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STAFF APPRAISAL REPORT

REPUBLIC OF SENEGAL

COMMUNITY NUTRITION PROJECT

APRIL 26, 1995

Population and Human Resources Division
Western Africa Department
Africa Region

CURRENCY EQUIVALENTS

Currency Unit: CFA Franc (CFAF)
US$1 = CFAF 580 (October 1994)

ABBREVIATIONS AND ACRONYMS

ADMUR	Association for Urban and Rural Development (*Association pour le Développement en Milieu Urbain et Rural*)
AEP	Sanitation and Potable Water (*Assainissement et Eau Potable*)
AGETIP	Public works Executing Agency (*Agence d'Exécution des Travaux d'Interêt Public contre le Sous-Emploi*)
BASICS	Basic Support for Institutionalizing Child Survival Project
CAS	Country Assistance Strategy
CNC	Community Nutrition Center (*Comité National de Concertations Rurales, CNCR*)
CPSP	Fund for Price Equalization and Stabilization (*Caisse de Péréquation et de Stabilisation des Prix*)
CRS	Catholic Relief services
CSA	Food Security Commission (*Commissariat à la Sécurité Alimentaire*)
DHS	Demographic and Health Survey
DSSP	Division of Primary Health Care (division des soins de santé primaire)
ENDA	Environment and Development in Africa (*Environnement et Développement en Afrique*)
EPS	Health Education Division (*Division Education pour la Santé*)
ESP	Priority Survey (*Enquête Sur les Priorités*)
FONGS	Federation of Non-Governmental Organizations (*Fédération des Organisations Non-Gouvernementales*)
GIE	Small Economic Interest Groups (*Groupement d'intérêt économique*)
GPF	Women's Promotion Groups (*Groupements de Promotion Féminine*)
GTZ	German Technical Cooperation
ICB	International Competitive Bidding
ICR	Implementation Completion Report
IDA	International Development Association
IEC	Information, Education and Communication
ITA	Food Technology Institute (*Institut de Technologie Alimentaire*)
KAP	Knowledge, Attitude, Practice
KfW	Kreditanstalt fur Wiederaufbau
LCB	Local Competitive Bidding
M+E	Monitoring and Evaluation
MIC	Micro-entrepreneur
MIS	Management Information System
MOC	Local NGO supervisor (*Maître d'oeuvre communautaire*)
MOH	Ministry of Health and Social Action
NGO	Non-Governmental Organization
NMD	Nutrition Management Division
ORSTOM	French Scientific Research Institute for Development and Cooperation (*Institut Français de Recherche Scientifique pour le Développement en Coopération*)
ORT	Oral Rehydration Therapy
PNVA	National Agricultural Extension Program (*Programme National de Vulgarisation Agricole*)
PPF	Project Preparation Facility
PPNS	Health and Nutrition Project (*Programme de Protection Nutritionnelle et Sanitaire*)
SANAS	Senegal's Food and Applied Nutrition Service (*Service d'Alimentation et de Nutrition Appliquée au Sénégal*)
SDA	Social Dimensions of Adjustment
SM	Social Mobilization
SOE	Statement of Expenses
SONES	National Water Company of Senegal (*Société Nationale des Eaux du Sénégal*)
TA	Technical Assistance
UNDP	United National Development Program
UNICEF	United Nations Children Fund
UNFPA	United Nations Fund for Population Activities
USAID	United States Agency for International Development
WFP	World Food Program
WHO	World Health Organization
ZOPP	Objectives-oriented project planning (*Ziel-orientierte Projekt-Planung*)

FISCAL YEAR

January 1 - December 31

REPUBLIC OF SENEGAL

COMMUNITY NUTRITION PROJECT

CONTENTS

This report is based on the findings of an appraisal mission carried out in Senegal in January/February 1995, consisting of Mr. Lealie Péan (Sr. Project Officer, mission leader), Mr. Emmerich Schebeck (Departmental Project Advisor), Ms. Tonia Marek (Nutritionist), Ms. Adriana De Leva (Economist), Mr. Richard Seifman (Nutritionist), Mr. Uwe Kracht (Consultant, United Nations), Mr. Gonzalo Ribo-Dieguez (Chief Desk Officer, WFP/Rome), Mr. Ibrahim Sharif, (Director WFP/Senegal), Mr. Paul Crowley (Consultant, Food Technologist), Mr. Manfred Dittmar (Director, Africa, KfW), Mr. Christophe Twerenbold (Economist, KfW), Ms. Lioba Weingartner (Nutritionist/Consultant, KfW), Mr. Magatte Wade (Director General, AGETIP), Mr. Ibnou Gaye (Director of Development, AGETIP). Ms. Judith McGuire (PHN) is the Lead Advisor. Ms. Maryse Pierre-Louis (Sr. PHN Specialist) and Mr. Bernard Abeillé (Sr. Procurement Specialist) are the peer reviewers. Mr. Jean-Louis Sarbib is the Department Director. Mr. Ok Pannenborg (Chief, Population and Human Resources Division), and Mr. Alberto Harth (Chief, Infrastructure Division) share responsibility for the project. Technical support was provided by Ms. Song Li.

ANNEXES

REPUBLIC OF SENEGAL

COMMUNITY NUTRITION PROJECT

CREDIT AND PROJECT SUMMARY

Borrower:	Republic of Senegal
Beneficiaries:	1.2 million persons for the nutrition and water programs
Credit Amount:	SDR 11.7 million (US$18.2 million equivalent) Staff of MOH, SONES, AGETIP, and municipalities
Terms:	Standard, with 40 years maturity
Project Objectives:	The project's *development* objectives are to (a) halt a further deterioration in the nutritional status of the most vulnerable groups (malnourished children under 3 years of age and pregnant and nursing mothers) in targeted poor urban neighborhoods; (b) provide potable water to unserviced neighborhoods of the nutrition program; and (c) enhance household food security in poor rural and urban areas during critical periods of vulnerability. Its *implementation* objectives are to (a) demonstrate the feasibility of targeted, efficient and cost-effective delivery of community nutrition interventions; and (b) execute a poverty-oriented program through a privately operated agency.
Project Description:	The project consists of *three major components*: (a) a **nutrition program**, consisting of Information, Education and Communication (IEC) interlocutors, supported by supplementary feeding for the target population in urban areas and a small fund for research and development; (b) a **water program** in the targeted neighborhoods of the nutrition program; and (c) a pilot **rural household food security program**. As an integral part of these components, there will be (i) a package of **social mobilization and IEC**, (ii) a package of **managerial and technical assistance and training** to build local capacity for nutrition/health services delivery; and (iii) **a management information system** for monitoring and evaluation, supported by systematic client consultation throughout project execution to ensure necessary program adjustments reflecting participants' views.
Project Benefits:	The project will have *two main benefits*. First, the immediate impact of the **nutrition program** is intended to halt a further deterioration in the nutritional status of the most vulnerable groups in the poorest urban areas, estimated at a total target population of 469,000 (about 230,000 malnourished children under 3 and 120,000 nursing and pregnant women receiving food as well as growth-monitoring and IEC services, and 119,000 mothers and children receiving only growth-monitoring and IEC services). The project's nutrition education activities should set in motion behavioral changes and adoption of better child-feeding practices, leading to long-lasting nutritional improvement in children under 3. Through the **water program** increased access to safe drinking water should reduce the incidence of diarrhea and water-borne diseases affecting the nutritional status of 174,000 residents in the targeted neighborhoods for the first year of operation, and 522,000 beneficiaries for the subsequent years, totaling 696,000 over the life of the project for this program. Thus, about 1.2 million people will benefit from both programs. As demonstrated during the pilot phase in neighborhoods where the Community Nutrition Center is close to a health facility, the proposed project will also lead to an increased demand for and use of health services. An additional benefit of **the household food security and water programs** will be the provision of development-oriented infrastructure

in targeted rural and urban areas. Second, the project will establish for the first time a local capacity to deliver community-managed nutrition services with private sector efficiency, both in terms of management and administrative cost containment. It will also contribute to the capacity building of NGOs by providing training in the supervision of community nutrition centers and IEC methods to pre-selected local NGOs. Finally, closer collaboration between NGOs and public health services will improve the delivery of social programs geared to the most vulnerable households and the capacity-building of local groups to manage their social/poverty problems.

Project Risks: As the nutrition program will be carried out in the urban low-income areas and among some of its poorest people, many of them illiterate and innumerate, its implementation will not be easy. The project will involve *five specific risks*. The first concerns the production of the food supplement, since the enterprise selected by WFP for production enjoys a virtual monopoly. The second risk is linked to the strong coordination required among the many stakeholders associated with project implementation, which could impose a logistical problem that might undermine the private agency's (AGETIP) efforts to meet project objectives efficiently and effectively. The third risk is that implementation might be delayed by community mobilization, organization and training shortfalls. The fourth risk is that the necessary nutrition-health coordination arrangements between AGETIP and the Ministry of Health fall short of expectations. Finally, the project's administrative costs might be higher than estimated, thus jeopardizing the program's sustainability.

To reduce the risk related to the sole source of food production, WFP will attempt to identify through local competitive bidding alternative production sources during the first year of operation. To mitigate implementation risks, the project will be implemented on the basis of a detailed Manual of Procedures and under a strictly organized schedule of supervision procedures, thus ensuring attention to quality issues by all implementing bodies. In addition, starting from the pilot phase, the program will expand towards full coverage only after organizational, management, and technical program details have been sufficiently tested and adjusted to account for absorptive capacity conditions in the field. The National Commission for the Fight Against Malnutrition, created at the Presidency in June 1994, constitutes the strongest possible Government commitment in supporting AGETIP's community mobilization efforts. Training and in-service training of large numbers of community private entrepreneurs and beneficiaries are recognized as key elements for project success. Moreover, improved coordination with the health system will be ensured by clearly defined contractual arrangements between AGETIP and the Ministry of Health. Finally, AGETIP's contract management capabilities, supported by its strong management information system, have proven to be guarantor for cost containment and will ensure sustainability. Through this approach to social services provision, the traditional role of Government as a provider of public services will be replaced by one in which the Government provides those services in terms of planning, programming and budgeting, but leaves delivery to the more efficient and cost-effective agents of the private sector.

Environmental Risks: No environmental risks are foreseen.

Poverty Category: Program of targeted interventions to halt a further deterioration in the nutritional status of the most vulnerable groups in specific poor neighborhoods selected on the basis of a poverty assessment, to reduce their food insecurity, and to generate employment and income for community groups through small-scale activities.

Economic Rate of Return Not applicable.

SUMMARY OF PROJECT COST ESTIMATES
(Net of taxes and duties)

		Local	Foreign	Total
		----------(in US$ million)-------		
1.	Nutrition Program	14.6	0.7	15.3
2.	Water Program	0.6	2.2	2.8
3.	Rural Household Food Security	1.1	0.1	1.2
4.	Social Mobilization and IEC	1.3	0.3	1.6
5.	Training	1.1	0.4	1.5
6.	Monitoring and Evaluation	0.8	0.7	1.5
7.	AGETIP Management	0.7	0.3	1.0
8.	Pilot Operations and Project Preparation	0.4	0.1	0.5
	Total Base Costs	20.6	4.8	25.4
	Physical Contingencies	0.3	0.2	0.5
	Price Contingencies	2.0	0.1	2.1
	TOTAL PROJECT COSTS	**22.9**	**5.1**	**28.0**

FINANCING PLAN
(in US$ million)

IDA	18.2
WFP	5.2
KfW	3.0
Government	1.6
TOTAL	**28.0**

Estimated IDA Credit Disbursements
(in US$ million)

	---------- IDA Fiscal Year ----------			
	1996	1997	1998	1999
Annual	3.6	5.6	5.4	3.6
Cumulative	3.6	9.2	14.6	18.2

REPUBLIC OF SENEGAL

COMMUNITY NUTRITION PROJECT

SOCIO-ECONOMIC INDICATORS

	Unit of Measure	Most Recent Estimate /1 (mre)	Same Region/ Income Group		Next Higher Income Group
			sub-Sah. Africa	Lower-Income	
Total Population (mre = 1992)	thousands	7,841	546,390	942,547	477,960
Urban	%	40.8	29.5	57	71.7
Income Indicators					
GNP per capita (mre =1994)	US$	470	-	-	-
Social Indicators					
Public Expenditures on Basic Social Services	% of GDP	-	-	-	-
Gross Enrollment Ratio:	% school age group				
Primary: Total		59	66	-	107
Male		70	79	-	-
Female		49	62	-	-
Secondary: Total		16	-	-	-
Female		11	-	-	-
Mortality	per '000 live births				
Infant Mortality Rate		68	99	45	40
Under-5 Mortality Rate		105.8	169	59	51
Chronic child malnutrition (<5 years old)		29	-	-	-
Life Expectancy	years				
Overall		49	52	68	69
Female advantage		2	3.4	6.4	6.3
Total Fertility Rate	births per woman	5.9	6.1	3.1	2.9

/1 Except for GNP/capita mre, all other mres are for the periods 1987-92. The malnutrition rates are obtained from the 1991 Priority Survey.

Sources: Social Indicators of Development, 1994, The World Bank, 1994.
World Development Report 1993: Investing in Health, the World Bank, 1993.

SENEGAL

COMMUNITY NUTRITION PROJECT

STAFF APPRAISAL REPORT

I. INTRODUCTION

1.01 The Government of Senegal has requested IDA's assistance in financing a community nutrition project. The principal objectives of the proposed project are to halt a further deterioration in the nutritional status of the most vulnerable groups in poor urban neighborhoods, provide those households with potable water, and enhance food security in targeted poor urban and rural areas during critical periods of vulnerability.

1.02 The proposed project will be IDA's first free-standing nutrition project in Senegal and the first project of this kind in sub-Sahara Africa. It is not an emergency intervention, but an experimental one that attempts to demonstrate an innovative approach, i.e., the delivery of targeted and cost-effective nutrition interventions, designed in close collaboration with all stakeholders and executed not by the Government but by agents of the private sector. Total project costs are estimated at about US$28.0 million equivalent, net of taxes and duties, of which IDA would finance about US$18.2 million. The German Government (KfW) would finance in parallel about US$3.0 million equivalent, WFP would finance in parallel US$5.2 million, and the Government of Senegal would contribute US$1.6 million equivalent.

II. SECTORAL CONTEXT

A. Background

2.01 Senegal is a low income country with a population of 7.8 million, growing at 2.7% per year, with an average per capita income of US$470 distributed unequally. Although better off than some of its Sahelian neighbors, Senegal faces many similar constraints, such as dry arid land, low rainfall, rapid population growth, dependence on one agricultural commodity, groundnuts, that accounts for 60% of farm cash income, and economic stagnation. It ranks 150 out of 173 countries on the poverty index developed in the 1993 Human Development Report by UNDP. Senegal is, however, more urbanized than its neighbors (40% of the population). The health and education status of the population improved over the past decade, but primary enrollment is starting to decrease. However, life expectancy is only 49 years of age; children under five in urban areas suffer a chronic malnutrition rate of 23%; onchocerciasis in rural areas is prevalent. Widescale malaria, diarrhea, and respiratory diseases indicate that Senegal's living standards remain below those of other lower-middle income countries.

2.02 Over the past decade, dramatic declines in formal sector activity have combined with longer-term trends (population growth, land degradation, declining world commodity prices) to plunge the country into a severe and prolonged economic recession. The Government launched adjustment and stabilization programs in the early 1980s, resulting in the partial liberalization of agriculture, fiscal stabilization through austere expenditure contraction, and financial reform. But, this internal adjustment was insufficient to improve the competitiveness of the economy and achieve the type of economic growth that would have a large impact on poverty. The January 1994 devaluation of the CFA franc offered an opportunity to regain competitiveness and to reverse economic performance by improving rural incomes through higher prices for the most important

revenue source of the poor (groundnuts) and by encouraging other export-oriented industries, such as fishing, tourism, agro-processing, and small manufacturing.

B. Economic Situation of Vulnerable Groups

2.03 The economic crisis has particularly affected vulnerable groups in Senegal. While the devaluation is expected to promote long-term economic growth in Senegal, it has led to a deterioration of incomes and food access for vulnerable groups in the short term. For example, food expenditures, which represent 70% of the household budget of the poor increased nearly 40 percent during 1994. The urban poor are particularly affected by increases in the prices of imported food. In early 1994, the Government of Senegal introduced accompanying measures aimed at passing the benefits of the parity change on to rural producers; limiting the wage bill; reducing regressive levels of taxation, while balancing fiscal and credit measures to control inflation; and improving the availability of social services in health and education by increasing budgetary appropriations to these sectors. In the short term, temporary measures to minimize increases in the prices of certain basic food and non-food goods (bread, rice, edible oils, kerosene, medicines, and basic health care) were adopted. The Bank-financed 1992 household priority survey found that 33% of the entire population, about 2.4 million individuals, did not spend enough money on food to assure a minimum daily caloric intake of 2,400 calories per adult equivalent. Rural poverty (86% of total) far exceeds urban poverty. Yet, poverty in urban areas is intensifying, as highlighted by the fact that Dakar, with over one-fifth of the total population, houses 12% of the total poor. Poor households in Dakar have on average 12 persons, more than half of whom are children and elderly; nearly half of the heads of these households have more than one wife, two out of three households use some type of standpipe to access water, four out of five heads of households have no education, and less than 10% have any assets (land, hoe, carts). Despite better average living conditions in urban areas, a substantial number of poor live in squatter areas in peri-urban Dakar, which serves as a magnet for the handicapped, orphans, and destitute who seek services, special care or income from begging. Increasing migration to urban areas is contributing to the problems of these squatter neighborhoods which have poor or nonexistent sanitation, house up to eight people in a room measuring less than two square meters, lack water or electricity, and are characterized by housing made of discarded metal and cardboard. These living conditions are breeding grounds for disease.

2.04 To compensate for the hardships of the poorest population groups, particularly in urban areas, resulting from declining purchasing power, the Government plans to provide direct assistance to certain vulnerable groups by facilitating the establishment of family- or community-oriented projects aimed at halting further deterioration of already high malnutrition rates. It is in this vein that the Presidency created a National Commission for the Fight Against Malnutrition and requested IDA's support. The proposed project, which will complement other ongoing employment/food security efforts, such as a food-for-work project managed by the Public Works Executing Agency (AGETIP) and supported by food from the World Food Program (WFP), is a response to this request. Yet, the proposed project also presents a challenge and an opportunity to lay the basis for a long-term program to address the country's entrenched nutrition problems, an objective towards which the proposed project hopes to contribute.

C. Nutrition and Food Security

2.05 The main nutrition problem and the effect of food insecurity in Senegal remains chronic protein-calorie malnutrition, which results in visible stunting and wasting of children. Average levels of caloric intake have been barely adequate in both rural and urban areas for many years. All urban zones in Senegal show caloric inadequacy, estimated to be 80% of normal consumption below which

households are considered in a state of nutritional risk. Throughout Senegal, but particularly in the urban areas, rice consumption has become an important part of the cereal diet. In urban areas, more than 98% of noon meals, 50% of evening meals, and 20-50% of morning meals use rice as the staple. The phasing-out of subsidies for rice is likely to cause particular hardship for low-income groups, particularly because in the short-run, the supply response is not expected to provide large stocks of low-cost coarse grains to substitute for the more expensive rice. This food availability and access problem is undoubtedly most acute among urban poor households, who are mainly employed in the service sector or in petty trade. They are, therefore, not likely to realize any compensatory production benefits in the short run, and have, therefore, confronted significant loss of purchasing power parity. Unless the urban poor households are able to reduce their non-food expenditures by the amount of real income loss, and transfer these amounts to food expenditures, the result will be further nutritional deterioration.

2.06 Rural Senegalese confront a somewhat different problem. They annually face a hungry period (June-September) prior to the harvest. Villagers who ordinarily eat three meals a day reduce the number of meals to two at the end of the dry season (Benefice and Simondon, 1993). Even in rice-producing areas, where rice constitutes 48% of the total energy intake in January (during the harvest period), villagers purchase 50% or more of their energy requirements, i.e., 50% in January rising to 61% in June (Benefice and Simondon, 1993). This seasonal availability problem spills over into the major peri-urban poverty areas as well.

2.07 Infant malnutrition rates have remained relatively constant during the past decade. The 1992 Priority survey found that 29% of children under five years of age were chronically malnourished, with rural child malnutrition estimated at about 34% and urban at 23%. Malnutrition begins before birth, and in Senegal about 10% of children are low birthweight babies. Iron deficiency anemia is a severe public health problem with 63% of children estimated to be anemic. Significant regional and seasonal vitamin A deficiency was found among children 1-5 years of age (7.4%) in a survey completed in 1993 (Rankins). Iodine deficiency is also considered a problem, but mainly in inland areas.

2.08 The urban malnutrition problem is growing more severe because the urban population is growing much faster (4.0% per year in Dakar) than the national growth rate of 2.7%. Urban chronic child malnutrition at 23% is more pronounced in Dakar than in other cities of West Africa (22% in Accra, 18% in Conakry, and 11% in Abidjan). Large differences in malnutrition rates have been found depending on the socio-economic profile of the community. For instance in the poor area of Guediawaye the proportion of children with chronic malnutrition is 1.6 times higher than in Medina (Guiro, June 1994). Even in the same suburb, there are great disparities, depending mainly on whether the area is a squatter or a planned area. In the Pikine area, chronic malnutrition rates were higher in the squatter areas of Yeumbel and Medina Gounass than in the planned neighborhoods of Pikine Extension and Pikine Ancien (Guiro, 1994).

2.09 In addition to poverty, often being both one of the causes and one of the consequences of child malnutrition, food insecurity, lack of knowledge of good feeding practices, endemic diseases, inadequacy of potable water, and poor sanitation remain significant factors towards child malnutrition. They are discussed individually below.

a) **Food insecurity**: In the past, supplies of coarse grains and rice on a national level did not translate into adequate food for families, principally because of weaknesses in Senegal's food distribution system and limited access to income. Even in years of normal rainfall with adequate production and adequate imports of rice, a substantial portion of the population

was chronically food insecure. With the establishment of a more stable food structure and other measures taken under the Bank's proposed Agriculture Sectoral Adjustment Lending, stable food availability -- and therefore one crucial aspect of the food security situation in general -- should improve, particularly for the poor. Nonetheless, many households still have inadequate income or other resources to obtain needed levels of appropriate foods on a regular basis. The evidence suggests a strong positive correlation between low-income families and high levels of stunting and other forms of malnutrition in children under five, and poor nutritional status of women of reproductive age. The 1992-93 Demographic and Health Survey (DHS) showed that 15% of women of reproductive age had a low Body Mass Index (less than 18.5 kg/m2), indicating chronic energy deficiency in this cohort, which is often a good marker of household food insecurity. Simply put, household income remains one of the main factors affecting food insecurity in Senegal.

b) **Feeding practices**: With regard to poor feeding practices, both the 1986 DHS and a more recent study in Guediawaye confirm that this is a critical area in infant feeding. In Senegal only 6% of children under three months are exclusively breastfed, and in Guediawaye 40% of the children began receiving complementary feeding earlier than four months (the recommendation is to exclusively breastfeed a child up to four months). In addition, children over four to six months usually require complementary feeding, but the 1986 DHS survey (latest data available) found that a large percentage (29%) received only breastmilk or breastmilk plus water or low nutrition liquids. The low caloric density of weaning food is also a problem: the most common weaning food is millet porridge (*rouye*). A child being weaned does not eat more than 200 ml of the porridge per meal and thus absorbs only 70 calories and two grams of proteins at each seating, which is largely insufficient, especially since a child only has two to three meals a day (the ideal is five meals a day).

c) **Endemic diseases:** A sick child has a 30% higher chance of being underweight than a healthy child. The most critical age in terms of nutritional status is between 12 and 23 months when children in Senegal are abruptly stopped being breastfed. By the age of 20 months, about one in three children suffers from insufficient weight. Health problems contribute in part to the deficiency in weight, diarrhea being one of the major problems among small children. The prevalence of diarrhea among young infants is high and increases rapidly among infants under nine months of age. In the 1986 DHS survey, it was found that one in two Senegalese children under 24 months had diarrhea in the two weeks preceding the survey. This level is the highest among nine sub-Saharan countries where similar data were collected. Malaria, acute respiratory illnesses, parasite-related diseases, and measles are widespread childhood illnesses. Other major diseases found in Senegal have a direct or indirect impact on the care for children. Of particular note is maternal anemia, and onchocerciasis which alone affects some 57,000 people (or 1 in 130 Senegalese).

d) **Water and Sanitation:** The inadequacy of potable water and the lack of sanitary services are major causes of morbidity in the poor neighborhoods of the peri-urban areas. Among the most widespread illnesses are diarrhea, intestinal parasites, amoebiasis, typhoid and conjunctivitis. A significant part of the population in the neighborhoods of the proposed Community Nutrition Project (20% in Dakar and over 30% in the secondary towns) get their water from traditional wells which exploit shallow pools of water polluted by waste water. In the neighborhoods without drinking water networks, the conditions of water storage and informal resale add considerably to water pollution for the populations not served by the network.

D. Government Policies and Actions and the Bank's Experience

Policies

2.10 In an effort to increase cereal self-sufficiency, the Government has pursued a policy supporting domestic rice production. Producers in the North River regions have benefitted from heavy Government investment in irrigated perimeters. For these producers, inputs and water rates were highly subsidized. The poorer region of Casamance benefitted less (less marketing of rice and competition from fraudulent rice imports from the Gambia) from Government support in the development of irrigated perimeters for rice production. As a result of these policies, until January 1994, consumers paid a high price for the protected local rice. However, since June 1994, the Government abandoned its rice production strategy within the context of the preparation of the proposed Agriculture Sector Adjustment Lending. Although the expansion of irrigated rice is possible, the abandonment of the protectionist measures will doubtlessly slow down the artificial expansion of paddy rice production in the north river valley. As a result, the likelihood of Senegal achieving rice self-sufficiency in the near future is considered very slim. However, the practice of artificial flooding of the Senegal River Valley, which was begun last year, has had a beneficial effect by enabling large flood recession areas to be planted with millet, which is increasingly becoming a substitute for rice among poor households. Further, it is Government policy, supported by the Bank, to improve the effectiveness of research and extension services for women farmers. This policy is being implemented through a series of agreed-upon measures and is supported by the National Agricultural Extension Program (PNVA) (Cr. 2108-SN).

2.11 A coherent five-year National Nutrition Program (1991-1996) was announced in the early 1990s, but little has materialized. Ongoing efforts to identify and treat malnutrition rely mainly on health education by health post personnel. This not only places an extra burden on already overworked staff, but is not the most effective way of dealing with malnutrition among the poor as they are the least likely to seek modern medical care.

2.12 The Food Security Commission (CSA) is responsible for food security issues. It maintains a minimal stock of cereals in storage facilities throughout the country and seeks to stabilize market prices for cereals. The CSA monitors food security (stocks and prices) on a pilot basis in four zones identified as food insecure and monitors food prices nationwide. The pilot zones, located in the northern part of Senegal, have been identified based on levels of cereal deficits and rainfall patterns rather than on indicators of net income. Recent evidence suggests that in poor harvest years, farmers in the more fertile zones could actually be more vulnerable to malnutrition and food insecurity because of lack of off-farm sources of income.

Actions

2.13 The Government incorporated nutrition under the USAID-financed Health and Nutrition Project (PPNS) which lasted from 1973-88. This program, carried out with the assistance of Catholic Relief Services, established about 400 centers around the nation providing pre- and post-natal visits, growth monitoring and food supplements to children under five. As of 1984, 10.3% of children under age three were covered by these supplemental programs, which were not targeted either by season or by qualifying rural regions. In fact, distribution depended on the location of the health center. Had the program been better targeted to lower-income children, the impact (and cost-effectiveness) might have been greater. An additional problem revealed by project evaluations was that only 6-11% of the calories were actually consumed by the beneficiaries. Take-home rations lasted fifteen days instead of the whole month: in 1981 each child received 5.53 kg per month, while in 1982 each child received only 3.84 kg, compared to a theoretical objective of 7.5 kg (Echenber et. al., 1984). In 1987, supplemental food was discontinued,

thus leaving only growth monitoring in the PPNS. Many mothers stopped participating because of the high opportunity cost of their time, especially since the small fee mothers had to pay to the PPNS (about $0.67/month) was mandatory. The drop in attendance might also have been due to the quality of health services provided by the health centers, which was inadequate to provide an incentive for mothers to bring their children. The PPNS has not been replaced by a similar program, thus leaving a gap in the detection and prevention of malnutrition on a national basis.

2.14 The Ministry of Health and Social Action (MOH) recommended that the PPNS be restructured by redefining the role of the mothers' committee vis-à-vis the health committee. It also introduced the idea that growth monitoring should be decentralized to the community and that nutrition activities be carried out by women groups (Diene, 1989), but no follow-up took place.

2.15 The MOH has been able to achieve a 37% vaccination coverage among children less than one year old, and 55% for children between 12 and 23 months old. Despite this relatively low coverage, it seems that a large part of the population in the target areas ask advice from health personnel, as shown by the beneficiary assessment carried out during preparation of this project. But health service delivery is generally weak, as health centers/posts tend to be understaffed and underequipped. A study undertaken during project preparation (Sall, 1994) concluded that among the 10 health posts visited in five of the target areas, only one could assure satisfactory delivery of curative, preventive and educational services and offer nutrition rehabilitation facilities; two had almost no activities, and several among the others did not even have a weighing scale.

IDA's Experience in Senegal

2.16 IDA has been involved in both the health and infrastructure sectors in Senegal. In health, IDA prepared a nutrition project in the late 1970s, but the project was dropped for a rural health project, which has been satisfactorily completed (PCR Report No. 12319). The ongoing human resources project supports the extension of primary health care services in three regions through the construction/renovation of health posts, the training of medical and paramedical personnel, the decentralization of health planning and management, and a small nutrition sub-component in the Maternal and Child Health component. In infrastructure, IDA's involvement includes four urban projects; two are complete, one ongoing and another under preparation.

2.17 In addition, IDA has supported two Public Works and Employment Projects in promoting the delivery of public services through simplified contracting procedures. The first project was successfully completed in September 1993 and the second is in its second year of implementation. To help mitigate the potentially negative effects of the country's macro-economic adjustment program, particularly on youth and the urban poor, the first Public Works and Employment Project (Cr. 2075-SE) was approved in December 1989: (i) to create temporary new employment in urban areas as rapidly as possible; (ii) to improve individual skills of those employed under the project and the competitiveness of the firms that would carry out works, so as to develop their capacity to respond to increased opportunities for sustained employment after project completion; (iii) to demonstrate the feasibility of labor-intensive projects and test the procedures that would enable the public sector to commission such projects; and (iv) to undertake sub-projects that are economically and socially useful. Key associated objectives were to maximize the benefits of implementation methodologies that feature low cost, high visibility and conspicuous impact; use transparent but expeditious and flexible procedures for sub-project proposals, appraisal, contracting and disbursements; and provide sustainable technical and managerial assistance.

2.18 A special agency with private legal status, *the Agence d'Exécution des Travaux d'Interêt Public contre le Sous-Emploi (AGETIP),* was created to implement the project. AGETIP as an NGO is an independent institution with a Board consisting of a Director from the private sector and representatives from the National Council of Employers of Senegal, the Union of Construction and Public Works Workers, and the Association of Mayors of Senegal. The director of AGETIP is assisted by technical and financial directors and an internal auditor. Administrative costs have been kept below 5% of the total program amount. Project management is governed by a Manual of Procedures, which is an integral part of the *Convention* signed with the Government of Senegal.

2.19 AGETIP has successfully met many of its objectives. In its first three years, AGETIP created 11,103 temporary jobs through public works execution with an average duration of 30 days each. Seventy-eight enterprises won contracts to execute 119 sub-projects, including 15 youth groups (103 youth groups had in fact been pre-qualified). The AGETIP agency has successfully addressed poverty and household food security problems, particularly in the cities of Kaolack and Saint Louis, through food for work initiatives supported by the World Food Programme (WFP). It has set up easy and transparent bidding procedures which facilitated the participation of a large number of small- and medium-scale enterprises in the program, who respected the agreed-upon time framework for the execution of works. Moreover, the project disbursement profiles indicate that AGETIP has demonstrated an absorptive capacity greater than the average IDA-financed project. Most important, AGETIP has shown how managerial autonomy and private sector orientation lead to strong results, as indicated in bidding and procurement procedures -- AGETIP completes the process in two months, while the public administration takes six months, and at lower cost than force account.

2.20 Lessons learned from the first AGETIP project indicate that (i) in the appraisal of social sub-projects, quantifiable indicators be used to rank them; (ii) a strong covenant be included in the Development Credit Agreement to link the review of sub-project batches to the disbursement of counterpart funding; (iii) training for contractors should be available upon credit effectiveness; (iv) a grassroots participation program be an essential part of the project; and (v) a phased approach be adopted.

E. Rationale for IDA Involvement

2.21 The objectives of the proposed project are fully in accordance with the development strategy of the World Bank Country Assistance Strategy (CAS) for Senegal, presented to the Board on February 16, 1995. The proposed Community Nutrition Project is considered as one of the key projects in meeting these objectives. IDA's strategy to assist Senegal is to achieve sustainable economic growth with equity and targeted poverty reduction. Its central focus is: (a) to promote competitiveness in order to make the economy more responsive and to create more opportunities for the private sector; (b) to complete structural reforms in agriculture; and (c) to deliver essential services efficiently and effectively. Moreover, a central aspect of the Bank's partnership with Senegal is the strengthening of the quality of the dialogue with Government and civil society to enhance participation and to facilitate internalization and ownership. IDA's strategy rests on the approach developed in the 1990 World Development Report, which is based on a two-pronged approach: (i) increasing economic growth and incomes mainly through labor-intensive methods and (ii) improving access to basic social services. A complement to this approach is assuring adequate social safety nets for the truly vulnerable (pregnant and nursing women and children below the age of three years). A key element in this strategy is the strengthening of anti-poverty programs, particularly those which contain a safety net for the poor that promote human resource development and increased access to social services. IDA's main nutrition objective is to assist the Government in

adopting strategies and cost-effective programs to deal with the malnutrition problems of the most vulnerable groups. While considerable external support is needed for this project, IDA is best equipped to play the important catalytic role required to mobilize the needed assistance from the donor's community and to influence government's strategy. The proposed project, consistent with IDA's human resources development and poverty alleviation objectives in Senegal, has drawn from other nutrition-related studies, particularly from the IDA-funded Tamil Nadu Nutrition Project in India and the 15-year nutrition project implemented by USAID/Catholic Relief Services in Senegal, regarding food targeting and the composition of a food supplement, i.e, that cannot be sold on the market (Annex I). Best practices from nutrition projects have indicated the importance of communication and community mobilization in targeted interventions; the need to establish program sustainability through clearly defined nutritional entry and exit criteria; and the need for regular on-the-job training and supportive supervision systems with clearly defined accountabilities. These lessons form the overriding principles for the design of the proposed operation. These lessons have been taken into account for the proposed project orientation, design, funding, and implementation.

III. THE PROPOSED PROJECT

A. Project Objectives and Design

3.01 The project's development objectives are:

(i) to halt a deterioration in the nutritional status of the most vulnerable groups (malnourished children under three years of age and pregnant and nursing women) in targeted poor urban neighborhoods;

(ii) to provide potable water to unserviced neighborhoods targeted under the nutrition program; and

(iii) to enhance household food security among poor urban populations and households "at risk" in targeted poor rural areas during critical periods of vulnerability.

3.02 The specific project implementation objectives are:

(i) to demonstrate the feasibility of targeted, efficient and cost-effective delivery of community nutrition interventions; and

(ii) to execute a poverty-oriented program through AGETIP, a privately operated agency, rather than a ministry, applying delegated contract management to local entrepreneurs, such as women and youth groups, community associations, and local NGOs.

3.03 Realization of the last objective will demonstrate the potential for replacing the traditional role of Government in delivering public services by one where Government would provide those services in terms of planning, programming and budgeting, but leave their delivery and partial cost recovery to the more efficient agents of the private sector. Moreover, the project's urban nutrition and rural household food security programs have been designed so as to complement each other in contributing to both nutrition and household food security by: ensuring a food supplement to malnourished children and pregnant and nursing women, as well as to the siblings aged 6-36 months of the malnourished children, and by generating household income through labor-intensive employment activities in the neighborhoods or villages of the target population. Progress in achieving these objectives will be assessed against monitoring and evaluation indicators that have

been developed and agreed upon with the Government, AGETIP, and key stakeholders during an "Objectives-oriented project planning" (ZOPP) workshop held in July 1994. In the long term, the development objectives of the project will be to strengthen management capacity in the area of nutrition, according to replicable and sustainable mechanisms and to assist the Government of Senegal in the preparation of a national strategy to fight malnutrition.

B. Project Description

3.04 The project will consist of three major components: (a) a **nutrition program**, consisting of Information, Education and Communication (IEC) interlocutors, supported by supplementary feeding which includes micronutrients, growth monitoring, and referral to basic health services for the target population in urban areas, and a small fund for research and development; (b) a **water program** that would meet the water needs of poor households in many of the same households in the targeted neighborhoods of the nutrition program; and (c) a pilot **household food security program** in targeted rural poor areas. As an integral part of these three components, there will be (i) a **package of social mobilization and IEC;** (ii) a **package of training** to build local capacity for nutrition/health service delivery; and (iii) a **management information system** for monitoring and evaluation, supported by systematic client consultation throughout project execution to ensure necessary program adjustments reflecting participants' views. These elements are mutually supportive and establish the basis for a longer term strategy to deal with nutrition and household food security problems.

3.05 The proposed project will be IDA's first free-standing nutrition project in Senegal and one of the first projects of this kind in Africa. It is not an emergency intervention, but an experimental one that attempts to test an innovative approach, i.e., a private delivery mechanism to assist targeted vulnerable groups in the area of nutrition. Important lessons provided by IDA's experience in the nutrition sector in other regions of the world and with health projects in Africa are that strong political commitment by government, community ownership and involvement of all stakeholders in the decision-making process are crucial for successful implementation. The creation of the National Commission for the Fight Against Malnutrition, with the strong support from the President of the Republic of Senegal, is an encouraging example of Government commitment to address the problem of malnutrition among the most vulnerable groups, and offers an unprecedented opportunity for engaging all national and international partners to join forces in addressing malnutrition. The preparation of the proposed project has addressed ownership aspects. A rapid beneficiary assessment and a ZOPP workshop were carried out to identify project objectives and target groups, to understand where coping strategies are inadequate to ensure household food security and good nutritional status of segments of the target population, to define jointly with the targeted population appropriate nutrition interventions, and to determine the willingness and mechanisms by which the target group would participate in the implementation of the nutrition component. This project will complement ongoing donor-assisted nutrition projects which provide IEC on nutrition rehabilitation of malnourished children through the health system.

Nutrition Program

3.06 The objectives of the nutrition program are: (i) to halt a deterioration of the nutritional status of the vulnerable groups (pregnant and nursing women and children below the age of three years) in targeted poor communities; and (ii) to bring about a change in nutritional behavior of mothers, particularly in terms of breastfeeding, child weaning and diarrheal treatment.

3.07 The nutrition program will involve three sub-components: (i) an IEC intervention aimed at changing nutrition behavioral patterns, supported by supplementary feeding and child growth monitoring; (ii) some basic preventive health care, through a referral service of severely malnourished children to nutrition rehabilitation centers, and health posts and centers, in particular for sick and malnourished children and for family planning (Annex II, paras. 9-10); and (iii) a fund for research and development so as to encourage development of small entrepreneurs in the food supply and processing business and to contribute policy and program improvements in the nutrition sector. A weekly take-home supplement will be provided to pregnant and nursing women and malnourished children aged 6 to 36 months (including siblings of malnourished children below 3 years) in the target areas. A monthly growth-monitoring session will be held by specially trained community nutrition centers (CNCs) staff. The age and weight of all children enrolled in the nutrition program will be registered on growth charts, and mothers will receive counselling on how well their children are doing. The nutrition program will be operated by a variety of specially trained micro-entrepreneurs (MICs), such as women groups, community associations, and youth groups, in community nutrition centers (CNCs). They will be supervised by NGOs and *Groupements d'Interet Economique* (GIEs), which will be contracted and trained specifically for this purpose and report to AGETIP. Local Steering Committees (*Comités de pilotage*) made up of local religious leaders, neighborhood chiefs, opinion leaders and various local groups and associations will provide the means towards local ownership and communty commitment and, as such, participatory advice and overall oversight.

3.08 The food supplement serves a dual purpose: to partially fill the food gap in poor peri-urban households which have had to reduce their food consumption due to lower purchasing power; and to serve as an instrument for behavioral change towards better breastfeeding and weaning practices. It is for this reason that the food supplement, growth monitoring and the IEC interventions are inseparable and will be treated in an integrated way. The project is designed to ensure that CNCs will not be regarded as food handout centers by the target population. Moreover, on-site feeding of children has been ruled out because of its heavy demands on the time of mothers and on project management capacity.

3.09 The relationship between the MOH and the CNCs will be constant and mutually beneficial. For example, when clinically indicated a child will be referred to health facilities operated by the MOH to receive preventive or curative health services. A referral person in charge of receiving any referred child will be identified. When no health infrastructure exists near a CNC, the ongoing IDA-supported Human Resources Development Project (Cr. 2255-SE) will assist in the rehabilitation or construction of new health facilities on a priority basis in targeted areas. AGETIP and the primary health care division of the MOH have mapped out for each existing health center its zone of intervention and the location of the CNCs and the district hospitals for secondary referrals of severe malnutrition cases. CNCs will provide an "outreach" base into the communities for the MOH, including extending its mother and child health care and family planning activities. To formalize relationships between MOH and AGETIP, a Convention has been signed between these two entities. *The signing of the Convention was a condition of negotiations (*para. 6.01*).* This agreement requires at least monthly visits to the CNCs by medical personnel, to deal with health facility referrals, choice and coordination of IEC messages, and mobilization of the community for health events. The District Medical Officer, who is a member of the District Nutrition Committee (Annex II, para. 10), will receive monthly monitoring reports on project progress, which will enable the health service to improve its targeting. The MOH-AGETIP agreement also spells out the mechanism by which the Community Health Committees will ensure that monthly check-ups and an essential drug package (oral rehydration salt, vitamin A, iron and folic acid, deworming and malaria tablets)

will be available to CNC participants, consistent with the cost-recovery approach being implemented by MOH.

3.10 To address micronutrient deficiencies, the project will implement a three-pronged approach: the food supplement will contain a multi-vitamin and mineral mix; micronutrient supplements (iron and folic acid tablets to pregnant women and children, and vitamin A capsules) will be distributed by the Community Health Committee; and finally, periodic distribution of deworming tablets will help decrease the problems of anemia among children.

3.11 With regard to the educational and behavioral aspects of the IEC program, existing research findings suggest that the strategy should focus on three principal themes: (i) exclusive breast feeding for the first five months and the timely introduction of appropriate weaning food thereafter, providing five meals a day for children under 3 years, in addition to breast milk; (ii) proper growth monitoring; and (iii) prevention of diarrheal diseases and of dehydration. Promotion of these themes will utilize messages, communication materials and approaches already developed and to various degrees successfully tested in projects supported by Senegal's Food and Applied Nutrition Service (SANAS), the United Nations Children Fund (UNICEF). Other existing material will also be adapted. A multi-faceted strategy for promoting the central themes will be pursued. This includes the use of mass-media, group approaches, traditional media, counseling, and training of community collaborators.

3.12 The services offered by the CNCs will be provided to the target population according to strict entry and exit criteria, especially for the food supplement in order not to create a dependency on this food. The entry and exit criteria for the target population are as follows:

- **Children aged 6-36 months**: moderately to severely malnourished children, siblings of the moderately to severely malnourished children in the same age group, and children who have failed to gain weight for two consecutive months will be those who can enter the program. The children will receive a weekly food supplement and monthly growth monitoring for six months. It is anticipated that after that period an average of 80% of the children will exit the food supplementation program; they will have gained weight and their mothers will have received significant IEC sessions. The remaining 20%, however, will probably re-enter because of lack of weight gain, needing an additional six months of the food supplement.

- **Pregnant Women**: Entering the program will be women in the last three months of their first pregnancy. They will receive the food supplement and benefit from IEC activities on a weekly basis for three months.

- **Nursing women**: nursing women who have a child in the program (less than 24 months old) or with a non-program child less than six months old will receive food supplementation and IEC on a weekly basis for six months.

- **Well-nourished children and their mothers**: mothers of children who are not malnourished will also be strongly encouraged to participate in the IEC program and to have their children's growth monitored. All women and children entering the program will be referred to health facilities for other services that they might need, thus strengthening the links between the CNCs and the public health system and virtually making the CNCs catchpoints for the provision of basic health and family planning services and the distribution of micro-nutrients.

3.13 The total number of beneficiaries of the nutrition program for the four-year project is estimated at 350,000 women and children receiving the food supplement and other CNC services, plus an additional 119,000 receiving CNC services without the supplement, resulting in a total number of beneficiaries of 469,000 persons (based on a staff of four persons per CNC). The four principal targeting criteria are: site selection (peri-urban poverty districts); demographics (pregnant and nursing women, children aged 6 to 36 months); nutritional status (malnourished and/or no weight gain); and food characteristics (sweet porridge is generally unappealing to adult males because of traditional eating habits thus, it is self-targeting). The target locations for the first year of the project (based on the ESP) are 21 neighborhoods in the cities of Pikine, Dakar, Diourbel, Kaolack, and Ziguinchor (Annex III, Attachment A), covering a total of 50,000 persons, plus an additional 17,000 persons, resulting in a total number of beneficiaries of 67,000. Table 1 presents the target population and the number of centers broken down by year. *Assurances were given during negotiations that the specific neighborhoods for the creation of CNCs for the second, third and fourth year of the project will be presented by AGETIP to IDA no later than March 1996, March 1997, and March 1998. (*para. 6.02e*).* Moreover, a large share of the country's total population will receive nutrition/health messages through mass media campaigns. About one third of the targeted population is estimated to consist of pregnant and nursing women. The project aims at reaching some 30% of all malnourished children 0-3 years in the selected urban areas. These targets will be reviewed at the time of project effectiveness, annually thereafter. The project will respond to beneficiary-led demands. Further details on the Nutrition Program and on targeting are provided in Annexes II and III.

Table 1: Nutrition Program – Beneficiaries and Centers by Year

Beneficiaries	Year 1	Year 2	Year 3	Year 4	Total
Receive Food Supp. & Services/wk					
Children	31 000	59 000	67 000	73 000	230 000
Nursing mothers and First Pregnancy Women	19 000	31 000	33 000	37 000	120 000
Sub-total	**50 000**	**90 000**	**100 000**	**110 000**	**350 000**
Receive Monthly Services Only					
Children	8 500	15 300	17 000	18 700	59 500
Mothers	8 500	15 300	17 000	18 700	59 500
TOTAL BENEFICIARIES	**67 000**	**120 600**	**134 000**	**147 400**	**469 000**
Number of new centers	72	107	104	114	397
Number of old centers		72	179	283	
Total number of opened centers	72	179	283	397	

The assumptions underlying the above estimates are found in Annex III.

3.14 Beneficiaries who receive full service (i.e., food supplement, growth monitoring, and IEC) will be charged a fee of CFAF 50/week for their participation, in keeping with the Ministry of Health's current practice of partial cost recovery for drugs. This fee will be reviewed annually in light of project objectives. The fees collected will be managed by the Local Steering Committees in collaboration with the MICs, and will be used exclusively for the CNC's upkeep and for emergency situations, such as a severely malnourished child whose mother does not have the transport money to go to the nearest health center. Transparency will be ensured by making the beneficiaries well aware

of the fee and by showing the accounts and use of the money to the CNC's Local Steering Committee.

3.15 The food supplement will be produced locally, using only local foodstuffs (pearl millet, roasted cowpeas, roasted peanuts), except for sugar and a multi-vitamin/mineral mix which will be imported. The addition of sugar is intended both to increase the energy contents of the product and to enhance its self-targeting characteristics, making it less appealing as an all-family food. One hundred grams of the dry supplement, to be prepared as a pap similar to the local millet porridge (*rouye*), provide 370-400 kcal and some 15 grams of protein, in addition to the energy and nutrients derived from breastmilk and regular food. An infant/small child can consume 100 grams of the product in about two meals. The product's characteristics are in line with international guidelines for weaning foods established by the Codex Alimentarius Commission in 1991 and with product specifications for locally manufactured fortified blended foods suggested by WFP/UNICEF.

3.16 A simple, inexpensive process will be used for the manufacture of the supplement. A group of Senegalese food processors have been identified who collectively have the capacity to produce the food. The cost of the blended food is expected to be within the normal range of this type of food produced in other countries. WFP will finance the local production of the food supplement through monetization of imported food aid and will co-ordinate the activities of the entire food chain from local procurement to processing, packaging, storage (CSA), distribution to the CNCs and quality control (ITA) at all levels. WFP will use a competitive bidding process for procurement to attempt to stimulate interest by other manufacturers in addition to those already identified. It will also identify one or more alternative formulations for the product which will enable it to substitute ingredients which might not be available at competitive prices in a given season. Moreover, WFP will reserve a portion (up to 25%) of total food-supplement requirements for possible production by small producers or micro-entrepreneurs, with a view to laying the basis for potential future small/micro-enterprise production for ensuring project sustainability. As further insurance on the sustainability of these micro-enterprises, some training in management will be provided by the project to these micro-entrepreneurs to ensure that they acquire skills for eventual diversification of their business. *As a condition of project effectiveness, WFP will confirm to the Government and IDA the availability of funds to purchase the local ingredients for the purposes of the supplementary feeding program (*para. 6.04a*)*. Details on the food-supplement are given in Annex II.

3.17 The Nutrition Program has been tested during a six-month pilot phase. This procedure was prompted by the unusual approach for the Bank of executing a nutrition program through a privately operated entity, involving large numbers of local NGOs and micro-entrepreneurs made up of a large variety of community groups. The pilot phase has shown that AGETIP is able to handle this additional activity, without jeopardizing its ongoing work program. The strong emphasis on social mobilization was an additional factor calling for particularly careful preparation and the pre-testing of many innovative features, which potentially lay the basis for a longer term food and nutrition program in Senegal.

3.18 The experience of the pilot phase has demonstrated the need to make provisions to allow AGETIP to have some flexibility over the delivery mechanism but also over the composition of the food supplement and packaging, over a future diversification of supply sources, and over ways of addressing technical issues as they arise. Therefore, a Special Fund of US$1 million will be created and managed by AGETIP. The Fund is principally designed to encourage development of small entrepreneurs in the food supply and processing business in selected peri-urban and rural areas in the vicinity of CNCs; and to contribute policy and program improvements in the nutrition sector.

3.19 It is envisioned by the mid-term review that at least some of the blended food will be produced by women's groups or other micro-entrepreneurs at or near the CNCs as an alternative to centralized large scale manufacturers. This concept entails producing a cereal-based product similar in composition and nutritional quality to the current product, but made with simple inexpensive equipment under supervised conditions. The concept also requires that the product meet the safety and health standards required of the current product, and that the local producers obtain a reasonable profit margin. The Special Fund will provide the financial resources to undertake these research and development activities with the assistance of the Senegal Food Technology Institute (ITA). The ITA will be contracted to make tests and provide analyses of costs, benefits and technical requirements to develop supply responses for the production of the food supplement at the grassroot level.

3.20 The Special Fund will provide funds, up to US$800,000, to purchase services from micro and small producers that meet the production requirements of the project. It will neither finance start-up capital costs, nor the purchase of equipment. If the product is found satisfactory, i.e., its quality is certified by ITA to meet the recommended nutritional value, its price is competitive, its quantity is estimated by WFP to be sufficient for project needs, and the logistics for its distribution is ensured by WFP, AGETIP will be able to enter into a contractual arrangement to purchase the food supplement from this producer. *The bidding documents and the sample contract detailing the obligations of the two parties are an integral part of the Manual of Procedures that were reviewed and agreed upon during negotiations (*para. 6.02b*)*. The number of small and artisanal firms selected by AGETIP to supply alternative food supplements to the project will be a function of the size of the fund and of the capacity of the firms that will have won participation in the project. This component will be discontinued as soon as the funds allocated to it are spent.

3.21 The experience gained in the first year of implementation of this project will be valuable for any broader national effort to address Senegal's nutrition problems, particularly its extension to the rural areas. Therefore, the Special Fund will finance (up to US$200,000) the revision of the 1991-1996 national nutrition program action plan, undertaken by the MOH. These efforts will be carried out in light of the project's experience in terms of identifying nutritional problems and solutions, success in utilizing NGOs to carry out nutrition interventions for vulnerable groups, development of a domestic food supplement industry, behavioral change and social mobilization aspects which lead to improved knowledge and nutrition outcomes. *Assurances were given during negotiations from Government that under the aegis of the National Commission for the Fight Against Malnutrition, the technical advisory committee will draft appropriate terms of reference of a study for updating the national nutrition action plan that will be presented to IDA for review no later than July 31, 1996 (*para. 6.02m*)*. The Commission will oversee the execution of any studies and review the results in light of project activities and experience, and will ensure their implication in a broader, longer-term rural and urban national nutrition strategy and program.

Water Program

3.22 The water component, which has been designed in line with the Third National Water Project, which is proposed for FY96 Bank support, aims at assuring adequate drinking water supplies (extension of networks to increase home supplies, installation of new standpipes) and improving general health conditions of the population concerned, during and after the lifetime of the project. This component will also ensure that the current water supply deficit in Dakar will not become a constraint in the implementation of the nutrition program, in view of the requirements for safe drinking water for the preparation of the food supplement to be distributed by the program. Studies have shown that most of the project's targeted communities do not have connections to public services and do not have ready access to potable water, both essential elements for a community's

health status and its level of environmental hygiene. KfW financed a feasibility study on all technical, socio-economic, financial and institutional aspects of the water component, with a view to ensuring the provision of safe water to the target population. In Dakar, despite the overall drinking water deficit (15-30% of requirements), it is still possible to improve the supply situation in poor peri-urban areas, because of their proximity to large water-pipe conduits and the low water demand of the poor population (40 liters per person/day for households linked up with the water supply network, and 25 liters per person/day for stand-pipe users). In the provincial capitals targeted for the first project year (Kaolack, Diourbel and Ziguinchor), the production capacity of the National Water Company of Senegal (SONES) is sufficient, so that the water supply network can be extended to the peri-urban areas.

3.23 During the first year, the water component will cover 12 poor neighborhoods that have poor water services, of which five are in Dakar and seven in the provincial towns (Diourbel one, Kaolack three, Ziguinchor three). For the first year of operation, these neighborhoods will have a total population of around 174,000 inhabitants (est. for 1995). In these areas, standpipes are to be installed and managed by private entrepreneurs. A study on the willingness of the poor to pay for the water showed that they can pay for this improved water service. For the users of standpipes, the study revealed that the poor can allocate up to 10% of their incomes for water purchases. The beneficiaries of private connections will be able to meet their bills which generally fall within the limits of the "social category" of SONES's tariff structure. Moreover, SONES has become more flexible with regard to cost recovery, offering the possibility of paying water bills in installments; this allows households not to have to pay a major amount ($8-10 every two months) in a single payment. The "drinking water" component envisages a network extension of 11.2 km and the construction of 30 public standpipes. *Assurances were given during negotiations that the proposed areas for intervention for the three subsequent years of the project will be agreed upon by AGETIP and Government and presented to IDA no later than March 1996, March 1997, and March 1998 (*para. 6.02e*)*. The program will be implemented under the supervision of AGETIP, which will sub-contract the works to local enterprises according to a schedule of charges established by SONES. For the purpose of greater involvement of the beneficiary population, the contracted enterprises will have to recruit workers and unskilled laborers from the population of the neighborhoods concerned. The procedures and practices necessary for this approach are well known and widely applied in the framework of highly labor-intensive community works already undertaken by AGETIP.

3.24 Sensitization and sanitation education are key factors for the success of the water program. For this reason, it is envisaged that a member of each CNC will be responsible for and trained in sensitizing and educating beneficiaries in the field of water. Issues to be discussed include the links between water and health, the cost of access to potable water, the hygiene aspects of water conservation, and the organization of the collection and disposal of household garbage. The IEC agents will be selected by the micro-enterprises from the population of the concerned neighborhoods, according to their qualifications and ability to influence people. Moreover, the organizational structure and management of the Nutrition Management Division (NMD) will be strengthened with the inclusion of a sanitary engineer on its staff for the entire duration of the program. The sanitary engineer will be in charge of: (i) adapting the water program to the operational framework of AGETIP, SONES and the services of the Ministry of Hydraulics, and (ii) determining the sites for the extension of the networks and the standpipes, which are to be in the same areas as the nutrition program. The details of the Water Program are presented in Annex IV.

Rural Household Food Security Program

3.25 Rural malnutrition is a very significant problem in Senegal. While benefits from the January 1994 devaluation have improved the situation for those working in agriculture, rural household food insecurity among the poor remains a very serious and continuing concern. The Bank's Agriculture Sectoral Adjustment Loan is expected to result in further improvements in the livelihoods of those active in agriculture, and enhance food security, particularly for the poor living in rural areas. Nevertheless, for those who are chronically food insecure, a more targeted effort is required. This component, therefore, will formulate and test targeted approaches to assist chronically food insecure and malnourished rural women and children living below the poverty line. It will do so by making available food security and nutrition information and advice, food supplements, food, cash or cash equivalents, principally through labor-intensive infrastructure and income-generating activities.

3.26 The intention is to learn from the first phase of project operations in the ten priority urban centers. It is also the intention to gain a better understanding of where and how to improve conditions for rural women and children through behavioral change, greater access to food, diet diversity, clean water, food production and income-generating programs. Further, this will be an opportunity to look more closely at time allocation patterns of rural mothers, and ways to enhance women's control over household income. A useful starting point in identifying and tracking vulnerable groups in rural communities is the *CSA's Suivi des zones et groupes à risques alimentaires*, a monthly bulletin identifying trends in food insecure regions and groups which is done in cooperation with the MOH.

3.27 AGETIP's rural partners will be principally those rural organizations which are similar to the MOCs and MICs in peri-urban areas. These would include some of the existing 3,600 rural and urban women groups in Senegal. In addition, the Federation of Non-Governmental Organizations in Senegal (FONGS) and the associated *Comité National de Concertation Rurale* (CNCR) provide technical and administrative support to member farmer organizations, and could perform MOC-like functions. Similarly, traditional women's associations have social and safety net functions, with some taking up regular collections which go to members in need. Many of these groups have been further organized by rural Government agents (*Monitrices Rurales)* to become Women Promotion Groups (GPF) retaining traditional functions while expanding into economic activities. Small economic interest groups (GIEs) function in rural areas, as they do in urban settings, with the added feature that agricultural extension activities for women are channeled through such groups.

3.28 The rural household food security program will be developed in collaboration with other donors, such as WFP. While experimentation is foreseen, the initial approach will be to develop labor-intensive community micro-projects, such as wells, village health posts, classrooms, school canteens, community gardens, food storage facilities, and maintenance of communal roads which are of principal benefit to the poorest households. Targeting in the rural areas will be done through pre-qualified NGOs and other active rural entities such as the PNVA and the *Monitrices Rurales*, who will inform village groups of the program and mobilize these groups to be able to carry them out. These organizing entities will be trained in reaching poor village households, in order to be able to assist them in forming MIC-like groups for infrastructure construction activities and to identify promising income-generating activities.

3.29 In determining sub-project selection, food security concerns of poor households will take precedence over strictly investment objectives. Details on the selection criteria, institutional arrangements for micro-project implementation and supervision will be developed by a working group composed of AGETIP, technical representatives from the National Commission members, NGOs, and representatives of the Consultative Group. By June 1997, a proposal, satisfactory to IDA, will have been prepared and presented for approval to the National Commission for the Fight Against Malnutrition (see terms of reference in Annex V). *Assurances were given during negotiations that the action plan to implement the household food security program will be completed two months prior to the mid-term review by WFP and IDA (*para 6.02n*). Disbursements for the rural household food security program will be conditioned on an approved plan of action, acceptable to IDA during the mid-term review (*para 6.05*).* The first set of activities will commence during the June-September 1997 hungry period and be fully underway by February-April 1998, the period of low rural labor demand.

Social Mobilization and IEC Programs

3.30 The social mobilization and IEC Programs, central to all the components of the project, will be used to encourage the participation of all those involved in the project and to stimulate positive behavior change among the target populations. The project is based on a premise of broad and sustained political support, good communications between all levels of stakeholders and community participation. The social mobilization objectives are: (i) to mobilize political support and collaboration for the project at the national, regional and community level; (ii) to ensure that the community has a sense of ownership of the project and participates in its planning and execution; and (iii) to improve the capacity of communities to provide and broaden access to nutrition and related health services.

3.31 Critical elements in the mobilization strategy at the national level include the political support provided by the National Commission for the Fight Against Malnutrition, as well as national planning meetings, such as ZOPP workshops. Mass media campaigns will aim at sensitizing the public at-large to the problems addressed by the project and their solutions. A key factor in mobilization efforts at the community level is the establishment of local steering committees, composed of local leaders, GIEs and associations, and representatives of local authorities. These committees will serve as a mechanism for communication and coordination among all local stake-holders in the project, and as an instrument for community supervision, problem identification and problem-solving. The social mobilization strategy at the community level also includes a variety of public meetings tailored to local traditions (including local language theater, *griot* or public speakers). The social mobilization component will be directed by community supervisors (MOC) in conjunction with agents of the CNC and will be supervised by AGETIP.

3.32 The objectives of the IEC program are: (i) to stimulate positive behavioral change among the target population and strengthen their capacity to manage their nutrition, health and related problems; and (ii) to increase awareness of nutrition, health and sanitation conditions and ways of addressing them among the public at-large, including the leaders responsible for the provision of social services. IEC strategies, messages and materials are being developed and pre-tested in collaboration with Government ministries including the MOH and the Ministry of Family, Women and Children; NGOs; international organizations such as UNICEF and USAID; and private sector consulting firms. Their primary target groups are pregnant and nursing women in the case of the nutrition program, and households and communities in the targeted poverty areas of the water program. This difference in target groups within the overall target population will require distinct IEC strategies for each program. The nutrition program will rely heavily on client consultation at the

CNC in the form of individual counseling (through the CNC's Community Health Agent), group meetings (organized by the CNC's IEC agent), household visits of CNC agents to targeted women, and community-level activities. In the case of the water program, emphasis will be given to household- and community-level approaches. The latter would--as in the case of social mobilization--include traditional media such as folklore theater.

3.33 The mass media will play a complementary role in the delivery of IEC messages for both programs. Particular emphasis will be placed on broadcasts in national languages on regional radio stations. Initially, IEC messages would focus on growth monitoring; breast feeding and good weaning practices; oral rehydration; and good water and hygiene practices, as well as prudent use and continuing maintenance of the infrastructure constructed in the water program. Other themes will be identified and messages and materials developed during project implementation. The effectiveness of these messages in the project context will be ascertained through annual beneficiary assessments and Knowledge, Attitude and Practice (KAP) studies. There will be a need to develop new messages and materials where none exist and in response to obstacles identified through client consultation.

3.34 Major emphasis will be placed on client consultation and research to guide and improve the quality and efficiency of project interventions. Behavioral and operational research will be integrated in the development of strategies, messages and materials. This will require research: (i) to gain insights into the target population's behavior; (ii) to identify obstacles to changes in behavior and misinformation; (iii) to pre-test strategies and materials with target populations; and (iv) to monitor and evaluate the program to measure IEC-induced behavioral change. This work will be mainly conducted by private consultants recruited by AGETIP. Further details are given in Annex VI.

Training

3.35 The training component will include: (i) a package of on-the-job training services related to work organization, management, and technical and nutritional training for micro-entrepreneurs who are awarded contracts for delivery of nutrition services; (ii) a training program for supervisory services to be carried out through contracted NGOs; and (iii) training in how to plan and conduct IEC, including strategy and materials development, use of materials, and inter-personal communications techniques. IEC training will be provided to small and micro-entrepreneurs and local NGOs, and to participants involved in social mobilization. Training of those implementing the social mobilization and IEC programs will be done through the training of trainer model. The training program will be contracted out to private pre-selected firms who have been training entrepreneurs and supervisors of existing social mobilization aspect in projects managed by AGETIP. Training modules have already been developed and adapted from existing materials. *Agreement on a detailed training program for entrepreneurs and supervisors and the IEC program for beneficiaries will be submitted to IDA for review no later than July 1, 1995.* (para. 6.02g).

3.36 During project preparation, training was provided to some 120 micro-entrepreneurs and their staff, as well as to a number of supervisors (NGOs) in order to implement the pilot phase. Young medical doctors, formerly unemployed, have been trained to perform training and special supervising functions in the nutrition program. It is expected that during the life of the project nearly 4000 persons, including micro-entrepreneurs, supervisors, and AGETIP staff, will benefit from training. Further articulation of the length and content of the training program will be developed, based on continuing information generated during the pilot phase. At present, an initial training program is envisaged for CNC staff prior to the start-up of a CNC, to be followed by a second

training session after approximately six months of operation, and a third session after one year. Annex VII describes the Training program.

Monitoring and Evaluation

3.37 A monitoring and evaluation system will be set up: (i) to permit the continuous review and calibration of the program design; (ii) to strengthen the Government's monitoring and evaluation capacity in nutrition in order to analyze the cost-effectiveness and appropriateness of various intervention strategies; (iii) to determine the progress of project activities according to planned targets and schedule, and to propose appropriate corrective actions; (iv) to verify and update existing information on the extent, severity and location of various forms of malnutrition; (v) to establish the impact of project activities on nutritional status and to relate these changes to other socio-economic and behavioral variables; and (vi) to provide a basis for ongoing evaluation of the project effectiveness by local, district and national level government. The monitoring system will allow for quick analysis and availability of information at all levels of project management through a simple, computerized reporting system, with warning thresholds. A baseline census for each geographic area of project intervention will provide the information base to identify malnourished children and to monitor project progress. The evaluation system will consist of baseline and impact studies in cross-sectional samples of target and control populations. *Agreement was reached on the annual monitoring indicators, supervision guides, and the terms of reference for the base-line and impact evaluation studies to be submitted to IDA no later than July 1, 1995* (paras. 6.02 k and l). It should be kept in mind that measurement of project impact will be affected by the considerable mobility (in- and out-migration) of the population in the targeted areas. Several operations research studies will be undertaken to gather information that neither the monitoring nor the evaluation system will reveal concerning ways to improve project effectiveness (Annex VIII). Finally, in order to improve the monitoring of the overall situation of vulnerable groups in Senegal, the project will finance short-term technical assistance in the Ministry of Economy, Finance and Planning.

C. Status of Project Preparation

3.38 During project preparation a number of studies, financed under the Second Public Works and Employment Project (Cr. No. 2369-SE), were conducted to deepen the understanding of poverty and malnutrition in Senegal and ensure greater client consultation and participation. These studies included:

a. a beneficiary assessment of poor urban households to examine changes in household food consumption behavior following the devaluation and to solicit these households' views on a supplemental feeding program;

b. a targeting study to identify poor neighborhoods in regional capitals and other main urban centers, as well as the project's target population in these areas;

c. a study of eating habits of the target population in urban areas to identify breastfeeding practices, weaning foods and food habits of women, so as to help define an appropriate composition of the food supplement;

d. a study on social mobilization to determine the most effective methods of encouraging community participation and ownership;

e. a census of community groups, NGOs and women associations; and

f. a study on existing health/nutrition services and facilities in the targeted areas.

3.39 In addition, the prospective co-financiers, the World Food Program (WFP) and Germany (KfW), have been intensively involved in project preparation, since identification started in March 1994. WFP-financed a study ("Local Production of a Blended Food in Senegal for Use in the Community Nutrition Project") to determine the most appropriate composition of the food supplement. The recommendations of the study were reviewed by WFP, AGETIP, KfW and the World Bank in July 1994. Following this meeting, a supplementary study (*Etude relative à la production d'un aliment de complément pour le Projet de Nutrition Communautaire au Sénégal*) was conducted in August 1994 by a local consultant under WFP and AGETIP supervision. These studies prompted the following pilot activities: (i) a trial run for the production of the food supplement; (ii) a test of the acceptability of the food supplement with a sample of the target population; (iii) the selection of targeted neighborhoods; (iv) a census and nutritional screening of the population in the targeted areas; and (v) a workshop of project stakeholders on the IEC and social mobilization strategy. The studies have also contributed to the preparation of the pilot phase, which was launched in three neighborhoods in November 1994 in order to field test project approaches and procedures and to fine-tune them prior to actual project implementation, thus ensuring effective project implementation.

3.40 On the institutional side, a National Commission for the Fight Against Malnutrition was created at the Presidency in June 1994 to ensure that a social safety net for poor households be available. The Commission, chaired by the President of Senegal, is composed of representatives of the Prime Minister's Office, of the ministries of Economy, Finance and Plan, Health and Social Action, and Women, Children and Family Affairs, AGETIP, and NGOs. The Commission is playing a strong role in supporting AGETIP's community mobilization efforts and in ensuring coordination among ministries involved in project implementation. A Technical Committee, chaired by the MOH and composed of the ministries of Women, Children and the Family, of the Economy, Finance and Plan, and AGETIP, was formed to assist in project design. This Committee is supported by a Consultative Committee which includes representatives of UNICEF, WFP, USAID, GTZ, ORSTOM, SANAS, DSSP, EPS, ENDA, and the BASICS Project, so as to allow an exchange of views on a number of technical, nutritional and institutional issues and to ensure that best practice is followed.

3.41 A ZOPP workshop was held during project preparation for key stakeholders involved in the planning of the project. The week-long planning workshop was organized and financed with GTZ's assistance. The workshop brought together representatives of Government Ministries, the Presidency, NGOs and donors. The following Ministries were represented: Health and Social Action; Family, Women and Children; Agriculture; Finance; and Interior. The Secretary General of the Presidency also attended. The workshop identified nutrition-related health problems and obstacles in dealing with them. The objectives of the project were then clarified, project activities and intended results identified, and indicators to monitor results defined. The ZOPP was useful in developing a framework for the project and a consensus between the Government, the financial partners and NGOs.

3.42 UNICEF has also provided advice throughout project preparation. It has contributed extensively to the planning of the IEC component by: (i) providing pedagogical materials on key areas, especially breastfeeding, diarrhea, anemia and deworming; (ii) supplying SANAS with relevant leaflets; and (iii) holding a seminar/workshop in September 1994 to review and further

develop nutrition/IEC modules and medias (audio-visual spots, posters, flip charts and root medias) used in Senegal. AGETIP attended the September seminar which was held with key partners, SANAS, EPS, the BASICS Project, and selected NGOs (e. g. ENDA). In addition, AGETIP held another seminar with these key partners and UNICEF in December 1994. The IEC strategy and the yearly planning of IEC activities for the project were finalized during the seminar.

3.43 In the process of project planning, an examination of the issue of potable water in the poor neighborhoods indicated the need for further review of water sources. The Government requested an advance under the Project Preparation Facility to finance such a study during the pilot phase. A PPF of US$500,000 was granted for this purpose, as well as to fund the activities of the pilot phase up to project effectiveness. The water study was completed in December 1994.

3.44 For the pilot phase of the project, one neighborhood was selected in Dakar (Grand Yoff Arafat), one in Pikine (Guinaw Rail) and one in Diourbel (Keur Cheikh Ibra). In order to validate the data base used for the targeting and to verify the prevalence of malnutrition among children, a baseline survey of all households in the three urban districts targeted was undertaken, during which all children aged 6 to 36 months were screened for malnutrition. The survey indicated that roughly 30% of the children suffered from moderate to severe malnutrition. It was estimated that about 6,800 persons (children 6-36 months and pregnant and nursing women) constituted the target group for the pilot phase under the orginal eligibility criteria.

3.45 AGETIP initiated the pilot phase with the support of two NGOs (ENDA, ADMUR), and one GIE (*Touba Boustane*) as supervisors, and 23 micro-enterprises. In planning the pilot, AGETIP involved the Governors of the two regions concerned, and the Aide-Mémoire of the July preparatory mission was distributed to the regional authorities, the municipalities, the services of the MOH, SONES, and neighborhood leaders (*chefs de quartier*). In addition, AGETIP organized community meetings that were attended by neighborhood leaders and representatives, community group leaders (youth, women, and economic groups), and local NGOs. Based on these meetings, Steering Committees (*Comités de Pilotage*) were formed and given official status by the *Préfet* or the Governor of the region. These committees have been expanded to include local health and hygiene personnel of the MOH, as well as community development and SONES representatives.

3.46 In February 1995, 58% of Guinaw Rail's malnourished children were receiving food supplementation and growth monitoring at the CNCs. In Diourbel and Arafat, however, the number of beneficiary children registered at the CNCs significantly exceeded the number registered in the baseline survey -- by some 30% and nearly 100%, respectively. Limited comparability of the data from the baseline survey (using the arm-circumference indicator) and the CNC data (based on the weight-for-height indicator) and possible flaws in the baseline survey and CNC records can only partially explain the significantly higher pilot phase numbers of malnourished children. There is reason to believe, confirmed by informal information provided by local NGOs, that child malnutrition has increased in these neighborhoods. The issue will be kept under review and will be further evaluated after project effectiveness. The high influx of people to CNCs has demonstrated (a) the very high demand for the food supplement and the services provided by the CNCs; (b) the right targeting of neighborhoods; and (c) the need for more restrictive and fine-tuned eligibility criteria as already reflected in paragraph 3.12. Focus groups have revealed that women appreciate the food supplement, the IEC (notably group IEC) and growth monitoring services. Women mentioned that the supplement was generally prepared as porridge in addition to other meals, but was also given to other family children. They also expressed the desirability of associating some other health- and development-related activities with the CNCs. Problems encountered regarding production, quality control and packaging of the food supplement have been resolved in collaboration

with WFP and ITA. In addition, the pilot phase experience has indicated that the weekly ration size could be reduced (from 1 kg to 700g/beneficiary/week) because intra-family leakage is taken into account by allowing the siblings of malnourished children to benefit from the food supplement and since the reduced ration provides the required daily caloric intake of 370-400 kcal.

D. Project Costs and Financing

Costs

3.47 Total costs for the proposed project, excluding direct and indirect taxes and duties, are estimated at US$28.0 million. AGETIP is a not-for-profit enterprise that has tax-exempt status. Base costs are estimated at US$25.4 million equivalent, and total contingencies amount to US$2.6 million equivalent (9.3% of total project costs). Foreign exchange would account for US$5.1 million, or 18.2% of total project costs. Detailed cost tables are presented in Annex IX.

3.48 Physical contingencies have been calculated at 5% for equipment, vehicles and materials. The following price contingencies have been included: (i) on foreign exchange expenditures 2.4% per annum, and (ii) on local cost expenditures 7.8% in 1995 and 2.5% per annum thereafter. Estimates for equipment, training, studies, and vehicles are based on the experience of AGETIP.

3.49 Project costs are based on January 1995 prices. Project costs by component, free of taxes and duties, are shown in Table 2 below. The nutrition program would account for 60.2% of base costs, the water program 11%, the rural household food security program 4.7%, social mobilization and IEC activities 6.3%, the package of training 5.9%, monitoring and evaluation 5.9%, and AGETIP's management fee 3.9%.

Table 2: Project Cost Summary (net of taxes and duties)
(US$ million)

	Local	Foreign	Total
Nutrition Program	14.6	0.7	15.3
Water Program	0.6	2.2	2.8
Rural Household Food Security Program	1.1	0.1	1.2
Social Mobilization and IEC	1.3	0.3	1.6
Training	1.1	0.4	1.5
Monitoring and Evaluation	0.8	0.7	1.5
AGETIP Management	0.7	0.3	1.0
Pilot Operations and Project Preparation	0.4	0.1	0.5
Total BASE COSTS	20.6	4.8	25.4
Physical and price contingencies	2.3	0.3	2.6
Total PROJECT COSTS	**22.9**	**5.1**	**28.0**

Financing

3.50 Of the US$28.0 million total project costs, IDA would finance US$18.2 million equivalent, or 65% of total project costs, for the delivery services of the nutrition program, the rural household food security program, the social mobilization and IEC program, the training package, the monitoring and evaluation system, and project management (Table 3). Through parallel co-financing, WFP would contribute US$5.2 million, or 18.6% of total project costs, for the nutrition program (funding food, processing and logistics of distribution). Through parallel co-financing, KfW would fund US$3.0 million equivalent, or 10.7% of total project costs, to finance the water program. UNICEF has contributed extensively to the planning of the social mobilization and IEC component. The Government is expected to contribute US$1.6 million equivalent, or 5.7% of total project costs.

Table 3: Financing Plan by Disbursement Category*
(US$ million)

	IDA		WFP		Germany		Govt.		Total	
	Amt	%	Amt	%	Amt	%	Amt	%	Amt	%
Water Program					2.8	10.0			2.8	10.0
Nutrition services	9.2	32.8	5.2	18.6			1.6	5.7	16.0	57.1
Training	1.5	5.4							1.5	5.4
AGETIP Mgmt Fee	0.8	2.9			0.2	0.7			1.0	3.6
Consultant Services	3.6	12.9							3.6	12.9
PPF Advance	0.5	1.8							0.5	1.8
Unallocated	2.6	9.2							2.6	9.2
Total Disbursements	**18.2**	65.0	**5.2**	18.6	**3.0**	10.7	**1.6**	5.7	**28.0**	100.0

* Costs are net of taxes and duties /

IV. PROJECT IMPLEMENTATION

A. Project Management

4.01 The Government of Senegal has designated AGETIP as the executing agency for this project, as AGETIP has proven its ability to execute a broad range of projects successfully and expeditiously, mainly because of its strong managerial and operational capacity. To that effect, an amendment to the *Convention* between AGETIP and the Government of Senegal was agreed upon during negotiations, *and its signing will be the condition of Board Presentation* (para. 6.03*)*. To ensure that AGETIP can effectively expand this capacity to the broader mandate of executing community-based nutrition programs, the newly-created Nutrition Management Division will include a small technical staff specialized in the areas of nutrition and health, water, IEC and social mobilization, and monitoring and evaluation, under the guidance of a manager. *During negotiations, IDA received official notification of the nomination of the divisional director of AGETIP to manage this new division (para. 6.01). The appointment of the key staff of the Nutrition Management Division by AGETIP is a condition of project effectiveness (*para. 6.04c*). During negotiations, assurances were given that the Government of Senegal will agree that at all times*

the management of this Division will be handled by a person acceptable to IDA (para. 6.02d*)*. AGETIP will execute the project under the established procedures of "delegated contract management", with extensive use of short-term consultants. Assurances *were given at negotiations that at the mid-term review an assessment will be carried out to determine the feasibility of separating the NMD from AGETIP to make it a stand-alone agency (*para. 6.02j*)*. There will also be a review as to whether other entities could execute delegated contract management responsibilities similar to those performed by AGETIP. In view of the growing role of AGETIP in delegated project contracting, this action aims at lessening the monopoly risk that may otherwise be created. Moreover, starting with a pilot, the project will proceed in a phased manner, so as to ensure that organizational, management and technical details have been sufficiently tested and adjusted to account for absorptive capacity conditions in the field. Project implementation will be guided by a detailed Manual of Procedures which, among others things, stipulates entry and exit criteria for program participation to avoid food dependency, and establishes linkages with the health system to ensure referral health services. The Manual clearly spells out objective criteria for cost-effective targeting and specific indicators to monitor project implementation. In order to improve coordination with the health system, clear contractual arrangements between AGETIP and the MOH are defined in the Manual of Procedures. *A draft of the Manual of Procedures was sent to IDA and agreement on it was reached during negotiations (*paras. 6.01 and 6.02b*)*.

4.02 In order to ensure greater ownership of the project, District Steering Committees (*Comités de Pilotage*) will be created in each district to play an advisory role and will be given official status by decree of the Governor of the region. Members of the committees will be representatives of the Governor, *Préfet* or *Sous-Préfet*, the District medical officer, the mayor, and neighborhood leaders, as well as agents from technical services involved in the project. Local committees *(Comités de Pilotage de quartiers)* will be organized in each target neighborhood, in order to participate in the elaboration of the social mobilization strategy pertinent to the neighborhood and to provide periodic feedback to AGETIP on the overall project impact and performance.

4.03 **Nutrition program**. Local groups--including GIEs, women groups, community associations, and youth groups--will be the small and micro-entrepreneurs for the nutrition service program. These groups will be instrumental to the success of this project since they will be the entry point to communities and will provide the link between the planners at the national level and the beneficiaries. They will be responsible for identifying and motivating beneficiaries, ensuring greater community participation, and for delivering nutrition services. Supervisors of the nutrition centers (NGOs and consultants), defined as organized groups with a technical capacity and legal status, will be instrumental in the training and supervision of small and micro-entrepreneurs responsible for managing the supplementary feeding program at the community level. A *roster of pre-qualified small and micro-entrepreneurs and supervisors will be submitted to IDA no later than July 1, 1995. (*para. 6.02h*)*. The selection of the entrepreneurs and supervisors will be based on competitive bidding, as spelled out in the Manual of Procedures. Local health structures will participate in the project and provide primary care to pregnant and nursing women and children referred by the CNC for periodic clinical exams and other basic health services. AGETIP has entered into an agreement with the MOH to ensure the collaboration of the local health structures in this endeavor.

4.04 **Water Program**. This component will be implemented under the supervision of AGETIP, which will sub-contract the technical execution to local enterprises according to a schedule of charges established by SONES. For the purpose of greater involvement of the beneficiary population, the contracted enterprises will recruit workers and unskilled laborers from the targeted neighborhoods. Procedures and practices known and widely applied in the framework of highly

labor-intensive community works previously undertaken by AGETIP will be applied. AGETIP will enter into an agreement with SONES to ensure the respect of technical standards by the local contractors. *The signing of this agreement, under terms and conditions acceptable to IDA, is a condition of project effectiveness (*para. 6.04d*).* In order to ensure proper coordination of activities with the water sector, the Ministry of Hydraulics will be part of the National Commission for the Fight against Malnutrition.

4.05 **Rural Household Food Security**. Local community personnel will be recruited to implement and supervise this program, as done under the peri-urban component. However, more detailed preparation of this component will be undertaken during the first and second year of project implementation in order to target the rural areas where the project will intervene, in line with the findings of the Senegal Poverty Assessment, to determine the type of works, and to specify the most appropriate time for this intervention. It is envisaged that this component will become fully operational in the third year of project implementation. *Disbursement on this component will be conditional upon the approval by IDA of a plan of action and an investment program that will be presented by AGETIP at the medium-term review of the project (*para. 6.05*).*

4.06 **Social Mobilization and IEC**. NGOs or other private sector organizations will be responsible for developing training modules and IEC materials (building on existing materials) and for conducting the training of the small and micro-entrepreneurs and supervisors for the nutrition centers. The Manual of Procedures provides detailed criteria for pre-qualification and selection of these groups. Similar groups will also be hired to conduct: (i) IEC and certain monitoring and evaluation functions; and (ii) research, including beneficiary studies to identify nutrition and food security needs, which would serve as a basis for adjusting project planning and strategy development during project implementation.

4.07 **Monitoring and Evaluation System**. An elaborate, yet simple, monitoring system has been developed to check performance and efficiency of micro-entrepreneurs and supervisors. This system will provide readily understandable information on project coverage and on the evolution of the nutritional situation of children who come to the CNC (para. 4.08).

B. Project Monitoring and Evaluation

4.08 **Monitoring** will be implemented through (i) a management information system (MIS) that provides feedback to each level; and, (ii) operations research. The MIS has already been designed and builds upon a successful system in use by AGETIP for its public works activities. The system operates as follows: (i) the CNCs will use a simple reporting form that is presented in the Manual of Procedures to record their activities; (ii) the MOCs will input the records kept manually by the CNCs and send them electronically via modem to AGETIP; (iii) selected performance information on the centers will be transmitted to AGETIP's NMD by the supervisors (MOCs) of the CNC on a monthly basis; (iv) the monitoring agent at AGETIP headquarters will process the information received and submit all performance statistics to the NMD's manager, on a monthly basis; (v) the performance of each CNC will then be compared to pre-established performance norms and fed back by AGETIP to the CNC and the MOCs; and (vi) corrective measures will be recommended for CNCs that show low performance. The norm for a CNC is determined in terms of general attendance, coverage of children, number of children receiving the food supplement and key growth monitoring, nutritional improvements of children (children graduating after three months, children graduating after six months, total children graduating); number of pregnant women entering the program, number of pregnant and nursing women receiving supplement, number of clients referred to health services, and coverage of relapses for past six months. Operations research will be

triggered, as needed, by questions raised throughout the supervision system. The system is set up so as to facilitate impact evaluation and longitudinal performance studies of changing indicators on nutritional status, on knowledge, attitudes and practices concerning nutrition, on hygiene and health, and on the satisfaction of the population. In addition, the system will also allow the measuring of the cost-effectiveness of the program at national and local levels. A series of ZOPP workshops will be held during project implementation to assess progress, build consensus, and agree on the next course of action with all concerned stakeholders from government to community leaders. The monitoring system is described in detail in Annex VIII.

4.09 To ensure sustainability, the beneficiary population will continue to be involved in project implementation. This will be done through (i) a yearly beneficiary assessment, the results of which will be taken into account in relevant project components; and (ii) a monitoring system that requires supervisors to visit beneficiaries and non-beneficiaries in order to identify potential problems and offer suggestions. Every six months, the CNC's Local Steering Committee will be given information on project progress and problems encountered, so that constraints can be assessed locally, and local solutions sought. The District Steering Committee will also be informed and will be asked to find solutions that could not be found at the local level. Project sustainability is closely linked to macroeconomic performance, namely that only through economic growth and cost-effective public expenditures will the Government be able to take over the nutrition activities started under the project.

4.10 **Evaluation** indicators will consist of impact measures on both the beneficiaries and the overall target population (Annex VIII). Sample cross-sectional surveys of project beneficiaries and non-beneficiaries will be carried out yearly in three out of the ten cities to analyze the evolution of malnutrition rates, household food insecurity, and access to water, and thus to estimate project impact and opportunities for project improvement.

C. Procurement

4.11 The procurement procedures according to which AGETIP will select small contractors and micro-entrepreneurs and award contracts are simplified procedures designed under the Bank's Public Works and Employment projects and outlined in the current Manual of Procedures of AGETIP for small contractors and the supplementary manual developed by AGETIP for micro-entrepreneurs under the project. It is anticipated that all contracts for nutrition services will be below CFAF 2.8 million (US$5,000) annually and those for supervisory services for CFAF 4.8 million (US$10,000). AGETIP will pre-qualify and maintain a roster of entrepreneurs eligible for National Competitive Bidding (LCB), established according to procedures acceptable to IDA and detailed in the Manual of Procedures of the roster will stay open during project execution so as to allow additional applications at any time. Large firms are not likely to be interested in the type and size of most activities proposed, but they will not be excluded from participating in the process. The purpose of pre-qualification will be to determine the micro-entrepreneurs who can demonstrate their ability to carry out the proposed nutrition programs effectively and would, therefore, be eligible to bid.

Table 4: Summary of Proposed Procurement Arrangements*
(US$ Million)

Project Element	Procurement Method			N.B.F.	TOTAL
	ICB	LCB	Other		
Water Program				2.8	2.8
Equipment	1.2 (1.2)	0.4 (0.4)	0.1 (0.1)		1.7 (1.7)
Service Contracts a/			7.8 (7.8)	1.8	9.6 (7.8)
Consultant Services b/			6.1 (6.1)		6.1 (6.1)
Miscellaneous Operating Costs			2.1 (2.1)		2.1 (2.1)
Food PPF Advance		0.5 (0.5)		5.2	5.2 0.5 (0.5)
TOTAL IDA financed	1.2 (1.2)	0.9 (0.9)	16.1 (16.1)	9.8	28.0 (18.2)

Costs are net of taxes and duties.
Notes: Totals may not add up due to rounding. Figures in parentheses show IDA amount and are free of taxes and duties.
N.B.F. = Not Bank-Financed. Nutrition activities will be procured in accordance with AGETIP's Procedural Manual (acceptable to IDA). Consulting services will be procured according to IDA guidelines.
a/ For services provided by micro-entrepreneurs.
b/ For supervisory services provided by NGOs and for studies and technical assistance by private firms or individuals.

4.12 For the delivery of nutrition services (including IEC services, referral services for severely malnourished children, distribution of iron folate and ORT), procurement procedures will be consistent with those acceptable for service contracts. These services will be contracted out to micro-entrepreneurs. The core of the procurement procedure for micro-entrepreneurs expected to participate in the nutrition program will be local advertisement of a proposed contract to service a community nutrition center. All micro-entrepreneurs registered in the roster will be invited to bid and deliver services under the supervision of NGOs. Those expected to participate comprise primarily small community groups (such as women groups, community associations, GIEs and youth groups). Qualification criteria for micro-entrepreneurs include formal registration as a legal entity and a proven record of relevant community activity.

4.13 Procurement arrangements for the water works and rehabilitation of CNCs are designed to address poverty alleviation objectives. These works will be sized so that they can be implemented by small contractors, using simple, labor-intensive techniques already demonstrated by AGETIP. The quality of the works performed will be ensured through technical supervision by qualified engineering bureaus or individuals registered with AGETIP and under successfully tested AGETIP procedures.

4.14 Contracts for equipment, vehicles and materials will be grouped into bid packages and those in excess of US$200,000 will be awarded on the basis of international competitive bidding (ICB). AGETIP will use World Bank standard bidding documents. For such ICB, local

manufacturers will enjoy a preference margin of 15% or applicable custom duties, whichever is lower. National competitive bidding (LCB), using procedures which have been found acceptable to IDA, will be used for procurement involving contracts lower than US$200,000 but greater than US$ 30,000, up to a total of US$0.4 million over the life of the project. Contracts below US$30,000 for vehicles, small items of equipment and office supplies will be procured by local and/or international shopping procedures acceptable to IDA with a minimum of 3 price quotations up to an aggregate amount not to exceed US$0.1 million.

4.15 Consultant services for training, technical assistance, and project monitoring will be procured according to IDA guidelines outlined in the "Use of Consultants by World Bank Borrower and by the World Bank as Executing Agency". This includes audits and accounting services, capacity building, contract management by AGETIP and training of NGOs providing technical advice and supervision to micro-entrepreneurs, nutrition monitoring and evaluation activities, and implementation of a nutrition IEC program. Given the specific nature of these activities, contracts will be awarded to institutions or consultants satisfactory to IDA on the basis of work programs and terms of reference or in a competitive way from established pre-qualified rosters.

4.16 As the designated executing agency for the project, AGETIP will charge the project a 5% overhead-cost fee for the provision of overall management services. These services include project management (preparation, scheduling, and implementation), supervision, legal counsel, administration and office space. The project will benefit from AGETIP's umbrella, which will ensure its independence and autonomy. The AGETIP management system has established a proven record of low cost service (contract) delivery and independence of action in critical areas such as project review and approval, disbursement of funds and implementation. Specifically, since its creation in 1989, AGETIP has proven its capacity to manage large numbers of contracts with small enterprises in the building and public works sector, using social mobilization as a major instrument for project implementation at the community level. To extend this capacity to the management of the activities envisaged under the project, AGETIP will set up a Nutrition Management Division, comprising of a Coordinating Director and one technical staff for each of the following areas: nutrition/health services; water; training; IEC and social mobilization; and monitoring and evaluation.

4.17 Prior Bank review will be required for all contracts valued at more than US $200,000 equivalent. Prior Bank review will not apply to consultant services estimated to cost less than US$ 100,000 for firms and US$50,000 for individuals. However, this exception to prior review will not apply to the terms of references of such contracts, to single-source hiring of firms, to assignment of a critical nature as determined by IDA, and to amendment of contracts raising the contract value to US$100,000 or more for firms and US$50,000 or more for individuals.

D. Disbursement

4.18 The project is expected to be implemented over a four-year period, with the closing date set at June 30, 2000, and the IDA credit disbursed over four years, according to the categories shown in table 5. The estimated disbursement profile is shown in Annex X. The Credit is expected to disburse ahead of the regional disbursement profile for population, health, and nutrition projects because the project will be implemented through agents of the private sector. Disbursements will be made on the basis of 100% of total expenditures free of direct and indirect taxes and duties for IDA's share of the services linked to the nutrition program, the rural household food security program, social mobilization and IEC program, training, and project management *The Government's deposit of an aggregate initial amount of not less than US$0.4 million equivalent in CFA Francs in AGETIP's account as its contribution for the first year is a condition of project effectiveness* (para.

6.04b). *In addition, assurances were given during negotiations that the Government deposit its counterpart funds at the beginning of each year of project implementation, i.e., July 1, 1996, July 1, 1997, and July 1, 1998 (*para. 6.02i*).* It is understood that the percentages in Table 5 have been calculated on the basis of the provisions 309 and 1091 of the Law 92-40 of July 9, 1992 of the Government of Senegal, which exempt the goods and works to be financed from taxes and customs duties levied by the Government of Senegal. If any change is made to this Law which has the effect of levying taxes or customs duties on such goods or works, the percentages referred to above shall be decreased in accordance with the provisions of Section 5.08 of the General Conditions.

Table 5: Allocation and Disbursement of the IDA Credit

CATEGORY OF EXPENDITURES	AMOUNT (US$ Million)	PERCENTAGE FINANCED (free of duties and taxes)
Equipment	1.4	100%
Consultant Services (TA, training, studies)	13.7	100%
PPF Advance	0.5	100%
Unallocated	2.6	
TOTAL	18.2	

4.19 To expedite project implementation, a Special Account denominated in CFAF will be opened at a commercial bank and operated on terms and conditions acceptable to IDA. The authorized allocation will be CFAF 600 million, representing anticipated eligible expenditures financed by IDA for a 4-month period. IDA will make an initial deposit of those amounts from the proposed credit immediately upon credit effectiveness. Replenishment of the Special Account will be made on the basis of full documentation, except for contracts valued at less than US$100,000 equivalent, for which disbursements will be made on the basis of Statements of Expenses (SOE). In such cases the relevant documentation will be retained by AGETIP for review by IDA supervision missions and the project's external auditors.

E. Accounting, Auditing and Reporting

4.20 *The terms of reference and a list of firms for the selection of an external accounting/auditing firm and for the design and implementation of accounting and financial management system was presented to IDA prior to negotiations (*para. 6.01*). The arrangements were reviewed and agreed upon during negotiations (*para. 6.02c*).* The accounting system of AGETIP will be revised to take into account the diversification of its operations. *The adoption and implementation of the accounting and financial management system and the employment of an independent auditor to audit project records, accounts and financial statements will be conditions of effectiveness (*paras. 6.04e and f*).* Consolidated project accounts will be maintained by the Agency. These accounts will be audited every six months by independent auditors acceptable to IDA according to terms of reference agreed by IDA. The auditors will be appointed for a period of four years. Auditors will express separate opinions on statements of expenditures and special accounts. Audits will be carried out semi-annually and auditors' reports will be submitted to IDA within three months of the close of each semester. *During negotiations, assurances were given that AGETIP will also submit every six months management and financial audits, and a technical audit will be undertaken annually (*6.02f*).* It will submit monthly progress reports and prepare an implementation completion report (ICR) within six months of the closing date.

F. Supervision Plan

4.21 The project will be supervised every four months. The necessary staff inputs for supervision will be as follows: 5 staffweeks in FY95, 18 in FY96, 18 in FY97, 18 in FY98, and 18 in FY99 for a total of 77 staffweeks. A detailed supervision plan is shown in Annex XI. Given the need for close monitoring of the operation, there will be a mid-term evaluation during which ZOPP workshops would be held in order to assess, *inter alia*, the targeting mechanism, cost-effectiveness, and beneficiary participation, and the actions for the nutrition strategy. This mid-term evaluation will also serve to make any necessary modifications to project implementation in close coordination with all concerned stakeholders. Other ZOPP workshops will be held at the end of the project for purposes of evaluation and design of future operations.

G. Environmental Impact

4.22 The overall environmental impact of the project is expected to be neutral to positive. The environmental category is C. The impact of the small public works to be financed under the project, such as the rehabilitation of community infrastructure, will be neutral on the environment. Components such as the water program will have a positive impact on the environment by providing potable water to the beneficiaries.

H. Project Objective Categories

4.23 The proposed project is a poverty-targeted intervention, geared to halting a deterioration in the nutritional status of the most vulnerable groups in targeted poor neighborhoods of Senegal, selected on the basis of a poverty assessment. As such, it expects to reduce food insecurity in these neighborhoods, and generate employment and income for community groups through the promotion of small-scale activities. The project promotes the development of small and micro-entrepreneurs, community participation, and the involvement of NGOs and local consultants in implementation, thus placing key implementation into the hands of the target group population and thereby insuring long-term sustainability. The project responds to the Government's objectives of human resource development and poverty alleviation.

V. BENEFITS AND RISKS

A. Benefits

5.01 The project will have two main benefits. First, the immediate impact of the nutrition program is intended to halt a deterioration in the nutritional status of the most vulnerable groups in the poorest urban areas, estimated at a total target population of 469,000 (about 230,000 malnourished children under three years of age and 120,000 nursing and pregnant women receiving food, growth monitoring and IEC services, and 119,000 mothers and children receiving only growth monitoring and IEC services). Based on preliminary estimates the project is expected to reach about 30% of urban malnourished children in targeted areas. The project's nutrition education activities should set in motion behavioral changes and adoption of better child-feeding practices, leading to long-lasting nutritional improvement in children under three years. Through the water program, increased access to safe drinking water should reduce the incidence of diarrhea and water-borne diseases affecting the nutritional status of 174,000 residents in the targeted neighborhoods for the first year of operation, and 522,000 beneficiaries for the subsequent years, totaling 696,000 over the life of the project for this program. Thus, about 1.2 million persons will benefit from both programs.

As demonstrated during the pilot phase in neighborhoods where the CNC is close to a health facility, the proposed project will also lead to an increased demand for and use of health services. An additional benefit of the household food security and water programs will be the provision of growth and development-oriented infrastructure in targeted rural and urban areas.

5.02 Second, the project will establish, for the first time, a local capacity to deliver community-managed nutrition services with private sector efficiency, both in terms of management and administrative cost containment. It will also contribute to the capacity building of NGOs by providing training in the supervision of community nutrition centers and IEC methods to pre-selected local NGOs. Finally, closer collaboration between NGOs and public health services will improve the delivery of social programs geared to the most vulnerable households, and the capacity of local groups to manage their social/poverty problems.

B. Risks

5.03 As the nutrition program will be carried out in the urban low-income areas of Senegal and among some of its poorest people, many of them illiterate and innumerate, its implementation will not be easy. The project will involve five specific risks. The **first** concerns the production of the food supplement, since the enterprise selected by WFP for production enjoys a virtual monopoly. The **second** risk is linked to the strong coordination required among the many stakeholders associated with project implementation, which could impose a logistical problem that might undermine AGETIP's efforts to meet project objectives efficiently and effectively. The **third** risk is that implementation might be delayed by community mobilization, organization and training shortfalls. The **fourth** risk is that the necessary nutrition-health coordination arrangements between AGETIP and the Ministry of Health fall short of expectations. Finally, the project's administrative costs might be higher than estimated thus endangering the program's sustainability.

5.04 To reduce the risk related to the sole source of food production,, WFP will attempt to identify through local competitive bidding, alternative sources during the first year of operation. Implementation risks will be mitigated by several measures. The project will be implemented on the basis of a detailed Manual of Procedures and under a strictly organized schedule of supervision procedures, thus ensuring attention to quality issues by all implementing bodies. In addition, starting from the pilot phase, the program will expand towards full coverage only after organizational, management, and technical program details have been sufficiently tested and adjusted to account for absorptive capacity conditions in the field. The National Commission for the Fight Against Malnutrition constitutes the strongest possible Government commitment in supporting AGETIP's community mobilization efforts. Training and in-service training of large numbers of community private entrepreneurs and beneficiaries are recognized as key elements for project success. Moreover, improved coordination with the health system will be ensured by clearly defined contractual arrangements between AGETIP and the MOH. Finally, AGETIP's contract management capabilities, supported by its strong management information system, have proven to be guarantor for cost containment and will ensure sustainability. Through this approach to social services provision, the traditional role of Government as a provider of public services will be replaced by one by in which Government provides those services in terms of planning, programming and budgeting, but leaves delivery to the more efficient and cost-effective agents of the private sector.

VI. AGREEMENTS, ASSURANCES AND RECOMMENDATION

6.01 Before negotiations, the Government provided evidence of (i) a draft of the amendment to the *Convention* to be signed with AGETIP to include the new services to be provided by the Nutrition Management Division (para. 4.01); (ii) a draft of the Manual of Procedures (para. 4.01); (iii) the terms of reference and a short list of firms for the selection of an external accounting/audit firm and for the design and implementation of accounting and financial management systems (para. 4.20); (iv) a signed Convention between the Ministry of Health and AGETIP (para. 3.09); and (v) the nomination of the director for the Nutrition Management Division (para 4.01).

6.02 During negotiations, agreements were reached on:

a. the amendment to the *Convention* between AGETIP and Government to include the new services to be provided by the Nutrition Management Division (para. 4.01);

b. the draft of the Manual of Procedures, including bidding document and sample contracts for the Special Fund (para. 3.20 and 4.01);

c. the terms of reference and a short list of firms for the selection of an external accounting/audit firm and for the design and implementation of accounting and financial management systems (para. 4.20);

d. the management of the Nutrition Management Division to be the responsibility of a person acceptable to IDA at all times (para. 4.01);

e. the submission by AGETIP to IDA of the proposed areas of intervention for the second, third and fourth year of the project for the nutrition and water components, no later than March 1996, March 1997 and March 1998 (paras. 3.13 and 3.23);

f. the submission of audit reports (management and financial every six months and technical audit annually) and of annual review reports (para. 4.20);

g. the submission of a detailed training program for entrepreneurs and supervisors and the IEC program for beneficiaries to IDA for review no later than July 1, 1995 (para. 3.35);

h. the submission to IDA of a roster of pre-qualified small and micro-entrepreneurs and supervisors no later than July 1, 1995 (para. 4.03);

i. payment of Government counterpart funds by July 1, 1996 for the second year, by July 1, 1997 for the third year, and by July 1, 1998 for the fourth year (para. 4.18);

j. an assessment will be carried out during the mid-term review to determine the feasibility of separating the NMD from AGETIP to make it a stand-alone agency (para. 4.01);

k. the terms of reference for base-line and impact evaluation studies on measuring the impact of the project to be submitted to IDA no later than July 1, 1995 (para. 3.37);

l. annual monitoring indicators and supervision guides to be submitted to IDA no later than July 1, 1995 (para 3.37);

m. terms of reference of a study for updating the national nutrition action plan to be submitted to IDA no later than July 31, 1996 (para. 3.21); and

n. the action plan to implement the rural household food security program two months prior to the mid-term review by WFP and IDA (para. 3.29).

6.03 The **condition for Board presentation is** signing of the amendment to the *Convention* between the Government of Senegal and AGETIP (para. 4.01).

6.04 The **conditions of project effectiveness are**:

a. WFP's confirmation in terms and conditions satisfactory to IDA, and reflected in WFP's Grant Agreement, of the availablity of funds to purchase the local ingredients for the purposes of the supplementary feeding program (para. 3.16);

b. Government's deposit of an aggregate initial amount of not less than US$0.4 million equivalent in CFA Francs in AGETIP's account as its contribution for the first year of project implementation (para. 4.18);

c. appointment of the key staff of the Nutrition Management Division by AGETIP (para. 4.01);

d. signing of an agreement between AGETIP and SONES for the purposes of implementing the water program, under terms and conditions acceptable to IDA (para. 4.04);

e. adoption and implementation by AGETIP of accounting and financial management system acceptable to IDA (para. 4.20); and

f. employment of independent auditors acceptable to IDA for the audit of the project records, accounts, and financial statements (para. 4.20).

6.05 The **conditions of disbursements** on the rural food security program component will be IDA's approval of a plan of action (para. 3.29) and an investment program to be presented by AGETIP (para. 4.05) at the mid-term review of the project.

6.06 **Recommendation**. Subject to the above terms and conditions, the proposed project would be suitable for an IDA credit of SDR 11.7 million (US$18.2 million equivalent) to the Republic of Senegal on standard IDA terms, with 40 years maturity.

LESSONS FROM NUTRITION PROJECTS IN SENEGAL AND OTHER COUNTRIES

Senegal

1. From 1973 to 1988, a supplementary feeding program, the *Programme de Protection Nutritionnelle et Sanitaire* (PPNS), was carried out with the assistance of Catholic Relief Services (CRS). The PPNS established nutrition centers throughout the country, mainly in rural areas (less than 10% in cities). The number of centers increased dramatically from 37 in 1973 to 430 in 1984. The CRS/Senegal was responsible for food procurement, the collection of fees from mothers and the general administration of the program. The SANAS (Food and Applied Nutrition Service of Senegal of the Ministry of Health) supervised the program, and Cathwel/Senegal supervised the program and food distribution and inspection of feeding centers. The health posts and feeding centers were managed locally by health committees, comprised of men only. The centers were usually run by medical technicians, nurses, nurses aides, community health workers, and mothers' committees. Most workers of the centers were Government employees.

2. The services provided by the centers were pre- and post-natal supplementary feeding, growth monitoring, nutrition education and food supplementation for children under 5 years of age. In 1987, the supplementary feeding was discontinued, thus leaving simply growth monitoring, resulting in a drop of beneficiaries from 152,200 mothers and children in 1985 to 100,000 in 1987, and to 97,800 between January and September 1988. The reasons for this drop in attendance are in part linked to the high opportunity cost of mothers' time, especially since the small fee that mothers were asked to contribute to the PPNS (about US$0.67/month) was mandatory, and to the quality of health services provided by the health centers, was inadequate as an incentive for mothers to bring their children. According to a 1983 evaluation, the successes of the program were (i) a high coverage of immunization for children in the program; (ii) better use of health services by children in the program; (iii) lower infant and child mortality rates for participating communities; (iv) a large number of paramedical personnel trained in the use of growth cards; (v) lower incidence of malaria among children enrolled in the program due to higher usage of prophylactics; and (vi) and increase in the use of oral rehydration salts in the participating areas. Some of these results, however, may have been due to the fact that children in the program had better access to health care services than non-participants. The program was not renewed also because of the following poor performance indicators:

- only 6-11% of the calories were actually consumed by the beneficiaries;
- take-home rations lasted fifteen days rather than one month;
- the monthly food supplement received was much lower than the planned one (in 1981, each child received 5.5 kg and in 1982, 3.8 kg, instead of the planned 7.5 kg) either due to management or distribution problems;
- 10% of the most at-risk households were unaware of the program or did not participate in it;
- although 90% of the children under 2 years of age entered the program, 20% stayed until 3 years of age or more, thus diminishing the chances for younger at-risk children to enter the program.

The causes identified for this poor performance include:

- the non-targeting of lower-income groups, since distribution depended on the location of the health center (90% were located at a health facility),
- the take-home rations could be easily sold on the market, thus allowing large leakages (the ration was composed of 3.75 kg of corn-soy-milk and 3.75 kg of soy-fortified cornmeal or soy-fortified sorghum); and
- the perception of the food as a new source of income (the food represented an income transfer of about 18% of household income) than a way of promoting changes in children's feeding patterns.

Conclusions

3. These conclusions are based on lessons learned from past supplementary feeding projects (the IDA-financed Tamil Nadu project in India, an emergency feeding program in Zimbabwe, a national program of food distribution and feeding in Botswana, a supplementary feeding program in the Gambia, the IDA-financed Applied Nutrition Education Project in the Dominican Republic, the PROSALUD - health - project in Bolivia, and the PANFAR project - project for Food and Family Nutrition - in Peru):

- **targeting of children under two** years of age is necessary to prevent malnutrition in poor areas; while malnourished children should be targeted individually to provide therapeutic care;

- **supplementary feeding of children**: food supplements should not replace the meals prepared by the family; nutrition education should accompany the supplementation program; and health follow-up should be provided simultaneously with the feeding program;

- **supplementary feeding of pregnant women**: has an effect among rural women (urban women having less of a caloric deficit and less energy expenditures), especially if provided during the rainy season; should cover the last trimester of pregnancy; should be accompanied by iron/folate supplements as well as anti-malaria prophylaxis; and should include nutrition and family planning messages;

- **supplementary feeding of nursing women**: target all poor nursing mothers; should be accompanied by iron/folate supplements and anti-malaria prophylaxis; should provide nutrition and family planning messages; and

- **IEC and community participation** are crucial: mothers need to understand and accept the principle of targeted supplementation in order to reduce the risk of the re-sale of the food supplement, its leakage to other family members, and its substitution for the customary food ration. Local committees need to be involved in the food supplement program from the inception, thus ensuring that the program is managed at the community level. The committee should be kept informed of the program's progress at regular intervals so that it understands fully any changes made.

COMMUNITY NUTRITION PROGRAM

1. The nutrition program will be implemented by micro-entrepreneurs (MICs), organized in local associations, such as GIEs. However, only those communities showing a willingness to have this program will benefit. The MCIs will be supervised by NGOs which will report directly to AGETIP. Contracts will be provided to NGOs for carrying out the training, supervision and evaluation of the program. Modules and guidelines for training, supervision and evaluation have been developed by AGETIP and tested during the pilot phase.

Community Nutrition Centres (CNC) *:*

2. Community micro-entrepreneurs will be trained to provide the following services:

1) Identification of malnoursihed children
2) Child growth monitoring and promotion
3) Referral of acute cases of malnutrition and of women for family planning to health centers
4) Distribution of a food supplement
5) IEC
6) Basic record keeping
7) Home visits

Each MIC will have a staff of four who will be trained to carry out these activities and who will handle a maximum of 350 persons per week. This workload will also allow the MIC to undertake home visits to malnourished children. After one to two years of operation, it is expected that MICs will have more time for home visits and could also engage in other community services, such as literacy or family planning.

3. AGETIP developed "Guidelines for the Model Community Nutrition Center", training manuals, a "Supervision Guide" and a "Home Visits Guide". These documents will be given to each MIC. Any entrepreneur will be able to apply for training as long as it satisfies the selection criteria and accepts to work under the standard contract conditions that will be presented. Standard and simple registration and accounting forms are included in the Manual of Procedures.

4. Growth of children will be monitored based on weight-for-age, and plotted on the growth curve to complement what is already being done by the health structures. Salter scales will be used to measure the weight.

5. A model contract between AGETIP and the MIC has been drafted. This contract specifies that the CNC should not be used for other purposes than nutrition activities of the project, unless specifically authorized by AGETIP. The Terms of Reference of the MIC include weekly home visits to children who have been identified as children with nutrition problems (criteria for this are in the "Home Visit Guide for the CNC staff"), and periodic meetings with local steering committee.

Selection of Beneficiaries

6. The following are entry and exit criteria to be applied among the population in the target areas:

- **for pregnant women**: any pregnant woman who lives in the target area can enter the program during the last trimester of her pregnancy until birth. Initially the program will be available to women who are pregnant for the first time. (services received: IEC, referral to health center and food).
- **for nursing women**: a woman can enter the program if she has a malnourished child between 6 and 24 months of age (thereafter a woman cannot be considered lactating) or if she has a child less than 6 months old (services received: IEC and food).
- **for children**: a child aged 6 to 36 months can enter the program for 6 months if it is malnourished (in the yellow or red zones); if it is a sibling 6-36 months old of a malnourished child; or if it is well nourished (in the green zone) but has not gained weight for two consecutive months. The child will exit after six months if it has achieved normal weight, or has gained weight during the last three weighings. If a child fails to gain weight between three weight monitoring sessions, he will continue the program but be referred to a health center (services received: growth monitoring, food (if malnourished), referral to health center).
- **siblings of malnourished children** will also be admitted as long as they are 6-36 months old (services received: growth monitoring, food, referral to health center).

Children will not be eligible to receive the food supplement if they are not accompanied by their care-taker who must attend the IEC session.

7. For the first year of the project, the AGETIP nutritionists will be responsible, at the end of the 6 months, to identify and advise beneficiaries who can continue in the program and those who cannot. For the years thereafter, MOCs will be identified and trained to do this work.

8. A census of the target population in selected locations will be undertaken (i) to validate the data base used for targeting, and (ii) to screen under-three year old children for malnutrition, using age, weight and height indicators. Malnourished children will receive the food supplement, and will be monitored by the MOC's if they fail to continue the program. The census will be undertaken by a private company which will be requested to use the CNC members as surveyors for the census. A technical consultant will be asked to do the quality control of this census, so as to ensure that the data can be used for evaluation purposes. Data on each family of the target area will be computerized and families "at risk" of malnutrition will be identified. Malnourished children who do not come to the CNC will receive home visits from the CNC staff to encourage the mother to participate in the nutrition program. Each child who is identified by the census group as a malnourished child or who is less than three years and belongs to a family with a malnourished child will receive a "program card" valid for 6 months. Each time the child goes to the CNC, this card will be stamped with the date and the name of CNC.

Link with the Health System

9. An agreement between the MOH and AGETIP has been signed which spells out the role of each institution. This Agreement states that at least once a month medical personnel will visit the CNCs to carry out the following activities: discuss any problems, especially concerning referrals to health facilities (referral will mainly be for sick or severely malnourished children and women for family planning services); coordinate the choice of IEC messages; social mobilization for health events that will occur in the community.

10. The MOH/AGETIP agreement also defines how the local Health Committee will ensure that a minimum drug package will be made available to the target group through the CNC, following the MOH cost-recovery system and standard treatment. The drugs concerned are part of the national essential drug list, namely: vitamin A, iron and folate, deworming drug, and chloroquine.

· At the local level, the Health Committee will be involved in distributing certain drugs to the beneficiaries through the CNC. In addition, the CNC will systematically refer beneficiaries to the nearest health infrastructure. The health personnel from the closest health infrastructure will visit the CNC at least once a month. The local steering committee will have a summary of the Agreement between AGETIP and the MOH in order to understand the role of each organization.

· At the district level: the District Medical Officer is part of the District Steering Committee.

· At the national level: the MOH is part of the National Commission. The SANAS will be constantly informed of the nutrition program progress and will receive a copy of data base.

Supervisory NGO (MOC)

11. An NGO (MOC) will be selected according to criteria spelled out in the Manual of Procedures and will supervise about 10 CNCs. A training program has been developed for these MOCs and a Supervision Guide as well as a Home Visit Guide will be developed before project effectiveness. The MOC will undertake a weekly supervision of each CNC. A contract between AGETIP and the MOC has been designed along with specific terms of reference. The MOC will receive the same training as the MICs, plus additional training on supervision. Home visits will be undertaken weekly by the MOC to at least two households selected at random among the families whose names appear in the beneficiary file to check if they received the services, and to at least two households who have abandoned the program to find out the causes of cessation. Periodic meetings of all NGOs with AGETIP will be organized.

Training in Nutrition

12. Each MOC and CNC staff will receive the same training, provided by training consultants. This will ensure that each of the four CNC staff can serve as back-up, if necessary. The MOH will be involved in the quality control of training.

13. The training modules which have been developed during the pilot phase will be revised and for project implementation the following modules will be printed:

- General presentation of the project: with project objectives, target population, the different actors and their contracts;
- Techniques for welcoming the population;
- Nutrition: basic nutrition, breastfeeding promotion, weaning practices and frequency of feeding, prevention and treatment of diarrhea, growth monitoring and promotion (using weight for age and how to use the growth chart); food demonstration in the CNC; referral of children to the health system and how to coordinate with the health system;
- Inter-personal communication techniques: social mobilization and nutrition education;
- The management information system: monitoring and supervision of a CNC data collection and analysis; techniques for; supervision by the MOC; home visits by MIC and MOC; the computer system used; feedback to the mother and to the community;
- Stock management: general concepts; quality control; record keeping; safety.

Training will be practical and will include role plays. Yearly refresher course will be provided to both MIC and MOC.

Food Supplement

14. The food will: (i) serve as a supplement to malnourished infants aged 6-36 months and their siblings 6-36 months old and to pregnant and lactating women selected from the poorest neighborhoods; (ii) act as income transfer to the households enabling them to improve their food security during critical periods; (iii) induce those in need of assistance to attend the CNCs; and (iv) demonstrate to the recipients that use of nutritional supplements will accelerate recovery from malnutrition and thereby reinforce the nutrition education component (an activity which will attempt to alter the behavior of mothers in term of weaning food preparation and child feeding).

15. AGETIP will execute the project under the established procedures of delegated authority involving NGOs, women groups, economic interest groups, youth associations, etc. The implementation will be guided by a Manual of Procedures which will cover all the necessary topics including the contractual arrangements between AGETIP and the MOH.

16. WFP will provide a dry-blended food which will be produced locally based on local cereals, cowpeas, and groundnuts. The mix will be fortified with imported vitamins and minerals to contribute to the alleviation of some of the existing micronutrient and food deficiencies and sweetened with sugar in order to increase self-targeting (so that the blended food cannot be used as a family food but only as a porridge). Each beneficiary attending the centers will receive 700 grams of supplementary food per week during six months.

Requirements for Supplementary Food

17. The international food and nutrition community has considered the basic requirements for foods for older infants (6-12 months) and young children (1-3 years) and through extensive deliberation arrived at guidelines regarding raw materials, processing, formulation, hygiene,

packaging and labeling. While the guidelines generated by various groups have differed somewhat, and all the guidelines provide flexibility to account for variations in local conditions and local regulations, these international guidelines provide a basis for identification of a suitable supplement for use in the nutrition program.

18. The guidelines offered by the Codex Alimentarius Commission in 1991 and those suggested by WFP/UNICEF product specifications for locally manufactured fortified blended foods were used to select ingredients, develop a formula, and suggest a manufacturing process for the product which will be used in the program. In addition, it was concluded that a single product should be used in the program which will be suitable for use as a food supplement by all beneficiaries (infants, children, and pregnant and lactating women).

19. The food should be based on locally available ingredients to the maximum extent possible and should utilize millet as the cereal base for the product and cowpeas/groundnuts as the principal sources of supplementary protein and energy.

20. The groundnuts and cowpeas will be roasted to reduce the amount of antinutritional factors (trypsin inhibitors and other heat sensitive factors normal present in legumes). Roasting equipment suitable for treating groundnuts and cowpeas are available in Senegal and WFP consultants have identified conditions suitable for operating these roasters to treat the products.

21. The cereal component (millet) will not need to be precooked. Precooking for cereals is generally undertaken when it is necessary to increase the caloric density of porridge (by disrupting the starch so that less water is needed to prepare the food) or reduce the time necessary to cook the product. However precooking can be expensive in terms of capital costs (e.g., up to US$ 1.0 million for an extrusion cooking system to produce 2000/3000 tons per year). Operating costs are also expensive (US$50-100 per ton). Furthermore, precooking changes the textural characteristics of the prepared food to some extent and therefore could result in diminished acceptability among persons accustomed to consuming products made from unprecooked flours, such as those in the project. Based on these factors, particularly the high capital costs and the lack of need for improved caloric density and shortened cooking time, it was recommended not to precook the cereal.

22. Because vitamin and mineral deficiencies are expected to be prevalent among the beneficiaries, available research and studies suggest that imported vitamins and minerals be used in the product to provide about 2/3 of the recommended daily allowance.

23. The supplement should be suitable for consumption by infants and children during two (2) supplementary feedings when prepared with a traditional recipe used for that age group, specifically a porridge.

24. The food should be suitable for manufacture at low cost by existing Senegalese food processors with little or no additional investment. Preferably, the product should also be suitable for manufacture by small enterprises at the local level, should be processed, packaged and distributed in such a way as to minimize insect infestation and avoid hazardous contaminants including pathogenic microorganisms such as E. coli and toxic substances such as aflatoxin.

Ingredients and Formulation of the Supplement

25. Based on the general requirements outlined above, in September 1994 a WFP nutrition consultant selected a set of ingredients, a formulation and a manufacturing procedure which provided a basis for producing a food supplement suitable for use in the project. The ingredients and formulation were:

Ingredient	Proportion (%)
Pearled millet flour	55.0
Roasted, dehulled cowpeas	23.6
Roasted, deskinned peanuts	11.0
Sugar	10.0
Vitamins (A, C, B1, B2, B12, Niacin, Folic acid)	0.1
Minerals (calcium, zinc, iron)	0.3
	100.0

26. The millet, cowpeas and groundnuts are all produced in Senegal and in amounts sufficient to supply blended food for the nutrition program. Sugar is also produced in the country but costs substantially more than imported sugar. Consequently, WFP will import the sugar. Likewise, if the prices of millet and cowpeas reach unaffordable limits, WFP will import them from neighboring countries thus also promoting triangular transactions. The vitamin and mineral pre-mix is not produced locally and will be imported.

27. The blended food will provide the following amounts of protein, fat, fiber and energy per 100 grams:

Property	Amount	
	As is (7% moisture)	Dry basis (0%)
Protein (g.)	15.0	16.2
Fat (g.)	7.5	8.2
Fiber (g.)	1.9	2.1
Energy (kcal.)	370.0	401.0

28. Based on limited tests, the caloric density of porridge made from the product is in the range of 80-90 kcal per 100 ml of cooked food. While this caloric density is somewhat lower than the 100 kcal value recommended in the guidelines, it is deemed sufficient. The caloric density can be raised by increasing the proportion of groundnut or sugar or by decreasing the amount of millet. However, these changes would either increase cost, lead to excessive fat level or increase the need for imports. Based on the above facts, it has been decided that the benefits do not merit the negative consequences.

29. The 100 gram per day ration will then provide each beneficiary 15 grams of protein and 370 kcal. per day through two supplementary feedings of about 220 ml each (7.7 ounces). This supplement will provide 25-40 percent of the recommended daily allowance of energy and 65-75 percent of the allowance of proteins for older infants and young children. These levels are deemed appropriate for malnourished children selected as beneficiaries of the project.

30. With respect to processing, it has been decided that the groundnuts and cowpeas should be roasted to inactivate the antinutritional factors and it was also recommended that the groundnuts be selected and processed to avoid contamination with aflatoxin (product of mold growth that is carcinogenic and which has an upper limit of 10 parts per billion in groundnuts in Senegal).

31. Tests undertaken with a local groundnut processor demonstrated that hand sorted and de-skinned groundnuts should contain less than 3 ppb of aflatoxin. Therefore, the contribution of aflatoxin to the product by the groundnuts should be less than 1 ppb.

32. The amount of product required for distribution in the CNCs varies throughout the course of the project depending on the number of beneficiaries being served. A total of 350,000 beneficiaries will be served during the project, thus the total requirement for food during the four year project life is estimated at 6,370 tons. Likewise, because the maximum number of beneficiaries is 110,000 during the fourth year, the maximum annual requirement for food supplement is 2002 tons and this will occur during the last year of the project's life. Consequently, the maximum manufacturing capacity needed is 2002 tons per year or about 167 tons per month.

Manufacturing Procedure for the Food Supplement

33. A simple, inexpensive process for manufacturing the food supplement will be used during which the dry ingredients listed above will be mixed, ground to a powder with a particle size less than one millimeter, then re-mixed with the vitamins and minerals, and finally packaged in 40 kg. bags for distribution to the CNCs.

34. A group of Senegalese food processors have been identified who collectively have the capacity to manufacture the product. Agrifa SA of Fatick was found to be a potential supplier of low-aflatoxin roasted groundnut and roasted, dehulled cow peas, while Moulins Sentenac/Dakar could supply the pearl millet, the final mix, and bag the product.

35. Sentenac reported to WFP that it believes it can provide the amount of product required for the pilot phase of the project (24 tons per month), but will require additional equipment to increase the capacity to manufacture at the maximum rate required during project implementation (167 tons per month). However, Sentenac apparently requires a definite, long-term commitment for procurement of product from the project before it will invest in changes in its processing system.

36. The cost of the blended food is expected to be within the normal range of this type of food produced in other countries and within the availability of WFP funds that could be committed for this purpose.

37. In summary, the basic process recommended should be suitable for the manufacturing of the product and local manufacturers should be capable of resolving their technical problems when they are assured that they will be productive participants in the project.

Procurement of the Food Supplement

38. WFP will procure the required amounts of product for the project from local manufacturers. Several local food processors have participated in manufacturing the food supplement during the pilot phase of the project and it is expected that they will maintain interest as production increases to a total of 6,370 metric tons over the life of the project. However, of the participating processors no single one is currently capable of undertaking all of the processing steps. Furthermore, no manufacturer outside the present group has as yet been identified as potential participant in manufacture. Accordingly, the present small number of processors represents a potential risk in the supply of product for the project.

39. WFP intends to take several steps to minimize this risk during procurement. First WFP will use a competitive bidding process for procurement to attempt to stimulate interest by other manufacturers. Call for bids will include requests not only for the complete product but also for individual components. Second, WFP will identify one or more alternative formulations for the product which will enable it to substitute ingredients which might not be available at competitive prices in a given season (e.g. it might be possible to replace groundnuts with a combination of groundnut oil and millet). And thirdly, WFP will reserve a portion (up to 25%) of the amount of product required for procurement from small producers or micro-entrepreneurs who might initially be partially mobilized as an alternative source of supply but be completely mobilized to supply the full requirements, if the principal suppliers fail. These options will be explored and developed with a view not only to reduce current procurement risks but also to lay the basis for potential future small/micro-enterprise production for ensuring project sustainability.

40. WFP in collaboration with AGETIP and ITA will develop product and production standards, procurment terms and issue requests for bids for the product to be delivered after the pilot phase is completed.

Packaging and Distribution of the Food Supplement

41. The blended food will be packed and transported by WFP to CSA stores and, as needed, distributed in small quantities to CNCs where stocks will be maintained in secure store rooms. Each recipient will receive a 700 gr. ration of blended food weekly. Distribution will be carried out by CNC personnel using measuring cups designed to deliver 700 gr. of product.

42. Each recipient or recipient group (eligible family members) will be issued a 2 or 5 liter plastic canister with a tight fitting lid in which to store the blended food. The 2-liter container will be used for one ration and the 5-liter one for two or more rations. Separate canisters for women and children will be identified by color and printed logos as having been issued by the project, and will also bear printed messages to help mothers use the product effectively. The canisters will be given to

the mothers the first day of distribution and are durable enough to be used continuously throughout their participation in the project to receive the weekly food rations.

43. If the canisters are lost or destroyed, the beneficiaries are expected to buy replacements from the center at cost. The use of this type of containers is expected to reduce packaging costs substantially, as compared with delivery of the product in 700 gr. plastic bags. Furthermore, the canisters should provide an effective barrier against insect infestation and against moisture and spillage.

Quality Assurance for the Food Supplement

44. A specific plan of action for quality assurance of the food supplement will be required to guarantee the manufacture and distribution of the supplement according to the specifications outlined above. To meet this need, a Hazard Analysis Critical Control Point (HACCP) system according to Codex Alimentarius guidelines has been developed by ITA. This system will then be incorporated by WFP into the procurement specifications and production operations.

NUMBER OF BENEFICIARIES AND TONS PER YEAR

TIME	CHILDREN	MOTHERS	TOTAL	RATIONS *	METONS
YEAR 1	31,000	19,000	50,000	1,300,000	910
YEAR 2	59,000	31,000	90,000	2,340,000	1,638
YEAR 3	67,000	33,000	100,000	2,600,000	1,820
YEAR 4	73,800	37,000	110,000	2,860,000	2,002
TOTAL	**230,800**	**120,000**	**350,000**	**9,100,000**	**6,370**

TARGETING

1. The project has incorporated the recommendations of the Bank's Assessment of Living Conditions (World Bank, 1994) on improving the targeting of the poor, namely (i) taking a census of the beneficiaries in the target neighborhoods by the community-based groups under the supervision of a survey specialist; (ii) using beneficiary assessments to monitor the impact of the project, so that appropriate adjustments can be introduced in a timely fashion; (iii) intervening in the poorest areas which often do not benefit from public services; and (iv) increasing the involvement of local community groups and NGOs to carry out and supervise activities. The project will adopt the principles of AGETIP in contracting out all activities to community-based groups.

2. The project has adopted four types of targeting and food-eligibility criteria: site selection/geographic targets; (peri-urban poverty districts); demographics (pregnant and nursing women, children aged 6-36 months); nutritional status of children (malnourished, no weight gain, "at risk" children/siblings of malnourished children); and food characteristics (choice of a "self-targeting" food generally unappealing to adult males because of traditional food habits). As to demographic and nutritional targeting of the nutrition program, see Annex II for details on entry and exit criteria. In terms of geographic targeting, the nutrition and water programs will intervene in the poorest neighborhoods of urban centers. This targeting will be based on the results of the 1992 household budget survey (ESP), which defined poor households as those whose average per capita monthly expenditure level was below the cost of a food basket equivalent to 2400 calories per day. Based on this definition, 33% of the Senegalese population are poor, of which roughly one-fourth are in the urban areas (nearly 550,000). Given the recent impact of the parity change, the high vulnerability of most urban households to poverty, and the growing urban population, however, it is most likely that these figures are now low - a hypothesis which appears to be supported by pilot-phase findings concerning the prevalence of child malnutrition. The ESP breaks down the population into 8000 "census districts", thus permitting a detailed poverty profile of all neighborhoods. In this project, the targeting of the poorest urban neighborhoods will be generally based on the following criteria: the poverty level (at least 20% of the population is poor) and the population density (the population totals at least 2000 persons if at least 10% of the population is poor), but will vary slightly by region. For demographic targeting, a census will be conducted within the targeted neighborhoods before the opening of the CNC in order to arrive at a list of potential beneficiaries (Table 1).

3. For the first year of the project, the criteria for the selection of the zones are the poverty level and the presence of an AGETIP office. Accordingly, three regions have been targeted -- Dakar, Kaolack and Ziguinchor (Attachment A). More specifically, the following urban areas will be covered: Pikine and Guédiawaye in the region of Dakar, Kaolack and Diourbel in the region of Kaolack, and the city of Ziguinchor in the region of Ziguinchor. The criteria for selecting the neighborhoods of Pikine and Guédiawaye are: a poverty level of at least 25% and a total targeted population of at least 2000 persons. For the less populated region of Kaolack, the criteria are: a poverty level of 18% and a total targeted population of at least 1500 persons. For Ziguinchor which recorded high levels of poverty, the criteria are a poverty level of at least 30% and a total targeted population of minimum 1500 persons. In order to respect the number of beneficiaries estimated for the first year, certain neighborhoods of the region of Dakar with a poverty level of 25% will benefit from the project as of the second year. On the other hand, one neighborhood of Diourbel with a poverty level of less than 15% will be retained in the first year so as to continue the program begun under the pilot phase. It should be noted that the water program will intervene in these neighborhoods

over the first year of the project. The selection of targeted areas for the second, third and fourth year of the project will be determined annually since project activities will be phased in gradually. Based on these criteria, it is estimated that the targeted population in the 21 selected neighborhoods will total 50,000 persons in the first year, who will be eligible for supplemental feeding growth monitoring and IEC activities. It is assumed that the centers will also offer monthly growth monitoring for children that are not malnourished and IEC activities for their mothers, estimated at 17,000 persons (based on the capacity of the CNCs to handle extra IEC activities). Over the life of the project, the number of beneficiaries receiving weekly services (food supplement, growth monitoring, and IEC activities) is 350,000 persons and an additional 119,000 persons will receive growth monitoring and IEC activities on a monthly basis, totalling 469,000 beneficiaries, and nearly 400 CNCs will operate (Table 1).

Table 1: Nutrition Program -- Beneficiaries and Centers by Year

Beneficiaries	Year 1	Year 2	Year 3	Year 4	Total
Receive Food Supp. & Services/wk					
Children	31 000	59 000	67 000	73 000	230 000
Nursing mothers and First Pregnancy Women	19 000	31 000	33 000	37 000	120 000
Sub-total	**50 000**	**90 000**	**100 000**	**110 000**	**350 000**
Receive Monthly Services Only					
Children	8 500	15 300	17 000	18 700	59 500
Mothers	8 500	15 300	17 000	18 700	59 500
TOTAL BENEFICIARIES	**67 000**	**120 600**	**134 000**	**147 400**	**469 000**
Number of new centers	72	107	104	114	397
Number of old centers		72	179	283	
Total number of opened centers	72	179	283	397	

Assumptions:

- The urban population covered by the project is expected to rise by 4% per year, reflecting Senegal's urban growth rate.
- The pilot phase indicated an infant malnutrition rate of 30% in the targeted population.
- 15% of the total project population is between 0-3 years of age and another 15% are pregnant women (each woman estimated to have 6 children).
- Women eligible only because of their pregnancy status will receive three months of ration (one-half the normal period).
- 20% of the children who enter the program will require an additional six months of food supplement.
- Not all malnourished children in the program are breastfed either because some are over 24 months and unlikely to be breastfed, or because a mother chooses not to breastfeed.
- Mothers with children under 6 months of age will receive the food supplement, if they are breastfeeding.
- Since the average birth spacing is 22.4 months in urban areas, it is estimated that there will be one sibling for each malnourished child.

4. The project aims at increasing its coverage of malnourished children in urban areas from 16% in Year 1 to 58% in Year 4. According to the 1992 EPS, malnutrition among urban children was 22.4% (stunting) and 16.9% (wasting); the corresponding values for rural areas were 33.6% and 24.8%. The pilot-phase results, based on the arm-circumference indicator and the weight-for-height indicator put moderate to severe malnutrition at 30-31%. The estimates of the number of malnourished children in urban areas are based on an assumed malnutrition prevalence of 24%, or mid-way between the low ESP pre-devaluation estimate of 16.9% and the high prevalence found in the pilot-phase neighborhoods. These estimates will be kept under review during project implementation, and coverage targets will accordingly be revised.

ATTACHMENT A

Targeted Neighborhoods for the Project's First Year

CITIES	NEIGHBORHOODS
Dakar	Arafat
Pikine	Guinaw Rail Yeumbeul Thiaroye Gare Diack Sao Diamaguène Keur Massar Ainoumadi V Nimzatt Guédiawaye Darou Salam Médina Thiaroye Kaw Thiaroye Kao I Diack Sao II
Diourbel	Keur Cheikh Ibra
Kaolack	Ngane Alassane Sam Touba Kaolack '81112' Touba Kaolack '81104'
Ziguinchor	Tilène Kadior Boucotte Sud 'Distr. recens. 81042' Santiaba (Petit Kande)

WATER PROGRAM

Objectifs

1. La situation nutritionnelle et sanitaire des populations est directement liée aux conditions de distribution d'une eau hygiéniquement saine dans les quartiers du projet. La présente étude vise donc à vérifier la situation de l'adduction d'eau et de proposer les mesures nécessaires. Les objectifs de la composante eau visent à améliorer la couverture en eau des populations des quartiers cibles, surtout dans les villes régionales. A Dakar, la couverture en eau des populations est déjà proche de 100%, l'objectif visera davantage l'amélioration du niveau de confort de la couverture en eau (diminution de la distance d'approvisionnement, sécurisation des quantités d'eau nécessaires). Il est impossible de limiter cet objectif aux seules personnes cibles (femmes enceintes, femmes qui allaitent et enfants de moins de trois ans); c'est l'ensemble des populations de ces quartiers qui doivent être prises en compte.

Situation de l'approvisionnement en eau

La couverture en eau dans les quartiers

2. La très forte densité de l'habitat à Dakar et Pikine a permis que la couverture en reseau d'adduction d'eau soit relativement élevée. Il y aurait encore quelques 5.000 puits dans le grand Dakar, mais avec l'extension de la couverture en eau par la SONES, la plupart sont abandonnées. Seuls, Keur Massar et les extension de Thiaroye Kao 2 à 19, ainsi que des zones ponctuelles à Guinaw Rail, Darou Salam, etc. ont une couverture en eau de la SONES inférieure à 50%. Dans ces quartiers, l'eau des puits reste la seule alternative. La situation est plus mitigée dans les autres villes. Diourbel présente des conditions assez similaires à celles de Dakar, ainsi que certains quartiers centraux de Kaolack (Sam et Touba Kaolack), et de Ziguinchor (Boucotte Sud). Dans ce dernier quartier, la population est surtout composée de fonctionnaires et de salariés du secteur formel, dont les habitudes de consommation sont similaires à celles de la capitale. Les autres quartiers périphériques de Kaolack et de Ziguinchor ont une couverture en eau très faible. Ce sont des quartiers récemment occupés, peu peuplés, avec de nombreuses constructions en paille, banco, bois ou torchis. Ces quartiers sont davantage des villages traditionnels déplacés aux abords des villes, plutôt que des zones urbanisées.

3. Deux causes expliquent le faible taux de couverture en eau de la SONES: dans les quartiers urbanisés, la population revendique la couverture en eau de la SONES à 100%, et la volonté de payer l'eau au prix SONES est indépendante de la capacité financière des ménages. Même les ménages les plus pauvres dépenseront, si nécessaire, bien plus de 10% de leurs revenus monétaires pour s'assurer une eau disponible et saine. A Dakar et à Pikine, les zones insuffisamment couvertes en eau sont des zones d'habitat récent (Thiaroye Kao 2 à 19, Darou Salam, ou les quartiers Sam Sam de Diack Sao). Ces zones sont encore peu peuplés pour justifier une extension importante du réseau. La population demande un approvisionnement régulier en eau, mais conçoit que des bornes fontaines soient bien suffisantes en l'absence d'une densification de l'habitat.

Les consommations en eau

4. Le Plan de Stratégie d'Assainissement pour la Communauté Urbaine de Dakar précisait en 1990 les quantités d'eau consommés:

. pour les branchements domiciliaires: 38 litres par habitant et par jour en hivernage, et 25 litres en saison sèche. Ces chiffres sont faibles, parce que de nombreuses coupures d'eau intervenaient

régulièrement. Ils doivent être revus à la hausse depuis l'étude, du fait d'une amélioration dans la distribution de nombreux quartiers. Une consommation moyenne de 50 litres par personne et par jour est considérée comme "normale" quand l'offre peut satisfaire la demande;

. pour les bornes fontaines: 29 litres par habitant et par jour en hivernage, et 19 litres en saison sèche, chiffres qui restent sans doute similaires actuellement. Le projet retient la norme de 25 litres en moyenne par personne et par jour dans des villes ou n'existent pratiquement pas des sources d'eau alternatives (Dakar).

Qualité de l'eau distribuée par la SONES

5. La qualité des eaux distribuées par la SONES est en permanence soumise à des examens. En effet, le laboratoire central de la SONES à Dakar procède deux fois par an à des examens de la qualité d'eau au niveau des usines d'eau. Lors de ces vérifications des échantillons d'eau sont également prélevés au niveau des consommateurs et dans les châteaux d'eau, puis soumis à des analyses batériologiques. L'examen de quelques résultats d'analyse en laboratoire conduites en vue de vérifier la qualité de l'eau dans les 4 villes du projet a révelé qu'à la fin du réseau il y a régulièrement été détecté la présence de streptocoques fécaux, coliformes fécaux et, plus généralement, de coliformes. La qualité de l'eau a été qualifiée de non potable par le laboratoire. Le cholore résiduel était généralement égal à zéro. A Kaolack et Ziguinchor la présence de coliformes a été établie même à la sortie des châteaux d'eau. Afin de remédier à cette situation le laboratoire central de la SONES a demandé aux usines d'eau d'augmenter la teneur en cholore, de procéder plus régulièrement au lavage des châteaux d'eau et des bâches et d'intensifier les précautions d'hygiène lors des travaux de nettoyage et d'entretien.

6. Le 16 novembre 1993, des échantillons d'eau ont été prélevés sur les 4 puits retenus dans les quartiers Guinaw-Rail, Thiaroye (Sam-Sam) de la ville de Pikine, dans le quartier Keur Cheikh Ibra de la ville de Diourbel et dans le quartier Ngane Saer de la ville de Kaolack, échantillons qui furent ensuite soumis à des analyses bactériologiques dans le laboratoire de la SONES à Dakar. On s'est abstenu de faire un prélèvement échantillons à Ziguinchor, compte tenu de la longueur du parcours (durabilité des échantillons).

Les résultats des échantillons sont résumés dans le tableau ci-après :

Lieu de prélèvement	Coliformes totaux par 100 ml	E. Coli par 100 ml	Streptoco par 100 ml	Germes totaux par .. ml	Conclusion
Ngane Saer					
Kaolack	17	12	> 100	1.100	Eau non potable
Guinaw Rail	25	15	4	900	Eau non potable
Thiaroye Sam Sam	42	18	> 100	100	Eau non potable
Diourbel	29	17	1.400	1.400	Eau non potable

7. L'ensemble des 4 échantillons d'eau ont été qualifiés "eau non potable". Il y a lieu de supposer que les résultats pour Ziguinchor auraient été sensiblement les mêmes. Tous les 4 puits sont utilisés par la population pour l'extraction d'eau de boisson. L'eau du puits à Ngane Saer est vendue sans toute la ville de Kaolack par les vendeurs d'eau.

Capacité actuelles des réseaux AEP

8. La région de Dakar souffre d'un déficit permanent de la production d'eau, dû à une croissance rapide de la demande. En effet, en 1994 la demande moyenne était de 272.000 m3/j pour une production de moyenne de 205.000m3/j. Les autres difficultés qui contribuent à la dégradation de l'alimentation en eau de la région de Dakar sont essentiellement liées à la vétusté et à l'hétérogénéité du réseau, notamment à Dakar Centre Pikine, Sicap, Grand -Yoff et Rufisque

- aux fuites dans les réseaux (env . 60.000 m3/j)
- aux extensions successives du réseau initial pour suivre les extensions de l'habitat
- au déblocage de l'attribution des quotas maraîchers ce qui entraîné un dépassement des volumes alloués au maraîchages (9,4% au lieu de 7% autorisés).

9. Ces facteurs affectent la qualité du service et se traduisent par des manques d'eau et des baisses de pression dans plusieurs quartiers de Dakar et de la banlieue. Face à cette situation de déficit une série de solutions a été étudiée. Parmi les solutions retenues et mises en oeuvre on peut mentionner:

- Une tarification dissuasive pour éviter les gaspillages
- La suspension de l'attribution des quotas maraîchers
- La privatisation des bornes fontaines
- La diminution des pertes d'eau dans les réseaux (luttes contre les fuites d'eau)
- La réalisation des travaux urgents en AEP
- Le renouvellement du réseau de Dakar

10. Malgré ces mesures, la production d'eau n'est pas suffisante pour satisfaire les besoins. En attendant un projet pour augmenter la production (ie. Canal du Cayor), la SONES est obligée de procéder régulièrement à des rééquilibrages de son réseau pour alimenter les quartiers. Toutefois, les extensions projetées dans les quartiers défavorisés du projet sont possibles du fait de la proximité de ces quartiers par rapport aux conduites maîtresses d'adduction et des faibles consommations d'eau des populations pauvres. Se fondant sur le nombre de 30 bornes-fontaines prévues et sur la base d'une estimation de 300 hab/borne-fontaine et une consommation journalière de 25/hab, la demande totale aux bornes-fontaines pour la première année du projet, ne représente que 225 m3/j.

11. Les trois villes (Diourbel, Kaolack et Ziguinchor) ne connaissent pas, pour le moment, de problème relatifs à la quantité d'eau produite. Le nombre des forages à été augmente et certains d'entre eux ont été réhabilités en 1988. De plus, des travaux d'extension des réseaux ont été exécutés. La production annuelle (1993) et la production potentielle sont:

	Production 1993	Production Potentielle
Diourbel	780.000m3/an	2 400 000 m3/an
Kaolack	3.042.000 m3/an	4 390 000 m3/an
Ziguinchor	1.220.000 m3/an	2 400 000 m3/an

Source : SONES

Ces chiffres démontrent que les extensions de réseaux ne posent aucun problème au niveau de la quantité d'eau. De même, il n'y a pas, selon la SONES, de pression de service trop faibles dans les réseaux existants.

Type de branchement à Dakar

12. Dans les quartiers de Dakar non encore approvisionnés, deux causes expliquent l'absence de réseau de distribution d'eau de la SONES :

- certains quartiers sont récents et encore peu urbanisés. La population y est peu dense, et l'habitat dispersé; c'est le cas dans les extensions de Sam Sam à Diack Sao, les extensions Thiaroye Kao 2 à 19, à Darou Salam-Bene Barrak. Dans ces quartiers, les bornes-fontaines sont nécessaires, avant une possible extension de réseau permettant ultérieurement des branches particuliers;
- deux des quartiers pilotes du projet à Dakar sont encore mal approvisionnés par l'eau de la SONES pour des raisons techniques;
- à Guinaw Rail, le débit est insuffisant et de nouveaux branchements sur le réseau actuel sont inutiles faute d'eau. De nombreux puits sont encore utilisés. Dans ce quartier, les conduites principales sont à revoir complètement;
- une grande partie du centre de Keur Massar est située sur une élévation du sol (colline). Il n'y a pas de réseau dans cette zone, expliquant une couverture en eau de la SONES très faible, avec un grand nombre de puits.

Type de branchements dans les villes régionales

13. Les conditions locales dans les villes régionales sont très différentes de celles de la capitale. La population est actuellement très réticente à s'approvisionner en eau de la SONES, particulièrement à Ziguinchor, et dans une moindre mesure à Kaolack, du fait :

- de la disponibilité d'eau des puits pendant presque toute l'année
- de la gratuite de l'eau à ces puits,
- du grand nombre de puits, limitant les distances d'approvisionnement,
- du goût agréable et doux de l'eau, limitant le travail de puisage,
- de la faible profondeur de l'eau, limitant le travail de puisage,
- mais surtout du coût de l'eau de la SONES (fluoré et/ou saumâtre).

14. Dans les quartiers périphériques des villes régionales, les zones non encore desservies par l'eau de la SONES sont essentiellement des zones d'habitat récent, de type villageois, sans rues clairement délimitées, et avec des constrictions très souvent en matériaux traditionnels (paille, banco, bois, etc...). Ce type d'habitat est encore largement temporaire, et la population est dispersée sur de grandes superficies. En conséquence, dans ces quartiers, des bornes-fontaines sont plus appropriées. Le projet propose d'établir des bornes-fontaines dans les quartiers périphériques de ces villes, avec la mise en place d'une étude de "suivi" de ces bornes-fontaines. A cet égard, il est recommandé de construire des bornes-fontaines dans les quartiers non desservis, non pas selon l'importance de la population à approvisionner, mais en fonction des surfaces sans réseau. On retient donc la normes de 250 mètres de rayon autour d'une borne-fontaine, permettant à toute la population de s'approvisionner dans un rayon acceptable.

Le Programme AEP

15. Les quantités d'eau à prévoir sont: 50l/h/j aux branchements et 25l/h/j aux BF. Il existe dans les quartiers étudiés une pénurie d'eau potable et ce pour les raisons suivantes: (i) les zones disposent d'un réseau d'alimentation, mais les pressions de service sont trop faibles. Les mesures suivantes sont prévues : (i) pose de conduites de distribution suffisamment dimensionnés; (ii) il s'agit d'habitats spontanés irréguliers à la périphérie des quartiers réguliers étant munis d'un réseau d'alimentation en eau. Les mesures suivantes sont prévues : alimentation par des bornes-fontaines privées raccordées à des conduites d'amenée DN/100/150 afin d'assurer une extension ultérieure du réseau et la mise en place éventuelle de branchements privés; (iii) il s'agit de quartiers irréguliers qui ne disposent pas de réseau de distribution. Les mesures suivantes sont prévues : extension du réseau par la SONES avec branchements privés/sociaux.

16. Normalement l'on compte qu'un habitant s'approvisionnant à partir d'une borne-fontaine consomme 25l/jour, y compris les pertes. Or, il y a lieu de penser que les valeurs effectives se situent à un niveau beaucoup plus bas. En plus, il est supposé qu'une borne-fontaine peut à elle seule assurer l'approvisionnement de 200 à 300 habitants au maximum. On peut cependant partir d'un chiffre plus élevé, compte tenu du fait que les chiffres de consommation sont plus bas et que la demande en eau est étalée sur toute la journée en zone urbaine. En prenant pour base les taux de desserte, on obtiendrait un nombre trop élevé de bornes-fontaines. Or, dans les zones à desserte insuffisante, plusieurs bornes-fontaines ont été déconnectées, parce que leur exploitation était non rentable.

17. Par ailleurs, le nombre d'habitants dans les zones desservies est difficile à estimer, parce que l'habitat est très peu dense. C'est la raison pour laquelle il est plus réaliste et pragmatique d'adopter comme critère la distance, en prévoyant une distance maximale d'environ 250 m à la borne-fontaine la plus proche. Il s'ensuit qu'une borne-fontaine pourrait desservir une surface d'environ 19.6 ha.

18. Le programme d'investissement présenté ci-dessus, concerne la première phase d'intervention prévue au cours de la première année du projet. Il concerne 12 quartiers dont 5 se trouvent dans l'agglomération de Dakar et 7 dans les centres de l'intérieur. S'inspirant de l'expérience de l'AGETIP en la matière, les modalités d'exécution du programme se définissent comme suit :

(i) confection des dossiers techniques finaux ainsi que les cahiers des charges des travaux par des consultants externes, sous la supervision d'un ingénieur sanitaire résident à l'AGETIP et sous le contrôle permanent de la SONES (maître d'oeuvre) ;
(ii) examen et approbation des dossiers par les services techniques de la SONES ;
(iii) achat global des fournitures par l'AGETIP en fonction des spécifications techniques de la SONES ;
(iv) choix des entrepreneurs de travaux en accord avec les trois parties ;
(v) exécution des travaux sous le contrôle du consultant et sous la supervision de l'AGETIP et de la SONES ;
(vi) réception technique et prise en charge des ouvrages par la SONES.

19. Dans certaines zones d'habitat précaire, il pourrait être nécessaire de procéder à de légères restructurations, pour pouvoir poser les conduites d'eau dans de bonnes conditions. A cet égard, il sera utile de mettre à profit l'expérience du Ministère de l'Urbanisme et la GTZ en matière de remembrement foncier.

Le Programme de travaux composante eau

VILLE	QUARTIER	EXTENSION PREVUE - LONGUEUR	BORNES-FONTAINES PREVUES
DAKAR	Darou Salam	2 antennes DN-150	4
	Guinaw Rails	Remplacement DN 100 pour 300 - 2300m Conduite de branchement - 500m Conduite de raccordement BF-900m	3
	Keur Massar	2 antennes DN 100-800m	2
	Nimzatt	2 antennes DN 150 - 1500m	3
	Thiaroye Gare	2 antennes DN-1100-900m	3
DIOURBEL	Keur Cheikh Ibra	2 antennes DN 150-500m	2
KAOLACK	Ngane et Touba Kaolack	3 antennes DN 100-900m	3
	Ngane Saer	1 antenne DN 100-600m	2
ZIGUINCHOR	Boucotte Sud Lydiane	1 antenne DN 100 - 100m	1
	Tilène Kadror	4 antennes DN 100-200m	4
	Santiaba Kande	3 antennes DN 100-500m	3
RECAPITULATIF.		DN 150/PN10-4000 DN 100/PN10-4900 DN 300/PN10-2300	30

Sensibilisation des Populations et Education Sanitaire

20. Le projet à prévu en place de micro-entreprises dans les centres de nutrition communautaires. Ces micro-entreprises sont supervisées par les ONG et par les comités de pilotage. Pour une meilleure efficacité du projet global, il est préférable que les mêmes micro-entreprises soient également chargées de la sensibilisation à l'eau. Il faudra donc renforcer les micro-entreprises par les agents "eau"' afin qu'ils puissent sensibiliser les populations sur :

- l'utilisation d'une eau propre et saine;
- le coût d'accès à l'eau potable;
- l'apprentissage des gestes sanitaires et d'hygiène indispensables ;
- l'organisation de l'évacuation des ordures ménagères;
- la mobilisation pour les travaux de nettoyage des rues et de curage des canaux d'évacuation des eaux ;
- la participation de la population à l'entretien de toutes les infrastructures à créer ;
- le suivi et les études sur la consommation et l'utilisation de l'eau aux bornes-fontaines tests dans les villes régionales.

21. Ces agents devront être choisis par les micro-entreprises au sein de la population des quartiers en fonction de leur qualité propre et de leur influence sur la population. Ils devront recevoir une formation spécifique pour leurs tâches ultérieures, dans des entreprises de formation existantes au Sénégal et auxquelles l'AGETIP déjà fait appel pour ses autres besoins de formation.

Participation des populations pour la composante "eau"

22. En ce qui concerne le coût financement des extensions du réseau de distribution de la SONES, il est jugé qu'une participation en travail et/ou en espèces ne peut être exigée de la population. Jusqu'à présent l'ensemble du coût de ces travaux a toujours été pris en charge soit par des bailleurs de fonds, soit directement par la SONES sur ses fonds propres. Ces financements ont couvert des extensions de réseau dans des quartiers beaucoup plus "riches" que les quartiers du projet. Il est illogique et injuste de faire payer des "pauvres" pour un service que les "riches" ont reçu gratuitement. En ce qui concerne les frais d'entretien du réseau, le paiement de la facture d'eau selon la grille tarifaire de la SONES suffit à couvrir ce coût. Il est proposé que l'AGETIP sous-traite avec des entreprises locales et des tâcherons la réalisation technique des équipements, selon un cahier des charges établi par la SONES. Pour que la population bénéficiaire se sente plus concernée par ces extensions de réseaux, les entreprises adjudicatrices devront recruter des ouvriers et la main d'oeuvre non qualifiée parmi les populations des quartiers, selon des listes de travailleurs prioritaires établies par l'AGETIP. Il s'agit de procédures largement répandues dans le cadre des travaux communautaires à haute intensité de main d'oeuvre. En ce qui concerne le coût d'investissement des bornes-fontaines, il est rappelé que c'est le projet qui devra les financer. Le programme sera exécutés par l'AGETIP dans le cadre de la maîtrise d'ouvrage déléguée et selon le même programme à haute intensité de main d'oeuvre recrutée localement, pour notamment la réalisation des travaux non spécialisés (ex: creusement des tranchées des conduites d'eau).

Capacité et volonté de la population à payer l'eau

23. Le coût de l'eau en fonction des revenues des ménages représente actuellement entre 5 et 7% du revenu monétaire des 80% les plus "riches" de la population urbaines. Les 20% les plus "pauvres" sont rarement raccordé à un branchement particulier. A Dakar, où les sources d'eau alternatives (puits) sont rares, la population la plus pauvre dépense quelques 10% de ses revenus monétaires pour l'eau potable aux bornes-fontaines. Dans les villes régionales, les revenus monétaires sont moins élevés que dans la capitale et les ménages les plus pauvres n'achèteront aux bornes-fontaines que quelques litres par personne et par jour indispensables à la cuisine et la boisson. Les autres-besoins en eau seront couverts par les sources alternatives d'eau (puits), qui sont nombreuses dans les villes régionales du projet. Dans la pratique, la SONES est flexible quant à la possibilité de payer la facture d'eau en plusieurs fois, ce qui constitue un atout pour les ménages pauvres de ne pas avoir à débourser 4.000 F CFA ou plus en une seule fois. Le coût de l'eau reste donc acceptable pour la très grande majorité de la population urbaine du Sénégal.

24. La notion de "volonté" de la population à payer l'eau potable est difficile à cerner dans une ville où il n'existe aucune autre source d'eau alternative. A Dakar, la population n'a pas le choix, puisque le nombre de puits encore fonctionnels est très faible. La SONES couvre déjà plus de 95 % de la demande en eau de la capitale. La population à la capacité financière pour payer l'eau de la SONES à Dakar, et le recouvrement des factures d'eau de la SONES est proche de 100%. La situation est différente dans les villes régionales, surtout à Ziguinchor où la capacité financière existe (bien que les revenus monétaires des familles soient inférieurs à ceux de la capitale), mais la volonté de payer l'eau n'est pas répandue dans les quartiers non urbanisés. La sensibilisation des populations est donc indispensable. En tout état de cause, une enquête supplémentaire plus détaillée sur la volonté des populations à payer l'eau, sera effectuée prochainement sur le terrain par le GREA qui dispose d'une très grande expérience en la matière.

RURAL HOUSEHOLD FOOD SECURITY

Terms of Reference

Description

a) **Goal:** The objective will be to produce a detailed proposal, completed at least two months prior to the project's mid-term review, which sets forth a plan of action for the rural household food security program. This proposal, once vetted and approved, will be selectively tested to determine its sustainability and replicability throughout rural Senegal.

b) **Perspective:** In the long run, increased food output and higher real income are the principal pathways to solving much of the malnutrition and food insecurity in rural households. Population density, logistical constraints, seasonal variations affecting food availability, household food production and consumption, female labor requirements and child feeding patterns, make the rural environment markedly different than that of the peri-urban setting.

c) **Intervention**: This component will test an approach for rural households in areas where there is a high incidence of food insecurity, poor nutrition, and poverty, especially with respect to child and women, principally through direct interventions which complement AGETIP's comparative advantages, as well as other programs, projects, and policies. The program will focus initially on labor-intensive rural community micro-projects. Such activities could include village wells, health posts, schools and school canteens, community gardens, food storages facilities, road maintenance and incidental construction. The program will look to AGETIP's experience in group motivation and partnership with both public and non-public entities.

Information and Analysis (Phase I)

Taking into account differences between peri-urban and rural household food insecurity, and the extent of AGETIP's institutional experience in rural communities, rural community basic infrastructure needs, the size, character, structure and capacity of rural NGOs, the task will be to gather and analyze existing information with respect to:

. rural household income, nutritional status, and household eating habits in different regions;

. early warning systems, such as those under the direction of the *Commissariat à la Sécurité Alimentaire* (CSA), which identify insecure food areas and food market price;

. availability and delivery of health and social welfare services to rural women and children, whether through the MOH, or the Ministry of Family, Child and Mother;

. assessing the availability and existing and potential capacity of AGETIP's possible NGO partners, such as traditional women associations and women farmer contact groups, and female extensions agents of PNVA, by the *Monitrices Rurales* or through *the Centres d'Expansion Rurale Polyvalent* (CERPs), to deliver household food security nutrition programs and messages;

. past or ongoing rural food assistance, particularly food-for-work, such as community reforestation and school cafeteria projects;

Proposal Document for Program Intervention (Phase II)

The findings of Phase I will provide the basis for concrete recommendations concerning:

. identification of regions where initial labor-intensive rural community efforts could be focused and tested, based on high probability of food insecurity, poor nutritional status, poverty levels, and proximity to areas where AGETIP is carrying out community nutrition activities;

. identification of one or more promising models which could be adapted to Senegal's rural conditions, including the transfer of the IEC component to rural settings: modifying this approach to emphasize greater reliance on outreach capability, for shorter time periods; experimentation with various formulations of targeted food-for-work, food supplement or cash equivalent programs; working with traditional women associations and farmer contact groups in developing productive activities which have high probability of increasing food consumption and income for women and children, and can be used to convey behavioral change messages; and

. proposals on ways to introduce these models, taking into account investment and operating costs, beneficiary coverage, and likely benefits. Preliminary cost estimates for training, staffing, food supplies, equipment, community civil works construction, IEC materials development and production, and operating expenses will be provided.

Trial Testing (Phase III)

Once the detailed plan of action is approved by the National Commission for the Fight Against Malnutrition and IDA, it will be made operational on a limited basis. At least one, possibly two, region(s), which meet the food insecurity, poor nutrition, poverty, and proximity to AGETIP's community nutrition activities criteria, will be chosen. The specific interventions and target populations will be identified, as well as the approach to be used for field monitoring. The test interventions will be evaluated during their implementation, with potential strengths and constraints of each, viewed in terms of: transference of functions to the non-public sector, community mobilization and responsiveness to beneficiary needs, training, management and logistical needs; additional rural nutritional and household food security information generated, on which to base decisions and action.

SOCIAL MOBILIZATION AND INFORMATION, EDUCATION, AND COMMUNICATION (IEC)

Introduction

1. More than one child in five aged 6-36 months is malnourished in Senegal. One child in three is stunted as a result of chronic malnutrition. While malnutrition is a greater problem in rural areas than in urban ones, nutrition problems in poor urban neighbourhoods are of a magnitude comparable to that in the rural world (Guiro 1994). There is evidence that socio-cultural and socio-behavioural factors are as much part of the underlying causes of malnutrition as are economic and food-security factors. Changing behavioral patterns towards improved practices in the field of nutrition, health and hygiene is therefore an integral part of the fight against malnutrition. A sustainable approach to the elimination of malnutrition requires the empowerment of individuals and communities to manage their nutrition and health problems themselves.

2. The Community Nutrition Project therefore places major emphasis on behavioral change and the mobilisation of communities to take charge of their problems. The Social Mobilization (SM) and Information, Education and Communication (IEC) Programs are central to all the components of the project and to the project's success as a whole. They will ensure that all those involved in the project from political leaders to beneficiaries are fully informed, motivated and participate in the project. They are also critical to achieving project sustainability by providing individuals and communities skills for dealing with their nutrition/health problems.

3. The programs are being developed with the past difficulties with SM and IEC activities in Senegal in mind. Emphasis will be put on strategic planning guided by well defined research (including monitoring and evaluation); regular training and supervision of IEC staff; collaboration between partners at the national and community levels; and the development of pretested, culturally appropriate IEC materials.

4. The programs will make the best use of SM and IEC resources through an approach which combines client consultation (interpersonal communication with beneficiaries) at the Community Nutrition Centers (CNC) and in households with interventions within communities and use of the mass media. AGETIP and its collaborators have gained valuable experience with SM and IEC and will build on this experience.

Social mobilization (SM)

Objectives

5. The SM objectives are to:

- mobilize political support and collaboration for the project at the national, regional and local level, including local leaders;

- ensure that the community has a sense of local ownership of the project and participates in its planninng and execution; and

- improve the capacity of communities to take charge of their nutrition/health problems and to provide and broaden access to nutrition and related health services

Strategy

6. At the national level, critical elements of the SM strategy include the political support provided by the National Commission for the Fight Against Malnutrition, as well as national planning meetings such as ZOPP workshops. At the regional level, the strategy aims at mobilizing the support of governors and other regional authorities. A key factor at the community level, the focus of the mobilization efforts, is the establishment of steering committees (Comités de Pilotage) composed of local leaders, local economic interest groups (GIEs) and associations, and representatives of local authorities (including the district medical officer); these are supported by sub-committees built around the individual CNCs (where the district medical officer is represented by the nurse or midwife of the neighborhood). These committees and sub-committees serve as a mechanism for communication and coordination among all local stakeholders in the project, and as an instrument for community supervision, problem idenification and problem solving. The steering committees are concerned with all major components of the project, i. e. nutrition, health, and water.

7. AGETIP has vast experience with SM. The existing AGETIP strategy for conducting Social Mobilization will be adapted to the needs of the project. At the community level, it involves the following steps : contact local authorities, meet with community leaders, hold large community meeting; gain approval of the community; and the formation of a community steering commitee. A description of the project and options for community participation are presented. The AGETIP method of contracting for services is also explained. A Video will be prepared and shown, illustrating successful project interventions in other communities with emphasis on the role of growth monitorig in the nutrition program and the mothers' active participation in that activity. Traditional forms of communication, such as the "griots" or town criers and theater groups, will be used to attract the attention of communities to the project.

8. Social mobilization activities will also include information exchanges between neighborhoods: local leaders, local NGOs, GIEs and other associations. The MICs and MOCs of neighborhoods about to open new CNCs will visit neighborhoods with well-established and well-functioning CNCs. There will also be competitions between CNCs with awards going to the best performers.

Implementation

9. Social mobilization efforts at the community level will be directed by the Steering Committees with the assistance of community supervisors (MOCs) and local consultants. MICs, and notably the IEC agents, will explain project details to local groups and associations and members of the Steering Committees/Subcommittees. AGETIP will exercise overall supervision.

10. The Social Mobilization activities will also provide a vehicle for delivering IEC messages, which include:

Community initiative : importance of communities helping themselves and not waiting for government services, development of techniques to lobby for services ; importance of participatory nature of project.

Community hygiene : importance of boiled water and link to good health and nutrition; importance of good water conservation and management habits; why pay for water (benefit returns to community) ; importance of good sanitation habits and link to good health and nutrition ; role of latrines, garbage collection, canal cleaning, compost.

Role of fathers for family nutrition : special needs of lactating and pregnant mothers; link between nutrition and good health ; need for financial planning to ensure nutritional needs of young children are met.

IEC

11. It is acknowledged that many of the nutrition and related health problems are caused by economic and environmental conditions. However, many are related to socio-cultural factors. Poor nutrition practices which are based on misguided traditions or simply ignorance will be the target of much of the IEC program. Traditionally, health and nutrition "education" was oriented to simply filling information gaps. This approach of providing scientific facts and encouraging behavioral change is not effective. More subtle participatory approaches have been developed which use a combination of media and inter-personal methods focused on inspiring specific changes in behavior among specific target populations.

12. These approaches help the target populations understand their situations and, most importantly, decide for themselves to make changes they perceive will be of benefit to themselves anf their families. Past experience has shown that the population's ability to make changes is weak, especially considering that those with the greatest nutrition and health problems are those with the most limited education and resources. Project planners have to make sure that realistic expectations are created and that the demands on IEC to inspire behavior change do not surpass the populaiton's ability to change.

13. The **objectives** of the IEC program are : (a) to stimulate positive behavioral change among the target population and strengthen their capacity to manage their nutrition, health and related problems; and (b) to increase among the public at large -including the leaders responsible for the provision of social services- awareness of nutrition, health and sanitation conditions and ways of addressing them.

14. The IEC **strategy** will be developed and guided by existing and new research, including beneficiary assessments and monitoring of IEC activities. The IEC will be targeted towards clearly defined target populations and oriented to inspiring and measuring specific changes in behavior.

15. The target groups are : (i) for the nutrition program, mainly pregnant and lactating women most of which have malnourished children (an attempt will be made also to reach men with selected messages); and (ii) for the water progam, all households in targeted communities.

16. The strategy will use the following communication methods:

(i) Inter-personal/client consultation at CNCs (individual and groups): mainly in the nutrition program;

(ii) Inter-personal at household level: primarily in the nutrition program for households with severely malnourished or sick children, with children not gaining weight and with multiple beneficiaries;

(iii) Inter-personal at community level: both programs

(iv) Mass media : both programs
- radio, TV, press; particular emphasis will be placed on broadcasts in local languages on regional radio stations.

(i) Inter-personal IEC at the CNC

17. Each CNC will offer weekly IEC sessions to pregnant and lactating women during the 6 months they participate in the feeding program. Other women who are not participating in the feeding program will also attend the sessions. The sessions will be held with groups of 10-15 and each session will cover a specific theme. An attempt will be made also to hold at least one IEC session with the husbands of participating women. Given the difficulties in reaching this group with nutrtition/health related IEC, successful efforts will depend on mobilizing the support of local leaders.

18. Two staff persons in each CNC will be responsible for conducting IEC sessions, though the other staff members will assist. The IEC Agent will provide group sessions at the CNC, while the Community Health Agent (in charge of growth monitoring) will be responsible for individual client consultation. This individual contact is with women who have the most acute difficulties and will involve referring them to other health and social services.

19. The two staff will attend three training sessions over the course of the project. Those conducting the training will also be responsible for supervising the work in IEC and client counseling and distributing materials. Each center will be supplied with IEC materials. Flip Charts to be used in the IEC sessions and Flash cards (for client consultation) together with growth charts are the primary materials which will be used. The person repsonsible for IEC will be literate and have roots in the community (to reduce the chances that they would be trained and then leave).

20. The IEC agent will also be required to organize IEC sessions outside the CNC, especially for the water program. This will be done in conjunction with the Social Mobilization efforts and in collaboration with other health and social service organizations, NGO's, women's groups or others who wish to benefit from the project IEC.

21. IEC activities in the CNCs would follow a standardized approach, using modular IEC packages. However, activities would be finetuned to the socio-cultural conditions and the specific needs articulated by the beneficiaries themselves in each CNC. Each IEC agent will be required to prepare quarterly plans (micro-planning) which will be reviewed by the community supervisors (MOC) and the IEC supervisor at AGETIP. The format for the group sessions at the CNCs would be uniform. Sessions would start with a review of the theme covered at the previous session and a discussion of

what impact if any it had on the mothers. This would be followed by a discussion to gain insights into how the mothers perceive their problems related to the new theme using the IEC material (flip charts and flash cards to stimulate the discussion and present information).

(iii) Communiy level IEC

23. At the community level IEC will be used for three main purposes : in support of the social mobilization process to stimulate interest in the establishment of the CNCs ; to communicate the IEC messages used in the CNCs to a wider audience ; to promote the water program and deliver related messages.

24. For the water program the IEC effort will build on AGETIP's experience with using the Social Mobilization to communicate IEC messages. Topics to be covered include: use of clean water ; why pay for water ; the importance of community and individual hygiene ; how and why to organize garbage collection ; the importance of clean drainage and keeping it clean ; why a community should participate in the Water and Sanitation Program ; the importance of maintaining water sources clean and conserving water; and the monitoring of the experimental standpipes in the regional towns.

(iv) Mass media IEC

25. Mass media can be the most cost-effective vehicle for IEC. Large numbers of people can be reached especially through radio. 70% all Senegalese households have a radio, in urban areas this rate is higher.

26. **Radio** spot ads will be developed which will initially treat three principal themes: the link between nutrition and health; the link between good hygiene and health; and breastfeeding and good weaning practices. The 30 second spots will be repeated several times daily for two months on regional radio stations. They will be broadcast in Wolof and the predominant language of the region in which the stations are located, if the population speaking the language is greater than 40 percent. The format recommended is creating a real life situation. Different spot formats should be pre-tested to find out which has the greatest impact. Traditional theater groups can assist in the dramatization of the dialogue we and the selection of words in Wolof and other languages.

27. Since the project will expand in phases it is recommended that the four regional radio stations be used for the spot ads to ensure that the ads broadcast at about the same time project services will be available or soon become available. Different themes and messages will be needed over the life of the project as different obstacles to behavior change emerge and priorities evolve. Spot ads on the radio are the most cost effective communication media for reaching the different target populations.. Limited use will also be made of TV spot ads to build strong advocacy for the project at all levels of society.

28. **A news media** campaign will be designed to gain support among opinion leaders and encourage community participation. It will also complement the spot ad campaign by communicating some of the same messages. The campaign will be conducted by preparing documentation and press releases on the project for radio, television and newspaper journalists. The journalists will also be invited to briefings; special attention will be paid to the journalists who prepare national language

programming. They will be assisted in developing a vocabulary in the different languages which would also be used on the spot ads in IEC materials.

29. The IEC program will receive advice from the Project's Consultative Committee composed of representatives from concerned government departments, international organizations, bilateral donors and local NGOs, including: SANAS, DSSP, ESP, UNICEF, UNFPA, WFP, USAID, GTZ, ORSTOM, ORANA, and Project BASICS. The Consultative Committee will ensure that a cooperative environment is created which allows for the sharing of research and materials developed by different organizations working in the nutrition and health sectors in Senegal. It will also facilitate the coordination of resources and content to avoid costly and confusing duplication. This Committee will function like a board of directors offering guidance and support for major IEC strategies. For specific subject areas the Committee may associate other institutions with specialized expertise.

30. A combination of messages and materials developed by other organizations and institutions, as well as new messages and materials developed for the specific needs of the project will be used. For example, flip charts on oral rehydration and nutrition exist and can be duplicated and used from the start of the project. All materials will be throughly pre-tested with representatives of the target population, including materials already produced and prototypes of new materials.

31. The materials will be developed by contracting out the work to private sector firms or NGOs with experience in communication and advertising. This will be done under the supervision of the AGETIP's NMD and in collaboration with the Consultative Committee.

32. To develop consistency in the vocabulary used in the project in the inter-personal and the mass media communications, a seminar will be held to create a glossary of terms in French and national languages. The seminar would be attended by several IEC agents from the CNC, representatives of the MOH, UNICEF, NGOs, and other organizations with experience in communication and advertising and the production of nutrition/health-related IEC material in Senegal. National language linguists and the producers of radio programs in national languages would also be invited. The terms already used by the MOH and UNICEF health educators will be used as the basis for the development of the glossary. The glossary would be circulated to the CNCs and integrated into the training.

33. The IEC program will be implemented by a combination of collaborators including AGETIP's NMD; private sector firms responsible for training, supervision, materials production ; institutional collaborators, notably those represented in the Consultative Committee.

Research

34. There exists in Senegal a large volume of high quality research which has been produced by various organizations and agencies on topics related to this project. This research on food habits, taboos, intra-family food sharing, breast feeding and weaning habits will be important in guiding the IEC and Social Mobilization program. However, there will also be a need to develop operational research which will be instrumental to the functioning of an efficient IEC and Social Mobilization program. A combination of small scale studies and focus group discussions with various target populations would serve to guide the development of IEC and Social Mobilization strategies, messages

and materials. This research will become increasingly important as obstacles to behavior change are identified.

35. Operational research is needed to monitor and evaluate the IEC and Social Mobilization program. The impact of the messages and materials on changes of behavior among the target populations is of particular importance. Different parts of the project have different research needs for planning, monitoring and evaluation (study of beneficiaries, periodic operational studies, activity reports of supervisors, household studies and an annual KAP study). This research will be coordinated to ensure that the specific needs of the IEC and Social Mobilization planners are met (see Annex VIII on monitoring and evaluation).

Management of the IEC and Social Mobilization Program

36. A team approach will be employed for the management of the IEC and Social Mobilization program. The team will be headed by a program manager who will have the responsibility of coordinating the work of other AGETIP project staff, including the nutritionist and sociologist/anthropologist. The manager and other staff would have the responsibility of:

-Reviewing research and developing plans for new research
-Developing specific IEC and SM strategies
-Identifying private sector collaborators to execute the IEC and SM strategies through bidding
-Developing terms of reference for the collaborators
-Developing work plans with the collaborators and supervision of their work
-Ensuring the pre-test of IEC materials and the development and analysis of research guiding the development, monitoring and evaluation of the execution of IEC and SM strategies

37. Under the supervision of the IEC and SM manager, the IEC-related research, IEC materials, training modules and accompanying materials and the Social Mobilization will be developed and executed under contract. NGOs, government agencies and the private sector with experience with the various responsibilities will render the services. Private sector advertising and market research firms will be used to develop media strategies and materials and pre-test their effectiveness.

38. In order to develop a clear public identity for the project, a logo will be developed for use throughout the project (e.g. at CNC entrances, on food-supplement containers, T-shirts). The logo will contain a visual message related to good nutrition practices and conveying child well-being. It will be thoroughly pre-tested to ensure that it is understood and appreciated by the target populations and not confused with other projects or programs. A name for the food supplement will also be developed.

TRAINING

1. Given the innovative aspect of the project, it is essential to implement a training program which will address the needs of the target groups, the steering committees, the Community Micro-Entreprises (MIC), the Community Supervisors (MOC), and the communities involved in the project. Such a program will enable the providers of services to promote the nutrition and hygiene practices they have gained during project implementation. The training program will cover the nutrition, water and and monitoring and evaluation programs of the project. The implementation of the training program will take into account the phasing of the project; thus, this Annex will consider only the first year activities.

Strategy of the Training Program

2. The objective of this component is to set up through training, the environment favorable to a real involvement of the populations, the steering committee, the MIC, the MOC and the target groups, so as to ensure good project implementation. In addition, this component aims at ensuring the durability of the experiences gained during this project and at strengthening the local and national expertise in terms of training and nutrition.

Theoretical and Practical Training

3. The training modules for the first year of project execution are mostly dictated by AGETIP's past experience in contracting with small entrepreneurs in the Public Works Project. These modules draw also from the pilot phase experience and the observed capacity of the MICs and MOCs to carry out the tasks of managing the CNCs. It is envisaged that during the first year of project implementation, many issues will arise, in particular during monitoring and evaluation, that will be recorded and communicated to the trainers by AGETIP in order to be taken into account in susbsequent years. This bottom-up approach puts the emphasis on the real needs of the entrepreneurs. The links established with the monitoring and evaluation component of the project allow for feedback and for adjustment to improve the delivery process.

4. In the short term, educational materials will be prepared for training in local languages (Wolof, Diola) of the different project participants in Dakar and in the various districts of the ten regions in which the project will be implemented. In the long term, these materials will be reviewed in conjunction with the MOH to integrate them in the action plan of the national nutrition program.

Training Program Description

5. The training program will have three sub-components dealing with nutrition, water, and general management.

Nutrition sub-component

6. The development of training modules and support materials and the training itself will be contracted out. Training will be conducted following the method used by AGETIP in previous projects. Contractors will develop training modules and identify consultants (unemployed doctors) to conduct the training and assist in the supervision of activities. The "cascade" method similar to the Training and Visit method used for Agricultural Extension in Senegal will be used. It involves

conducting training of trainers and the use of supervision and extensive feedback mechanism to ensure that the training has been effective and to identify future training needs. A nutritionist will be identified to be part of the team developing the training modules, and will participate in the training. Training will be practical and will include role plays if necessary. After initial training, yearly refresher courses will be provided both to the MICs and MOCs.

7. The training for the nutrition program will be divided into six main modules: i) inter-personal communications methods and techniques for welcoming the population ("accueil"); ii) general presentation of the project; iii) stock management; iv) nutrition; v) management, monitoring and supervision of a CNC; and vi) the management information system.

8. The following training modules will be developed:

9. Module on inter-personal communications methods. This module is designed to improve the skills of MICs in inter-active communications. In the past, support materials, such as flip charts, have not been used properly because of a lack of training in inter-personal communications techniques. The primary participant for this training would be the person at each CNC who is designated to be responsible for IEC. The initial training session would be for five days, followed by 2 additional follow-up sessions of 2 days in length. Existing documents and training modules on conducting inter-personal communications exist and will be adapted for this module. This module on communication techniques and animation of meetings will be helpful to develop the relationships between the MIC, the MOC, the Steering Comittee and the beneficiaries. In this module they will also learn techniques for welcoming people in the CNCs.

10. General presentation of the project. This module is targeted to the main actors of the project (MICs, MOCs). After this session, they will know the project's objectives, who are the target population, the different actors and their terms of reference, and contracts. An introduction to the project's Manual of procedures will be given to ensure that they understand who are the stakeholders of the project.

11. Module on management, monitoring and supervision of a Community Nutrition Center. This module is targeted to the supervisors of micro-entrepreneurs and to CNCs external supervisors (MOCs). The module presents the role of the CNC in the context of the project and its contractual relationship with AGETIP. The module will provide training in basic management and develop skills directly related to running the CNC, such as receiving and registering beneficiaries, conducting growth monitoring and the stocking and distribution of the food supplement. An operations manual will be provided as a support document. Also, videos of functioning centers will be shown and discussed.

12. Module on Nutrition. This module is designed to ensure that collaborators at all levels have fundamental information about nutrition, hygiene and other issues related to the project. It will help them understand the context of their part of the intervention and enable them to act as informal educators.

The participants would include all the managers of the CNCs, supervisors and those conducting IEC training, weighing and referral to health centers. The module will include the following elements: basic nutrition, breastfeeding promotion, weaning practices, frequency of feeding, prevention and treatment of diarrhea, growth monitoring and promotion (using weight for age and how to use the growth chart), food demonstration in the CNCs, referral of children to the health system and ways to coordinate with the health system.

13. Module on stock management. This module is above all designed for the agents who will be responsible for distributing and controling the stock of the food supplement. The supervisors (as well as MOCs) will also be concerned by this module. This session will present general concepts on stock management, quality control of the food supplement, record keeping and safe storage of the food.

14. Module on the Management Information System (MIS). This module is designed for the MOC in charge of putting data collected from the CNCs and the staff of the Nutrition Management Division in AGETIP who will treat and analyze results given by the MIS. Simplified sub-modules will be addressed to enable the MICs, the MOCs and the Steering Committees to interpret the results generated by the MIS.

Water Program

15. Training for the water program, developed in accordance with SONES, the Services Techniques Communaux, and AGETIP, will be done by private contractors. The training component will promote an expertise from small contractors who will later have the opportunity to become skilled repairmen, spare-parts distributors, cement sellers, and generally dynamic contractors in their districts. The training modules will cover all the trades involved in the implementation of the water component, i.e., pump and generator repairs, well-digging, construction (for the superstructures/pumps and the platforms for stand-pipes), pipe laying and electric work. In addition to technical training, they will be offered support in the management of their MIC including community outreach (information campaign and data collection) and a survey on the effective demand in the target areas.

Management Training Component

16. This component will reinforce the managerial abilities of the MIC and MOC. It will comprise the following modules: general diagnosis (computing); management; fiscal and social diagnosis; general accounting; marketing; stock management; finance; worksite management and supervision diagnosis; analytic accounting; and strategy diagnosis: development plan.

Vocational Training Component

17. This component includes 6 modules: repair works for small water networks, pumps etc.; measurement and estimate of costs; well-digging techniques; electricity; worksite management; and construction.

Management Component

18. The last two training modules concern the Nutrition Management Division: training to document project implementation and self-evaluation training. The first module is one of the most important aspects of the Training Component. Indeed, the project aims at helping in the elaboration and setting up of a new nutrition strategy. It is a good means of experimenting and establishing norms, working principles, fixing participation rates, and determining responsibilities. The objectives of the training module, "Programming and Documenting Project Implementation", which will permit concerned persons to tap a regularly-updated information network, are the following:

- to collect nutrition information expected by various stakeholders;

- to identify and send to the National Commission for the Fight against Malnutrition the available information generated by the Management Information System;

- to elaborate summary documents on the different aspects of the project;

- to identify and duplicate educational materials which might interest health, education and nutrition stakeholders.

19. The Self-evaluation Training module is meant for the personnel of the Nutrition Management Division who will be responsible for providing information to the National Commission for the Fight against Malnutrition. It will help set up a very simple mechanism (without much data collection) to identify quickly areas which require special attention, need to be adjusted or eliminated. Not only will this self-evaluation help AGETIP monitor the activities of the project, but it will also help the project team understand project objectives that have been clearly defined by the National Commission for the Fight against Malnutrition.

MONITORING AND EVALUATION

I. DESCRIPTION

A. General

1. The objective of the monitoring and evaluation (M&E) system is to provide timely and relevant information to managers and policy makers of the project, to enable them to track project performance, take any necessary corrective actions, and assess project benefits and impact. The monitoring and evaluation system will be discussed with all interested parties (including MOCs, MOH, CSA, WFP, KFW and IDA) at the launching of the project during a 2-3 days workshop, to be organized by AGETIP. At the conclusion of the workshop, the M & E will be finalized, with each project actor having a better understanding of the purpose of the system, the role of each stakeholder, the relationship among the various stakeholders and the flow of information.

B. Key Data Base Components

2. Neighborhood Census: To build an information base on the children in the community, all children in a targeted neighborhood will be identified by an initial census. The local MIC personnel will participate as surveyors in the census data collection. Information gathered will be the child's name, age, weight and height (for those 6-36 months), number of pregnant and lactating women in the household, household conditions with respect to water souce and conservation, and sanitary conditions. All data collected during the census will be logged into the project management information system. This census will provide the basis to evaluate project coverage in each targeted neighborhood. Once the CNC is operational, this initial census data will be used to identify malnourished children who have not come to the CNC within a reasonable timeframe. CNC staff will visit these households during home visits and will try to convince mothers to participate in the program. In each area, the census will be done two months before the opening of the local CNC.

3. Management Information System: During the pilot phase, the MIS data collection system at the CNC was simplified, and during appraisal, preliminary agreement was reached on the number, type and content of forms to be maintained by the MIC. (These will be finalized during the M&E Workshop). MIC staff will be trained to collect information, organize and analyze it. As designed:

- each beneficiary form will be printed with a color code and will be organized in boxes to easily identify malnutrition categories and scheduling (i.e., which beneficiaries are expected to come on each day). A separate file will be kept on children who did not come and need at home visits.

- a daily tabulation of the number of children weighed, number of food rations distributed by client category, and the number of IEC sessions with theme and attendance will be kept on a small registry.

- a weekly data form has been developed for MIC data to be filled by the MOC for entry in a computer program. Weekly supervision meetings between MICs and MOCs will start by analyzing and discussing these data, identifying trends and problems, and trying to solve them on the spot (a supervision guide is being developed by AGETIP).

- MOC staff will consolidate the weekly reports for each MIC on a monthly basis and send these results to AGETIP by modem. The MOC will also use the monthly report to discuss it with the Local Steering Committee, and the District Steering Committee with AGETIP, to solve problems that can be solved at that level.

Supervision System

4. Supervisors will use MIS data for multiple purposes, including feedback to people supervised and to resolve problems. Supervision of the CNCs will be contracted out to MOCs who will provide at least two staffs for this purpose. They will share their workload so that each CNC is supervised by only one person. Each CNC will be visited weekly by its MOC supervisor. Results of supervision will be the basis for periodic meeting with the MOCs, MICs, Health Services and Communities.

5. The selection criteria for selecting supervisors (MOCs) and their terms of reference have been established in the Manual of Procedures. A Supervision Guide to be used by the MOC during its weekly supervision of the MIC is being tested and finalized by AGETIP. Briefly, the following services will be provided by MOC supervisors:

- undertake a weekly supervision of 10 CNCs;
- provide a monthly, semestrial and annual report to AGETIP;
- cross-check information collected in the CNCs by visiting a sample of households to check (i) if data are valid, and (ii) to ensure that beneficiaries' files are being updated properly;
- provide AGETIP the next monthly supervision schedule before the end of the ongoing month;
- participate in the annual program evaluation;
- coordinate activities with the District Committee (discuss with them the monthly supervision report and solve with them problems identified, through weekly supervisions);
- participate in periodic meetings with AGETIP and other MOCs.

6. A supervision form to be used by the MOC is also being developed and tested by AGETIP during the pilot phase. It will consist of two parts: one concerning the CNC and the other concerning household information. For the latter, at least two households, selected at random, whose names appear in the beneficiary file will be visited weekly to (i) confirm that this household belongs to the target population, and (ii) check if the household has received the services mentioned in the CNC activity report. In addition, at least two households who have abandoned the program will be visited to find out why they discontinued the program. Results of these field visits will be discussed with the MIC and the Local Committe and will be transmitted to AGETIP with the monthly report.

II. MONITORING ACTIVITIES

7. The monitoring system is designed to gather information on the availability and delivery of services, on the utilization of project inputs (the status of beneficiary recruitment into the program: age and nutritional status), on the coverage, on the quality of project outputs and on the conditions crucial for effective implementation. It will provide timely signals to project staff, management, and government on problem areas requiring corrective actions.

8. To be useful for rapid decision making, the data must be analyzed and made available quickly. This will be done by:

- setting performance thresholds which will trigger action by management if reached;

- making data available to all levels of management (CNC, community, District, MOC and AGETIP) through computer data entry at the CNCs and via modem, as well as through periodic meetings with Community and District Committees. Suggested monitoring indicators differ from management level: a) MIC by MOC; b) MOC by AGETIP, c) overall by AGETIP and d) by the National Commission.

A. Monitoring of the MIC by the MOC

9. The objective of this monitoring is mainly to monitor MIC performance against planned targets, and to ensure the quality of services provided by the MICs. Tentative MIC performance thresholds indicating that special attention is required are contained in the table on monitoring indicators (see Attachment A). Performance thresholds for each CNC will be set by semester, based on the census data.

10. Monitoring will be done during the weekly visits to the CNCs. The MOC will use a laptop computer to enter data collected during the weekly MIC supervision, and will transmit analysed data, through modem to AGETIP, at the end of each month. At the CNC level, data will be analyzed during the weekly supervision, and plotted on graphs and tables. These graphic analyses will then be used for meetings with the Local Steering Committee at least every two months. It is important to ensure that analysis of some data is made at the CNC so that the MIC understands how their data can be used, this should ensure better quality of data collection in the medium to long-term.

B. Monitoring of the MOC by AGETIP

11. AGETIP will ensure that the MIC/MOC information system works as planned, and that the MOCs are supervising regularly and effectively. Suggested indicators of performance that will warrant attention from AGETIP are shown in the table on monitoring indicators (see Attachment A). Monitoring of the MOCs will be done basically through monthly reports from MOCs to AGETIP and through regular meetings with AGETIP.

12. The monthly data analysis by the MOCs and AGETIP will be made available to the Community and District Steering Committees. This monthly report will contain information described in the table on monitoring indicators (see Attachment A). The five key indicators (number of children weighed; percentage of children in green, yellow and red; number of feeding program participants; number of children not gaining weight; number of rations distributed) will enable the different management levels to monitor the progress of project efforts. They reveal the project's changing coverage over time, show monthly variations in the nutritional status of children, and indicate trends in program participation of children with failing growth. These time-series data will provide a valuable running account of project coverage and impact. Comparing this information with past performance and with yearly data from evaluation surveys will allow management to identify those neighborhoods where results are as expected, and those where they are not.

C. Comprehensive Project Monitoring by AGETIP

13. Based on the MIS, a project monitoring chart will be established by AGETIP that pinpoints the actions required and shows whether services are available, accessible, utilized by the target population, and of acceptable quality. This monitoring chart will be updated yearly, prior to a Bank supervision mission. Data for this chart will be provided by the regular periodic reports coming from MIC and MOCs. The suggested main indicators for overall monitoring are shown in the Attachment A, on project monitoring indicators.

14. Project monitoring will be the responsibility of a Monitoring and Evaluation Specialist in the AGETIP office in Dakar. A statistician will be hired to work with this specialist about 2 months per year (to assist in the design of the system, analysis and interpretation of data), along with one part-time computer programmer and one part-time data entry clerk. This specialist would undertake field checks and special monitoring surveys as needed to supplement routine information and to provide an assessment of its quality.

15. Monthly, quarterly and annual progress reports are foreseen. However, reporting frequency will depend on the relative importance of the data. Format for project data feedback will be designed before project effectiveness, during the Monitoring and Evaluation Workshop.

16. To forecast the food requirements for supplementary feeding, and to monitor the food utilization rates, a simulation model will be designed before project effectiveness to provide estimates of the average number of beneficiaries fed on any given day by a CNC center. The assumptions on which this program will be based (estimated percentages of the population belonging in the various target groups; initial prevalence of malnutrition and of children under-three not gaining adequate weight (which determines eligibility for the supplementary feeding program); initial and subsequent participation rates of children and pregnant and lactating women receiving food supplementation; the growth monitoring and promotion and the IEC program; the frequency and regularity of attendance; the probability of recovery after three and six months in the feeding program; the probability of relapse both within and after six months following exit from the program) will be tested during the first year of the project. Both volume and timing of food supplement production and delivery orders will be based the computer forecasts. Adjustments will be made on the basis of the monitoring information.

III. EVALUATION

A. General

17. The project objectives, namely to a) halt a further deterioration in the nutritional status of the most vulnerable groups, b) improve household food security during critical periods of vulnerability, and c) bring about efficient nutrition interventions through delegated management, provide the basic framework and point of reference for all evaluative efforts. Two types of evaluations are envisaged: The first type of evaluation is process-related, and will be conducted on an annual basis, the second type of evaluation is impact evaluation (see the Evaluation Indicators in Attachment B).

18. The Technical Advisory Committee, which was established during the pilot phase, will continue to ensure that the experience with nutrition projects accumulated in Senegal and elsewhere by

experts and international organizations in Senegal will be fully utilized in planning and carrying out the project. Protocols of all surveys, studies, operations research and monitoring and evaluation systems will be screened by members of the Technical Advisory Committee. The data and findings will be discussed and reviewed with interested partners, before being made available to others.

B. Process Evaluation

19. Process evaluations will identify the strengths and shortcomings in the project's operational design and execution. Much of the information will be generated by the management information system, the results of which will assist the management of AGETIP, the MOCs and MICs to adapt the project mechanism to actual working conditions or more realistic perceptions about causes, inputs and outputs. Evaluation findings will provide guidance in the expansion of the project to new Districts and to the rural environment. The process evaluation format and contents will be drawn from the activities described in the preceding monitoring section, final review of annual evaluation indicators, and the recomendations of AGETIP.

20. Several small qualitative beneficiary assessments will be undertaken to determine from the beneficiary population how they perceive the purposes and interventions of the project and how it assists them and their community. These assessments will use focus group techniques.

C. Impact Evaluation

21. These evaluations focus on the impact of program activities in achieving Project objectives. Using baseline survey data, including census and beneficiary assessment data, collected at the beginning and during project execution, the impact evaluation exercise will assess program effectiveness in modifying nutritional status, improving household food security, and affecting beneficiary knowledge, behavior and practice. The evaluation studies will be contracted out, and SANAS will be partly responsible for the quality control of these studies, namely in reviewing protocols, participating in data interpretation, and maintaining a data set for their national nutrition surveillance system. Evaluative and research findings will be presented to AGETIP, for review and discussion with interested partners, prior to external dissemination.

22. As a condition of negotiations, an agreement was reached on the Terms of Reference for the quantitative impact evaluation studies. The technical organization which will carry out these impact evaluations will probably be ORSTOM, a research institute located in Dakar which has a long-standing experience in nutritional impact evaluation studies in Senegal and which employs Senegalese researchers. ORSTOM is already engaged in a similar study in Pikine (one of the Project's target areas). AGETIP contacted ORSTOM during project preparation, and an agreement in principle has been reached to build on ORSTOM's existing resources in Pikine and Senegal, to adapt the evaluation to the Project's objectives, and to work in other cities than Pikine.

23. The first impact evaluation studies will be carried out after one year of project implementation, comparing data with the baseline survey. Depending on the quality of these evaluations and project needs, a decision will be taken as to if and when the next impact evaluation would be conducted during project implementation. The insights gained from this impact evaluation

will assist the National Commission, AGETIP, and donor agencies in assessing the sustainability and replicability of the AGETIP community nutrition approach.

24. The following studies, surveys or assessments will contribute to the impact evaluation:

a. Quantitative baseline studies based on a statistically valid cross-sectional household sample in the target areas, in order to determine any changes that occur in the sample nutritional and short-term household food status. (An appropriate control group sample will be used, and data collected in a few non-targeted areas which have broadly similiar socio-economic and nutritional profiles.) A sub-sample of children in the target areas who benefitted from the food supplement program will be closely followed in order to compare their nutritional status with those of non-beneficiaries. The purpose is not to mount a scientifically controlled research study in which causality is affirmed; rather it is to produce information on which to base reasonable inferences and judgments about the extent of nutritional improvement or deterioration attributed to the project intervention. (To accomplish this study objective, it will be important to include in the study design and execution team a nutritionist experienced in anthropometric data collection and analysis.) Only a sample of neighborhoods in 3 out of 10 project cities will be evaluated. Three cities which participated in the project in year one will be selected to better analyze trends. Baseline sample surveys will be conducted in each neighborhood (project and control) prior to implementation of the project. These surveys will begin about 2 months before a CNC is operational in a neighborhood. Since it is expected that over the four years of the project life, the population, both within and outside the project area, will in all probability experience a change in standard of living, the control group would ensure that any improvement or deterioration in nutritional status can be attributed to the project and not to overall socio-economic variables. It should be kept in mind that the measurement of project impact will be affected by the considerable mobility (in- and out-migration) of the population in the targeted areas.

b. Three knowledge, attitude and practices surveys (KAP), will be carried out, the first conducted before full project intervention begins, the second, before mid-term evaluation, and the last in the final project year.

c. A cost-effectiveness study will be undertaken in the last year of project implementation to determine project delivery costs, and, to the extent data is available or can be estimated, to compare service delivery costs between public sector and AGETIP. The analysis will consider both food delivery costs, IEC message delivery costs, and administrative costs. The results of this study will help assess the sustainability as well as replicability of the project.

Evaluation results will be discussed during a series of meetings with different project collaborators, from the ministry to the community level, and will be used to plan how to put them into practice. These meetings will be participatory (ZOPP).

D. Dissemination of evaluation results

25. After completing data analysis and interpretation, AGETIP will prepare draft recommendations outlining any needed remedial actions or project design corrections. These recommendations will then be transmitted to the National Commission for the Fight Agaisnt Malnutrition where any major project design corrections will be discussed. The results of these discussions and of the evaluation will be shared with the District Nutrition Committee, where remedial actions will also be discussed. Subsequently, the results of all these consultations will be provided to the MOCs, MICs and discussed with local nutrition committees. IDA will receive copies of the studies, as they are completed. A yearly seminar will be held to discuss the implications of the evaluation findings (from impact evaluation, monitoring systems and operational research) with national and regional officials, project staff, IDA, KFW, WFP and other interested donors. The project's news letter will serve as an information channel between AGETIP, the MOCs and the MICs.

IV. OPERATIONS RESEARCH

26. Studies will be undertaken to answer those questions that neither the monitoring nor the evaluation system address and for which a solution needs to be found to improve project effectiveness or efficiency. The AGETIP Monitoring and Evaluation staff will identify these topics from questions raised by the data, from supervision reports or evaluation results. Before an operations research (OR) effort is undertaken, approval from the Technical Advisory Committee will be sought and draft proposals will be provided to IDA for its comments and non-objection. Before implementation, AGETIP's Monitoring and Evaluation staff will have the main responsibility of either carrying out or contracting the OR, while ensuring that the design protocol is adequate.

27. Based on experience during the pilot phase, immediate OR needs for the first year of the project are to:

verify the number of feedings per day, ration density and size required to bring malnourished children back to normal growth;

evaluate the adequacy of the training modules proposed for MOCs and MICs, study the adequacy of initial and periodic in-service training (including their timing) and analyze the appropriateness of the staff workload, targets and schedules as they are currently conceived. This OR would include evaluating the accuracy of child weighing, weight recording, interpretation and use of growth chart, and the appropriateness of beneficiaries selection. This OR would also assess if the training function with the monitoring, supervision and evaluation functions are well-linked;

determine minimum information requirements, refine the proposed monitoring and supervision systems, assess the adequacy of the CNC manual, Supervision Guide and Home Visit Guides, and suggest improvements;

assess the coordination arrangements proposed with the health sector at various levels;

undertake a preliminary analysis of determinants of relapse, dropping-out, irregular and non-participation. This OR will not be confined to those eligible for the feeding program, but will also cover those who can benefit from the other key nutrition services;

determine the use of food supplement (as a supplement ? does it replace meals? is it used for other purposes than intended ?);

evaluate the extent of present community participation and investigate how to increase it. Participation may be expressed by contributing ideas, time, money, facilities, and/or labor.

ATTACHMENT A

PROJECT MONITORING INDICATORS

Level at which data is collected	**Indicators**	**Level to which data is communicated**
CNC	**Performance thresholds as % of semester objectives** (indicating poor performance): 1. coverage of total children weighed: Less than 80% 2. malnourished children in feeding program: Less than 90% 3. beneficiary children not gaining or losing weight: More than 10% 4. drop-outs among malnourished children: More than 10% 5. first relapses within 6 months after children graduated: More than 20% 6. children graduated after 6 months of feeding: Less than 80% 7. rations distributed: Less than 90% 8. all beneficiaries not attending regularly the CNC: More than 20% 9. children going from red to yellow, yellow to green, and gaining weight (even if still in yellow zone) 10. Coverage of pregnant and lactating women	MOC (weekly); Local Steering Committees
MOC	1. number of children under three weighed/total number of children under three (a measure of coverage); 2. % of children weighed in green, yellow and red; 3. number of children under three, pregnant and lactating women in the feeding program (a measure of availability); 4. number of children under three not gaining adequate weight/number of children under three weighed (a measure of quality of the program). 5. number of rations distributed by category of beneficiary (a measure of utilization).	Local Steering Committees; AGETIP (monthly).
AGETIP	For project monitoring indicators, see table below	District Steering Committee; National Commisstion; SANAS; Bank; WFP; KfW (yearly)

SPECIFIC INDICATORS TO MONITOR THE PROJECT (1)

Component	Indicator	YEARS			
		1	2	3	4
Nutrition	1. number of centers operational (by region ; total)	72	179	283	397
	2. number of new MIC contracts signed	72	107	104	114
	3. number of new MOC contracts signed	8	11	11	12
	4. coverage:				
	a) number of children receiving food and other services	31.000	59.000	67.000	73.000
	b) number of children receiving growth monitoring	8.500	15.300	17.000	18.700
	c) number of women receiving food and IEC	19.000	31.000	33.000	37.000
	d) number of women receiving IEC	8.500	15.300	17.000	18.700
	5. number of new centers serving 350 or more beneficiaries	72	107	104	114
	6. % of malnourished children reached against baseline of targeted areas	16	31	44	58
	7. a) % of pregnant and lactating women with universal health card b) % of children with universal health card	TBD	TBD	TBD	TBD
	8. number of rations distributed (million)	1.3	2.3	2.6	2.9
	9. total tonnage of blended food produced (3)	910	1 610	1 820	2 030
	10. total tonnage delivered to the project	910	1 610	1 820	2 030
	11. total tonnage distributed to beneficiaries	892	1 578	1 783	1 989
	12. total tonnage lost (2) (2 % of production) (3)	18	32	37	41
	13. number of micro-entrepreneurs who produce food (3)			TBD	TBD
	14. tonnage of food produced by micro-entrepreneurs (3) (4)			TBD	508
	15. % of food produced by micro-entrepreneurs (3) (4)			TBD	25
	16. quality control tests undertaken (3)	12	12	TBD(3)	TBD(3)
Household Food Security	1. action plan completed		YES		
	2. physical targets achieved for each activity (e.g. kilometers of feeder roads constructed			TBD	TBD
	3. number of person/days of work created			TBD	TBD
Water	1. Population in targeted neighborhoods with improved access to water (cumulative)	174000	348.000	522.000	696.000
	2. number of stand-pipes built (cumulative)	30	60	90	120
	3. number of kilometers of network pipes (cumulative)	10	20	30	40
IEC/Social mobilization	1. % new CNCs with 20 or more IEC sessions/month	100	100	100	100
	2. KAP studies done	1	1		1
	3. number of neighborhood Steering Committees created	13	TBD	TBD	TBD
	4. number of Community meetings held per neighborhood	4	4	4	4
	5. number of radio + TV spots	8	10	10	10
	6. number of sessions/ district steering Committee	6	6	6	6
Training	1. number of MIC staff trained (cumulative)	288	716	1132	1588
	2. number of MOC staff trained	16	38	60	84
	3. % of MIC staff re-trained	100	60	60	60
	4. % of MOC staff re-trained	100	60	60	60
	5. number of opinion leaders ("relais") trained/neighborhood	2	2	2	2

MIS	1. % of targeted neighborhoods having access to MIS computers and modems	100	100	100	100
	2. number of MOC staff trained in MIS	16	38	60	84
	3. % of MOC progress reports delivered on time	80	80	80	80
	4. number of feedback meetings (MIC/MOC/Steering Committee) / neighborhood	12	12	12	12
Management	1. number of qualitative studies	2	2	2	2
	2. quantitative nutrition evaluation surveys	6	3	3	3
	3. % NMD operating costs to food & services costs	10	8	5	5
	4. % of MICs contracts renewed	0	90	90	90
	5. % of MOCs contracts renewed	0	80	80	80
	6. number of meetings Agetip/Comité Consultatif Restreint	12	12	12	12
	7. number of meetings of National Commission	4	4	4	4

TBD = To be determined

(1) Indicators for the first year of project operation have been confirmed with Government and AGETIP. All indicators from second to fourth year of project operations are only indicative and will be updated, confirmed and agreed upon with Government and AGETIP annually during project supervision.

(2) Reasons for tonnage lost include warehouses that break down, infestation by weevils, damaged or open sacks, theft, and expired shelf life.

(3) WFP will provide the indicators.

(4) Depends on the number of micro-entrepreneurs participating in the production of a blended food.

ATTACHMENT B

EVALUATION INDICATORS

OBJECTIVE	Sub-Objectives	INDICATOR	Type of evaluation	Source of data	Responsible Agency
1. Halt deterioration in nutritional status of most vulnerable groups	Improved access to nutrition and health services	a. % (number) of children and pregnant/lactating women in target population reached by food supplement, growth monitoring, IEC.	Impact	ESP; Annual nutrition study; Supervision reports	ORSTOM/ SANAS AGETIP
		b. nutritional status (W/H;W/A;A/H) of children in target areas c. % children going from red to yellow and yellow to green and % of children gaining weight in the last three months inside the program. d. % children relapsing	Impact Process process	Annual baseline nutrition study	ORSTOM/ SANAS
	Improve nutritional/ hygiene behavior	e. KAP on nutrition, including: - length of exclusive breastfeeding - ORT use - Frequency of feeding	Impact	KAP study	Consultant
	Improve access to safe drinking water	f. % of households with potable water (at home connection; community well; community pipe; other)	Impact	Annual beneficiary assessment	Consultant
2. Safeguard household food security in critical periods of vulnerability	Increase income and/or food	a. # of persons days of work provided per target household (for men and for women)	Process	Supervision reports	AGETIP
		b. amount of food/cash transfer provided by the project	Impact	Annual Beneficiary Assessment	Consultant

		c. number of meals per day: .. per target child .. per target household	Impact	idem	idem
		d. variety of food eaten by household	Impact	idem	idem
3. Efficient nutrition interventions through delegated management		a. satisfaction of target population concerning project	Process	idem	idem
		b. drop-out rate of beneficiaries	Process	Supervision reports	AGETIP
		c. satisfaction of other participants: - micro-entrepreneurs - MOCs - Steering Committees	Process	Focus groups	Consultant
		d. Number of CNCs created	Process	AGETIP reports	AGETIP
		e. number of yearly meetings with community by AGETIP	Process	idem	idem
		f. number of MIC, MOC created, trained, contracted	Process	Supervision report	AGETIP
		g. drop-out rate of micro-entrepreneurs, MOCs	Process		
		h. % AGETIP contracts with micro-entrepreneurs, MOCs, not renewed	Process	idem	idem
		i. cost-effectiveness of project versus public sector service delivery	Impact	Special study	Consultant
		j. number of women producing the weaning food themselves	Beneficiary Ass.	Impact	Consultant
		k. cost/beneficiary	Impact	AGETIP annual report	AGETIP

SENEGAL
Community Nutrition
Project Cost Summary a/

	(FCFA Million)			(US$ Million)			% Foreign Exchange	% Total Base Costs
	Local	Foreign	Total	Local	Foreign	Total		
1. Nutrition Program	8,451.4	431.0	8,882.4	14.6	0.7	15.3	5.0	60.0
2. Rural Household Food Security	662.4	34.5	696.9	1.1	0.1	1.2	5.0	5.0
3. Water Program	341.6	1,285.1	1,626.7	0.6	2.2	2.8	79.0	11.0
4. Training	635.3	235.0	870.2	1.1	0.4	1.5	27.0	6.0
5. IEC & Social Mobilization	754.0	161.6	915.6	1.3	0.3	1.6	28.0	6.0
6. Monitoring & Evaluation	487.1	406.0	893.1	0.8	0.7	1.5	43.0	6.0
7. AGETIP Management	391.9	170.5	562.5	0.7	0.3	1.0	30.0	4.0
8. PPF Advance	232.0	58.0	290.0	0.4	0.1	0.5	20.0	2.0
Total Baseline Costs	11,955.7	2,781.7	14,737.4	20.6	4.8	25.4	19.0	100.0
Physical Contingencies	163.0	136.8	299.8	0.3	0.2	0.5	46.0	2.0
Price Contingencies	1,160.0	58.0	1,218.0	2.0	0.1	2.1	13.0	8.0
Total PROJECT COSTS	13,278.7	2,976.5	16,255.2	22.9	5.1	28.0		

a/ All costs are net of taxes and duties.

SENEGAL
COMMUNITY NUTRITION
Table 1. NUTRITION PROGRAM /a
Detailed Costs

	Unit	Quantities					Unit Cost (FCFA '000)	Base Cost (US$ '000)					Parameters (in %) Phy. Cont. Rate	For. Exch.	Gross Tax Rate	Summary Divisions Component	Expenditure Account
		1995	1996	1997	1998	Total		1995	1996	1997	1998	Total					
I. Investment Costs																	
A. FOOD /b	UNIT	910	1,638	1,820	2,002	6,370	473.6	743.1	1,337.5	1,486.1	1,634.7	5,201.4	0.0	9.0	0.0	NUT	FOOD_EA
B. MATERIALS																	
SCALES, FURNITURE	UNIT	72	107	104	114	397	547.5	68.0	101.0	98.2	107.6	374.8	5.0	25.0	0.0	NUT	GOODS_EA
SUPPLIES	UNIT	72	179	283	397	931	155	19.2	47.8	75.6	106.1	248.8	5.0	25.0	0.0	NUT	GOODS_EA
Subtotal MATERIALS								87.2	148.8	173.8	213.7	623.6					
C. PERSONNEL																	
ENTREPRENEURS	UNIT	72	179	283	397	931	2,880	357.5	888.8	1,405.2	1,971.3	4,622.9	0.0	0.0	0.0	NUT	FFF_EA
SUPERVISION OF CENTERS	UNIT	8	18	29	40	95	4,800	66.2	149.0	240.0	331.0	786.2	0.0	0.0	0.0	NUT	FEE_EA
Subtotal PERSONNEL								423.7	1,037.8	1,645.2	2,302.3	5,409.1					
D. SPECIAL FUND	UNIT	1	1	1	1	4	145,000	250.0	250.0	250.0	250.0	1,000.0	0.0	10.0	0.0	NUT	FOOD_EA
Total Investment Costs								1,504.0	2,774.1	3,555.2	4,400.8	12,234.1					
II. Recurrent Costs																	
A. OPERATING COSTS	AMOUNT	72	179	283	397	931	960	119.2	296.3	468.4	657.1	1,541.0	5.0	0.0	0.0	NUT	O&M_EA
B. SUPPORT PERSONNEL	AMOUNT	72	179	283	397	931	840	104.3	259.2	409.9	575.0	1,348.3	5.0	0.0	0.0	NUT	SAL_EA
C. TRANSPORT FOOD	CONTRACT	910	1,638	1,820	2,002	6,370	17.4	27.3	49.1	54.6	60.1	191.1	5.0	10.0	0.0	NUT	O&M_EA
Total Recurrent Costs								250.7	604.7	932.9	1,292.1	3,080.4					
Total								1,754.7	3,378.8	4,488.0	5,692.9	15,314.5					

\a All costs are net of taxes and duties.
\b Includes 50% of transport of food from production units to CMCs.

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SENEGAL
COMMUNITY NUTRITION
Table 2. RURAL HOUSEHOLD FOOD SECURITY /a
Detailed Costs

	Unit	Quantities 1995	1996	1997	1998	Total	Unit Cost (FCFA '000)	Base Cost (US$ '000) 1995	1996	1997	1998	Total	Parameters (in %) Phy. Cont. Rate	For. Exch.	Gross Tax Rate	Summary Divisions Component	Expenditure Account
I. Investment Costs																	
A. Consultant Services	Amount	1	1	-	-	2	58,000	100.0	100.0	-	-	200.0	0.0	10.0	0.0	FOOD	FOOD_EA
B. Pilot Program	Unit	-	-	20	20	40	6,322	-	-	218.0	218.0	436.0	0.0	5.0	0.0	FOOD	FOOD_EA
C. Equipment	Unit	-	-	4	5	9	11,400	-	-	78.6	98.3	176.9	0.0	10.0	0.0	FOOD	FOOD_EA
Total Investment Costs								100.0	100.0	296.6	316.3	812.9					
II. Recurrent Costs																	
A. Operating Costs	Unit	-	-	20	20	40	5,278	-	-	182.0	182.0	364.0	5.0	0.0	0.0	FOOD	O&M_EA
B. Veh O&M/Depreciation	Amount	-	-	4	9	13	900	-	-	6.2	14.0	20.2	5.0	0.0	0.0	FOOD	O&M_EA
C. Vehicle Insurance	Amount	-	-	4	9	13	200	-	-	1.4	3.1	4.5	5.0	0.0	0.0	FOOD	O&M_EA
Total Recurrent Costs								-	-	189.6	199.1	388.7					
Total								100.0	100.0	486.2	515.3	1,201.6					

\a All costs are net of taxes and duties.

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SENEGAL
COMMUNITY NUTRITION
Table 3. WATER AND SANITATION /a
Detailed Costs

	Unit	Quantities 1995	1996	1997	1998	Total	Unit Cost (FCFA '000)	Base Cost (US$ '000) 1995	1996	1997	1998	Total	Parameters (in %) Phy. Cont. Rate	For. Exch.	Gross Tax Rate	Summary Division: Expenditure Component	Account
I. Investment Costs																	
A. WORKS: WATER																	
Extending Pipes	AMOUNT	1	2	2	2	7	13,920	24.0	48.0	48.0	48.0	168.0	10.0	79.0	0.0	WAT&SAN	WKS_EA
Pipe Links	AMOUNT	3,725	7,450	7,450	7,450	26,075	50	321.1	642.2	642.2	642.2	2,247.8	10.0	79.0	0.0	WAT&SAN	WKS_EA
Standpipes	AMOUNT	30	152	152	152	486	464	24.0	121.6	121.6	121.6	388.8	10.0	79.0	0.0	WAT&SAN	WKS_EA
Total								369.1	811.8	811.8	811.8	2,804.6					

\a All costs are net of taxes and duties.

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SENEGAL
COMMUNITY NUTRITION
Table 4. TRAINING /a
Detailed Costs

	Unit	Quantities 1995	1996	1997	1998	Total	Unit Cost (FCFA '000)	Base Cost (US$ '000) 1995	1996	1997	1998	Total	Parameters (in %) Phy. Cont. Rate	For. Exch.	Gross Tax Rate	Summary Divisions Component	Expenditure Account
I. Investment Costs																	
A. TRAINING FOR NUTRTION PROGRAM	Unit	1,875	1,875	1,875	1,875	7,500	58	187.5	187.5	187.5	187.5	750.0	0.0	27.0	0.0	TA&TRG	TRG_EA
B. TRAINING FOR WATER PROGRAM	Unit	750	750	750	750	3,000	58	75.0	75.0	75.0	75.0	300.0	0.0	27.0	0.0	TA&TRG	TRG_EA
C. TRAINING FOR IEC	Unit	938	938	938	938	3,752	58	93.8	93.8	93.8	93.8	375.2	0.0	27.0	0.0	TA&TRG	TRG_EA
D. MANAGEMENT TRAINING	SEMINAR	188	188	188	188	752	58	18.8	18.8	18.8	18.8	75.2	0.0	27.0	0.0	TA&TRG	TRG_EA
Total								375.1	375.1	375.1	375.1	1,500.4					

\a All costs are net of taxes and duties.

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SENEGAL
COMMUNITY NUTRITION
Table 5. SOCIAL MOBILIZATION and IEC /a
Detailed Costs

	Unit	Quantities 1995	1996	1997	1998	Total	Unit Cost (FCFA '000)	Base Cost (US$ '000) 1995	1996	1997	1998	Total	Parameters (in %) Phy. Cont. Rate	for. Exch.	Gross Tax Rate	Summary Divisions Component	Expenditure Account
I. Investment Costs																	
A. Planning and Supervision																	
Supervision: IEC/SM activities	Amount	1	1	1	1	4	10,000	17.2	17.2	17.2	17.2	69.0	0.0	31.0	0.0	IEC	IEC_EA
Evaluation of SM/IEC plans	Amount	1	1	1	1	4	10,000	17.2	17.2	17.2	17.2	69.0	0.0	31.0	0.0	IEC	IEC_EA
Subtotal Planning and Supervision								34.5	34.5	34.5	34.5	137.9					
B. Social Mobilization																	
Visits to Community Leaders	Unit	200	250	300	350	1,100	30	10.3	12.9	15.5	18.1	56.9	0.0	31.0	0.0	IEC	IEC_EA
Dissem. Docs to Imp. Persons	Amount	1	1	1	1	4	1,750	3.0	3.0	3.0	3.0	12.1	0.0	31.0	0.0	IEC	IEC_EA
Field visits: local leaders	Amount	1	1	1	1	4	9,800	16.9	16.9	16.9	16.9	67.6	0.0	31.0	0.0	IEC	IEC_EA
Sensib. rallies: group leaders	Unit	15	20	25	30	90	250	6.5	8.6	10.8	12.9	38.8	0.0	31.0	0.0	IEC	IEC_EA
Community mobilization	Unit	300	300	300	300	1,200	150	77.6	77.6	77.6	77.6	310.3	0.0	31.0	0.0	IEC	IEC_EA
Subtotal Social Mobilization								114.3	119.1	123.8	128.5	485.7					
C. IEC in the CNCs and Community																	
Briefing of Steering Comm.	Unit	20	25	30	35	110	900	31.0	38.8	46.6	54.3	170.7	0.0	0.0	0.0	IEC	IEC_EA
Neighborhood Cult. Activities	Unit	9	10	15	20	54	1,022	15.9	17.6	26.4	35.2	95.2	0.0	31.0	0.0	IEC	IEC_EA
Visits to Resource Persons	Unit	9	10	15	20	54	1,022	15.9	17.6	26.4	35.2	95.2	0.0	31.0	0.0	IEC	IEC_EA
Subtotal IEC in the CNCs and Community								62.8	74.0	99.4	124.8	361.0					
D. Beneficiary Consultation																	
Consult. with reticent benif.	Unit	6	10	10	10	36	1,117	11.6	19.3	19.3	19.3	69.3	0.0	31.0	0.0	IEC	IEC_EA
E. Media Activities																	
Briefing of communicators	Unit	2	4	4	4	14	1,500	5.2	10.3	10.3	10.3	36.2	0.0	31.0	0.0	IEC	IEC_EA
Press articles	Amount	1	1	2	2	6	4,000	6.9	6.9	13.8	13.8	41.4	0.0	31.0	0.0	IEC	IEC_EA
Preparation of radio, TV spots	Unit	3	3	3	3	12	5,000	25.9	25.9	25.9	25.9	103.4	0.0	31.0	0.0	IEC	IEC_EA
Diffusion of radio, TV spots	Unit	8	10	10	10	38	1,250	17.2	21.6	21.6	21.6	81.9	0.0	31.0	0.0	IEC	IEC_EA
Subtotal Media Activities								55.2	64.7	71.6	71.6	262.9					
F. IEC Support Materials																	
Image Boxes: growth monit./RVO	Unit	45	45	45	45	180	160	12.4	12.4	12.4	12.4	49.7	0.0	31.0	0.0	IEC	IEC_EA
Reprod. on Breastfeeding	Unit	38	38	38	38	152	100	6.6	6.6	6.6	6.6	26.2	0.0	31.0	0.0	IEC	IEC_EA
Video, RVO, growth monitoring	Unit	1	1	1	1	4	5,000	8.6	8.6	8.6	8.6	34.5	0.0	31.0	0.0	IEC	IEC_EA
Video with professional group	Unit	1	1	1	1	4	5,000	8.6	8.6	8.6	8.6	34.5	0.0	31.0	0.0	IEC	IEC_EA
T-Shirts	Unit	5,000	5,000	5,000	5,000	20,000	2	17.2	17.2	17.2	17.2	69.0	0.0	31.0	0.0	IEC	IEC_EA
Reprod. of existing materials	Amount	1	1	1	1	4	1,000	1.7	1.7	1.7	1.7	6.9	0.0	31.0	0.0	IEC	IEC_EA
Subtotal IEC Support Materials								55.2	55.2	55.2	55.2	220.7					
G. Equipment																	
Audio/Video Equipment	Unit	15	-	15	-	30	794	20.5	-	20.5	-	41.1	0.0	31.0	0.0	IEC	IEC_EA
Total								354.0	366.7	424.2	433.8	1,578.6					

\a All costs are net of taxes and duties.

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SENEGAL
COMMUNITY NUTRITION
Table 6. AGETIP MANAGEMENT /a
Detailed Costs

	Unit	Quantities 1995	1996	1997	1998	Total	Unit Cost (FCFA '000)	Base Cost (US$ '000) 1995	1996	1997	1998	Total	Parameters (in %) Phy. Cont. Rate	For. Exch.	Gross Tax Rate	Summary Divisions Component	Expenditure Account
I. Investment Costs																	
A. Technical Assistance																	
Coordinator	month	12	12	12	12	48	1,500	31.0	31.0	31.0	31.0	124.1	0.0	45.0	0.0	NMU	FEE_EA
Financial Manager	month	-	-	12	12	24	600	-	-	12.4	12.4	24.8	0.0	45.0	0.0	NMU	FEE_EA
Accountant	month	12	12	12	12	48	600	12.4	12.4	12.4	12.4	49.7	0.0	45.0	0.0	NMU	FEE_EA
Nutritionists	month	24	24	24	24	96	600	24.8	24.8	24.8	24.8	99.3	0.0	45.0	0.0	NMU	FEE_EA
Training specialist	month	12	12	12	12	48	600	12.4	12.4	12.4	12.4	49.7	0.0	45.0	0.0	NMU	FEE_EA
IEC Specialist	month	12	12	12	12	48	600	12.4	12.4	12.4	12.4	49.7	5.0	60.0	0.0	NMU	IEC_EA
Engineer	month	12	12	12	12	48	1,200	24.8	24.8	24.8	24.8	99.3	0.0	45.0	0.0	NMU	FEE_EA
M&E Specialist	month	12	12	12	12	48	600	12.4	12.4	12.4	12.4	49.7	0.0	45.0	0.0	NMU	FEE_EA
Subtotal Technical Assistance								130.3	130.3	142.8	142.8	546.2					
B. EQUIPMENT																	
Computer	UNIT	4	-	-	-	4	2,500	17.2	-	-	-	17.2	10.0	25.0	0.0	NMU	GOODS_EA
Printer	UNIT	2	-	-	-	2	1,700	5.9	-	-	-	5.9	10.0	25.0	0.0	NMU	GOODS_EA
Photocopier	UNIT	1	-	-	-	1	5,600	9.7	-	-	-	9.7	10.0	25.0	0.0	NMU	GOODS_EA
4x4	UNIT	4	-	-	-	4	17,000	117.2	-	-	-	117.2	10.0	25.0	0.0	NMU	GOODS_EA
Motorcycles	UNIT	6	-	-	-	6	400	4.1	-	-	-	4.1	10.0	25.0	0.0	NMU	GOODS_EA
Telephones	UNIT	5	-	-	-	5	60	0.5	-	-	-	0.5	10.0	25.0	0.0	NMU	GOODS_EA
Furniture	UNIT	5	-	-	-	5	970	8.4	-	-	-	8.4	10.0	25.0	0.0	NMU	GOODS_EA
Subtotal EQUIPMENT								163.0	-	-	-	163.0					
Total Investment Costs								293.4	130.3	142.8	142.8	709.2					
II. Recurrent Costs																	
A. Operating Costs																	
Rent & Utilities	AMOUNT	12	12	12	-	36	500	10.3	10.3	10.3	-	31.0	5.0	0.0	0.0	NMU	O&M_EA
Vehicle Oper. & Maint.	AMOUNT	12	12	12	-	36	75	1.6	1.6	1.6	-	4.7	5.0	0.0	0.0	NMU	O&M_EA
Vehicle Insurance	AMOUNT	10	10	10	10	40	200	3.4	3.4	3.4	3.4	13.8	5.0	0.0	0.0	NMU	O&M_EA
Secretary	Month	12	12	12	12	48	600	12.4	12.4	12.4	12.4	49.7	5.0	0.0	0.0	NMU	SAL_EA
Driver	Month	24	24	24	24	96	600	24.8	24.8	24.8	24.8	99.3	5.0	0.0	0.0	NMU	SAL_EA
Personnel insurance	Mth/pers	36	36	36	36	144	250	15.5	15.5	15.5	15.5	62.1	5.0	0.0	0.0	NMU	O&M_EA
Total Recurrent Costs								68.1	68.1	68.1	56.2	260.5					
Total								361.5	198.4	210.9	199.0	969.7					

\a All costs are net of taxes and duties.

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SENEGAL
COMMUNITY NUTRITION
Table 7. MONITORING & EVALUATION /a
Detailed Costs

	Unit	Quantities 1995	1996	1997	1998	Total	Unit Cost (FCFA '000)	Base Cost (US$ '000) 1995	1996	1997	1998	Total	Parameters (in %) Phy. Cont. Rate	For. Exch.	Gross Tax Rate	Summary Divisions Component	Expenditure Account
I. Investment Costs																	
A. Monitoring																	
Neighborhood Census	CONTRACT	14	15	15	8	52	1,740	42.0	45.0	45.0	24.0	156.0	0.0	45.0	0.0	M&E	FEE_EA
Operations Research	CONTRACT	4	4	4	4	16	2,320	16.0	16.0	16.0	16.0	64.0	0.0	45.0	0.0	M&E	FEE_EA
Subtotal Monitoring								58.0	61.0	61.0	40.0	220.0					
B. Evaluation																	
Project Launch Workshop	CONTRACT	1	-	-	-	1	1,740	3.0	-	-	-	3.0	0.0	45.0	0.0	M&E	FEE_EA
M&E Workshop	CONTRACT	1	1	-	-	2	1,740	3.0	3.0	-	-	6.0	0.0	45.0	0.0	M&E	FEE_EA
Quantitative Studies	CONTRACT	6	3	3	3	15	13,798	142.7	71.4	71.4	71.4	356.8	0.0	45.0	0.0	M&E	FEE_EA
KAP Studies	CONTRACT	1	1	-	1	3	4,640	8.0	8.0	-	8.0	24.0	0.0	45.0	0.0	M&E	FEE_EA
Focus Groups	CONTRACT	3	3	3	3	12	2,320	12.0	12.0	12.0	12.0	48.0	0.0	45.0	0.0	M&E	FEE_EA
ZOPP Workshop	CONTRACT	-	-	1	1	2	2,900	-	-	5.0	5.0	10.0	0.0	45.0	0.0	M&E	FEE_EA
Cost-effectiveness evaluation	CONTRACT	-	-	-	3	3	2,320	-	-	-	12.0	12.0	0.0	45.0	0.0	M&E	FEE_EA
Subtotal Evaluation								168.7	94.4	88.4	108.4	459.8					
C. Personnel																	
Technical Assistant	CONTRACT	6	6	6	5	23	9,860	102.0	102.0	102.0	85.0	391.0	0.0	45.0	0.0	M&E	FEE_EA
Monitoring of Living Conditions	CONTRACT	1	1	1	1	4	21,750	37.5	37.5	37.5	37.5	150.0	0.0	45.0	0.0	M&E	FEE_EA
Computer Specialist	CONTRACT	6	4	2	2	14	1,500	15.5	10.3	5.2	5.2	36.2	0.0	45.0	0.0	M&E	FEE_EA
Statistician	CONTRACT	2	2	2	2	8	2,320	8.0	8.0	8.0	8.0	32.0	0.0	45.0	0.0	M&E	FEE_EA
Data entry clerk	CONTRACT	3	3	3	3	12	500	2.6	2.6	2.6	2.6	10.3	0.0	45.0	0.0	M&E	FEE_EA
Subtotal Personnel								165.6	160.4	155.3	138.3	619.6					
D. MIS: Equipment																	
Computer	UNIT	3	-	-	-	3	2,419.5	12.5	-	-	-	12.5	0.0	25.0	0.0	M&E	GOODS_EA
Mini-Computers	UNIT	11	-	-	-	11	1,172	22.2	-	-	-	22.2	0.0	25.0	0.0	M&E	GOODS_EA
Maxi-printer	UNIT	1	-	-	-	1	8,908.8	15.4	-	-	-	15.4	0.0	25.0	0.0	M&E	GOODS_EA
Printer	UNIT	5	-	-	-	5	440	3.8	-	-	-	3.8	0.0	25.0	0.0	M&E	GOODS_EA
Main Server + Modem: MND	UNIT	1	-	-	-	1	22,109.3	38.1	-	-	-	38.1	0.0	25.0	0.0	M&E	GOODS_EA
Main Server: SAHAS&DSSP	UNIT	1	-	-	-	1	12,559	21.7	-	-	-	21.7	0.0	25.0	0.0	M&E	GOODS_EA
Mini-server + Modem	UNIT	2	-	-	-	2	1,259.3	4.3	-	-	-	4.3	0.0	25.0	0.0	M&E	GOODS_EA
Software: MND	UNIT	1	-	-	-	1	12,486	21.5	-	-	-	21.5	0.0	25.0	0.0	M&E	GOODS_EA
Software for network	UNIT	2	-	-	-	2	695	2.4	-	-	-	2.4	0.0	25.0	0.0	M&E	GOODS_EA
Software: MIS program	UNIT	2	0.8	0.4	0.67	3.87	3,750	12.9	5.2	2.6	4.3	25.0	0.0	25.0	0.0	M&E	GOODS_EA
Subtotal MIS: Equipment								154.9	5.2	2.6	4.3	167.0					
Total								547.2	321.0	307.2	291.0	1,466.4					

\a All costs are net of taxes and duties.

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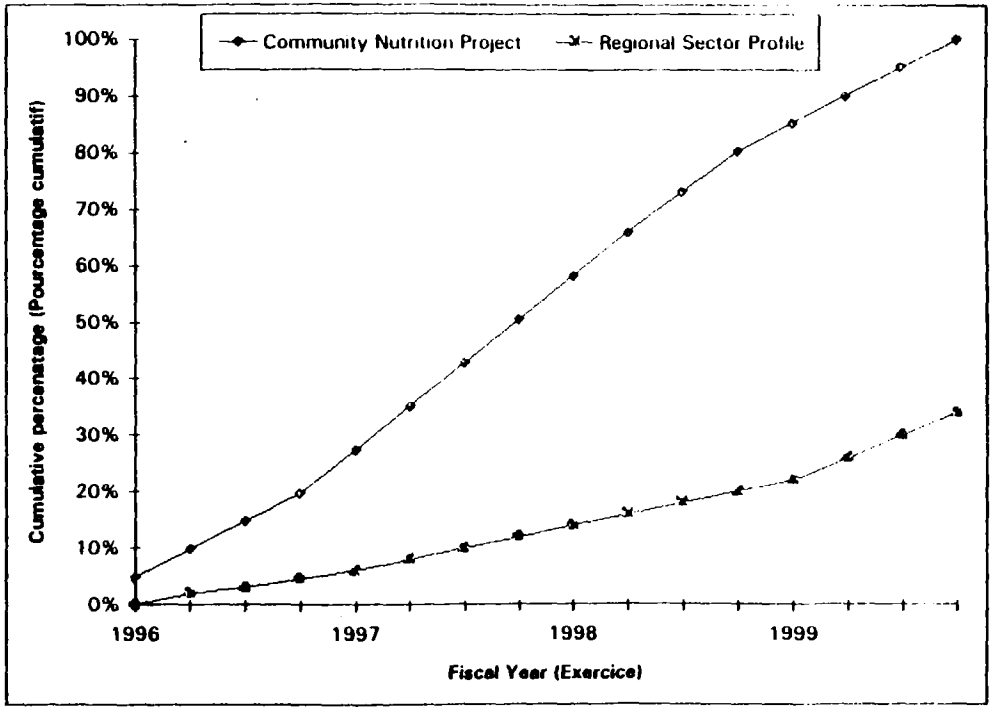
REPUBLIC OF SENEGAL
Community Nutrition Project

Disbursement Profile/Profil de Deboursements

IDA fiscal years and quarters *Annees budgetaires IDA et trimestres*		Disbursements/ *Deboursements*		Profile/ *Profil*	
		By Quarter *Par trimestre*	Cumulative *Cumulatif*	Credit *Credit*	Regional Sector *Secteur a l'echelle regionale*
		(US$ million)	US$ millio	(%)	(%)
1996	1	0.9	0.9	5%	0%
	2	0.9	1.8	10%	2%
	3	0.9	2.7	15%	3%
3.6	4	0.9	3.6	20%	5%
1997	1	1.4	5.0	27%	6%
	2	1.4	6.4	35%	8%
	3	1.4	7.8	43%	10%
5.6	4	1.4	9.2	51%	12%
1998	1	1.4	10.6	58%	14%
	2	1.4	12.0	66%	16%
	3	1.3	13.3	73%	18%
5.4	4	1.3	14.6	80%	20%
1999	1	0.9	15.5	85%	22%
	2	0.9	16.4	90%	26%
	3	0.9	17.3	95%	30%
3.6	4	0.9	18.2	100%	34%



ANNEX XI
Page 1 of 1

SUPERVISION PLAN

1. Supervision will be carried out according to the supervision plan below. The expected targets to monitor are presented in Table 1 of the report. These targets are tentative, as the project is demand-driven and needs to respond to beneficiary requests.In addition to these quantitative targets, supervision missions should examine the following:

Coordination between AGETIP and SANAS
Performance of the National Coordinator
Coordination with the local steering committees ("comités de pilotage")
Effectiveness of the IEC program in communicating to target population
Integration of the results of beneficiary assessments and of operational research into daily project implementation.
Implementation of the monitoring and evaluation system.

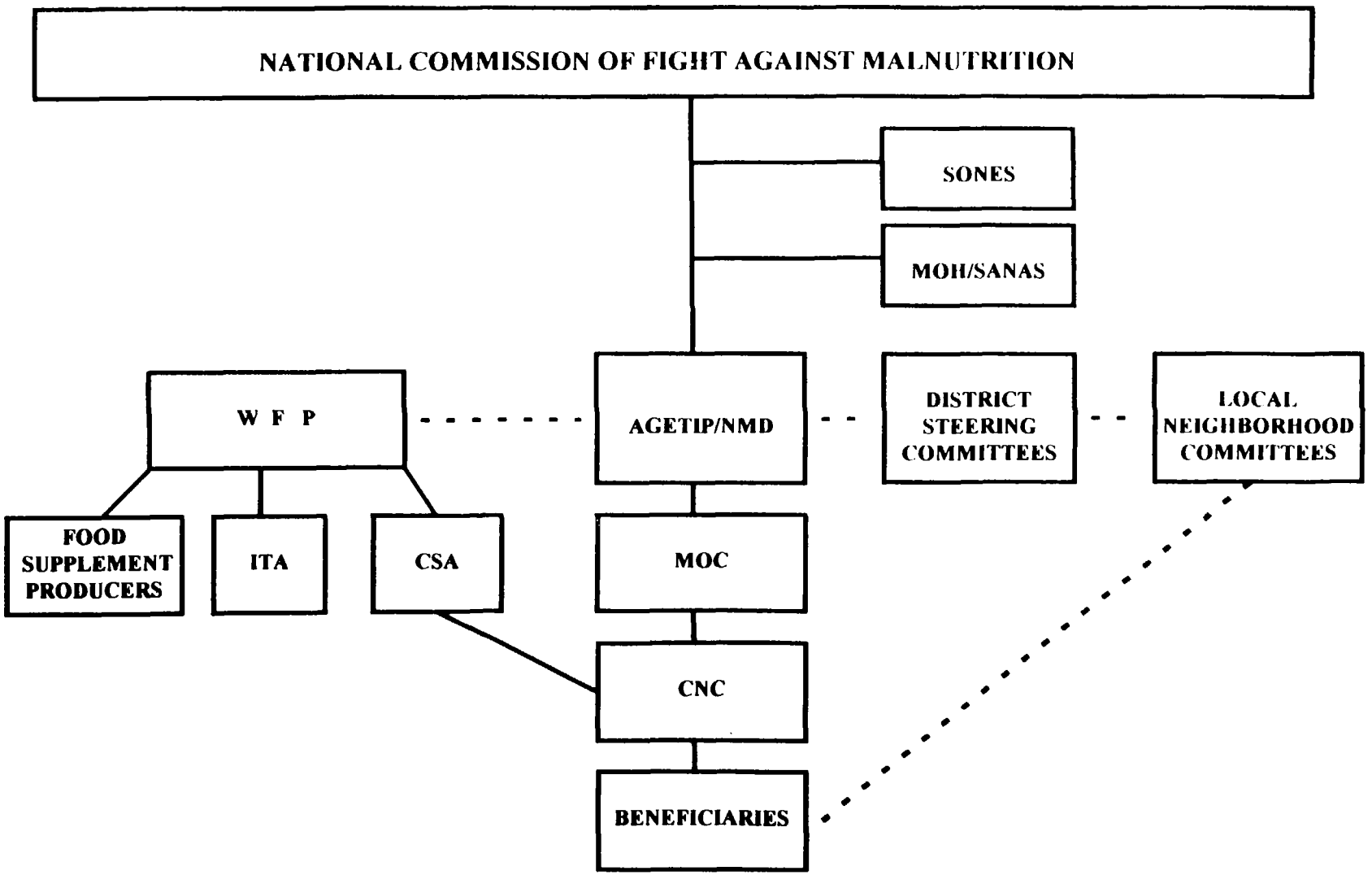
2. A tentative project supervision schedule is:

Fiscal Year	Activities	Skill requirements	Staffweeks
1996			
July	Project launching workshop	TM; DO; Nutritionist; PO Lawyer	4 1
November	Examine project progress		11
March	Review pending issues Visit project sites	TM Nutritionist	7
1997			
July	Examine project progress	TM	8
November	Review pending issues Visit project sites	Nutritionist	4
March	Idem Mid-term review	TM Nutritionist	3 3
1998			
July	Examine project progress	TM	8
November	Review pending issues Visit project sites	Nutritionist	4
March	Idem	TM Nutritionist	3 3
1999			
July	Examine project progress	TM	8
November	Review pending issues Visit project sites	Nutritionist	4
March	Idem Annual review	TM Nutritionist	3 3

NOTE: TM = Task Manger; DO = Disbursement Officer; PO = Procurement Officer

COMMUNITY NUTRITION PROJECT

ORGANOGRAM



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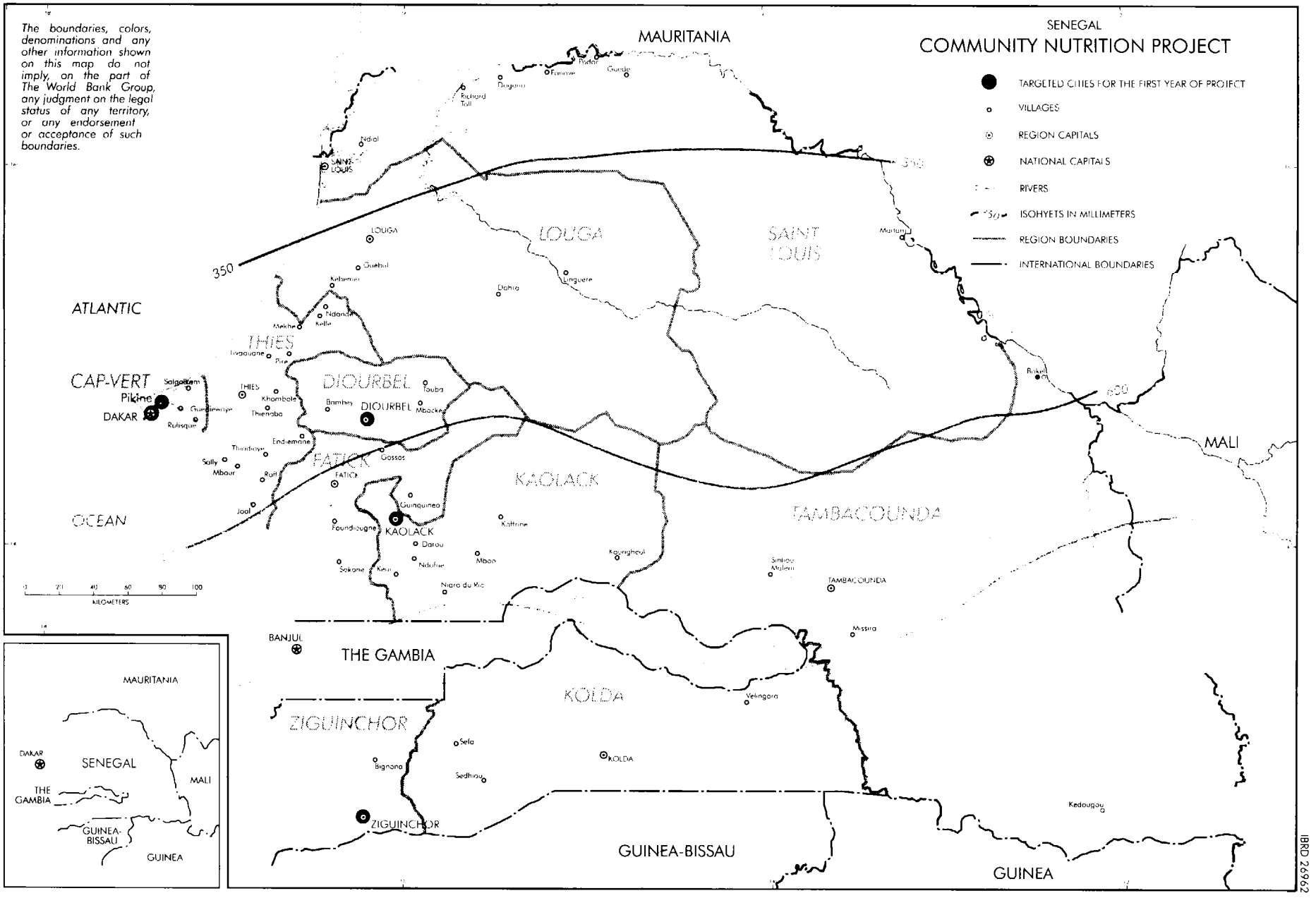
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SENEGAL
COMMUNITY NUTRITION PROJECT
TARGETED CITIES FOR THE FIRST YEAR OF PROJECT
VILLAGES
REGION CAPITALS
NATIONAL CAPITALS
RIVERS
ISOHYETS IN MILLIMETERS
REGION BOUNDARIES
INTERNATIONAL BOUNDARIES
MAURITANIA
ATLANTIC
OCEAN
LOUGA
SAINT LOUIS
THIES
DIOURBEL
FATICK
KAOLACK
TAMBACOUNDA
KOLDA
ZIGUINCHOR
CAP-VERT
DAKAR
Pikine
MALI
THE GAMBIA
BANJUL
GUINEA-BISSAU
GUINEA
KILOMETERS
MAY 1995
IBRD 26962