deregulated prices (e.g., of paddy rice), and privatizated parastatals (e.g., of rice mills and some functions of the rice marketing board).

Political Factors:

The second most important event of the last sixteen months were the riots of February 16, 1994. The unexpected brutality that characterized these riots, and the suddenness with which they burst upon the scene, shocked the citizenry of Senegal. The government successfully dampened the deep political discontent that fueled the riots; well-received verdicts returned in the trials of those accused of causing the riots as well as of those linked to the murder of Maitre Babacar Seye, Vice-President of the Constitutional Council, reduced political tensions.

In his New Year's Speech on December 31, 1994, President Diouf committed himself to consult more with Senegal's political leadership (including the opposition), the unions, "civil society", and the religious leadership on the big issues. A heightened sense of participation and partnership is evident in the way the GOS conducts business.

Insurgency:

On December 21, 1993, a French expert bore testimony to the appurtenances of the Casamance to Senegal. This testimony was a crucial element in what has proven to be a durable (to date) cease-fire agreement. Almost all of the Casamance separatist groups have abided by this agreement. Disturbances now are extremely rare and isolated incidents. The contractor team for USAID/Dakar's Southern Zone Water Management (SZWM) project moved back to the city of Ziguinchor in September, 1993, and has been fully implementing the activities of that project in the regions of both Kolda and Ziguinchor since then. The Peace Corps now is preparing to place several volunteers in the Ziguinchor region.

Crop Results:

Throughout much of Senegal, relatively abundant late summer/early fall 1994 rains compare favorably with 30-year average rainfall levels. These rains affect primarily the production of the principal (rainfed) crop of the 1994-95 crop year (ending September, 1995). Although the rains were good, limited sunshine associated with successive rainy days hurt crop yields. Torrential rains in August, 1994, caused an explosion in weeds and increased soil erosion in many areas. The preliminary harvest forecast for

the 1994-95 crop year suggests a decrease in production for the cereal crops (except sorghum) offset by an increase for cash crops (except cotton and cowpea). That implies a higher value of marketed production and lower value of home consumption.

Shortly after the devaluation, the Government of Senegal increased the producer prices of groundnuts, cotton, and paddy rice (the price of paddy rice now is determined by the market) by 43 percent, 30 percent, and 6 percent respectively. These price changes discriminated against paddy rice and in favor of groundnuts. As a result, farmers planted more area to groundnuts. We anticipate that this change in area planted will be reflected in productions levels recorded for the 1994-95 crop year.

SECTION II: PROGRESS TOWARD OVERALL DEVELOPMENT GOALS

Aggregate Indicators:

With this API submission, USAID/Dakar discusses, in Section III, a proposed revision of some of the indicators associated with Strategic Objective 1 (Decrease Family Size). As reported in USAID/Dakar's API of November, 1993, preliminary results of the 1992/93 Demographic and Health Survey II (DHS-II) indicated that the total fertility rate (the average number of children woman may have during her reproductive life) in Senegal declined from 6.6 children in 1986 to 6.0 children in 1993. These preliminary results have been confirmed. The 6.0 figure was the performance target we originally expected to reach in 1997. This is a clear sign that the program is on the right track. However, decreases in fertility rates make themselves felt at the macroeconomic level only after long delays. While a significant achievement, meeting the performanfce target for Strategic Objective 1 four years ahead of schedule has no measureable effect on population growth in 1995, and it will have no measureable effect in the next several years. Therefore it can have no immediate or short-term effects on USAID/Dakar's program goal or sub-goals. Eventually, of course, it will.

This significant achievement is an encouraging sign that USAID/Dakar's health and population program is on the right track over the long run. People won't participate fully in population reduction activities until they are reasonably certain that their smaller number of children will survive. The relationship between a decrease in child mortality and the resultant increase in family planning acceptance has been well-documented throughout the world. We discuss this emphasis on child survival in Section III, below.

USAID/Dakar has the lead role among the donors in the environmental and natural resources management areas. We have helped establish and support enabling institutions such as the "Conseil Superieur pour l'Environnement et les Ressources Naturelles" (CONSERE) and, in November, 1993, its Permanent Secretariat. CONSERE has begun to prepare Senegal's National Environmental Action Plan (NEAP); CONSERE organized a highly successful meeting in mid-February to start to prepare the NEAP. When completed, the NEAP will assure that the GOS fully takes into account the environmental perspective as it discusses social and economic development policy issues. In time, we anticipate that these institutional changes at the policy level will profoundly affect the achievement of our program goals.

Table 1 presents USAID/Dakar's goal, sub-goals, and indicators at the program level. Some of the data provided in Table 1 differ from those provided in our last API submission. For example, there are significant changes in the data provided for FY 93. These data revise the estimates presented in our last API. They also reflect

an effort to harmonize the different ways that crop statistics are compiled in Senegal. FY 94 estimates (to be revised next year) also are provided in Table 1.

The revised FY 93 data indicate that gross domestic product (GDP) fell sharply in that year, rebounding with a modest 1.5 percent growth rate in FY 94. Population grew even faster: in FY 94, per capita GDP fell an additional 1.2 percent. But the picture in the natural resources field was much more encouraging. The contribution to GDP made by producers in the natural resources field fell by 5.6 percent in FY 93, then rose by a very impressive 11.7 percent in FY 94. FY 94 data for the value of marketed production and of home consumption support the sharp increase (55.3 percent) in per capita income from natural resources in zones of reliable rainfall. These are based on nominal price data and do not take into account the price adjustments that occurred in the wake of the devaluation. Even considering the rise in prices, incomes of farmers and other producers in the natural resources-based field appear to have increased substantially. The principal reason was the relatively good weather.

Preliminary projections suggest a real growth rate of GDP of around 3.4 percent for FY 95. If this projection holds, it will mark a substantial increase in percapita income. As noted above, the harvest forecast for the FY 95 crop year suggests a decrease in production for most cereals and an increase for most cash crops. This forecast suggests relatively higher values of marketed production and lower values of home consumption in FY 95.

Gender Concerns:

Women constitute over half of the population of Senegal. They must be fully engaged in the development process if that process is to succeed.

Vignette: Long-Term Training

For FY 95, the Government of Senegal was unwilling to continue to make salary payments for civil servants. As a result, USAID/Dakar considered only private sector candidates for masters degree training in the U.S. Over 400 individuals (a record for this mission) applied. 50 candidates were interviewed and were given English language aptitude and proficiency tests. Six women and four men were selected.

These trainees have begun their intensive English language training. They will leave for the U.S. in June, 1995, for additional language training. They will begin their academic training in September.

In May, 1994, USAID/Dakar issued its Gender Action Plan. The purpose of the Gender Action Plan is to improve the system for tracking gender issues, to articulate a coherent strategy for improving the situation of women in Senegal in the context of our overall program, and to develop an implementation plan for both the gender tracking system and the women in development (WID) strategy.

The goal of our WID strategy is to increase women's participation in and income from the sustained exploitation of the natural resource base. We have identified five WID objectives. They are:

-- increase women's labor force participation rates, their labor effort, and their labor productivity in and income from crop production in zones of reliable rainfall;

-- increase women's participation and productivity in tree planting and conservation, and income derived from the sustainable exploitation of forest products;

-- increase women's role in private sector activities;

-- decrease fertility rates in urban areas, and decrease women's desired size in rural areas; and

-- increase women's access to credit and to decision making positions.

The Gender Action Plan recommends that USAID/Dakar undertake three sets of actions. First, USAID/Dakar will develop working hypotheses, based on available data in both the agricultural and natural resources, and the health and population fields, for a study on the impact of our activities on the women of Senegal. Second, we will seek ways to attenuate the negative effects of the inadequate coverage in specific areas such as education and literacy, and rural credit; we will do this through components of existing or future project activities. Third, we will increase USAID/Dakar staff awareness of the importance of gender considerations through on-the-job training, seminars and briefings, site visits and so on. We also will institutionalize our heightened concern with gender issues through administrative means such as issuing a mission order on gender and defining precisely the roles and responsibilities of the WID committee.

Table 1

USAID/DAKAR PROGRAM GOALS

	Baseline	ACTUAL				PERFORMANCE TARGET		
		FY 91	FY 92	FY 93	FY94*	FY 93	FY 95	FY 97
GOAL: INCREASE PRIVATE INCOMES FROM NATURAL RESOURCES (percent)	(1986-89)							
Indicator:								
1. GDP Growth Per Year	2.6	1.0	2.9	-3.5	1.5	3.2	3.2	3.2
2. Natural Resources Annual Growth (excluding Fishing & Mining)	3.3	-3.5	2.5	-5.6	11.7	3.6	3.6	3.6
SUB-GOAL 1: INCREASE NATURAL RESOURCES INCOME PER CAPITA (percent)	(1986-89)							
Indicator:								
1. GDP Growth Rate Exceeds Population Growth Rate	-0.1	-6.2	0.2	-6.2	-1.2	0.5	0.5	0.5
2. Per Capita Income from Natural Resources in Zones of Reliable Rainfall	-0.6	-12.2	-5.9	1.3	55.3	1.8	1.8	1.8
SUB-GOAL 2: INCREASE VALUE OF MARKETED OUTPUT (CFAF Billion)	(1989-91)							
Indicator:								
Value of Marketed Production	80.3	77.7	67.0	73.9	118.3	85.3	88.6	91.9
SUB-GOAL 3: INCREASE VALUE OF HOME CONSUMPTION (CFAF Billion)	(1989-91)							
Indicator:								
Value of Home Consumption	113.5	113.7	86.5	109.9	126.8	108.0	112.0	116.3

* indicates estimates

Sources: GOS data, Mission data

Notes:

1. The 1993 figures have been revised on the basis of actual results. See text.
2. This report assumes that the proportion of cereal grain production actually marketed is between three and five percent
3. The value of marketed production and home consumption could be expanded by about 20 percent to include the value of fruits and vegetables and livestock.

SECTION III: PROGRESS TOWARD STRATEGIC OBJECTIVES

Strategic Objective 1: Decrease Family Size

Major Achievements:

- The total fertility rate fell from 6.6 births per woman in 1986 to 6.0 in 1993.
- The contraceptive prevalence rate for married women of reproductive age rose from 3.5 percent in 1992 to 5.6 percent in 1994.
- The contraceptive social marketing pilot activity of the SCS/FP project has begun.

UPDATING PROGRAM INDICATORS:

USAID's 1997 target under Strategic Objective 1, decreasing family size, was to reduce the total fertility rate to 6.0 births per woman. This goal was achieved in 1993. We are conducting additional analyses of DHS-II data, and those of other available surveys, to project further declines, given demographic trends and the expected impact of USAID/Dakar's Senegal Child Survival and Family planning (SCS/FP) Project.

At the end of January, 1995, USAID sponsored a five-day workshop at which participants reviewed the results of five years (1989-1994) of research on child survival and family planning issues, as well as recent surveys carried out by the Population Council, (family planning), the BASICS project (diarrheal disease), Wellstart (breastfeeding), UNICEF (health services development), and MACRO (child survival and family planning). The workshop was attended by over 100 people including representatives from virtually all of USAID/Dakar's cooperators and contractors (U.S.-based as well as local) who are active in the health/population and AIDS fields, several national and regional directors of government programs, a number of technical representatives from data gathering and analysis institutions, national and international non-governmental organizations, the Ministry of Health's coordinator for the family planning program of the World Bank, and many others.

The findings of the workshop are not yet finalized. However, we now are beginning the process of changing some of the logframe indicators and are revising some of the performance targets of the SCS/FP project. A summary of some key discussions of the workshop

follows:

-- Projections based on the DHS-II suggest a 1999 performance target of 5.5 for the national total fertility rate. Participants at the workshop proposed several new project-level indicators and performance targets, including: 1) an increase in the knowledge of available sources of family planning services and modern contraceptive products from 40% to 75% for women, and 2) an increase in the acceptance by men of modern contraception from 43 percent to 70 percent (the current level of female acceptance).

-- Participants proposed other indicators, specific to child survival interventions, including: 1) the percentage of infant mortality attributable to diahrrea, now estimated at 25 percent of infant deaths; 2) the percentage of infants 0 to 36 months of age identified by the National Nutrition Service as malnurished (weight for age more than 2 standard deviations below normal), and 3) the percentage of infants under 5 months old who are exclusively breast-fed.

-- Participants also discussed specific performance targets for proposed indicators, including a 1999 child (0-60 months) mortality target of 93 per 1,000 live births; this would be significantly below the current rate of 131 per 1,000. Recent data show that juvenile (12-60 months) mortality has been decreasing faster than infant (0-12 months) mortality. Performance target infant mortality rates could be established after current rates are confirmed and causal hypotheses proposed and tested.

According to the DHS-II, the contraceptive prevalence rate (modern methods) for the country as a whole is 4.8 percent. In urban areas the rate is eight and half times higher than that in urban areas. Though an urban/rural difference is to be expected, the difference in Senegal is much larger than that experienced in many other countries. This situation may be explained in part by the difference in knowledge of contraceptive methods: among rural married women of reproductive age, 62 percent have knowledge of one modern method and only 34 percent have knowledge of three modern methods. Many of the constraints on the use of family planning services are equally relevant to the utilization of the health services -- transport costs, difficulty of access, and quality of services, in some instances even including attitudes of service providers.

The original hypothesis that contraceptive demand did not exist at significant levels in rural areas has been disproved. USAID/DAKAR intends to design interventions that will improve access to family planning services in rural areas.

The January workshop focussed on indicators and performance targets for the SCS/FP project. Strategic indicators and performance targets also were discussed. At the strategic objective level, we have established a new performance target of 5.7 for the national total fertility rate for 1997 based on projections from DHS-II (see Table 2, Strategic Objective 1). We are retaining the indicators, and the performance targets for FY 97, for program outcome 1.2. We may add additional indicators, and define additional performance targets, in the family planning area or the child survival area, or both. Additional consultations with our customers and our partners are required. We will continue to keep USAID/Washington closely informed of all actions that may affect our indicators and performance targets at the strategic objective level. In the meantime, for the purposes of this API submission, we present, in Table 2, our current indicators and performance targets.

Most recent actual data are taken from the DHS-II. No comparable data for FY 94 are available.

PROGRESS ON FAMILY PLANNING:

According to the DHS-II, roughly 40 percent of Senegalese women expressed a desire to use contraception, either to limit or space their future births. In rural areas, 62 percent of married women of reproductive age are able to name at least one modern method, but only 40 percent can identify a source of family planning methods (the figure is only 25 percent for adolescents). The data do not conclusively show which factor (knowledge of family planning as measured by the ability to name at least one modern method, or ability to identify a local source of family planning services and products) is more important in determining contraceptive use. A number of studies suggest that the availability (physical access) of services remains a major barrier. We are pursuing additional information on the relationships among knowledge, access and use.

Vignette: Norplant and Professor Fadel Diadieu

With the support of USAID/Dakar, the director of obstetrics and gynecology at Le Dantec Hospital Professor Fadel Diadieu has been the prime mover in introducing Norplant to Senegal. Thanks to the vision and leadership of Professor Diadieu, Le Dantec has established its reputation in West Africa for excellence in clinical training and research. Le Dantec has trained participants from several francophone countries, including of course Senegal. Le Dantec also implements a pilot program to provide Norplant services to Senegalese women. This program has now provided Norplant to more than 3,000 women.

Table 2

STRATEGIC OBJECTIVE NO. 1

	Baseline	ACTUAL				PERFORMANCE TARGET		
		FY 91	FY 92	FY 93	FY94	FY 93	FY 95	FY 97*
STRATEGIC OBJECTIVE 1: DECREASE FAMILY SIZE	(1986)							
Indicator National Total Fertility Rate	6.6			6.0		6.3	6.2	5.7
PROGRAM OUTCOME 1.1: Increase Use of Modern Contraceptives	(1986)							
Indicator: Urban Contraceptive Prevalence Methods	6.7	10.4		11.9		12.4	15.4	18.0
PROGRAM OUTCOME 1.2: Increase Knowledge of Modern Contraceptive Methods in Rural Areas								
Indicator: 1. Women's Knowledge of Modern Contraceptive Methods (percent) [1]	(1986)							
a. One Method:	58.1	75		62		82	86	90
b. Three Methods:	23.4			34		49.6	55	60
2. Men's Knowledge of Modern Contraceptive Methods (percent) [2]	(1992/93)							
a. One Method:	68			68		-	75	90
b. Three Methods:	43			43		-	51	60

Sources: DHS, KAP, National Census

[1] indicates married women of reproductive age 15-49

[2] indicates men age 20 and more

* our FY 97 performance target for the national total fertility rate has been reduced from 6.0 to 5.7

Pending the establishment of a health information system, USAID/Dakar uses contraceptive distribution data as proxies for clinic records to estimate family planning activity.

Contraceptive logistics data indicate that 73,968 couple years of protection (CYP) were provided, nationwide, in 1992. Allowing for long-term methods, this translates to 60,068 users, or an estimated nationwide contraceptive prevalence rate (CPR) of 3.5 percent for married women of reproductive age (see Table 3). Analysis of logistics data for 1993 translate to 86,336 users, or an estimated national CPR of 5.0 percent. These data provide only a rough estimation of program activity, but are supported by the DHS-II, which pegged the CPR at 4.8% for modern methods nationwide.

Table 3

Estimates of Contraceptive Use by Married Women of Reproductive Age

Item	1992	1993	1994
CYPs *	73,968	106,986	114,600
Estimated Users **	60,068	86,336	100,850
CPR ***	3.5%	5.0% (4.8% DHS-II)	5.6%

* CYP = Couple Year of Protection
** Assuming one year continuation for long-term method acceptors
*** CPR = Contraceptive Prevalence Rate

These rough estimates of program activity are supported by the 1994 Population Council Situation Analysis study which was based on data taken directly from clinic registers. This study showed a total of 82,550 new users, which yields a nationwide CPR of 5.6 percent. These figures will be verified in time by household contraceptive use surveys, but show very encouraging increases in contraceptive use.

The past sixteen months constituted a period of transition for the USAID/Dakar family planning program. The GOS was unable to fully insert USAID/Dakar's Senegal Child Survival/Family Planning Project into the overall Senegalese family planning program. During this period the project was in a "holding pattern". Financial and

administrative processes now are in place, and the initial wave of materials and equipment has been ordered. We anticipate that, under the project, USAID will be able to accelerate rapidly both the delivery of contraceptive services and the implementation of planned information, education and communication activities in 1995.

In December, 1994, and January, 1995, representatives from USAID/Dakar; the Ministry of Health at the national, regional and district levels; other key donor agencies; other national health/family planning programs; and the SCS/FP project all jointly developed comprehensive project workplans. USAID/Dakar believes that this collaborative style will result in the more effective coordination of resource flows.

The contraceptive social marketing pilot activity of the SCS/FP project has begun. Under this pilot activity, USAID/Dakar plans to sell 1 million condoms through private pharmacies during 1995. We expect to support a larger contraceptive social marketing activity scheduled to begin in 1996.

Important Research Findings:

- Data show unexpectedly high awareness of modern family planning methods among men (74 percent for married men).
- Data demonstrate strong linkages between birth spacing and child survival in the Senegalese context.

One of the initial hypotheses of the SCS/FP project was that men were unaware of family planning; accordingly, basic IEC activities, especially targetted at men, were required. In last year's API, we reported surprizing preliminary results suggesting that men, including rural men, are quite knowledgeable of modern contraceptive methods. These results have now been confirmed. Data show relatively high awareness of modern family planning methods among men (74 percent for married men). However, only 15 percent had ever used a modern method. One third of all men 20 years old or older said they refused to use family planning methods due to personal or religious beliefs. As a result, we are adjusting our strategy under the project, and will deliver messages that demonstrate the benefits of family planning using arguments that are acceptable in the Senegalese social context. At the same time, we will promote, among Islamic leaders, the idea that birth spacing as a maternal/child health intervention improves the well-being of all family members. In doing so, we will rely on the RAPID IV computer model to project resource needs (food, jobs,

Vignette: The Registration of ASBEF

For the first time, a Senegalese local non-governmental organization (NGO), the Senegalese Association for Family Welfare (ASBEF), has been registered as an NGO with USAID in Washington. As a registered NGO, ASBEF can apply directly to USAID for funding, rather than having to apply jointly with another organization. USAID's approval of ASBEF's registration request reflects the highly professional quality of ASBEF and of its programs. ASBEF offers family planning services through over 40 clinics in Senegal.

schools, medical facilities, etc.) based largely on population growth scenarios.

PROGRESS ON CHILD SURVIVAL:

Although USAID/Dakar does not have a separate child survival strategic objective, child survival is an integral part of our strategy to reduce the fertility rate in Senegal.

The DHS-II demonstrates strong linkages between birth spacing and child survival. These results show an infant mortality rate (the number of deaths before age 1 per 1,000 live births) for children born less than 2 years apart to the same mother of 112 per 1,000, while that for children born 2-3 years apart is 63, and only 42 for those more than 4 years apart. This finding supports USAID/Dakar's strategy of linking child survival and family planning as synergistic initiatives.

As noted above, the DHS-II shows an infant mortality rate of 68 per 1,000 and child mortality rate of 131. These indicators have improved since the 1986 DHS, but a very high proportion of these infant and child deaths are still due to easily preventable causes. For example, 25 percent of child mortality is due to diarrhea.

Just over one fifth of Senegalese children under 5 suffer from chronic malnutrition; an additional 22 percent suffer from moderate malnutrition (an improvement from 24.7% indicated by the 1986 DHS). While breastfeeding is a common practice, the proportion and duration of infants who are exclusively breast-fed is quite low. As many as two thirds of all Senegalese infants are given water as a supplement to breastfeeding. Many children are introduced too early to inappropriate supplementary foods. We are analyzing DHS data to demonstrate the existance of other relationships between infant feeding practices and subsequent nutritional status. As a result of what we have already learned, USAID/Dakar, our

cooperating agencies and GOS National Nutrition Service have prepared a joint action plan for infant nutrition and breastfeeding activities in the four regions covered by the SCS/FP project. We will coordinate closely with UNICEF and other donors active in this field.

PROGRESS ON DECENTRALIZATION:

Decentralization of health services, which includes family planning and child survival services, is extremely important to the impact of USAID's activities in the family planning area. Under USAID/Dakar's old Rural Health Delivery Services/Child Survival project, we sponsored the development of decentralized planning processes for maternal and child health care in three regions of Senegal (Kaolack, Fatick and Louga). All of the 13 health districts in these regions (as well as 3 in the region of Ziguinchor) are now responsible for their own processes of planning in the health and population field: within guidelines established by the Ministry of Health, they set their own objectives and prioritize their own activities.

However, inefficiency at the periphery remains the principal shortcoming of the Senegalese health system. We must find ways to strengthen the delivery of family planning, child survival, and other health care services at the district level.

According to the BASICS Health Facilities Survey, 38 percent of all health facilities had no oral rehydration salts packets in stock at the time of the survey. Under the SCS/PF project, we have proposed a new logistics system for oral rehydration salts and contraceptives to insure their availability at peripheral facilities. The new system will strengthen record-keeping and speed the re-supply process, with emphasis on facility-level needs projections. USAID/Dakar will provide equipment and oral rehydration therapy supplies to over 200 health facilities. Materials should arrive in early 1995 to correspond with UNFPA-funded renovation of key Ministry of Health health structures.

Strategic Objective 2: Increase Crop Productivity in Zones of Reliable Rainfall

Major Achievements:

- USAID/Dakar is working with the U.S. Geological Survey to inventory baseline natural and agricultural resources, and to provide data that will support efforts to develop sound natural resource management practices using state-of-the-art technologies including satellite image mapping, aerial videography, and geographic information systems.

- According to the 1994 knowledge, attitudes and practices (KAP) survey, use of natural resources management technologies has increased substantially in Senegal since 1992.

CONSOLIDATING STRATEGIC OBJECTIVES 2 AND 3 AND UPDATING PROGRAM INDICATORS:

As indicated in the background section of this API report, USAID/Dakar intends to consolidate Strategic Objectives 2 and 3. As a consequence, we will present to USAID/Washington a proposed revised development strategy during our "strategy week" in March, 1995. We provide a summary discussion of our proposed revised strategy in Appendix III.

USAID/Dakar will address the consolidated Strategic Objective Nos. 2 and 3 during the remaining two and one-half years of the current strategy period primarily through the Natural Resources-Based Agricultural Research (NRBAR), Kaolack Agricultural Enterprise Development (KAED), Southern Zone Water Management (SZWM), and Community-Based Natural Resources Management (CBNRM) projects. A new NRM non-project assistance activity is being contemplated.

Our proposed strategy, which involves only a slight modification of our current strategy, is best summarized in Table III.1 in Appendix III, a table entitled "Consolidation of Strategic Objectives No. 2 and 3." Most of the indicators in this table are taken from Tables 4 and 5 in the text ("Strategic Objective No. 2" and "Strategic Objective No. 3" respectively). Some are new (e.g., the "composting" indicator under Program Outcome 2.2 in Appendix II). Some indicators contained in one of the original tables have been deleted (e.g., the "Number of Trees Planted and Surviving per Year Nationwide" indicator under Program Outcome 3.1, Strategic Objective No. 3 in Table 5). We also have changed some program outcomes (e.g., we have deleted Program Outcome 3.1: "Plant More Trees."

There are three principal reasons why USAID/Dakar has decided to consolidate Strategic Objectives 2 and 3. First, in an era of declining resources, we needed to focus our implementation efforts on a smaller, more coherent set of objectives. Strategic Objectives 2 and 3 pulled, in different directions, our scarce agricultural and natural resources management (NRM) human and other resources. Second, the Senegal Reforestation project, a $14 million, seven-year activity that focussed on tree planting, will end on March 31, 1995. This was the only activity in our portfolio that directly and exclusively addressed Strategic Objective 3; the successor project (the Community-Based Natural Resources Management project) emphasizes community level planning and an array of natural resources technologies including but not limited to tree planting. In the absence of the Senegal Reforestation project, it is not in our manageable interest to focus on planting trees or on protecting forests. Third, knowledge, attitudes and practices (KAP) surveys supported by the Senegal Reforestation project indicate that villagers -- our customers -- generally accord reforestation a lower priority than other interventions such as wells, vegetable plots, health centers, millet mills and livestock activities. Nonetheless, reforestation remains a key component of an integrated natural resources management approach. There is strong evidence that tree planting in certain types of microecological zones such as in littoral zones (e.g., for dune stabilization) and in areas of exhausted soils in the peanut basin (e.g., to counter wind erosion), lead to significant changes in soil fertility and thus to increased crop productivity and increased farm income.

In this API submission, however, we report on our existing, approved strategy.

We have changed the baseline data for some of the indicators under Program Outcome 2.2. In our last API submission, we used GOS data from 1988 to determine the baseline figures for the first six indicators under Program Outcome 2.2 ("Increase Use of Adapted Technologies"). We stated that we would look into the differences between the original (1988) baseline data, which appeared to be very low, and those derived from the first Agricultural and Natrual Resources knowledge, attitude and practices (ANR KAP) survey, conducted in 1992. In 1994, we conducted a second ANR KAP survey. The 1994 ANR KAP survey was modelled on the original 1992 ANR KAP survey. We are now persuaded that the 1988 baseline numbers are not comparable to those provided by the ANR KAP surveys. As a result, we have decided to use the 1992 data as a new baseline.

PROGRESS ON AGRICULTURAL YIELDS:

In our last API, we reported on FY 92 yields (actual) and discussed the preliminary estimates for yields in FY 93 (coincidentally the US fiscal year and the Senegalese crop year both cover the twelve

Table 4

STRATEGIC OBJECTIVE NO. 2

	Baseline	ACTUAL				PERFORMANCE TARGET		
		FY 91	FY 92	FY 93	FY94*	FY 93	FY 95	FY 97
STRATEGIC OBJECTIVE 2: INCREASE CROP PRODUCTIVITY IN ZONES OF RELIABLE RAINFALL	(1989-91)							
Indicator: Adjusted kg/ha for:								
-Millet	786	731	741	769	732	820	850	880
-Sorghum	850	800	948	806	886	880	910	940
-Rice	1,254	1,078	1,176	1,525	1,099	1,380	1,440	1,505
-Groundnuts (for oil)	959	852	780	956	962	1,055	1,100	1,150
-Groundnuts (edible)	1,006	866	870	1,011	1,114	1,105	1,155	1,205
-Maize	1,202	1,144	1,093	1,282	999	1,115	1,154	1,195
PROGRAM OUTCOME 2.1: Increase Soil Productivity (no indicator; see text)								
PROGRAM OUTCOME 2.2: Increase Use of Adapted Technologies								
Indicator: Percent of Compounds Using Adapted Technologies.	(1992)							
-Windbreaks	4.5		4.5		10.4	5	7	8
-Live Fence	2.7		2.7		6.6	1	3	5
-Field Trees	2.4		2.4		18.4	25	30	15
-Fallow Land	15.3		15.3		39.7	-	-	5
-Manure	51.7		51.7		73.2	20	20	20
-Crop Rotation	42.6		42.6		70.8	-	-	-
-Fertilizer	25.1		25.1		54.5			
-Water Management	6.8		6.8		9.0			
-Improved Seed	14.0		14.0		47.7			
-Erosion Control	13.5		13.5		16.9			

* indicates estimates

Sources: Annual Farm Survey and Ministry of Agriculture Crop Production Estimates; 1992 and 1994 KAP Surveys

months ending September 30 of that year). In this API, we report the revised FY 93 figures and briefly discuss the preliminary estimates for yields in FY 94.

Yields for five of the six target crops rose in FY 93 compared to the yields in FY 92 (the exception is the yield for sorghum, which fell from 948 kilograms per hectare (kg/ha) in FY 92 to 806 kg/ha in FY 93. However, yields for all crops but two (rice and maize) were below FY 93 target levels. For both rice and maize, yields substantially exceed our FY 97 target levels. The principal cause appears to be relatively good weather; annual variations in the weather usually account for much of the fluctuations in crop yields. It is interesting that the preliminary estimates for FY 93 reported in our last API tended to be below the actual figures, substantially so for rice yields.

FY 94 preliminary estimates suggest a decline in rice yields by over 25 percent compared to FY 93 levels. The reasons for this decline are not yet known, but it appears that the devaluation, which resulted in an immediate and sharp rise in the relative price of (imported) fertilizer, caused farmers to purchase and apply less fertilizer to select crops, thus reducing yields. A poor distribution of rains was also a factor. Maize yields may fall by nearly as much for similar reasons. Yields of both rice and maize are projected to fall well below their original 1989-91 baseline levels. In other words, crop yields fluctuate sharply in the short term. Short-term improvements in yields associated with increased use of natural resource management technologies will be swamped by these fluctuations.

Additional data compiled by the Ministry of Agriculture for FY 94 show that the area planted to 8 major crops (these data include cotton and cowpeas as well as the six crops of particular interest to USAID/Dakar) was 2,214 thousand hectares -- in line with the three-year average of 2,229 thousand hectares. Within the USAID "zone of reliable rainfall", area planted to these 8 major crops was 1,416 thousand hectares or one percent below the three-year average of 1,430 thousand hectares for this zone.

FY 93 data show improvements in terms of production as well as yield for most crops over FY 92. FY 94 estimates suggest a 4.4 percent increase in area planted compared to that in FY 93. However the breakdown by type of crop show area planted to cereals in FY 94 fell by 2 percent compared to that in FY 93, while the area planted to cash crops (notable including groundnuts) is expected to rise by 16 percent. The production of groundnuts also is expected to increase by a little more than 16 percentage in FY 94. Ready availability of groundnut seeds and an increase in the farmgate price explain the marked shift in favor of groundnuts (against cereals) in FY 94. Weather variations are the principal causes of the expected general decline in yield for other crops in FY 94.

PROGRESS ON USE OF ADOPTED TECHNOLOGIES:

The 1994 ANR KAP survey shows encouraging trends for adoption of NRM technologies (see Table 4). In a majority of compounds, farmers use manure, rotate their crops, and use fertilizer; nearly as many use improved seed. Four in ten farmers let land lie fallow. Between ten and twenty percent use field trees, erosion control techniques and windbreaks. Less than one in ten use water management technologies or live fencing.

Vignette: Stimulating Use of NRM Technologies at the Local Level

USAID/Dakar's Kaolack Agricultural Enterprise Development project, being implemented through a grant to AFRICARE, is working with 15 new agricultural based enterprises (ABEs) in the Kaolack region. The ABEs construct wells, cereal stores, water basins and the like, and develop and maintain 4 hectare demonstration fields relying on NRM technologies such as live fences, windbreaks, and use of manure. To date the project has trained 4,189 women and 1,836 men in agroforestry, literacy, accounting, and management. Eight of the 15 ABEs consist exclusively of women. In two more ABEs, 84 percent of the members are women. In three more, 70 percent are women.

In our last API we reported that, for three technologies (water management, improved seed and erosion control), we might have to adjust our previously defined outyear targets. In fact, given the results of the 1994 ANR KAP survey, all the targets may have to be adjusted. For the five NRM technologies surveyed and for which outyear targets have been defined, actual use already exceeds those targets. In two of these five cases, use rates of 39.7 percent and 73.2 percent far exceed the targets of 5 percent and 20 percent respectively. There are five technologies for which outyear targets have not yet been defined. We are currently analyzing the results of the 1994 ANR KAP survey. In close collaboration with our partners and our customers, we will review our current targets. If necessary, and relying on the KAP surveys and other available data bases (including project level data bases), we may propose new targets for 1995 and 1997.

There are many differences between the numbers derived from the 1992 ANR KAP survey and those derived from the 1994 ANR KAP survey. For example, according to the surveys, use of fallow land increased from about 15 percent to about 40 percent (percent of compounds using fallow land technologies), use of improved seed jumped from nearly 15 percent to nearly 50 percent, and use of field trees rose from a meagre 2.4 percent to 18.4 percent. We are still trying to

understand these substantial variations in the use of natural resource management technologies. These substantial variations may indicate sporadic, rather than sustainable, adoption of these technologies. Increasing sustainable use more likely would be revealed by a steady rise in the trend line reflecting use rates by farm compounds.

Vignette: Agricultural Research on NRM Technologies

Under USAID/Dakar's Natural Resources Based Agricultural Research project, researchers from the Institut Sénégalais de Recherche Agronomique (ISRA) work with non-governmental organizations (NGOs) to transfer NRM technologies, such as composting, to selected farmers at field sites. On-farm trial sites have been very successful; the neighbors of the participating farmers clamour for training sessions of their own. We may add composting to our list of those NRM technologies that we track as indicators under Program Outcome 2.2, "Increase Use of Adapted Technologies."

KAP surveys tend to be qualitative and reflect whether or not farmers are aware of, and use, a given technology rather than the intensity with which they apply those technologies. For example, do farmers follow the norms advocated by extension agents when rotating their crops or letting land lie fallow? Do farmers plant sufficient numbers of trees in a windbreak to reach that minimum critical mass needed to preserve their soils? What kinds of trees (fruit trees, fuelwood trees, trees that enhance the fertility of the soil) are farmers planting? These are very important questions when trying to establish links between the use of technology and the impact on crop yields and, ultimately, incomes.

In short, the ANR KAP surveys are imprecise but useful. But we need to supplement the data generated by the ANR KAP surveys with data generated by project-specific instruments. Other data generated be the Ministry of Agriculture and the Centre de Suivi Ecologique also will help us better understand the links between uses of NRM technologies and resulting crop yields. Finally, we are putting in place a comprehensive relational data base that will provide us with the detailed information that we will need in the future. This relational data base will be in place in time for the development of the next phase of our natural resource management approach to agricultural development in Senegal.

PROGRESS ON RELATIONAL DATA BASES AND PROJECT-SPECIFIC KAP SURVEYS

USAID/Dakar is developing a comprehensive agriculture and natural resources management information system (MIS). We are pioneers in

this area; no such information system exists at this time anywhere in the developing world. Once established, this information system, which will be continuously updated, will capture and analyze existing data and will provide user-friendly access through a computer technology environment using relational database management and geographic information systems.

As part of the development of this MIS, USAID/Dakar is working with the U.S. Geological Survey to inventory baseline natural and agricultural resources, and to provide data that will support efforts to develop sound natural resource management practices. The U.S. Geological Survey will use state-of-the-art technologies including satellite image mapping, global positioning systems and aerial videography. Eventually, USAID/Dakar will be able to monitor short-term, medium-term and long-term environmental effects, such as erosion due to localized torrential rains, salinization of soils due to salt water intrusion, and desertification. USAID/Dakar will be able to establish linkages between agricultural and natural resource conditions on the one hand and human activities on the other. USAID/Dakar will be able to identify the particular environmental and agricultural consequences of the application, by farmers, of natural resource management technologies.

Even after the installation of this relational data base, USAID/Dakar will continue to rely on KAP surveys and on secondary source data for insights on how best to achieve Strategic Objective 2. For example, data compiled by the Ministry of Agriculture are the basis of our estimates on crop production, area planted, and yields by geographic region. And we will continue to administer tightly focussed project-level KAP surveys to supplement the periodic ANR KAP surveys.

For example, in December, 1994, we conducted a project-level KAP survey for the Southern Zone Water Management (SZWM) project. One of the findings of the survey was that construction of water retention dikes is a top priority for the people.whose lands have been harmed by salt-water intrusion. Almost all of the households in the SZWM area know the relevant water management technologies. In two valleys in the area affected by the SZWM project, some people already have invested their own money to build anti-salt dikes.

Strategic Objective 3: Increase Value of Tree Production

Major Achievements:

- The Senegal Reforestation project knowledge, attitudes and practices survey (SRP KAP) shows that villagers are changing their perception of the agents of the Forestry Service; once viewed largely as police officers of the forests, they are now regarded as useful extension agents and important sources of information on tree planting.
- The Senior Council for Natural Resources Management and the Environment (CONSERE) has been fully functional, with a Permanent Secretariat, a national coordinator and all support staff, since August, 1994. CONSERE is preparing Senegal's National Environmental Action Plan.
- The number of trees planted in Senegal increased from 6.14 million in FY 92 to 7.15 million in FY 93 before falling to 6.09 million (estimate) in FY 94.

MERGING STRATEGIC OBJECTIVES 2 AND 3 AND UPDATING PROGRAM INDICATORS:

USAID/Dakar intends to merge Strategic Objectives 2 and 3. Our plans are described in the first sub-section of that portion of Section III (on Strategic Objective 2) of this report. However, since this API reflects our current approved strategy, we report here on Strategic Objective 3, Increase Value of Tree Production.

For the purposes of this API report, we are not changing our indicators. However, due largely to data collection problems, we offer the following explanations.

For the second year in a row, reliable data on income derived from forest products are not available because the Government of Senegal still has not yet established its forest products information system. Last year we presented alternative (incomplete) data for FY 92 based on information from the Ministry of Agriculture on tree crops and from the Forestry Service on wood products showing that 38 percent of the marketed value of forestry products accrues to rural households. This fell to 35 percent in FY 93. Comparable data are not yet available for FY 94.

Table 5

STRATEGIC OBJECTIVE NO. 3

	Baseline	ACTUAL				PERFORMANCE TARGET		
		FY 91	FY 92	FY 93	FY94*	FY 93	FY 95	FY 97
STRATEGIC OBJECTIVE 3: INCREASE VALUE OF TREE PRODUCTION	(1990)							
Indicator:								
Income Increased per Compound from Forestry Products								
-Rural Share of Marketed Value (%)	36	32	38	35		35	40	50
-Per Capita Cash Revenue								
Kaolack (CFAF)	590	566	432	330		600	1,000	2,000
Kolda (CFAF)	1,300	1,225	1,971	2642		1,500	2,000	4,000
Marketed Value of Tree Stocks per Compound (CFAF)								
PROGRAM OUTCOME 3.1: Plant More Trees								
Indicator:								
1. Trees Planted and Surviving per Year Nationwide	(1990)							
-Number (million trees)	1.26	1.66	3.6	**	**	2.00	4.0	10.0
-Percent Survival (one year)	20	20	58.6			25	30	40
2. Compounds Engaged in Forestry (percent of total compounds)	(1988) 39				20	40	45	50
PROGRAM OUTCOME 3.2: Increase Conservation of Trees	(1990)							
Indicator:								
1. Increase Hectares Protected/ Managed to permit Regeneration	4,248	4,329	4,941	4,861	4,493	5,000	10,000	20,000
2. Trees/ha on participating Farms	18				16	25	40	50

* indicates estimates

** Data on number of trees planted and surviving for FY 93 and FY 94 are not available. Data on number of trees planted are available. See text.

Sources: Project data, GOS Forestry Service Records, Ministry of Agriculture and Farm Surveys

Citing budgetary constraints, the Forest Service no longer collects annual data on the number of trees planted and surviving one year. However, it still collects data on the number of trees planted.

The 1994 Senegal Reforestation Project (SRP) KAP survey indicates that 20 percent of all compounds are engaged in forestry. The same SPR KAP indicates that, on participating farms, there are 16 trees per hectare.

PROGRESS ON TARGETS UNDER STRATEGIC OBJECTIVE 3:

The trends we identified in our last API sumbission on per capita cash revenue in the regions of Kaolack and Kolda continued into FY 1993, the most recent year for which data are available. In Kaolack the per capita cash revenue figure fell again, to CFAF 330; in Kolda it rose again to CFAF 2,642. This appears to be due largely to the changes in the allocation of quotas to individuals and organizations authorized to exploit forest resources in these two regions. While the figure for Kaolack is well below our FY 1995 target, that for Kolda substantially exceeds our FY 1995 target.

As noted above, the Forest Service still collects annual data on the number of trees planted. In our last API, we reported that, in FY 1991, 8.3 million trees were planted in Senegal of which 20 percent, or 1.66 million, survived one year. In FY 1992 6.14 million were planted with a much higher survival rate of 58.6 percent. Data for FY 1993 show a modest increase in the number of trees planted, to 7.15 million, followed by a decrease to 6.09 million (estimated) in FY 1994. The decrease is probably the result of the completion of USAID's Senegal Reforestation project.

In our last API, we reported an estimated 5,733 hectares were protected/managed to permit regeneration of forests in Senegal. The revised estimate is 4,861 hectares, a decrease from the level reached in FY 1992. Our FY 1994 estimate shows a further decline to 4,493 hectares. This is a unfortunate trend. It is possible that, because some of the initial sites were inadequately protected from grazing livestock, people became discouraged and therefore protected fewer hectares for forest regeneration.

PROGRESS ON THE IMPLEMENTATION OF THE SENEGAL REFORESTATION PROJECT

The Senegal Reforestation project (SRP) ended on September 30, 1994. A three-person evaluation team has completed its field work and is now preparing its final evaluation report. Some of the comments in this section of the API are drawn from the preliminary findings of that evaluation team.

The major emphasis of the SRP was on its matching grant and roadside planting components. Under the project, individuals and organizations planted more than 2.6 million trees on about 4,000 hectares. Women, who traditionally are responsible for collecting

fuelwood and who are therefore very sensitive to the growing scarcity of trees, participated in the matching grant program in greater numbers than did men. The project also established over 40 cooperatives for roadside planting and maintenance of trees, creating 800 jobs in the process.

Vignette: The Considerable Importance of Trees

The preliminary findings of the team preparing the final evaluation of the Senegal Reforestation project confirm that tree planting, especially in areas of extreme environmental degradation can lead to observable and significant biophysical changes in the soil and to increases in agricultural production and farm incomes. Specific cases illustrating these findings can be found in the littoral (the dunes along the coast north of Dakar) and in severely affected parts of the peanut basin (where soils are almost completely exhausted).

The SRP KAP survey shows that villagers, both men and women, now see the agents of the Forestry Service as the most important sources of information on tree planting. Agents of the Forestry Service once viewed themselves as in charge of policing the forests of Senegal; now they regard themselves as useful forestry extension agents and as important sources of information on planting and conserving trees.

Through the SRP, USAID/Dakar supported the decentralization process in Senegal. Although unintended, this result is very important; no other donors in Senegal are involved in implementation efforts to decentralize GOS authorities. A "test program" (a transition between the SRP and its successor CBNRM project) was designed to build the capacity of local institutions in three rural communities to develop, plan and implement a broad range of natural resource management interventions (not just plant trees) at the local level. The results of the test program will influence the implementation of USAID/Dakar's Community Based Natural Resource Management project. Preliminary findings suggest that we will need to focus more heavily on technical issues (e.g., agroforestry techniques) and less heavily on financial management issues (e.g., accounting).

In the last year of the SRP, the project became deeply involved in policy reform issues, primarily involving the new Forestry Code and the creation of the Senior Council for Natural Resources Management and the Environment (CONSERE).

The new Forestry Code, adopted in January 1993, affirms the property rights of those who develop forest resources. The code applies to trees planted on farms as well as those planted on

forest lands. The GOS planned to issue the implementing regulations for the Forestry Code in January 1994. However, they have not yet been signed. A number of issues remain unresolved. For example, inconsistencies between the code and common law need to be resolved, and delegations of authority over the management of forest lands need to be clearly specified.

As stated above, CONSERE is now fully operational and has launched the process of preparing Senegal's National Environmental Action Plan.

Vignette: CONSERE's Opening Session

CONSERE organized a national seminar to launch Senegal's National Environmental Action Plan (NEAP). The seminar took place on February 13-16, 1995, with participants from the Government of Senegal, non-governmental organizations, universities, local groups, donors and others. CONSERE will assemble the various reports produced during the seminar into a policy framework document. This will provide a solid foundation for the NEAP. The next step is to organize a series of regional seminars and workshops on environmental issues to engage civil society at the local level.

Strategic Objective 4: Increase Liberalization of the Market for Agricultural and Natural Resources-Based Products

Major Achievements:

- In February, 1994, the Government of Senegal agreed to adopt a comprehensive package of reforms intended to liberalize rice markets and privatize rice marketing, processing and distribution functions performed by parastatal enterprises. These reforms are to be implemented over a three-year period.

- After difficult negotiations, the Government of Senegal agreed to privatize the receipt, handling, transport, storage and marketing of USAID's P.L. 480 rice. All available P.L. 480 rice (over 31,000 metric tons) has now been sold to and through private channels in a series of 15 competitive monthly auctions generating almost 5.5 billion CFAF (about $10.3 million).

- The Government of Senegal has fully privatized the collection, purchasing and processing of paddy rice in the Fleuve; has eliminated the administered pricing of paddy rice; and has eliminated the wholesaling of local rice by the grain marketing board.

- The Government of Senegal has agreed to split SONACOS into two companies and sell them as separate entities. An invitation for bids will be issued later this year.

UPDATING PROGRAM INDICATORS:

The program indicators for this strategic objective are the same as those presented in our last API report. However, USAID/Dakar still has not conducted the update of the 1992 market price study which included a specific survey of marketing margins. It makes no sense to conduct such as survey if competitive forces are not allowed to operate. We plan to conduct a survey of marketing margins shortly after the Government of Senegal eliminates the rice transport subsidy and liberalizes marketing margins. These policy reform measures are two of several that the GOS must implement before USAID/Dakar will release the first disbursement of the $33 million Rice Structural Adjustment program, now expected to take place in the late Spring of 1995.

There are two indicators for Program Outcome 4.1: the number of major (at least ten clients) wholesale cereal traders in Dakar (for

rice only) and the number outside Dakar (for all cereals). The 1992 market price study just noted included a specific survey of the number of these major private grain traders. Although this survey has not yet been updated, we are able to report a marked increase in the number of wholesale rice traders based on figures provided by the parastatal grain marketing board. The number of Dakar-based wholesale rice traders who were clients of the grain marketing board increased from 120 in 1992 to 150 in 1993 and to 200 in 1994. The number of wholesale rice traders based outside Dakar who were board clients increased from 447 to 461 and to 566 in the same three years. These proxy figures strongly suggest a substantial increase in private sector activity in the marketing of agricultural and natural resource-based products. We plan to confirm this increase in the course of updating, in 1995, the 1992 market price study.

The sixth indicator under Program Outcome 4.2 refers to the reorganization of the Agricultural Development Bank. In signing the Rice Structural Adjustment program agreement, the Government of Senegal formally agreed to abide by a series of conditions precedent that would result, after three years, in the liberalization of rice markets and the privatization of rice marketing, processing and distribution functions. However, none of the conditions precedent in this agreement refer to the Agricultural Development Bank or its reorganization. This indicator may be beyond the manageable interests of USAID/Dakar; we may wish to delete this indicator in future API reports (however, see below for more discussion on financial market issues).

PROGRESS ON PROGRAM INDICATORS:

In last year's API we described how progress on USAID/Dakar's market liberalization program stalled, largely due to electoral considerations. However, by August, 1993, we were receiving strong signals that the new government wished to proceed, especially with regard to rice. In the 18 months since then, the government has taken several important steps:

-- The deregulation of the local rice subsector was fully completed in June 1994. Specifically, the government (1) sold the rice mills of the parastatal SAED (an acronym created from its name in French) and has completely privatized the collection, purchasing and processing of paddy rice in the Senegal River Valley, which is the principal source of domestically marketed rice in Senegal; (2) no longer sets an administered price for paddy rice (the price currently fluctuates, according to market forces, in the CFAF 100-110 per kilogram range); and (3) eliminated the local rice wholesaling functions of the Caisse de Péréquation et de Stabilization des Prix (CPSP), the grain marketing board.

Table 6

STRATEGIC OBJECTIVE NO. 4

	Baseline	ACTUAL				PERFORMANCE TARGET		
		FY 91	FY 92	FY 93	FY94	FY 93	FY 95	FY 97
STRATEGIC OBJECTIVE 4: INCREASE LIBERALIZATION OF THE MARKET FOR AGRICULTURAL AND NATURAL RESOURCES-BASED PRODUCTS	(1989-91)							
Indicator								
1. Reduce Marketing Margins to Their Competitive Levels (percent margin)	17-26		14-17			15-20	10-15	10-15
2. Agricultural Product Marketed through the Private Sector (percent of total)	46		46	63		50	95	95
TARGET 4.1: INCREASE PRIVATE SECTOR ACTIVITIES	(1992)							
Indicator:								
Number of Major (at least 10 clients) Wholesale Cereal Traders *								
-Dakar (Rice)	279		279			285	300	300
-Outside Dakar	185		185			190	190	200
TARGET 4.2: DECREASE GOVERNMENT REGULATIONS		Actual/Expected Implementation Period						
Indicator:								
1. Eliminate Rice Transport Subsidy						x	x	x
2. Eliminate Buying/Processing Local Rice by SAED					complete	x	x	x
3. Eliminate Wholesaling of Local Rice by CPSP					complete	x	x	x
4. Deregulate Prices and Imports (whole rice)			complete			x	x	x
5. Implement Deregulation of prices for broken Rice (except Dakar wholesale)								
-All Regions except Kolda/Ziguinchor						x	x	x
-Kolda/Ziguinchor							x	x
6. Reorganize Agricultural Development Bank							x	x
7. Privatize Groundnut Parastatal (SONACOS)				initiate	continue	x	x	x
8. Implement Forestry Code				initiate	comtinue		x	x

Sources: GOS Market Surveys, CPSP, CSA/SIM, Mission Records

Note: * We have some alternative data on the number of traders. See text.

-- After difficult negotiations, the Government of Senegal agreed to privatize the receipt, handling, transport,

storage and marketing of USAID's P.L. 480 rice. In October, 1993, a private management firm was selected through an open and transparent competitive process, to perform these functions. The roughly 21,000 metric tons of rice provided under the FY 1992 tranche of the multi-year P.L. 480 agreement were sold in 14 monthly auctions. As expected, the process started slowly: sales under the first four auctions averaged just over 350 metric tons each. As the private traders became more familiar with, and gained confidence in, the process, sales increased: sales under the last four auctions averaged over 3,500 metric tons each. In each of the last four auctions, an average of over 100 traders made bids on the rice. The roughly 10,400 metric tons of rice provided under the FY 1993 tranche of the P.L. 480 agreement were all sold in a single auction that took place on February 10, 1995. Overall, more than 31,000 metric tons of P.L. 480 rice was sold to and through private channels in a series of 15 competitive monthly auctions generating almost 5.5 billion CFAF (about $10.3 million). The private traders clearly demonstrated that they could handle efficiently large quantities of imported rice.

-- The privatization of the remaining rice-related functions of the CPSP is well in hand. In close collaboration with the Government of Senegal, USAID/Dakar contracted with a local consulting firm to propose specific mechanisms that would effectively take the CPSP out of all aspects of the importation and marketing of broken rice (the only kind of rice that still falls within the perview of the CPSP). This report was accepted by the government in December, 1994; the government now is preparing a plan of action to implement the findings of that study. We expect the government to complete this plan of action in April, 1995, and to complete the actual privatization of the CPSP by Spring, 1996.

USAID/Dakar supported the first two phases of the study that will lead to the privatization of the giant oilseed processing parastatal SONACOS. Implemented by a team from the Price Waterhouse/International Privatization Group, phase one was essentially a reconnaissance mission designed to assess the government's commitment to privatize SONACOS. Under phase two, the Price Waterhouse team completed its preparatory work by examining potential scenarios for restructuring, determining the investment value of the company, developing a privatization strategy and identifying potential investors. In November, 1994, the GOS adopted the main conclusions of the Phase II report which proposed splitting SONACOS into two independent companies and selling them as separate entities. In December, 1994, the National Assembly passed legislation that adds SONACOS to the list of government firms to be privatized. USAID/Dakar will support phase three of

the study, which should lead directly to the sales of these entities. The GOS has indicated that it intends to issue an invitation for bids for the sales of these entities before mid-1995.

As discussed above in the sub-section on the progress on the implementation of the Senegal Reforestation project under strategic objective 3, the GOS planned to issue the implementing regulations for the Forestry Code in January 1994. They have not yet been issued.

In the preceeding sub-section, we questioned whether the sixth indicator under Program Outcome 4.2, which refers to the reorganization of the Agricultural Development Bank, lies within our manageable interest. In exploring this issue, we have asked to participate in a study, funded by USAID/Washington (AFR/ARTS), that would permit us to develop a strategy and an action plan for promoting credit and saving activities in rural areas. The existing Agricultural Credit Bank is essentially bankrupt. Instead of trying to rescue this bank, we would like to try to stimulate the emergence of mechanisms and instruments, such as credit and savings societies or credit unions, that would become part of a viable financial market system capable of servicing the needs of small and medium-scale depositors and entrepreneurs, including farmers, in rural areas of Senegal.

We are increasingly, if still cautiously, optimistic about the prospects for meaningful policy reforms that will lead to the liberalization of agricultural and natural resource based product markets in Senegal. Considering the tone of our last API report, this by itself signals a significant change. We are not alone in being cautiously optimistic. The World Bank has just approved its front-loaded, quick disbursing $40 million Private Sector Adjustment and Competitiveness program. Some of the key components of this program call for the elimination of administered prices for most of the products whose prices are still controlled by the state (a few fixed-price products will remain; most of these are supplied by so-called "natural" monopolies such as water, electricity and telephone services, or are controlled on social grounds such as pharmaceuticals). Other components call for the termination of special agreements effectively granting monopoly status to firms producing goods such as cement, fertilizers, textiles, cotton, wheat flour and tomato paste. Most of these special agreements already have been terminated (the special agreement for wheat flour is an exception).

The World Bank also is preparing for board consideration its Agricultural Sector Adjustment Program, or PASA (after its French acronym). USAID/Dakar's Rice Structural Adjustment program was designed in tandem with the other elements of this broad agricultural program, and we continue to collaborate closely with the World Bank in its negotiations with the Government of Senegal.

Targets of Opportunity

HIV/AIDS (Human Immuno-defficiency Virus/Acquired Immune Defficiency Syndrome):

We began implementation of the Senegal AIDS Control and Prevention (AIDSCAP) project during 1994. Table 7, below, contains select proposed goal and purpose level indicators for the Senegal AIDSCAP project. USAID/Dakar will discuss all the proposed project indicators with our partners and clients, and, if adopted, will suitably amend the Senegal AIDSCAP project paper. Baseline data on HIV prevalence (goal level) is from the Annual Report on Surveillance published by the National AIDS Control Program in December, 1993. We are planning for, or already collecting, baseline data on the purpose level indicators; these will be adopted and updated as appropriate data become available.

The DHS-II indicates high awareness of AIDS, although this awareness is thin. Over 89 percent of women (ages 15-49) know of AIDS (97% of men ages 20 and over), but only about two-thirds know of at least one method of prevention. Men seem generally more aware, with nearly three-fourths citing one preventive measure. Monogamy and condom use were among the most-often cited methods, but they still are not widely recognized as measures that will prevent AIDS. About 74 percent of men and 68 percent of women know of at least one mode of HIV transmission.

Under the Senegal AIDSCAP project, USAID/Dakar will support interventions in the mass media promoting the avoidance of high-risk sexual behavior and the use of condoms. We will assess changes in the behavior of target populations through baseline and follow-up knowledge, attitude, and practice (KAP) surveys.

Target groups, consisting of both men and women, include university students, faculty and staff; selected work-sites in the cities of Dakar and Thies (Port Autonome de Dakar, SENELEC, Regie Chemin de Fer); and selected military installations. The project also will support extensive peer education networks and improvements in the treatment and counseling of patients with sexually-transmitted diseases.

Recently the Organization pour la Mise en Valeur du Fleuve Senegal (OMVS), USAID/Senegal, and REDSO/WCA completed a study assessing the AIDS problem in the Senegal River Basin (covering parts of Senegal, Mali and Mauritania). In the valley, the HIV/AIDS situation still is in the pre-epidemic phase, but the presence of other disease factors make the threat of AIDS a very serious concern. USAID/Dakar will not address these concerns directly. We will, however, use our position in the National AIDS program to encourage other donors to work in this area.

Table 7

HIV/AIDS TARGET OF OPPORTUNITY

	Baseline	ACTUAL		PERFORMANCE TARGET
		FY 94	FY 95	FY 96
GOAL: STABILIZATION OF THE PREVALENCE RATE OF SEXUALLY TRANSMITTED HIV IN SENEGAL	(1994)			
Indicator: HIV Prevalence (percent)	1.0	1.0		1.0
PURPOSE: Decrease HIV high-risk behavior within the target groups and strengthen delivery of services that reduce the spread of HIV and other sexually transmitted diseases in target regions				
Indicator: 1. Proportion of targeted populations that can identify appropriate means of protection from HIV infection	68			90
2. Proportion of persons aged 15-49 in targeted populations who have had sex with a non-regular sex partner in the last 12 months report use of condom in the last sex act with non-regular partners	*			*
3. Proportion of public health plans containing evidence of evidence of strategic planning processes in national and national and regional plans for HIV/AIDS	*			*

* indicates to be determined.

Sources:
1. 1992-1993 Demographic and Health Survey; and
2. Sentinel Surveillance data.

CREDIT:

FY 94 was the first year in which the Agence de Credit pour les Enterprises Prives (ACEP) acted as a fully independent credit union. ACEP began as the credit component of USAID/Dakar's Community and Enterprise Development project. The project terminated on December 31, 1993. Since then, ACEP has become a fully self-sustaining, profitable institution. In 1994, ACEP issued 2,668 loans for a value of 2.1 billion CFA (about $4 million). Most of the loans were for commercial ventures. One in every 5 loans was made to women.

ACEP's legal status as a credit union was made possible by an interim measure adopted by the Ministry of Finance on February 23, 1993. The Central Bank of West African States (BCEAO) had adopted a financial intermediation law in December 1994, but this law has not yet been officially promulgated. Meanwhile, following in ACEP's footsteps, new credit unions are opening for business.

USAID/Dakar has no activities that are devoted exclusively to credit or financial markets. However, it is clear that inadequate access to credit is a binding constraint in many of our project interventions. We will examine how we might best overcome these constraints by encouraging the further development of credit unions.

DEMOCRATIZATION:

USAID/Dakar has had no project interventions in the democratization area since the presidential and legislative elections of 1993. However, we continue to emphasize local empowerment in virtually all our activities. We discussed above, in the section on Strategic Objective 1, our progress on decentralization in the context of our health and population program. We have several decentralization/grass roots initiatives in out agriculture and natural resources program as well. Our Natural Resources-Based Agricultural Research project emphasizes communication at the local level between researchers and farmers in the field. Our Kaolack Agricultural Enterprises project works primarily with local level agricultural based enterprises. Our Southern Zone Water Management project has created water management committees at the local level; these committees coordinate village participation in project and other activities. Our Senegal Reforestation project was very effective at working with individual farmers and in developing a collaborative relationship (replacing an antagonistic one) between local forestry agents and local populations. Our PVO/NGO Support project strengthens local organizations which are trying to design and implement their own development activities. Finally, although it is just now getting started, our Community Based Natural Resources Management project is primarily concerned with strengthening institutions at the local level.

USAID/Dakar anticipates that these interventions all will contribute to an ever-increasing capacity of local grass-roots organizations to have a positive impact on the lives of the people of Senegal.

SECTION IV: PROGRESS IN OTHER PRIORITY AREAS

USAID has designated a small number of missions worldwide as "experimental laboratories." These are missions that will "reinvent" themselves, that will test some new ideas on how best to "manage for results"; these are missions that will, in effect, blaze the trail for other USAID missions to follow. USAID/Dakar is such an "experimental laboratory."

For USAID/Dakar, "reinventing" ourselves implies, most of all, creating close and meaningful partnerships in all aspects of our work. It means creating partnerships with local grass-roots organizations here in Senegal. It means creating partnerships with American and Senegalese private voluntary organizations and non-governmental organizations. It means creating partnerships with universities, with foundations and with other donors, both bilateral and multilateral. It means creating partnerships with the contractors who actually implement specific development activities. Most of all, it means creating partnerships with the Government of Senegal, at the national, regional and local levels.

What does USAID/Dakar mean by "partnership"?

For us, the concept of "partnership" implies a collaborative relationship to achieve a consensus, jointly with our partners and our customers, on virtually all aspects of our work. A consensus is a group decision which all participants can support. It is a group decision achieved through a process in which the issues are fully aired, and in which all participants have been adequately heard. It is achieved through a process which satisfies all participants.

For us, the concept of "partnership" applies to the preparation of our overall strategic approach to the economic development of Senegal. It applies to the design and implementation of specific activities we support. It applies to the assessment of the development impact -- the results -- of those activities.

The concept of "partnership" has profound implications for the way USAID conducts business in Senegal. Some changes already have taken place.

During the past several months, representatives from private voluntary organizations (PVOs), non-governmental organizations (NGOs), the contractor for the PVO/NGO Support project funded by USAID, the Government of Senegal and USAID/Dakar met frequently to discuss the redesign of that project activity. The discussions were frank, cordial and fully collaborative. The result is a redesign -- almost completed -- that represents a consensus view of many difficult issues, and a much improved project.

In December, the Government of Senegal (led by the Ministry of Finance) and USAID/Dakar conducted a joint program review. This joint review was planned and carried out among partners. Many concrete problems were resolved in the course of preparing, collaboratively, the agenda for that joint review. Others were resolved at the review sessions themselves, which were opened by the Minister of Finance and attended by project contractors, Senegalese government officials from several ministries, and USAID staff.

In January, USAID/Dakar organized a meeting to discuss openly, without preconceived notions, the idea of developing a new non-project assistance initiative that would support the efforts of the Government of Senegal to improve the policy and/or institutional environment affecting natural resources management in Senegal. Representatives from several ministries, research institutions, universities and other donors attended this meeting. USAID/Dakar was not announcing a new initiative, already well-developed. On the contrary: during the meeting several participants offered several very interesting and substantially different proposals. These will be further discussed and refined later this year.

Other profound changes are anticipated in the way USAID conducts business in Senegal.

For example, it is already clear that we will be less involved in directly supervising project contractors; we will be less involved in "micro-management." Instead, USAID/Dakar will more closely monitor and evaluate the progress of those contractors toward meeting mutually established goals and indicators of progress. We will manage for results, providing frequent feedback to project contractors. We will direct additional resources to activities that are working well, and will reduce resource flows to activities that are not.

In FY 95, we intend to obligate some of our bilateral assistance funds not by specific project, but by strategic objective. Virtually all our development assistance now flows to specific projects that support one or more of our strategic objectives. We expect to obligate some bilateral assistance funds this year through an umbrella agreement that fully describes one of those strategic objectives. This umbrella agreement, to be signed by the Government of the United States and the Government of Senegal, will identify the specific activities that the Government of the United States will support. We anticipate that this umbrella agreement will allow greater flexibility. For example, the agreement will allow us -- in conjunction with our partners -- to shift resources more easily from a less successful activity to a more successful activity contributing to the achievement of the same objective; this will increase the liklihood that our resources will achieve the results we all hope to achieve.

USAID/Dakar is in the midst of reorganizing itself to be better able to conduct business in this newly "re-invented" mode. We already have organized our staff into teams. Some of these teams already include representatives of the Government of Senegal, local PVOs or from other organizations outside of USAID.

To facilitate the team approach to resolving problems, USAID/Dakar has moved to a new building, one that is more conducive to a collaborative, team-oriented style. The ceremony celebrating our move will have taken place from the 9th to the 11th of March. That ceremony will have signalled the start of a year-long celebration ending in 1996, the 35th anniversary of the initial agreement providing development assistance to Senegal by the Government of the United States.

SECTION V: LESSONS LEARNED

USAID/Dakar offers the following general reflections, based on our experience to date, focussing largely on process rather than on substance.

First: Developing indicators and targets is easier in areas in which the mission has been involved for many years.

USAID/Dakar has been heavily involved in the population area, and to a lesser extent in the child survival area, for a long time. Relevant data collection systems in Senegal are well-established. Many of the causal relationships between fertility rates, contraceptive prevalence, and couple years of protection are well established. Others, involving for example knowledge, attitudes and practices, are less well established but still reasonably well understood. Documenting progress in these areas is relatively simple. Developing indicators and agreeing upon targets with partners, both in and outside the GOS, who have been working with us in the same field, also is relatively simple. Managing for results, under these circumstances, does not require huge resources because crucial investments already have been made.

However, in some closely related fields our experience is limited. For example, precise causal relationships involving for example birth spacing and child survival rates in Senegal are not yet clearly known. Agreement on definitions of AIDS indicators is elusive. In these fields, up front investments are required.

USAID/Dakar has been involved in policy reform for a long time. We understand policy reform processes quite well, and have a very good understanding of the rice and groundnut sectors in which, at present, we are concentrating our resources. However, there is another important factor in this field. In all policy reform matters, the key ingredient is the political will to institute the reforms in question. We can reach technical agreements with our partners on the nature of the problems and on the optimal means of resolving them. We all can agree on the final objective and how best to get there. But we cannot as readily influence the exercise of political will.

Our involvement in the natural resources and AIDS areas is new. We are, frankly, experimenting with a natural resources management approach to agricultural development that is not well understood. We are collaborating closely with local groups; this poses challenges in relating results expressed in terms of national indicators. We are putting into place a data base and a comprehensive management information system. Although knowledge, attitudes and practices studies yield interesting data, they are insufficiently robust because they only measure whether farmers adopt certain technologies at a particular point in time rather than how intensively or consistently they apply those technologies.

Data collection systems put in place by our partners may be terminated mid-way through our approved program strategy period, as was the case with the measurement of trees surviving after one year by the GOS Forestry Service.

Second: There is a trade-off between reinventing USAID at the mission level and putting in place systems that will enable us to effectively manage for results.

As a "reinvention" laboratory, USAID/Dakar has found it necessary to devote large amounts of scarce staff time to issues ranging from reorganizing staff into teams to training those teams to operate effectively; from building a culture of collaboration with partners and customers to developing appropriate internal delegations of authority to empower staff; and from preparing detailed new job descriptions to designing efficient computer-based administrative processes. USAID/Dakar also has found it necessary to devote large amounts of scarce staff time to building a concensus among ourselves, our partners and our customers on how best to articulate our newly merged strategic objective, on how best to define our objectives and measure our targets, and on what specific target levels we should adopt for identifying success in future years. Both reinventing USAID/Dakar and putting in place systems that will allow us to manage for results are "highest priorities." They also are closely linked. But they call upon the same set of scarce resources. To some extent, in the short run, both suffer.

Table I.1

USAID/Senegal
Objective Tree
(current strategy)

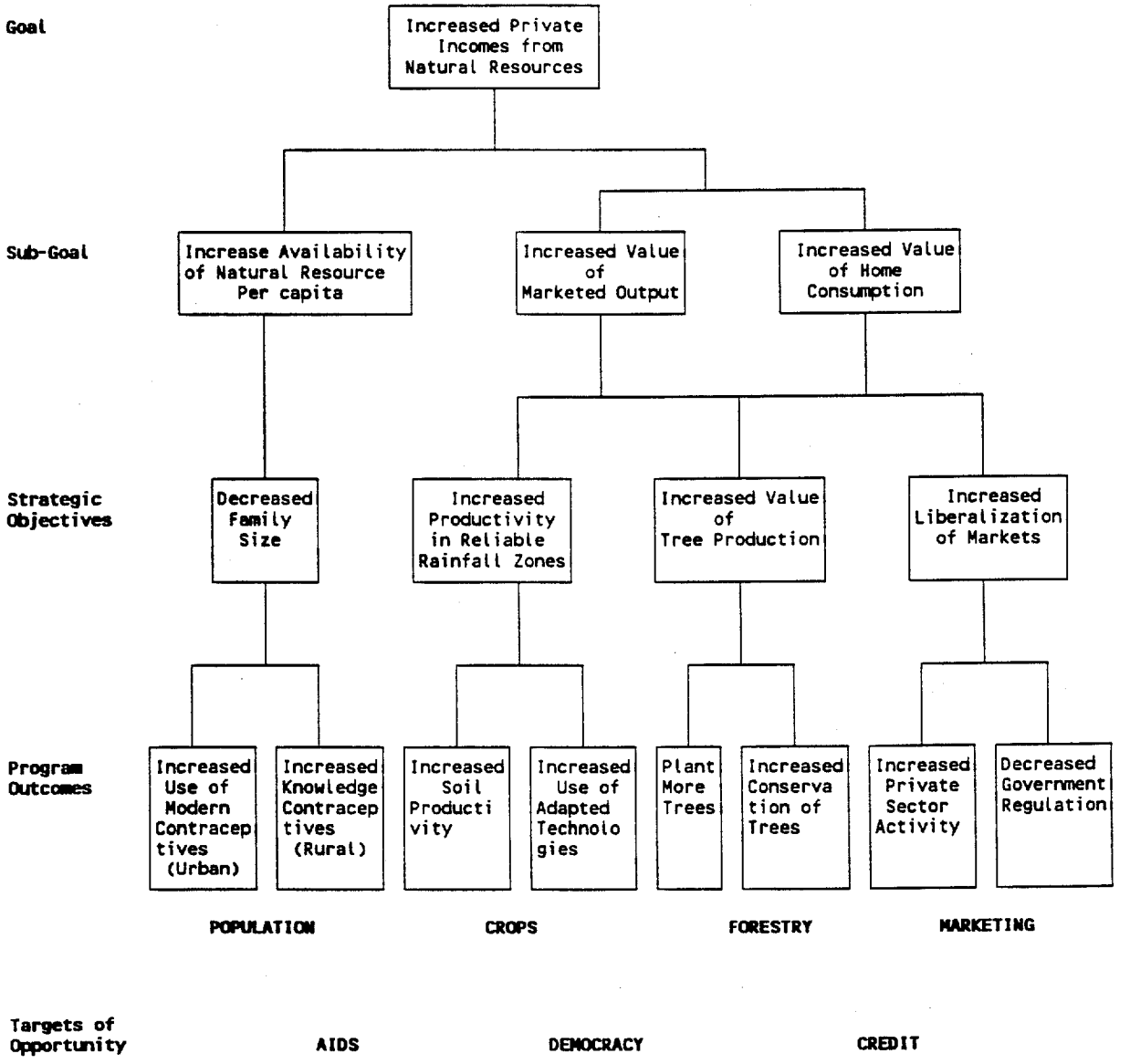
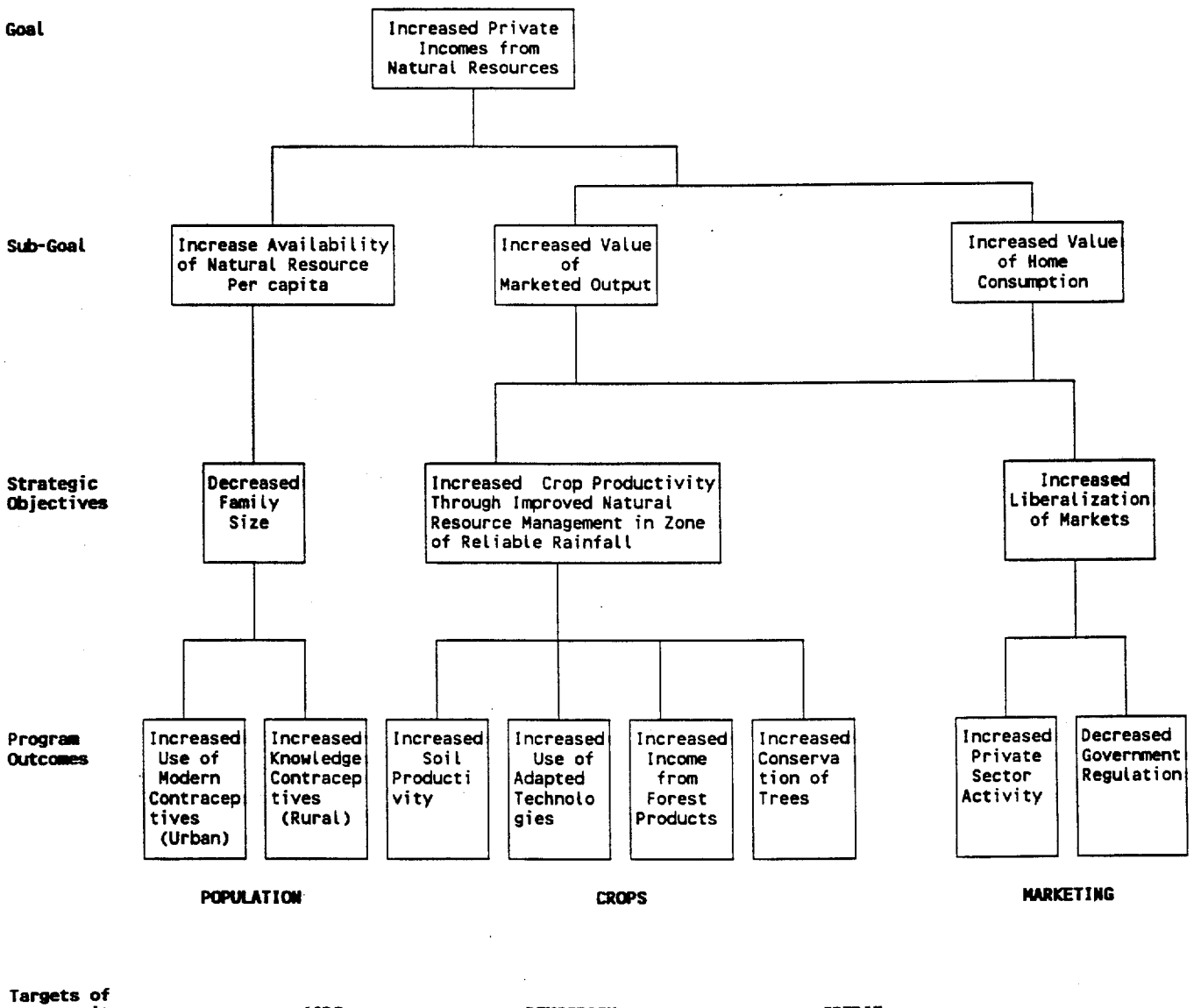


Table II.1

USAID/Senegal
Objective Tree
(proposed strategy)



SUMMARY DISCUSSION OF OUR PROPOSED CONSOLIDATED STRATEGIC OBJECTIVE NO. 2 AND 3

There are three principal reasons why USAID/Dakar has decided to consolidate Strategic Objectives 2 and 3. First, in an era of declining resources, we needed to focus our implementation efforts on a smaller, more coherent set of objectives. Second, the Senegal Reforestation project, the only activity in our portfolio that directly and exclusively addressed Strategic Objective 3, will end on March 31, 1995. Third, knowledge, attitudes and practices (KAP) surveys supported by the Senegal Reforestation project indicate that villagers -- our customers -- generally accord reforestation a lower priority than many other interventions. There is evidence, however, that tree planting in areas of extreme environmental degradation, such as in littoral zones (e.g., for dune stabilization) and in areas of exhausted soils in the peanut basin (e.g., to counter wind erosion), lead to significant changes in crop productivity and to increases in farm income). In some areas, tree crops contribute directly to substantial increases in income.

As a consequence of consolidating Strategic Objectives 2 and 3, USAID/Dakar will have a single strategic objective in the natural resources management area: "increased crop productivity through improved natural resources management in zones of reliable rainfall." Our principal indicator remains the productivity (in kilograms per hectare) of six select crops (including groundnuts grown for oil extraction and edible groundnuts). As in past API submissions, we retain Program Outcome 2.1, "increase soil productivity," but adopt no indicators for this target: given the ecological diversity in even very small contiguous area of Senegal, measuring such indicators would prove prohibitively expensive. We also retain Program Outcome 2.2, "increase use of adapted technologies." The indicators for this program outcome measure the adoption rates, at the level of the farmer's compound, of selected NRM technologies. Program Outcome 2.3, "increase income per compound from forestry products," is the former aggregate indicator associated with Strategic Objective 3. We retain three indicators at the level of Program Outcome 2.3: rural share of marketed value, per capita cash revenue in Kaolack, and per capita cash revenue in Kolda. Program Outcome 2.4 is adapted from the former Program Outcome 3.2, "increased conservation of trees." In measuring this program outcome, we retain the indicator: trees per hectare on participating farms.

This proposed consolidated strategic objective is built on a firm foundation of four parts, each of which is fundamental to our overall strategy. The first is our commitment, fully articulated in our approved Country Program Strategic Plan, to a natural resource based approach to agricultural development in Senegal.

The second is our commitment to working at the local community level. This is essential to sustainable development. USAID/Dakar has had strong positive results working with local organizations. Our flagship Community-Based Natural Resources Management project emphasizes community level land use planning and an array of natural resources technologies.

The third acknowledges the special nature of trees in the Senegalese context. As is true for other natural resource management technologies, trees increase the productivity of the soil. They can fix nitrogen, remove salts, reduce wind erosion, reduce evaporation and generally enhance the fertility, and therefore the productivity, of the soil. But they are also a sustainable source of income. Trees bear crops such as fruits and nuts. They can be harvested for poles, fuelwood and charcoal. Empowered local communities, able to exercize command over local resources, can be expected to harvest local woodlots and preserve local forest lands if it is in their interests to do so. We wish to capture both of these attributes of trees in our natural resource based, community level interventions.

The fourth refers to the zone of reliable rainfall. To further sharpen the focus of our natural resource management activities, our activities will be confined to those geographic areas that are south of the 400 milimeter isohyet. By contrast, the Senegal Reforestation project was nationwide in its scope.

Table III.1 presents USAID/Dakar's proposed consolidated strategic objective for "increased crop productivity through improved natural resources management in zones of reliable rainfall."

CONSOLIDATION OF STRATEGIC OBJECTIVES NO. 2 AND 3

		ACTUAL				PERFORMANCE TARGET		
	Baseline	FY 91	FY 92	FY 93	FY94*	FY 93	FY 95	FY 97
STRATEGIC OBJECTIVE : INCREASED CROP PRODUCTIVITY THROUGH IMPROVED NATURAL RESOURCES MANAGEMENT (NRM) IN ZONES OF RELIABLE RAINFALL	(1989-91)							
Indicator: Adjusted kg/ha for:								
-Millet	786	731	741	769	732	820	850	880
-Sorghum	850	800	948	806	886	880	910	940
-Rice	1,254	1,078	1,176	1,525	1,099	1,380	1,440	1,505
-Groundnuts (for oil)	959	852	780	956	962	1,055	1,100	1,150
-Groundnuts (edible)	1,006	866	870	1,011	1,114	1,105	1,155	1,205
-Maize	1,202	1,144	1,093	1,282	999	1,115	1,154	1,195
PROGRAM OUTCOME 2.1: Increased Soil Productivity (no indicator; see text)								
PROGRAM OUTCOME 2.2: Increased Use of NRM Technologies								
Indicator: Percent of Compounds Using NRM Technologies.	(1992)							
-Windbreaks	4.5		4.5		10.4	5	7	8
-Live Fence	2.7		2.7		6.6	1	3	5
-Field Trees	2.4		2.4		18.4	25	30	15
-Fallow Land	15.3		15.3		39.7	-	-	5
-Manure	51.7		51.7		73.2	20	20	20
-Crop Rotation	42.6		42.6		70.8	-	-	-
-Compost	12.1		12.1		8.0			
-Water Management	6.8		6.8		9.0			
-Improved Seed	14.0		14.0		47.7			
-Erosion Control	13.5		13.5		16.9			
PROGRAM OUTCOME 2.3: Increased Income per Compounds from Forestry Products	(1990)							
Indicator:								
-Rural Share of Marketed Value (%)	36	32	38	35		35	40	50
-Per Capita Cash Revenue								
Kaolack (CFAF)	590	566	432	330		600	1,000	2,000
Kolda (CFAF)	1,300	1,225	1,971	2,642		1,500	2,000	4,000
PROGRAM OUTCOME 2.4: Increased Conservation of Trees	(1990)							
Indicator Trees/ha on participating Farms	18				16	25	40	50

*.indicates estimates

Sources: Annual farm survey and Ministry of agricultural crop production estimates; 1992 and 1994 KAP surveys; GOS Foretsry Service records; and SRP KAP survey.