

# **Sahel Development Program**

## **Annual Report to the Congress**

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## A. INTRODUCTION

The Sahel with its 30 million people represent for the U.S., an important region for the application of internationally-coordinated development assistance. The region is composed of the eight nations of Mauritania, Mali, Niger, Chad, Upper Volta, Senegal, Cape Verde, and The Gambia, which form a broad strip between the 10th and 27th parallels of West Africa. The region suffered a major drought in 1972 and 1973 which took the lives of between 50,000 to 100,000 Sahelians.

The Sahel is an ecologically vulnerable region threatened by the Sahara and by low and erratic rainfall. With the exception of irrigated stretches along the major rivers and Lake Chad, livestock and agriculture must depend on low quantities of rainfall. Below normal rains cause serious loss of crops and pasture: food is in short supply, herds overgraze, the tree-and-brush vegetation on which Sahelians depend heavily for fuel are further drawn upon and soils deteriorate. As a result, food production is the major focus of the Sahel development effort.

Problems that AID faces in the development of its Sahel program differ from those in other major regions of the world. In the Sahel, programs resemble the early generation of assistance efforts in Asia and Latin America, largely depending on technical assistance. Sahelian programs also place heavy stress on institution-building related to increasing the capacity of local institutions to deliver or perform development services.

As in past years, the 1981 Annual Report to Congress highlights AID's activities in the Sahel, along with those of the Permanent

Interstate Committee for Drought Control (CILSS) the French acronym for the Sahel Anti-Drought Committee), the Club du Sahel (Club) and other donors.

In response to the magnitude of the Sahel's problems and the sustained effort required to address them, a regional framework has been established to oversee the development of a region-wide strategy, common approaches to problems and the coordination of assistance.

Two basic goals of the regional strategy are the achievement of:

- food self-sufficiency, and
- self-sustaining economic growth and development.

The Sahel can in time produce enough food to feed its population. Good years will permit building up stocks, which can be drawn upon during the low rainfall years. The second objective, self-sustaining economic development is the longer-term goal. It is tied to food self-sufficiency because food production requires an economy that can generate resources, the inputs and the technological base for long-term increases in agricultural productivity.

Development of the Sahel is in its very early stages and remains an uphill struggle given the climatic conditions, and more recently, increased oil prices which are now working against the Sahel. Following the severe drought of the early 1970's, the Sahel, has, however, been able to survive without a major crisis. The new approach to cooperation between the Sahel and the international donor community allows for concentration on key development problems such as the low per capita food production, the deterioration of farmland and rangeland and the waning supply of wood, the Sahel's major energy source.

Donor commitments to the Sahel Development Program continued to

mount; 1979 saw a 17 percent increase over the 1978 combined Organization of Petroleum Producing Countries (OPEC), United Nations and other donor resource flow to the Sahel.

#### Regional Progress Indicators

- The average Sahelian per capita GNP (excluding Chad) has risen in rolling average dollars from \$190 in 1976 to \$208 in 1978 in spite of declining performance by the Senegal economy.
- The average life expectancy of the Sahelian peoples increased by more than three years in the 1973-1978 period.
- Public health systems improved - a 30 percent decrease in the number of persons per doctor (40,000 to 28,000) was recorded.
- Food production since 1975 has increased by approximately ten percent despite erratic rainfall in 1979 and 1980.
- Irrigated farmland increased 17 percent in the three years following 1975.
- New lands amounting to 2.3 million square hectares is becoming available for cultivation through control of onchocerciasis.
- The nascent food security storage and marketing system (including large commercial and food aid imports) functioned effectively in protecting human and animal life.
- Work has begun in implementing the basic institutional and research elements of future food production and productivity increases.
- Livestock herds reduced by the drought have been largely reconstituted.
- A dialogue on population concerns with Sahelian officials has begun and some family planning services are now available in

Senegal.

- Thousands of Sahelians have been trained by the U.S. and other donors and are increasing the absorptive capacity of the Sahel states.

## B. THE SAHEL DEVELOPMENT PROGRAM - REGIONAL PERSPECTIVE

### 1. HISTORY OF THE SAHEL DEVELOPMENT PROGRAM

During the severe drought years of the early seventies, eight Sahelian States formed an organization, the Permanent Interstate Committee for Drought Control in the Sahel, known by its French acronym, CILSS, with its executive secretariat in Ouagadougou, Upper Volta.

CILSS was originally concerned with relief coordination, but following the worst of the drought, its membership enlarged its mandate to include the coordination of development projects and the design and implementation of certain regional ones. The group of bilateral donors and international agencies that had mobilized assistance for drought relief activities responded to the Sahelian initiative: they created an informal consortium to collaborate with the CILSS, the Club du Sahel.

The Club, which held its first meeting with the CILSS in March, 1976, continues to function as an informal organization; it de-emphasizes protocol and operates without statutes in order to encourage wide participation and an open exchange of ideas.

The CILSS member states participate in the Club, which is based within the OECD in Paris and served by a small secretariat. The Club supports efforts of the CILSS by coordination of assistance, fostering dialogue on policy and priorities and aiding in the mobilization of finances for the development of the region. The CILSS and the Club analyze problems, identify strategy and recommend programs jointly. The CILSS cooperates with member states in planning, identification and design of projects and coordination of national

programs. To achieve their programmatic objectives, the CILSS and Club utilize ad hoc technical teams and special working groups, which complement their respective permanent staffs. Conferences, colloquia and seminars are convened to address specific policy issues as the need arises.

Apart from the Executive Secretariat, the CILSS includes two specialized institutions:

- The Sahel Institute (Bamako, Mali), coordinates research in physical and social sciences, facilitates and in some cases, conducts training and serves as a technical information collection and dissemination center. The Institute is rapidly increasing its activities in implementation and its mandate and has identified a large portfolio of projects for this purpose.
- AGRHYMET (Agriculture, Hydrology and Meteorology - Niamey, Niger)
  - carries on a program of meteorological and pulviometric data collection: It trains personnel to gather this data, and strengthens national meteorological services with the ultimate goal of achieving regional climatological forecasting.

The CILSS Executive Secretariat, the Institute and AGRHYMET cooperate closely with other regional organizations and institutions. The CILSS, the West African Economic Community (CEAO) and the Economic Community of West Africa States (ECOWAS) participate in each other's meetings, especially at the technical level. CILSS also cooperates with the United Nations Sudano-Sahelian Office (UNDO) in connection with the anti-desertification and environmental efforts. CILSS is a young organization with a specific and limited mandate focussing upon agricultural and rural development and the Sahel

Development Program first priority of food self-sufficiency. CILSS works closely with other West African regional organizations in order to link economic development efforts concurrently implemented by these organizations.

The CILSS and the member-Governments are linked through the ministries of rural development, senior staff of the ministries of plan, finance, education, health and public works. At the national level, coordination is achieved through national committees composed of various ministerial representation. The committees have been functional in only a few countries and AID has asked the CILSS Secretariat to determine how these committees can be made more effective.

The Secretariat of the Club has continued in its role in bringing together the donors and the Sahelian governments in a low-key, informal efficient and constructive coordination of planning and implementation of development assistance activities. In addition, the Club has arranged for technical analyses and recommendations which can address sensitive development policy issues such as donor and Sahelian responsibilities for recurrent costs.

The achievements of CILSS and the Club provide an example of international cooperation for economic development.

## 2. THE SAHEL DEVELOPMENT PROGRAM: STRATEGY

The two broad goals adopted by the CILSS/Club are the achievement of:

- food self-sufficiency, and
- self-sustaining growth and development in the context of ecological balance.

Food self-sufficiency requires regional agricultural production to

feed the total population. Good harvests will permit the accumulation of surpluses, which can be utilized in times of food scarcity. These surpluses in conjunction with the availability of a minimal quantity of irrigated production will assure food security which is central to CILSS food production objectives. Food Security is fundamental to the achievement of self-sustaining development, a long-term goal of the CILSS/Club. Neither of these goals is possible without ecological balance and limitation of the encroachment of the desert. The Club/CILSS has translated these goals into a series of actions and sectoral objectives:

#### Food Production:

Rainfed farming to double dry land production through new lands development and improved farmer productivity (yields).

Irrigated agriculture to increase land under irrigation from 75,000 ha to 550,000 ha by the year 2000 through rehabilitation, improved efficiency, and expanded irrigation capacity.

Livestock development through increased herd productivity and increased total livestock population.

And fisheries development through research, breeding and farming.

#### Environmental Protection and Energy Resources:

This can be achieved through reforestation, management, energy conservation and development of alternate energy sources.

#### Human Resources

Basic to agricultural development is an education system supportive of agricultural development needs, improved rural health and control of major endemic diseases.

The achievement of these objectives will require substantial national efforts and large amounts of foreign assistance over at least a 15 year period. A discussion of the implication for AID of the Club/CILSS strategy is contained in AID's Regional Development Strategy Statement (RDSS) for the Sahel (June, 1980).

### 3. HIGHLIGHTS OF CLUB/CILSS WORKING GROUP ACTIVITIES: 1980

During 1980, the secretariats of the CILSS and the Club sponsored several important studies that were discussed at the Kuwait Conference. These include: a refined strategy document covering all development sectors; an evaluation of the regional programs, an approach to sustained monitoring and evaluation of the Sahel Development Program; and updated analysis of donor flows to the Sahel; and the final report on recurrent costs. During 1980, the Club contracted with the Overseas Development Council for an investigation of socio-economic indicators in the Sahel, and how they might be used to measure progress and provide feed-back to decision-makers.

As a follow-up to the July 1979 Nouakchott Colloquium on Cereals Policy, key recommendations were presented to and adopted by the CILSS Council of Ministers in January, 1980. The Council accepted the need for substantial revision and reform of some national cereals policies as fundamental to achievement of increased food production and eventual self-sufficiency and urged members to undertake appropriate national level studies. Ministers of Agriculture of four Sahelian countries have agreed to accept multi-national study terms to assist them in developing specific actions which they may take to provide production incentives to farmers. Senegal has already adjusted its pricing policies in favor of small farmers.

Country studies and a regional synthesis of issues dealing with irrigated agriculture were reviewed by the Sahelians and donors in Dakar, in May, 1980. The very large potential of irrigation for food production and food security was identified; a large number of attractive project proposals was presented, and new impetus was given to the search for solution of the problem of efficient implementation of larger irrigation projects.

The Club/CILSS human resource Team has initiated three studies relating to the reform of primary education, the participation of villagers in irrigation projects and the informal private sector in secondary cities. Each of these studies attempts to link education/training with increased food production. The team visited each of the CILSS member States during 1980, in an effort to appraise the internal and regional coherency of human resource efforts planned or underway.

The CILSS/Club Ecology/Forestry Team is addressing the serious problems of soil degradation and expanding deserts, brought on by over-exploitation of forests and inappropriate agricultural practices. It prepared 27 national and regional projects, which were presented at a donor's meeting in Paris in July 1980. The team has recommended a great expansion of reforestation efforts, and a reduction of fuelwood consumption by popularization of various techniques including improved stoves. Several of these projects are already underway representing a small but important start where the need is large. The Club and CILSS have acknowledged this requirement and fully expect an expansion of resource flows to this sector in the near future.

In collaboration with the Inter-State School for Tropical Veterinary Medicine, the CILSS/Club livestock working group prepared a strategy paper, "Elements for a Livestock Development Strategy in Sahel Countries". This study analyses potential in the livestock sector, and provides recommendations for expansion of livestock health initiative, range management, development of water points to permit optimum range use, control of other water points and, as the most promising possibility, expansion of livestock production in the higher rainfall areas. This work will be important to the design and implementation of future livestock sector projects.

4. The Fourth Conference of the Club du Sahel, Kuwait, November 1980

The periodic high-level conference of the Club du Sahel addresses global issues affecting the cooperative Sahel Development Program. Prior conferences yielded the club organization, the comprehensive strategy and a variety of detailed subordinate analyses and agreements. Club IV adopted an evaluation of the program and a refinement of the approved strategy.

The eight Sahelian countries, fourteen OECD countries, nine Arab development funds, and a multitude of regional and international organizations were represented at this meeting to consider the collective Sahel Development Program. The Conference retained the principal goal of food self-sufficiency and stressed the priorities of improvement of rain-fed agriculture, expansion of water control for domestic use, livestock, irrigation, anti-desertification and restoration of the environment. The need for an increase in the proportion of development resources to these sectors were generally agreed, and donors pledged action. The meeting noted the increase in

resource flows to the region during the recent five year period, the continuing regional food deficit and underlined the necessary long-term commitment to Sahel development.

Looking at the strategy and program for 1975-1979, the Conference showed its concern with limited progress in food production and the need for increased productivity in rainfed agriculture. The Sahel has rebounded from the low of 3.5 million tons of grain it harvested in the dry years of 1972/1973. A record harvest of 5.5 million tons of grain was achieved in 1979. However, even with an aggregate production of over 5.5 million tons, several Sahelian countries will need some food aid to overcome sub-regional shortages which can not be met by the intra-regional trade. The low yield of 550 kilograms per hectare underlines the need for increased productivity. The crucial long-term requirement for development of irrigation as a long-term contributor to future production was affirmed. There was unanimous agreement that something must be done to combat continuing environmental deterioration and to increase the sensitivity of the growing population to ecological realities.

The Conference reaffirmed its commitment to the Sahel program and strategy, to the regional process, and to CILSS and its work. The meeting urged inter alia, (a) more attention to needs and roles of farmers in their own development, (b) priority for water control for villagers, livestock and irrigation, (c) strengthened anti-desertification efforts, (d) improvement of production in rainfed and irrigated agriculture, (e) accelerated of the evaluations of rainfed agriculture, ecology and reforestation and village and pastoral hydraulics programs, and (f) definition and implementation of appropriate cereals policies.

## 5. US INTEREST IN THE SAHEL'S DEVELOPMENT

Despite the fragile ecological environment, the region has substantial resources and potential for economic growth. Large areas suited to agriculture exist along the southern belt in higher rainfall areas, the inland Niger Delta, the river basins, and in the oases. With improved inputs, technology and infrastructure, livestock and crop yields can be improved. The Sahel is an exporter of meat, peanuts and cotton, but a large importer of cereal foods. It can realistically hope to achieve agricultural self-sufficiency. Expanded irrigation, more effective fishing, improved and expanded rain-fed farming can enable the region to build food stocks and export food in good years.

There is currently limited but important exploitation of mineral wealth. Mauritania and Niger already derive substantial revenue from mining; the vast Saharan areas of Chad, Mali, and Upper Volta are not yet fully prospected.

With its 30 million people, the Sahel represents an important area of economic need for United States participation in a coordinated multi-donor development assistance program. The Club/CILSS approach to assistance is a unique model for a multi-national framework which focuses on the needs of several "least developed" countries. As the Brandt Commission's report put it, "In this Club all the partners, Sahelian and non-Sahelian, informally meet on an equal footing to share ideas, to air differences and to search for new ways of achieving the objectives of member governments. Such joint formulation of a program enhances mutual trust". It is in the US interest that this special Club/CILSS relationship yield results which help strengthen the fabric of North/South co-operation and provide the

basis for wider North/South dialogue on issues of particular concern to the U.S.

Libya's involvement in the internal affairs of African States reached new heights January 6 when Chad and Libya announced their intent to work toward unity. This announcement capped a year of intensified Libyan involvement in the affairs of other African countries after Colonel Qadhafi had earlier renewed his appeal for a Pan-Saharan Islamic Federation. Since last June, three Sahelian countries, Senegal, The Gambia and Niger have either broken diplomatic relations or closed Libyan diplomatic missions after discovering untoward activities. In response to the Chadian crisis, the OAU has directly confronted Libya. On January 15 in Lome, the Ad Hoc Committee in Chad issued a communique which called for the withdrawal of Libyan troops from Chad. The USG has indicated its displeasure with the intended unification of Chad and Libya. The US interests are to promote regional stability and cooperation, the growth of democracy and the economic viability of Sahelian states so that expansionist threats from outside the region may be thwarted.

#### 6. PROGRESS OF THE SAHEL DEVELOPMENT PROGRAM

The drought that struck the Sahel in the early seventies resulted in the displacement of weakened people, destruction of grain reserves, ravaged cattle herds, and rapid encroachment of desert upon useful land. Since then the Sahel has managed to stabilize with some indications of progress, in spite of severe climatic variations. The long process of development has begun. Sahel production, reduced during the dry years, is on the increase once more. In several countries per capita GNP has increased in absolute measures, but the initial changes are in infrastructural capital, including

human capital investment. This increased GNP provides some of the needed base for delivering direct assistance to the rural poor. Despite impressive gains in the production of cotton, export income is not keeping pace with the increasing cost of imports. With the exception of Niger, which derives important foreign exchange from the sale of uranium, the trade balance in all other Sahel states is becoming increasingly negative as terms-of-trade continue to deteriorate as a result of price inflation in manufactured goods and petroleum. The financial situation of the Sahel states is difficult and foreign assistance is important.

In 1975, economic and social conditions in the Sahel were generally considered to be a direct consequence of the drought, and the generally accepted objective of donors and Sahelians alike was to shelter the Sahel from future shortages of rainfall. In the years since 1975, Sahelians are increasingly aware of the fact that drought is but one variable among many that inhibits economic and social development. For example, FAO, CILSS and CEA0-sponsored studies have shown that low levels of cereal production are not only due to lack of rainfall, but to lack of incentive on the part of farmers to increase their food crop production for marketing. These studies have been widely discussed, and today, donors and Sahelian officials realize that the achievement of food self-sufficiency objectives will require modification of institutions and policies. In Senegal, the para-statal organization responsible for irrigated agriculture development has shifted emphasis to small irrigated development because of the higher yields obtained by farmer-managed irrigation perimeters. The Government of Senegal has also modified its pricing policies to favor the small farmer. These are examples of

some of the first steps toward reform of domestic food production, marketing, pricing and trade regulations which have been taken by Sahelian states. Continuous encouragement and cooperation from the donors will be provided to facilitate and to further this change. ✓

Environmentalists are worried about the loss of trees in the Sahel. A small number of reforestation projects are now underway and are yielding results. The slowness of reforestation efforts is a function of lack of trained Sahelian personnel and insufficient resources. In Kuwait the AID representative urged that a specific and significantly increased donor financial commitment to reforestation and environmental protection be undertaken immediately. The total disappearance of forest land is an imminent reality if the current trend is not reversed. The Club/CILSS work plan proposes a special effort to train Sahelian personnel in 1981-82 in the forestry sector.

The development of the Sahel, even without the effects of the drought, will be neither spectacular nor rapid. The Sahel has weathered the past five years without major crises. Rain-fed cereals production, the food base of the Sahel, has increased primarily because of additional land placed in cultivation. Cereals production in the short-term is largely at the mercy of climatic variables, as shown in 1979 and 1980, but in the long-term overexploited land will become increasingly degraded, unless special measures are taken. Hectarage under irrigation has increased according to FAO estimates but not fast enough to meet increased demand for rice and wheat. A key restraint has been insufficient maintenance. The Club/CILSS are fully aware of these problems and have proposed corrective actions.

AID is stressing management and maintenance training in the irrigation activities it supports.

Studies and analyses, and large investments in human resources, varietal seed trials, infrastructure and institutional development have begun to create the basis for food self-sufficiency. The development program has achieved some successes in improvement of both rain-fed and irrigated agricultural production in such areas as in the Niamey Department in Niger, in the Eastern Province of Upper Volta, in the area around Mopti in Mali and on the Island of Sao Tiago in Cape Verde. Mali, for example, has been able to promote new cereal production technologies for farmers. Some 15,000 farmers have accepted these new techniques. Niamey's Cooperative service has trained 1,000 village leaders to assist the organization of rural farming communities into self-governing cooperative associations.

Trained people are an important factor in the development of the Sahel. Recognizing this, Club members sponsor training in a very wide variety of disciplines for thousands of Sahelians. Annually, approximately 2,200 Sahelians receive long-term training and nearly 1,000 short-term training outside of the Sahel. These Sahelians add each year to the Sahel's ability to absorb increasing external assistance.

The question of the Sahel's capability for the effective use of development assistance is a complex one. The two-year study of the recurrent costs problem in the Sahel is one of addressing head-on one of the major absorptive capacity constraints of the Sahel; the analytical depth of this report is remarkable and will lead over the next one or two years to intensive policy level discussions at

the national and regional levels with the assistance of the International Monetary Fund. Other absorptive capacity problems were identified at the Kuwait Conference, such as maintenance of irrigation systems. The requirements in this and other areas were cited by the CILSS/Club at Kuwait as needing attention and were built into the CILSS/Club work program for 1981-82. Absorptive capacity constraints and their amelioration are thus being dealt with individually through a series of measures which are tightly focused on specific problem areas with provision for appropriate follow-up action.

The Sahel's increasing ability to absorb development assistance is further supported by the relative small size of the pipeline which was \$1.2 billion out of the \$5.1 billion committed over the past five years (See Table 1). Using this traditional method of computing pipeline, the Sahel pipeline stands at 25 percent. We believe this to be very favorable.

Existence of the problem of absorptive capacity is the basis of our being in the Sahel. Capacity constraints are the focus of the total program effort, in both intellectual and financial resource terms. Development proceeds and new economic opportunities emerge only as work progresses on improving capacity. The process is dynamic not static, permitting an ever-growing donor involvement and effectiveness of their efforts. The U.S. and other donor purpose in the Sahel is to continue striving to improve Sahelian capacity.

Currently underway is a dialogue with Sahelian government officials regarding the effects of the population factors of their country on the possibilities of that country attaining its economic and social goals. Government officials in Mali and Mauritania have received preliminary presentations of demographic impact on development.

A computerized presentation of the effect of population on, inter alia, savings and investment for development, new job requirements for youth, and food consumption projections was given to Senegal officials in January 1980. The Senegal National Population Commission is launching a population awareness campaign and wants to use the material and techniques developed in the AID-funded presentation.

The available statistical data show that there has been movement towards improvement of the well-being of the Sahelians. This trend is indicated by a small increase in life expectancy reflecting improvement in:

- food availability and distribution
- access to health services
- water supply

#### 7. CONTRIBUTIONS FROM DONOR GROUP

The tables on the following pages reveal the magnitude of donor resources flows to the CILSS member-states. Contributions of the US are included in global data or in data for OECD countries unless otherwise stated.

In 1979 total commitments of official development assistance through the Club du Sahel to the CILSS countries totalled \$1.7 billion; this represents an increase of \$302 million over 1978. Between 1974 and 1979, commitments more than doubled. Most project commitments were for rural development (36%). These commitments can be broken down into agriculture (47%), irrigation (23%), basin development (16%), and livestock (13%). Forestry mining and water supply at 13%; basic infrastructure which includes energy, transport and roads (32%); and health and education (14%) make up the other important sectors of project commitment.

In 1979, 45.4 percent of assistance came from the OECD countries, 30.6 percent from multilateral institutions (including the UN) other than OPEC, and 34.0 percent from OPEC countries and institutions. This represents a significant change from 1978, when the respective percentage input was 56.3% from OECD, 30.9% from multilateral institutions, and 12.8% from OPEC. Funding trends for the top nine donors finds France on top with \$274.0 million vs \$84.6 million for the US. France's assistance has concentrated on non-project aid in technical assistance, budget support and research. In 1979 AID assistance to the Sahel constituted 7 percent of the official development assistance committed to the CILSS countries.

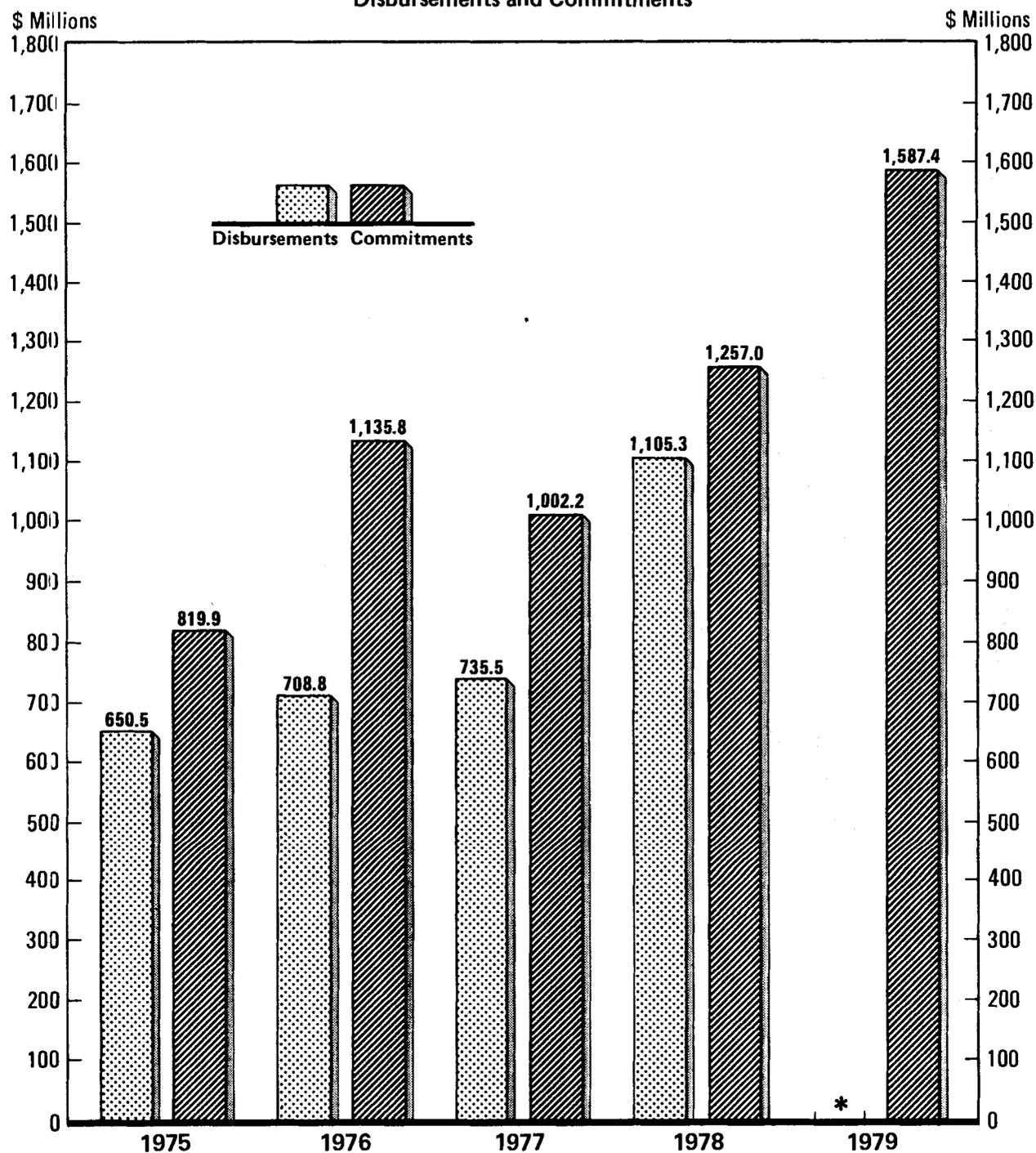
The OPEC countries and their financial institutions contributed a total of \$406.99 million in 1979, more than doubling their 1978 level of \$177 million. This rapid increase is due to a \$180 million commitment to the mining of Iron Ore, and an \$82 million commitment to the Kiffa-Nema road, both in Mauritania, which together represent 65% of total OPEC assistance to the CILSS member states.

Other major donor activities are directed toward rural development, basic economic infrastructure and human resource development, education, industry and natural resources. After France, these donors include: The European Development Fund (EDF) (total \$240.2 million in 1979), Germany (\$136 million), World Bank/IDA (\$110.1 million), African Development Bank and African Development Fund (\$76.4 million), United Nations Agencies (\$78 million). The Netherlands (\$57.9 million), Japan (\$46.8 million), Canada (\$42.7 million), United Kingdom (\$24.7 million), Belgium (\$24.2 million). The United States (\$84.6 million) was the sixth largest donor in 1979.

Table 1

## Total Public Aid for Development of the Sahel 1975 to 1979

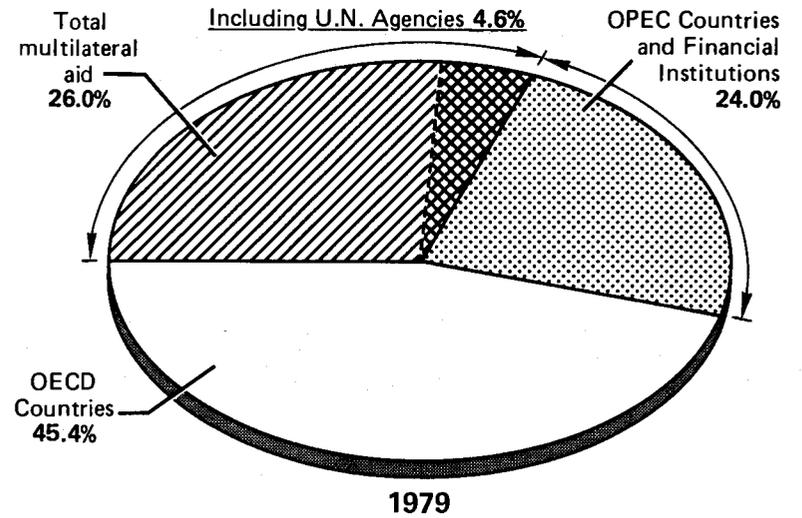
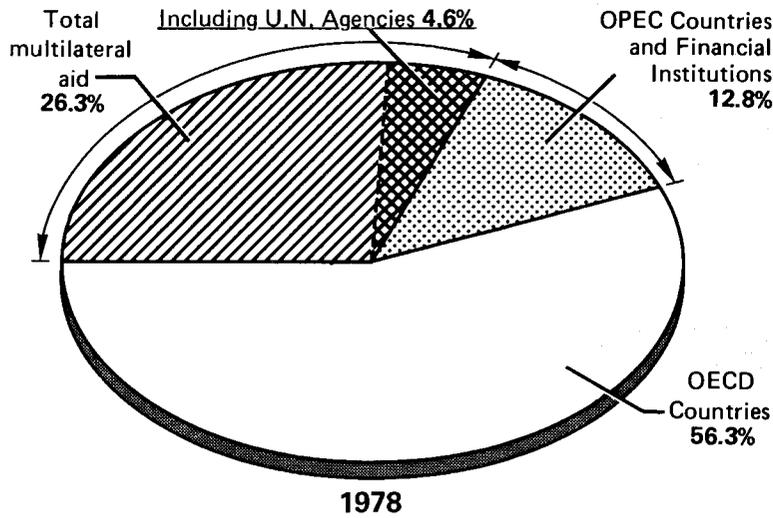
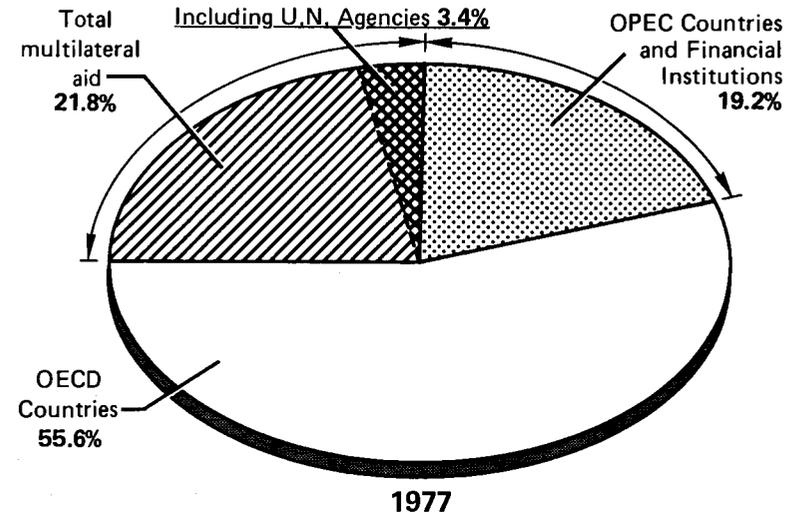
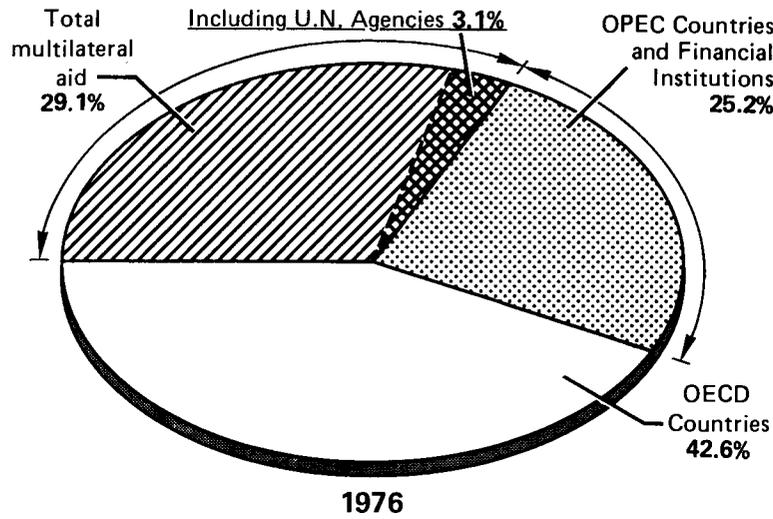
Disbursements and Commitments



\*Figures for 1979 disbursements are not available.

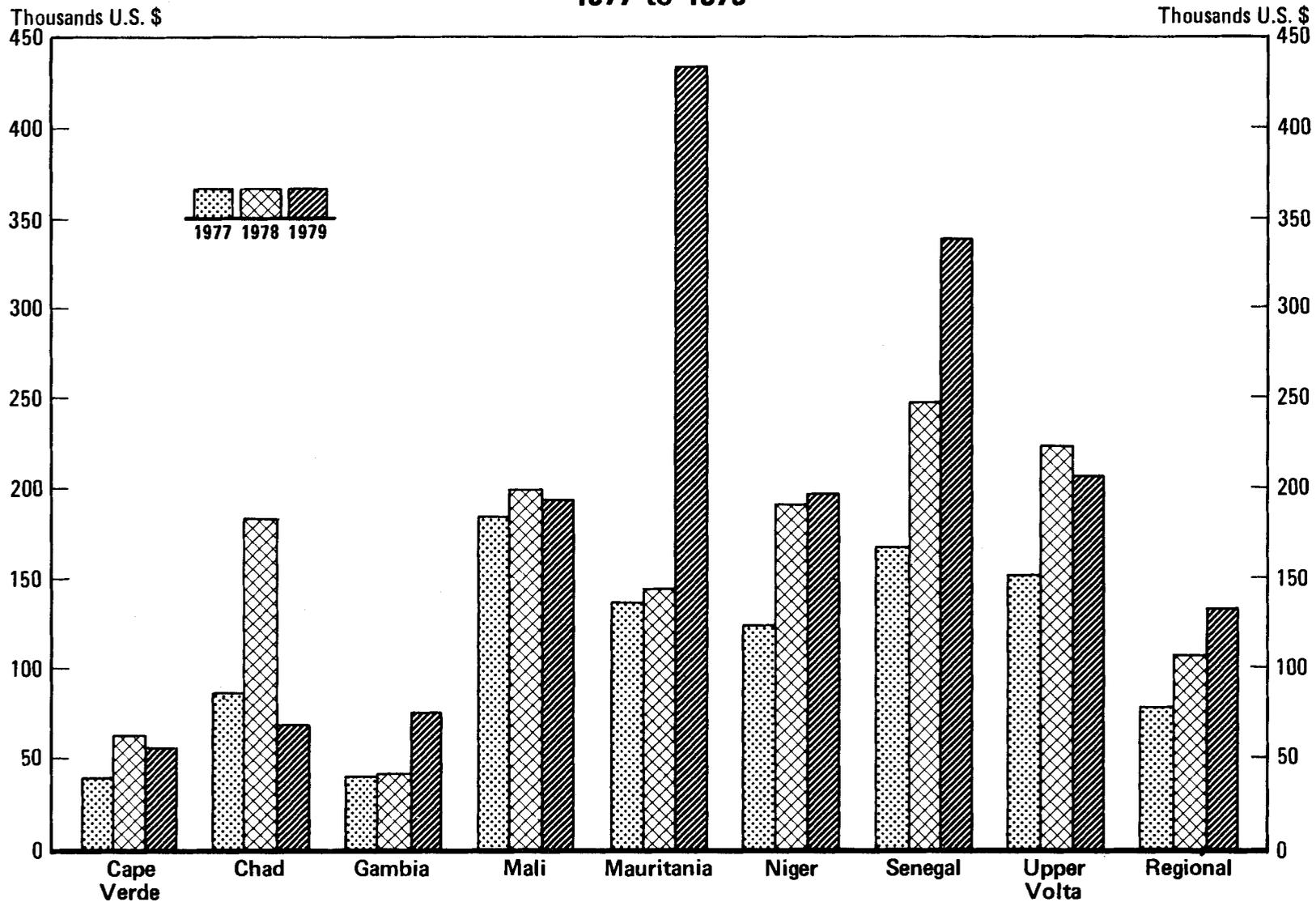
Table 2

**Contributions to Sahel Countries by Major Groups of Donors  
1976 to 1979**



Source: CILSS/Club 1980 Report, Sahel D(80) 103, October 1980

Table 3  
**Aid Received by Sahelian Countries  
 1977 to 1979**



Source: CILSS/Club Report, Sahel D(80) 103, October, 1980

Table 4

Commitments to the Sahelian Countries by Donor\*

(in millions of U.S. dollars)

RANK	1976		1977		1978		1979				
	\$	%	\$	%	\$	%	\$	%			
FRANCE	209	20	FRANCE	184	19	FRANCE	236	19	FRANCE	260	16
EDF	133	13	S. ARABIA	122	12	EDF	169	13	EDF	204	13
IDA/IBRD	134	13	EDF	119	12	CANADA	115	09	GERMANY	127	08
S. ARABIA	130	13	GERMANY	90	09	IDA/IBRD	103	08	S. ARABIA	117	07
GERMANY	68	07	CANADA	69	07	GERMANY	94	07	IDA/IBRD	110	07
ADF	46	05	ISA/IBRD	64	06	USA	94	07	USA	85	05
CANADA	45	04	UNDP	63	06	ADF/ADB	73	06	KUWAIT	85	05
AFESD	42	05	USA	59	06	NETHERLANDS	61	05	UNDP	78	05
NETHERLANDS	37	04	NETHERLANDS	38	04	S. ARABIA	52	04	ADF/ADB	76	05
USA	35	03	OPEC SP. FUND	26	03	UNDP	51	04	NETHERLANDS	57	04
	<hr/>	<hr/>		<hr/>	<hr/>		<hr/>	<hr/>		<hr/>	<hr/>
	879	87		834	84		1,051	82		1,199	75
OTHER DONORS	129.8	13		155	16		214	18		399	25
	<hr/>	<hr/>		<hr/>	<hr/>		<hr/>	<hr/>		<hr/>	<hr/>
	1,008.8	100		989	100		1,266	100		1,598	100

\*Food aid excluded.

SOURCE: ODA Assistance to CILSS Member Countries  
CILSS/Club Du Sahel, Vol. 1, Oct. 1980

### C. AID'S EFFORT WITHIN THE SAHEL DEVELOPMENT PROGRAM

AID collaborates with the Club and CILSS and with each Sahelian Government in planning and implementing the Sahel Development Program. Close liaison is maintained with the CILSS Secretariat in Ouagadougou and the Club Secretariat in Paris. Since the inception of the Sahel Development Program, a small group of planners, based in Washington, helped to monitor program developments, and periodically update strategy in collaboration with CILSS working groups. In mid-1979, a decision was taken to move this group to a Sahelian location where it could maintain close contact with CILSS USAID missions in the Sahel. This Sahel Development Planning Team (SDPT) now is located in Bamako, Mali. It conducts in-depth analyses of development issues and helps coordinate and improve the program in the region. To facilitate and re-inforce a regionally coherent and optimally effective approach to AID's development program in the Sahel, the SDPT works with the Sahel Mission Directors' Council (SMDC) wherein USAID Directors and AID principal officers address problems of common concern relating to both policy and implementation. This combination of a field-based planning team and a council of mission directors who convene quarterly is proving to be a very effective means to improve program coordination.

The staffing of AID country missions has been kept at 1978 levels with an average direct hire staffing American level of 24, not including Cape Verde or The Gambia.

AID coordinates its program with other donors and looks to the Club/CILSS mechanism to facilitate such coordination; it seeks to pace its development assistance with the ability of the Sahel

States to assimilate effectively such assistance in both human and financial terms, and to support projects whose funding requirements are within the ability of the recipient country to finance. Since the recurrent costs study was completed, AID, other donors and the Sahelian Governments have undertaken to implement many of its recommendations; these can be effected unilaterally or negotiated within the donor/host community for collective action. For example, Senegal, Upper Volta and Mali have adapted an austerity program and have restricted government hiring. The Government of Mali has frozen government salaries.

AID now requires greater attention and precision in computation of local costs of our projects, and inclusion within the project design of explicit funding commitments for these. AID has promised to investigate the possibility, in selected cases, of providing limited project-related local cost financing beyond the termination date of projects, and to consider, again on a case-by-case basis, sector-type financing.

AID continuously evaluates its programs. Some 108 evaluative reports on Sahel projects active in September 1974 or since are on file in the Development Information System. From these evaluations, which are part of the AID institutional memory, important lessons are learned. Some AID projects seek to introduce new approaches to the Sahel; these innovative projects contain a built-in and unknown risk factor. However, from them we add to our knowledge of what works in the Sahel. The following seven program accomplishments illustrate some of the results of these lessons:

-- Malian farmer incomes increased by up to \$300, nearly doubling earnings provided through traditional practices, because of

methods brought to small farmers by the Action Ble' Project.

- Farmer's committees organized to make important and informed decisions regarding crops to be planted, debt management, and marketing, through assistance provided by the irrigated agriculture project at Bakel, Senegal.
- Ground and surface water was found to irrigate 100 hectares of land on the semi-arid island of Sao Tiago, Cape Verde.
- Fast growing gemlina arborea trees (192 hectares) planted under the auspices of the Gambia Reforestation Project.
- On the Niger river, 17 kilometers of permanent dikes holding water for 2,500 hectares for rice production.
- River blindness down from a 65 percent frequency to 5 percent in areas of Upper Volta and Mali.
- Increased millet production achieved through utilization of techniques introduced by the Senegal Cereals Project.

A listing of AID's SDP projects, with funding data, is provided in Annex A. AID's Sahel programs, when appropriate, make maximum use of American universities with experience in development work, and of private voluntary organizations. A partial list of these institutions is included in Annex B. A summary of PL 480 food aid is found in Annex C. Annex D contains Summary AID Pipeline Analysis. Annex E is a glossary of acronyms.

Grouped by major sectors corresponding to those of CILSS/Club, and described below, are selected program activities which illustrate AID's role among Club donors.

Table 5

## AID ASSISTANCE TO SAHELIAN COUNTRIES

1977/1980 (\$ millions)

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
CAPE VERDE	4.2	7.9	2.9	3.1
CHAD	8.0	10.5	2.9	.2
THE GAMBIA	0.1	1.0	4.2	4.7
MALI	10.2	9.7	16.2	15.5
MAURITANIA	1.6	5.3	6.1	2.7
NIGER	10.2	10.8	9.8	9.5
SENEGAL	8.5	7.9	12.0	10.0
UPPER VOLTA	3.0	8.1	8.4	9.2
SAHEL REGIONAL	12.2	25.7	16.4	21.6

## 1. AGRICULTURE AND RURAL DEVELOPMENT

The Sahel Development Program focuses upon rural and agricultural development as the single most important effort, both for survival and for long-term growth. The exploitation of the agricultural potential of the region is based on three basic approaches: the objective of the Club/CILSS is to exploit each of these with initial concentration upon the first:

- a) marked improvement in productivity by the agricultural population now using low-yield, traditional rain-fed technology,
- b) massive expansion of irrigated agriculture through capture of large volume rivers, and
- c) settlement and exploitation of the large, underpopulated, "new lands" areas which have higher rainfall.

The prospective major problems which must be resolved are:

- a) identification through research of a workable and secure "new technology" which will be accepted and applied on a wide-scale by the farmers to replace less effective practices,
- b) commitment of very large investment to irrigation infrastructure, and
- c) "opening up" the new lands, mainly by controlling endemic diseases such as onchocerciasis or trypanosomiasis.

AID devotes over sixty percent of its development assistance directly to agriculture, rural development and natural resources. Following are some examples of major projects designed to increase production on the two major agricultural fronts of rain-fed and

irrigated agriculture and new land exploitation.

Traditional Agriculture: Senegal Cereals Production Project.

The Sine-Saloum, Thies and Lauza regions of Senegal form its rain-fed peanut basin. Here peanuts are the major crop and a principal source of foreign exchange for the country. A major concern of the Senegalese Government has been to keep peanut production high and still provide sufficient cereals, principally millet, to feed the peanut growers. The Government created the autonomous Corporation for Development and Agricultural Extension (SODEVA), to coordinate the agriculture production activities of the farmers of the peanut basin. AID was asked to help SODEVA improve its techniques and make its interaction with farmers more effective. AID sought first to assist SODEVA in its effort to increase millet production through reasearch, development and extension of improved technical packages.

Project evaluation showed that while AID's contribution did indeed strengthen SODEVA's extension effort, extension is but one link in the chain which begins with research and extends to marketing and consumption.

The evaluation also showed that millet production had been increased as a result of the project and that farmers approved the results. Both the production and marketing of traditional grains in Senegal may be in transition resulting from an increasing consumer preference for rice.

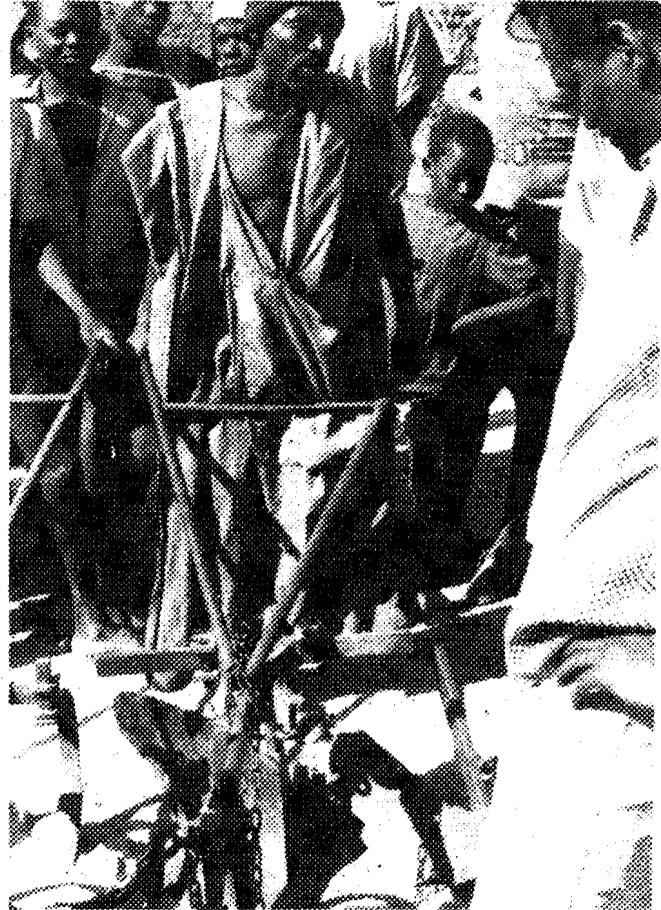
The Gambia Training for Development Project has resulted after two years in a training institution for advanced school leavers with thirteen buildings and a staff with a capacity for training twenty-five students yearly. The first thirty students have completed their course of instruction and returned to their village and an additional twenty-five have enrolled. Moreover, 330 acres of land have been cleared and 241 acres placed in production. The Government of The Gambia has proposed the project be extended to 1985 at which time it would take over operations.

Mauritania: Integrated Rural Development Project. This project was originally conceived to develop technically reliable and socially accepted methods for increasing agricultural and livestock production among sedentary inhabitants in the Guidimaka region, and to generate the necessary data to develop an expanded extension program. In early 1980, after one year of project implementation, AID and Mauritania officials concluded that the small farmers and herders in this region were eager to acquire and try out interventions rather than only participate in their testing. In addition, various proposed interventions, e.g., introduction of adapted tomato and eggplant seed and an irrigated vegetable production system in the Guidimaka region, had already proven themselves technically reliable and socially acceptable. It was determined that extension agents could initially extend a few proven interventions and then expand them to include newly verified ones as part of their on-the-job training.

The evaluation team prepared a project paper amendment to redirect the activities and take advantage of the information gained from the first year's implementation. The team recommended that the



*The Casis Development Project (above) provides assistance to rural Mauritania. Improved agricultural equipment is made available to farmers in Mali (right) through the Mils Mopti project.*



project's purpose and activities be restricted to a limited geographical area within Guidimaka. Also, the team recommended that the project be extended to December, 1982, in order to allow sufficient time to permit implementation of extension activities.

#### IRRIGATED AGRICULTURE

Mali Action Ble Project, based on diesel-powered pumped irrigation for wheat production on a remote stretch of the Niger River uses small-scale technology based on single farm unit systems and family-farm initiatives over a total target area of 4,000 hectares. On the basis of preliminary data, it is successfully increasing farm incomes by as much as \$300 per hectare where the average farm size is 2.8 hectares, which is almost doubling earnings over traditional production.

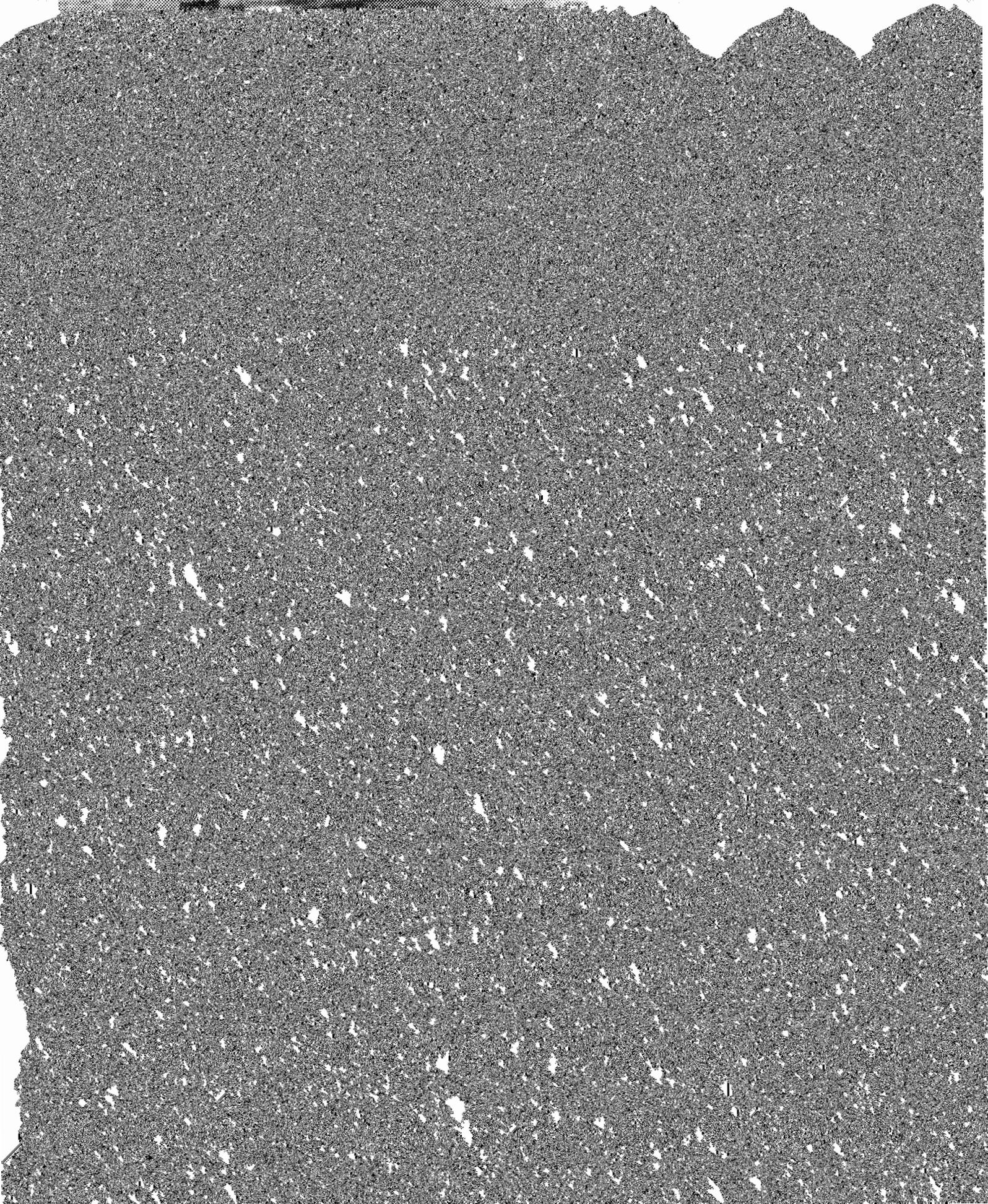
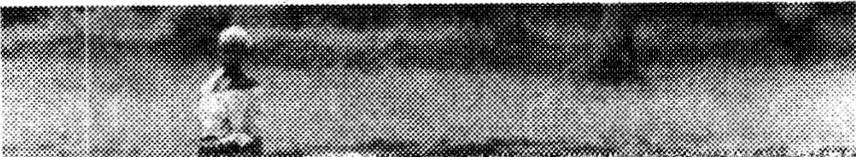
Senegal: Bakel Irrigated Perimeters Project. Located on the Senegal River at Bakel, near the Mali border, this \$6.6 million project is testing the feasibility of managing a river-fed irrigation scheme through largely autonomous, farmer organized production groups. Organized under the auspices of SAED, the Senegalese organization for irrigated agriculture development in the Senegal Valley, the project allows farmers' committee to make their own decisions on perimeter configurations, crops to be planted, debt management, and to an extent the marketing of produce. This is in contrast to the large, plantation-type enterprises which SAED directs elsewhere along the river.

In mid-1980, a joint AID-Senegalese evaluation team studied the project and endorsed the self-management theme which characterizes the Bakel model. Simultaneously, a survey of beneficiaries is being conducted by ENEA, the Senegalese institution for rural development



*Irrigated perimeters, such as the one located in Senegal (left), are projected as the long-term solution to food production shortages in the Sahel. This provides a controlled water source to farmers. At the same time, traditional practices of recession agriculture (below) are also being improved (Mauritania).*





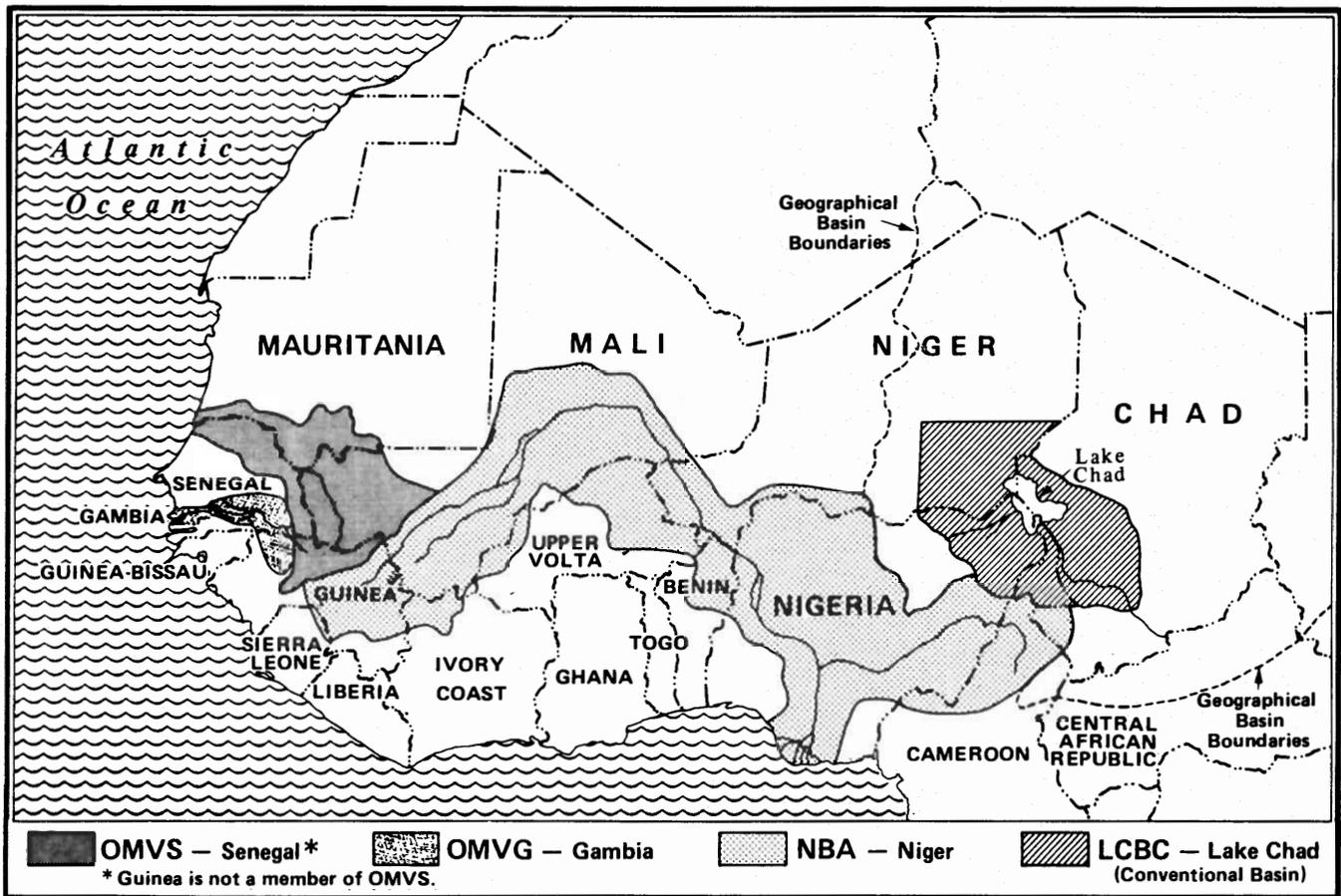
training. The ENEA confirmed that the project is strongly endorsed by the participating farmers, who after only two years, are beginning to market the surplus to their subsistence production.

In view of the character of this project as a prototype, the evaluation team recommended that particular emphasis be placed on the systematic collection and analysis of cost/benefit data. SAED, the evaluators found, must make efforts to improve the training of local farmers in water control techniques, pump maintenance, and horticultural practices. SAED has subsequently taken steps to improve basic construction services and the timely delivery of inputs. SAED has also made changes to clarify lines of authority in cases where, because of great distances and poor communications, they had become confused.

The Senegal River Basin Development Organization (OMVS) is a regional organization composed of Mali, Mauritania and Senegal devoted to long-range integrated development of the basin.

The agricultural goals of long range basin development envisage developing up to 375,000 hectares by the year 2025 in irrigated agriculture. AID has several basin development activities underway. These include a fiscal allocation study, aerial photography and mapping of the valley, as well as agronomic research. An assessment of the basin environment to determine potential impact of development on the ecology of the basin system has just been completed. The assessment identified several courses of action which will protect the basin physical integrity. AID is also preparing a project for integrated agricultural development to increase irrigated agricultural production while taking the steps necessary to address the related development efforts required in the health, livestock,

**Table 6**  
**Sahel River Basins**



The Sahel has four major river basins (above). A.I.D. projects with the Sahelian river basin commissions are managed by the USAID office nearest the basin headquarters office (below):

<u>Basin</u>	<u>Organization Name</u>	<u>Headquarters</u>	<u>A.I.D. Project Management</u>
OMVS	Organisation pour la Mise en Valeur du Fleuve Senegal (Senegal River Development Organization)	St. Louis, Senegal	USAID/Dakar
OMVG	Organisation pour la Mis en Valeur du Fleuve Gambie (Gambia River Development Organization)	Kaolack, Senegal	OAR/Banjul
NBA	Niger Basin Authority	Niamey, Niger	USAID/Niamey
LCBC	Lake Chad Basin Commission	N'Djamena, Chad*	USAID/N'Djamena*

\*The LCBC headquarters is temporarily moved to Maroua, Cameroon, and A.I.D. management is currently divided between Washington and USAID/Yaounde.

and socio-economic areas. To accomplish this purpose, AID is developing an immediate food and forage production activity as well as medium- and long-term planning and design studies for a broader-scale multi-donor investment in the agricultural sector.

The Niger Basin Authority (NBA) addresses, with multi-donor support, the systematic development of the Niger River Basin. The NBA Executive Secretariat has a mandate from its nine member States to coordinate the development and exploitation of the Basins' resources.

New leadership provided by Guinea beginning in October, 1979, has succeeded in revitalizing the NBA. These efforts culminated in new agreements signed in Conakry in November, 1980, granting the NBA a new measure of authority symbolized by changing its name from a "Commission" to an "Authority". A Prospective Indicative Development Plan was accepted which outlines a general short-, medium- and long-term plan for the upper, middle and lower basin areas.

The NBA Executive Secretary has requested significant assistance from the U.S. because of our recognized experience in river basin development. The AID response has been cautious awaiting the results of the reorganization efforts and the re-institution of the multi-donor effort under the coordination of the UNDP. In anticipation of a new effort, however, AID is exploring the use of the U.S. Army Corps of Engineers (COE) to develop a \$2 million river basin system analysis program with the NBA as the AID contribution to the multi-donor projects. This program will be required as a basic tool to assist the NBA analyze the various projects proposed or planned by member states in terms of impacts on the basin priorities.

The Gambia River Development Organization

AID has provided the technical leadership to the UNDP multi-donor team which has worked with the Gambia River Development Organization during the last three years to complete a comprehensive basin development study and action plan. The work on this study and action plan was performed jointly by international experts and experts from the governments of Senegal and The Gambia. The national development objectives of these two countries served as the basis for formulating regional agricultural development strategies. Specific studies and projects listed in the resulting comprehensive study chart a course for the achievement by the year 2000 of grain production self-sufficiency, and a significant forestry conservation and wood production program.

AID is now completing the design of a project which performs a few of the pre-feasibility studies needed by the Gambia River Development Organization prior to the design of production projects. These include basin aerial photography and mapping, an environmental assessment of the impacts of the planned anti-salinity Yelitenda dam and the upstream Kekreti dam.

Lake Chad Basin Commission (LCBC). The hostilities in Chad forced the LCBC Executive Secretariat to relocate its headquarters to Maroua, Cameroon, from N'Djamena, Chad, in 1979. The LCBC activities have been severely reduced as a result of the continuing war. The Executive Secretariat is currently making a strong effort, however, to relaunch the LCBC program in the other member states of the Niger, Cameroon and Nigeria.

AID made a significant contribution to the UNDP-coordinated multi-donor LCBC Development Study. Completed and accepted by

member states and donors in 1980, the study identified projects which the member states may undertake to develop the Lake Chad Basin area.

AID activities in support of LCBC includes funding a second phase of a livestock project located in northern Cameroon, completion of a telecommunications link between Maidurguri in Nigeria, Kousseri in Cameroon.

New Lands Exploitation: Broad swaths of potentially very productive land in the southern portions of Senegal, Mali, Upper Volta and Chad have been left largely unpopulated because of pervasive and persistent river blindness, sleeping sickness and tick-borne diseases. The future well-being of these countries will depend upon utilization of these territories, hence upon the control of the diseases.

A very good start has already been achieved in the Onchocerciasis Control Program. This program is financed by several donors, including AID, and has been able to improve the health conditions over substantial areas. Resettlement projects have begun with appreciable success.

The problem of the tse-tse fly and of the sleeping-sickness it brings has affected sub-Saharan African for millenia. Modern science and technology have been combatting the problem for more than a century. A feasible solution has not been found, but research, such as that funded by AID in Mali, continues.

AID has undertaken projects to develop production and improve living conditions in these unhealthy areas. Such efforts must be accompanied by vector control measures, or, in the case of onchocerciasis, they must follow an eradication program. AID has begun

projects in the Casamance and Eastern Province in Senegal, in the Volta River Valley in Upper Volta, and in the Upper Valley in Mali in order to open up these new lands. Additional initiatives may include livestock grazing based upon exploitation of trypano-resistant cattle strains such as the Gambian Ndama.

AID and other donors are establishing the means to generate the required institutions, human resources, infrastructure, and, above all, knowledge. Limited but nonetheless significant production success has been achieved. We have cited some examples of AID projects which have yielded impressive improvements in rain-fed agriculture and we have had encouraging achievements in small-scale irrigation development. We have been able to make some progress in organization and reform of fundamental policy. For example, an in-depth socio-economic review of irrigation projects in the Senegal River Basin showed that crop yields were significantly higher on the average for small irrigated perimeters than for the larger, government-managed farms, principally because the farmers were given a major role in the management of the activity. SAED, the Senegalese para-statal organization for irrigated agriculture development, has subsequently oriented its activities toward assisting small farm producers' groups (15-20 farmers) develop small irrigated perimeters. AID will select the best of these experiences and expand and implement them to the optimal extent. We believe that our food production goals are appropriate, and we will give rain-fed agriculture our priority attention. But AID is convinced that, concurrently, irrigation development must receive the maximum effort that can be accommodated by our resources and the absorptive capabilities of the host economies.

## 2. LIVESTOCK

Increases in livestock production in the years following the drought have due to increasingly intensive use of limited and ecologically fragile rangelands. AID places priority upon finding ways of increasing livestock production while at the same time reversing the deteriorating conditions of the rangeland. AID projects in the Sahel are directed at stock water development, fire control and prevention, grazing management, animal health research and delivery, culling of unproductive animals, forage production and preservation, and herder association organization and monitoring the effect of these factors upon livestock and ecology. Most interventions in the livestock sector are prototypes concentrated on limited areas and selected activities. This concentration makes it possible to closely monitor results which provide developers with economic, ecologic and social data to effectively implement larger-scale projects.

The monitoring components of several projects have already proved effective, as they are producing data that will help to resolve the key problems. For example, we are now able to better project the results of selected types of livestock interventions, i.e., how much, if any, environmental restoration can be attributed to particular interventions; or, how herders will react to given technological change.

The Niger Range and Livestock Management Project is developing a range management plan for the improvement of grazing areas in Niger's pastoral zone. The \$5.4 million Niger Range and Livestock Project was designed to develop baseline data on range, livestock and social conditions among herders that could serve as the basis for pilot

range-management activities. A relatively small component, of animal health, training and water development is included in the project, to help the Government of Niger to evaluate these pilot interventions for economic and technical feasibility.

The Mali Livestock Project has yielded lessons in marketing and production of cattle which will be incorporated in Mali Livestock II, a project currently under design. Although a gradual recovery of rangeland and re-stocking of herds have permitted a partial post-drought recover, careful range management is essential to allow production to continue and marketing to expand while safeguarding the rangeland. The project includes farm feedlot and industrial feedlot development, animal health research and support, and range management. Draft animal feeding has proved to be a profitable seasonal farm activity and can be expanded within the limits of available crop residue. The data from industrial feedlot component of the project indicate it is not a viable option. The animal health support and research is considered essential to the success of other project interventions and to livestock production both in Mali and the Sahel.

The Senegal Range and Livestock Development Project which is located in Eastern Senegal near Bakel, tests a range management system organized around rain-filled ponds as opposed to deep-bore wells, which are usually the case in the Sahel. Building on the successes in East Africa, the ponds system could have an important effect upon future range management schemes in the Sahel. An evaluation of this \$5.7 million project in 1980, indicated that logistic delays have temporarily distorted the direction of the project placing disproportionate emphasis upon fire break construction and



*A Senegalese veterinarian is providing services under the SODESP Livestock Production Project to assure improved livestock health and productivity.*

veterinary services with only a handful of the planned 26 ponds actually constructed. A system will be established to assess the effect of the ponds, as they come on line. The redesign of the project has included consultations with herders to redefine, as needed, the boundaries of the project zone to coincide with transhumance patterns which will develop as the ponds are installed; to study what training the herders will need to improve production and marketing; and to enlist the assistance of herders with the monitoring of range conditions. AID is also exploring the economic benefit that can be gained by coordinating various functions of this project with the Bakel irrigated perimeters project.

#### Assessment

The Sahelian livestock sector is socially and economically important to the region and obviously vital to the pastoralists. The livestock population has been reconstituted since the drought and animal products production restored. Our analysis now suggests that current livestock numbers are near optimum for the traditional range in the Sahel. Future increases in numbers and production will result in part from improved animal health measures and expansion into the areas of traditional range heretofore underutilized because of the unavailability of water points. But it is the increased use of higher rainfall "new lands" areas and the expansion of livestock raising in the agricultural areas that will provide the greatest increase in the livestock sector.

### 3. FORESTRY, ECOLOGY AND ENERGY

The progress of the Sahel Development Program has been imperiled by a lack of indigenous fossil fuel combined with increasing

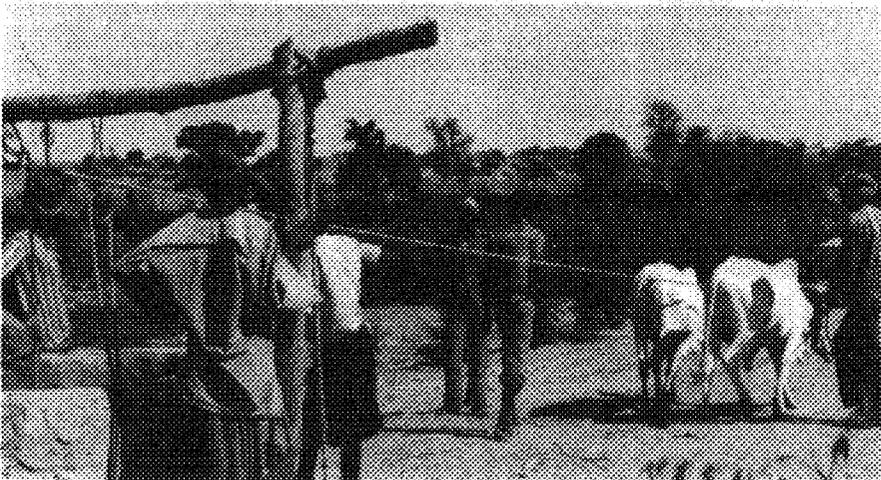
costs for imported oil. Projects are underway that seek to maintain the Sahel's principal energy source, wood, and others seek to promote efficient renewable energy technologies. Both of these relate to the general ecological well being of the Sahel and have a direct bearing upon agricultural and livestock production, as forest land protects against soil erosion due to wind or water, shields crops from wind, and provides forage for cattle.

Protection and restoration of the arid and semi-arid environment of the Sahel is a sine qua non for stability and economic growth of the region. Yet to date only about one percent of development resources are allocated to investments for these purposes. In contrast, the Club/CILSS estimated need for reforestation alone to stabilize the effects of current fuelwood consumption is 150,000 hectares per year at a cost of \$100 - 150 million annually. The proportion of AID resources devoted to environmental measures is above the Club average; however, AID as well as the community overall must commit proportionally much more. At the Kuwait Conference AID recommended fixing an investment target for the SDP so that by 1985 an environmentally stabilizing portion of development assistance will be applied to this sector. This will mean, for AID an early assessment of reproducible and effective projects and greatly expanded implementation.

In Mali, small scale devices applicable at the village level are to be developed and tested under the \$4.1 million Renewable Energy Project. Although a mid-term evaluation identified serious management deficiencies, corrective action is being taken and the project should soon be adapting or developing solar pumps and food dryers, more efficient wood burning stoves and other devices for

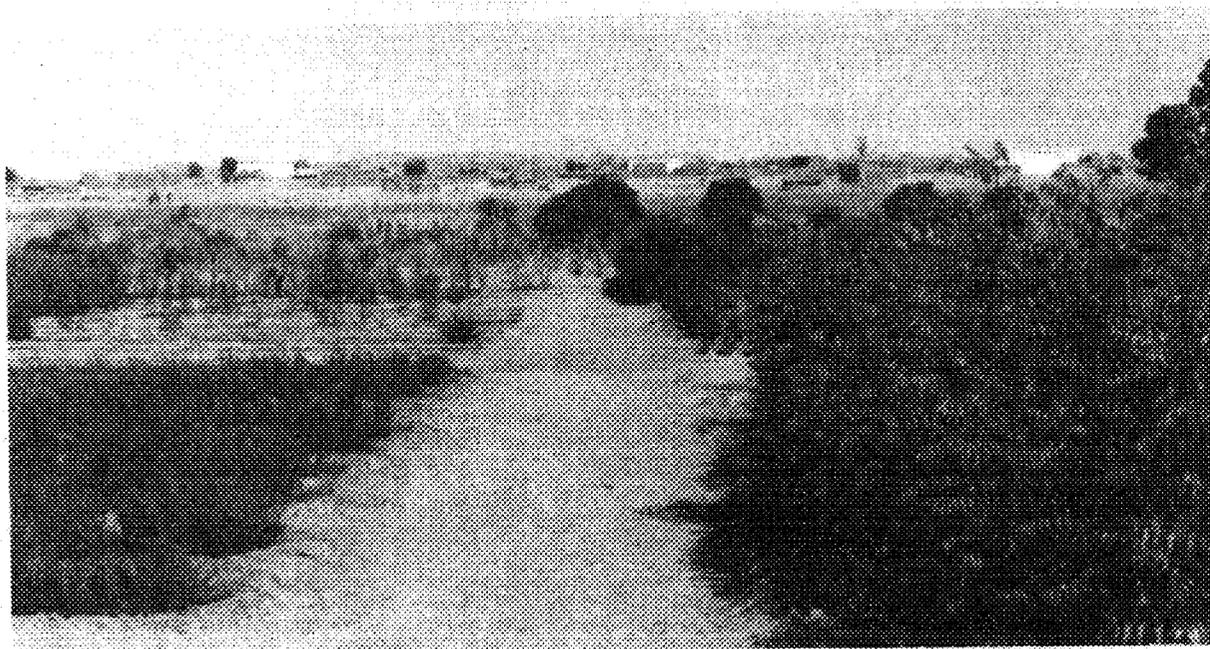


*The Mauritanian Renewable Resources Management Project includes dune stabilization (above) and interventions in forestry management. The seedling nursery (left) is watered from a well by animal traction. The same site includes vegetable gardening (below left).*





*Seedling nurseries are shown here for forestry projects in the Bandia Forest in Senegal (left) and in the Guidimaka region in Mauritania (below).*



larger scale introduction in rural Mali. AID has also begun an innovative Village Reforestation Pilot Project in Mali. In Mauritania, the Renewable Resources Management Project (\$4.7 million) started in 1980, seeks to inventory Mauritania's resource base and demonstrate, in selected pilot zones, the validity of an integrated program of dune stabilization, forestry and range management interventions.

In Niger, AID finances a Forestry and Land Use Project (\$13.6 million) that is preparing a comprehensive 20 year plan to rehabilitate, exploit and protect the country's soils, water, natural vegetation and firewood resources.

In Upper Volta, AID supports the Dinderesso Forestry Training Center through its Forestry Education and Development Project (\$5.9 million) which seeks to promote rational land and water resource use through anti-desertification programs. The Center offers innovative training of mid-level forestry service personnel and manages the adjacent model forest preserve.

In Senegal the Renewable Energy Project is designed to increase fuelwood supply in fifty village woodlots, improve the efficiency of charcoal production, expand the use of more efficient domestic woodstoves and improve preservation of fish with solar dryers. The Fuelwood Production Project will create a 3,000 hectare plantation to help provide fuelwood for urban centers, reduce pressure on natural forest lands, improve charcoal production, establish tree nurseries and provide training for foresters.

#### 4. HUMAN RESOURCES

The lack of trained personnel is a serious constraint on the ability of Sahel States to assimilate foreign assistance.

Consistent with AID's emphasis upon the development of the rural agricultural sector, much of AID's project activity in the human resources sector in 1980 was geared toward the training of facilitators who will in turn engage themselves in practical agricultural education or extension.

AID supports the development of agricultural training institutions in Mali, Upper Volta, Senegal and Niger and provides project-related training in agriculture in virtually all countries. AID's level of effort in human resources development is larger than it may appear, since most projects, which may be characterized as "agriculture" or "health", contain important training components.

Niger is undertaking major development programs in agriculture, livestock, irrigation and cooperatives. Niger will therefore need, over the next ten years, an additional 3,500 mid-level technical personnel to design, monitor and manage these programs. The Ministry of Rural Development requested assistance from the donor community to expand and upgrade the quality of the Practical Institute for Rural Development (IPDR), an institution that provides for the training of technicians in key agricultural development sectors. In 1979, AID joined UNDP/FAO, Belgium, Switzerland, FAC, FED and the World Bank in financing the growth of this institution through its Rural Sector Human Resources Development Project. Two separate but parallel evaluations of the project showed that despite initial recruiting difficulties, 13 of the 17 technicians to be provided by the various donors were on board and that the remaining positions were to be filled by the end of the year. Phase I of the construction, financed by Switzerland, has been completed and Phase II

and III are beginning in January.

In addition to support to IPDR at Kolo, AID finances other institutions that contribute to the development of Niger's human resources. AID will assist to develop a core of literacy-service personnel, to expand and improve the literacy program through its Literary Support Project, and to finance the production of primary school texts written in various languages, based on indigenous cultural traditions. AID will also contribute to the improvement of Niger's project planning, design and implementation capability by establishing a project evaluation unit within the Ministry of Plan through the Evaluation Assistance Project. In addition to IPDR in Niger, other Sahelian Agricultural training institutions are receiving assistance from AID.

In Upper Volta, AID supports the mid-level training center for agriculture extension at Matourkou and the University-level Agricultural Training Institute in Ouagadougou through its \$9.3 million Agricultural Human Resources Development Project. In Mali, AID is financing the expansion and improvement of the Agricultural Apprenticeship Center at Same.

The Sahel is faced with a shortage of personnel trained in managerial skills who can plan and carry out development programs. Under the Development Leadership Training Project, training will be offered to selected Malians in the public and private sectors, who have demonstrated superior academic performance and leadership qualities, and who can benefit from higher level training in American Universities. AID expects that many of these participants will eventually contribute to the growth and strengthening of Malian institutions of higher learning. AID recognizes not only the need

for mid and higher level training in Mali, but for the direct training of its rural farmers and herders through its Operation Mils Mopti Project, which is designed to increase millet production in an area of central Mali. Villagers are trained in blacksmithing and functional literacy as well as farm-to-market road improvement and maintenance. The functional literacy component of this project is a three-year accelerated impact activity that seeks to provide personal and occupational opportunities to villagers through literacy and numeracy training.

A mid-term evaluation of the project was conducted jointly by officials of AID, the Functional Literacy Department within the Ministry of Education (DNAFLA) and the Malian parastatal millet production agency, in March, 1980. The evaluation noted that while only 15 centers were planned originally an additional 32 were built by villagers, attesting to the perceived need for basic training. The crux of any functional literacy project is the ability to provide opportunities so that new-literates will not regress but will rather use their newly acquired skills for personal if not occupational development. In addition to the preparation of considerable supplementary reading material in local languages, the project provided occupational opportunities for new-literates as informal water and forestry agents, sanitary agents, and health workers. These health workers give shots and sell anti-malarial medication, and aspirin.

In addition to the training components contained in most AID projects, AID provides training opportunities through the Sahel Regional Manpower Development Project. From FY 1977 through FY 1980, a total of 58 Sahelians have been trained and returned home to participate in the development of their countries. These individuals

were trained in, inter alia, agricultural engineering, animal science, forestry and range management and public health. There are 362 Sahelians currently in training in the U.S.

#### 5. HEALTH, SANITATION AND POPULATION

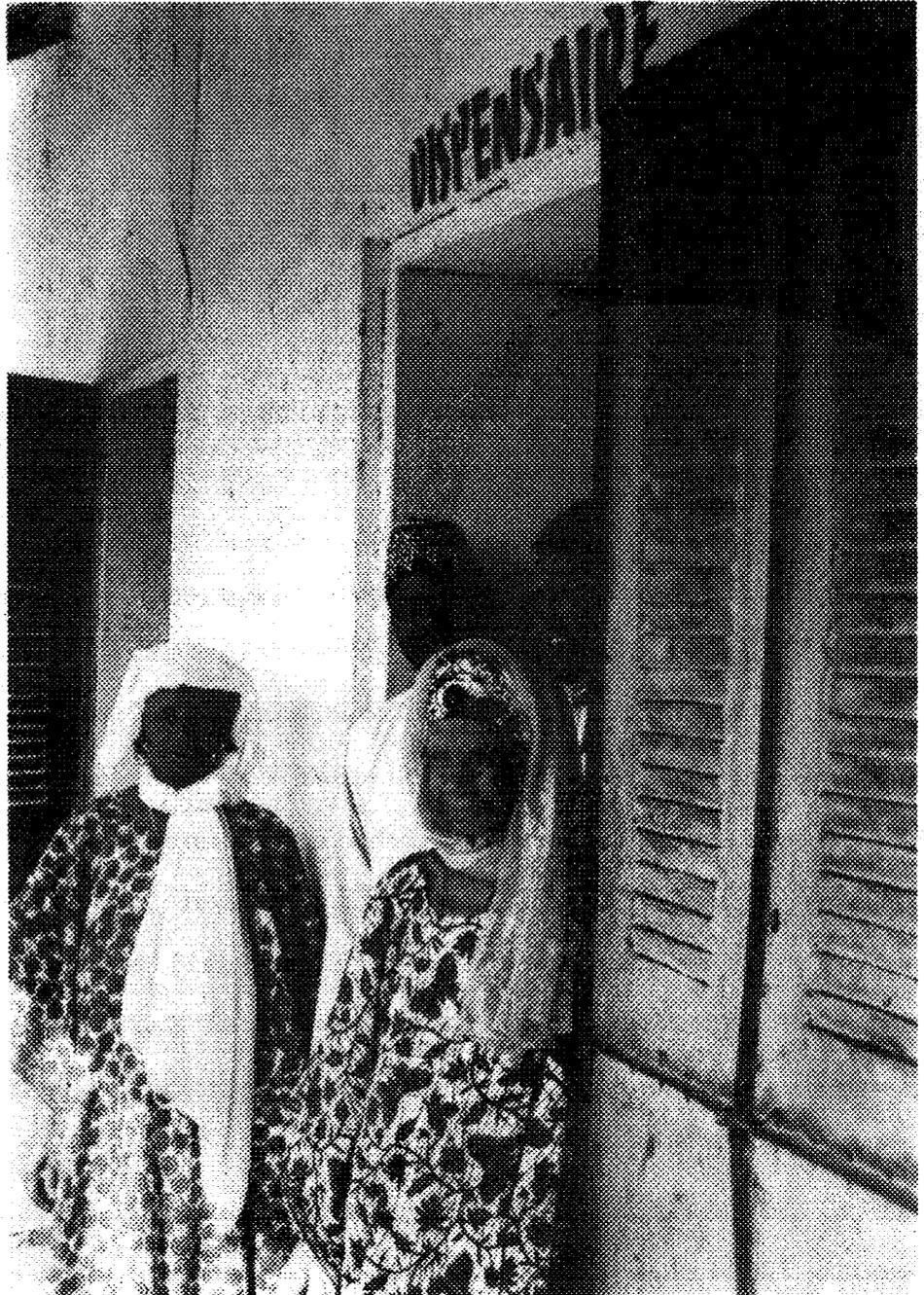
The AID strategy and program in the Sahel emphasizes rural primary health care provided by out-patient services at various levels in rural areas, all of which require a high level of community participation.

In Mali the Harvard Institute for International Development and the Peace Corps collaborate at the village level in a pilot low-cost rural health services delivery project. Training of 90 village health workers has been achieved to date. Also in Mali the University of California at Santa Cruz provides training for para-medicals. The Demographic Data Collection and Analysis Project has been initiated by the Sahel Institute which over the next 5 years will conduct demographic research in all 8 Sahelian countries. One of its objectives is government sensitization to the need for family planning programs.

AID is implementing village well and water projects in several Sahelian countries. The Rural Services project in Niger, AID's largest in sub-Saharan Africa is contributing to the national primary health care program. At the end of the project, 40% of the total population living in rural areas will be reached. In 1979, about 300 Village Health Worker teams were trained.

Niger has been able to provide an adequate drug supply network nationwide, a remarkable achievement and a necessary step in the provision of improved health care. Mali has recently reoriented its drug network in emulation of the Niger model.

In Mauritania, a new basic health project is underway in the Trarza region. Nomads recently settled in small villages as well as



*Beneficiaries of a program to increase access to basic health care. This dispensary is vital to the health of these rural women.*

the provincial hospital at Rosso will benefit from the program. AID contributes also to a multi-donor immunization program under the auspices of WHO. The program has so far been successful in providing a cold chain for vaccine. This is a difficult task in a zone with day-time temperatures reaching 112°F. In Senegal, a rural network of village health posts drawing on Peace Corps Volunteers has been created in the Sine Saloum region and will in the future be expanded to other areas. In Gambia, a U.S. assisted national immunization program has started, which gradually will expand over the whole territory. It provides measles, tetanus, BCG, polio, diphtheria and whooping cough vaccine to children under 3 and tetanus to pregnant women through health centers and mobile health teams. U.S. private voluntary personnel assist in central planning of the national primary health care program. Upper Volta has started its U.S. financed village water program with a projected output of 600 mechanically drilled and hand-dug wells. The Peace Corps provides technical assistance.

The WHO regional onchocerciasis program covering 2 Sahelian countries (Mali, Upper Volta) with its headquarters in Ouagadougou receives substantial U.S. assistance. A recent evaluation has shown that within 10 years the prevalence of river blindness has dropped from as high as 65% to 5% of the population in infested areas. Two successful U.S. programs in Chad, namely a well established Ministry of Health planning unit and a village water supply program had to be stopped due to an outbreak of civil war.

Family Planning projects assisted by AID are at present found only in Senegal and only in Dakar. However, Sahelian governments

are more and more sensitive to the fact that population growth (by some estimates an average of 3% per annum) out paces food production growth (2.45% on an average rate).

In Mali the Rural Health Services Development Project was evaluated in 1980 by a team of experts over a period of several months. The evaluators utilized standard questionnaires to assess the quality of the performance of village health workers in the Yelimane and Koro districts, and discovered a number of relationships between the literacy/numeracy levels of village health workers and their successful performance. This information will be useful in planning future programs, particularly with regard to selection criteria for village health workers. This project has demonstrated the need to develop strong support mechanisms for systematic drug supply, and supervision of village health workers.

A joint Senegalese/AID evaluation was made of the AID rural health effort in Senegal, the Sine Saloum Rural Health Care Project. The evaluation team recommended that AID field a strong, technical assistance team to administer the project' instead of seeking Senegalese management responsibility from the outset as village management committees were not functioning as hoped. An important cause of project difficulties, the evaluation team determined, was that villagers, the direct beneficiaries of the system, were not involved in basic decisions on staff recruitment, location of health facilities, salary payments and choice of medicines. Within two months of the evaluation, the project was redesigned to improve project administration and monitoring, to strengthen

training, and to re-inforce financial structures at local levels.

### Assessment

Provision of health care to rural people is a principal AID objective. The Agency intends to build upon its experience and to modify ongoing rural health and village health worker projects as appropriate. During the course of the year we have conducted a meticulous study of the experience and have prepared a very detailed and precise draft of guidelines which will be helpful in efficient design and implementation of on-going and future projects.

## 6. SDP PARTICIPATION IN AFRICA REGIONAL PROJECTS

The AID Sahel program participates in the following Africa-wide regional projects.

The regional Onchocerciasis Control Project in the Volta River Basin area seeks to control the vector fly which carries river blindness. Major reductions have already been achieved through sustained spraying operations. In addition to the obvious humanitarian benefits derived from Onchocerciasis control, significant amounts of new lands which were formerly avoided because of the endemic disease became available for cultivation. In Upper Volta, river blindness has been practically eliminated.

Upper Volta hosts the Regional Remote Sensing Project for Western Africa. This project trains African planners and resource managers to utilize LANDSAT and other satellite imagery to monitor a broad spectrum of agricultural, forestry, rangeland, ground water and other resources.

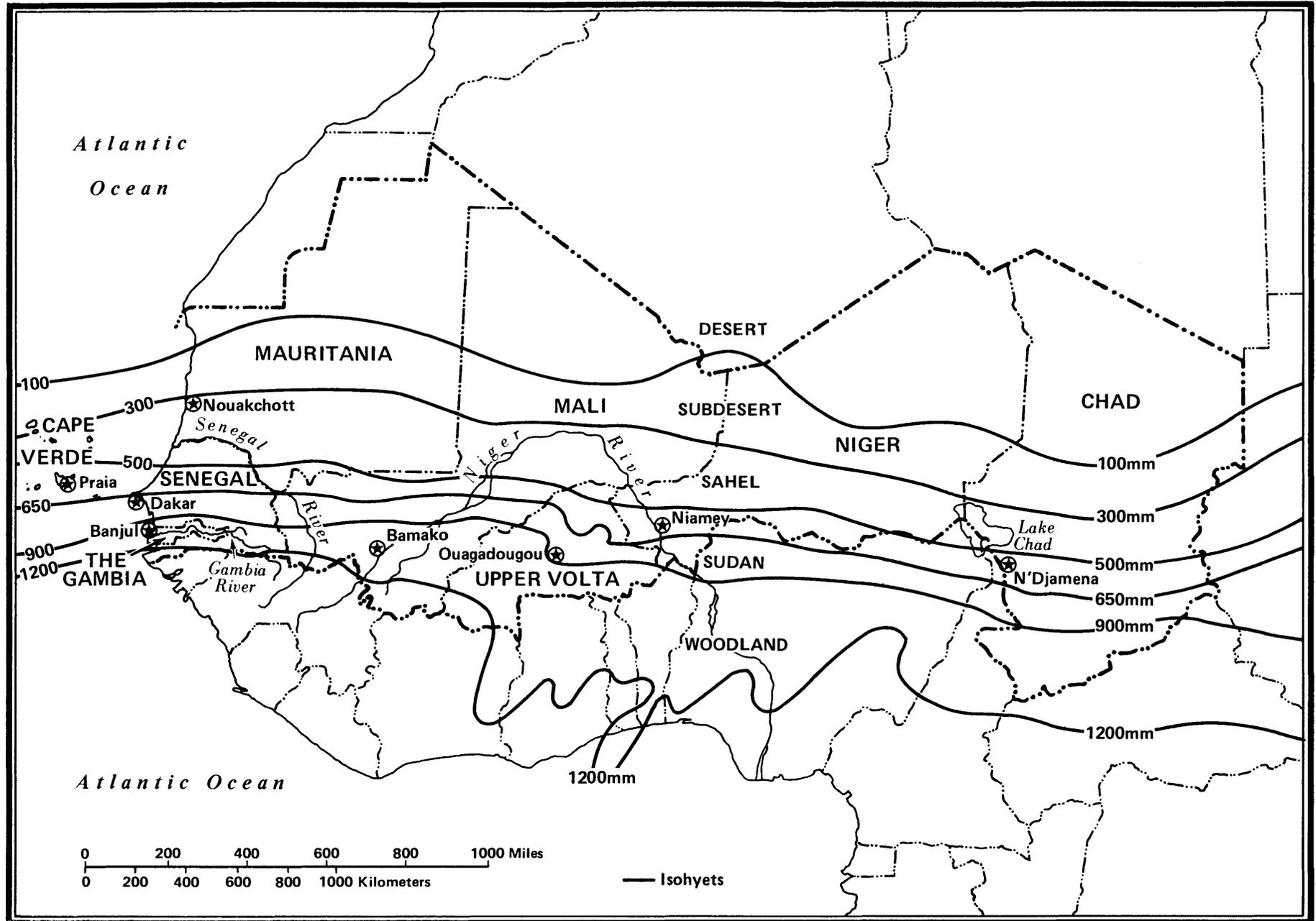
Several Sahel states participate in and benefit from the Regional Semi-Arid Food Grain Research Development Project (SAFGRAD).

This project is developing improved cereals and legume varieties and establishing cultural practices that are compatible with small semi-arid farming conditions. This project is strengthening the regional research station at Kamboinse, Upper Volta, and has an important participant training component.

Table 7

BASIC INDICATORS

Country	Population (millions)	Area (thousands of square Km)	GNP per capita dollars	Adult Literacy rate (%)	Life expectancy at birth (years)	Infant mortality rate/1000 live births
Cape Verde	.3	4	160	37	60.1	105
Chad	4.3	1,284	140	15	43.1	165
The Gambia	.6	10	230	10	41.0	214
Mali	6.6	1,240	120	10	42.1	190
Mauritania	1.6	1,031	270	17	42.1	169
Niger	5.2	1,267	220	8	42.1	162
Senegal	5.6	196	340	10	42.1	159
Upper Volta	6.8	274	160	5	42.1	182



**The Sahelian Countries**

D. COUNTRY NARRATIVES AND MAPS

1. CAPE VERDE

Cape Verde, a nation of ten small islands situated 600 kilometers west of the African mainland, is a geo-climatic extension of the West African Sahelian zone and for the last 13 years has been continuously affected by drought.

With 90% of its 300,000 people engaged in agriculture, drought-induced losses have severely affected rural areas, provoking ecological deterioration, and increasing the rate of urban migration. Per capita income is currently less than \$260.

There are no published national accounts for Cape Verde. However, a 1978 AID assessment of Cape Verde's agriculture sector estimated the 1976 GNP at \$64 million. Agriculture (including fisheries) is the most important economic sector, accounting for 56% of GNP. The assessment also indicated that agriculture's share of the GNP declined in 1978. Emergency drought expenditures including rural area public works increased by \$37 million in an attempt to offset falling employment.

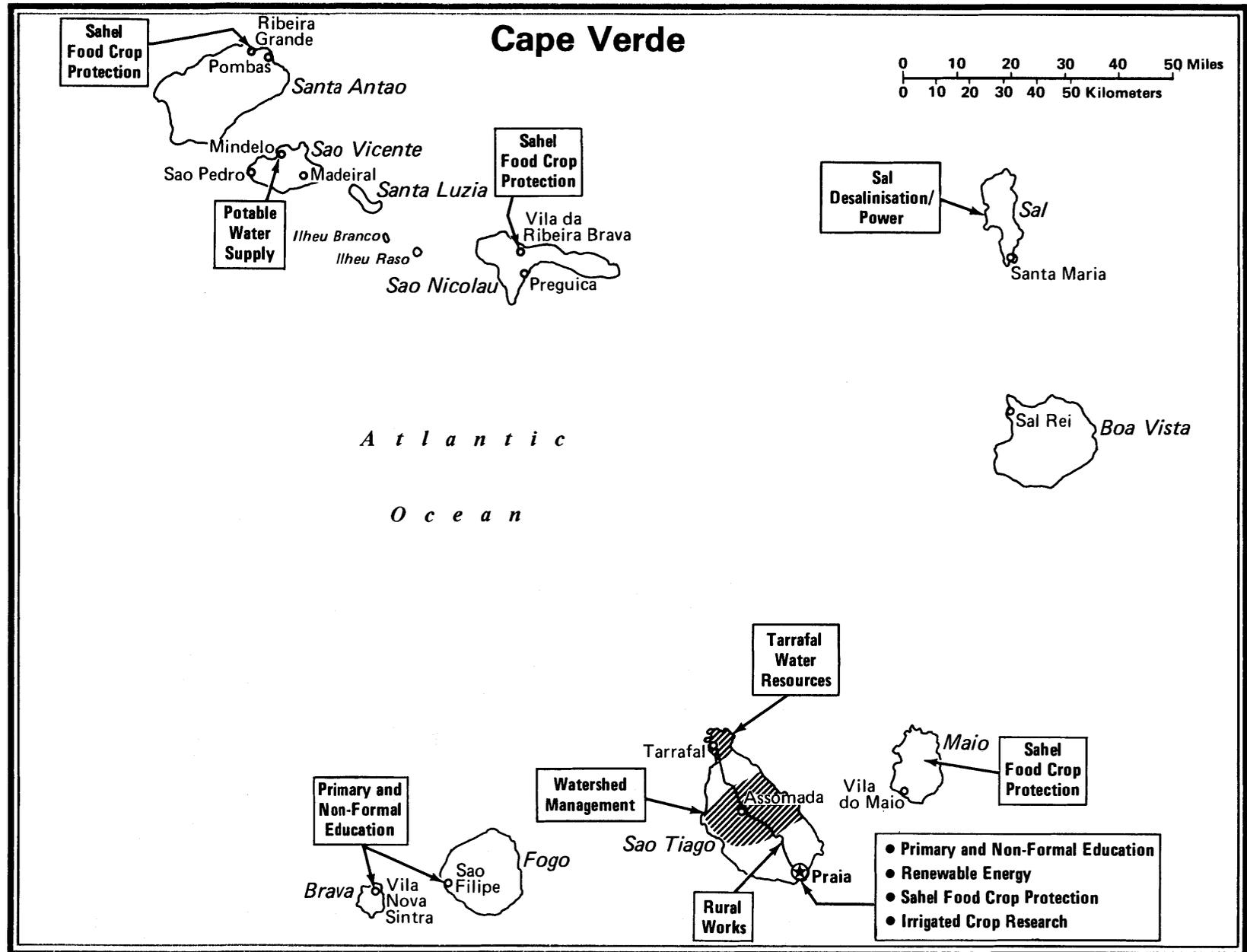
Economic development is limited by Cape Verde's sparse natural resources, inadequate infrastructure, poor transportation and drought prone climate. While the agricultural potential of Cape Verde is low, the Government of Cape Verde believes that it could be increased through improved soil and water conservation and irrigation schemes, which are being promoted by AID. In non-drought years 70% of the population's food needs have been met by domestic production.

Cape Verde's development is keyed to donor assistance. Bilateral donor nations are concentrating on individual agricultural

projects on different islands. In 1979 UNDP's assistance totalled approximately \$800 thousand in the fields of groundwater development, soil conservation, fisheries, crop protection and production, and development planning. The Federal Republic of Germany which concentrates its assistance on the islands of Fogo, Maio and Sao Tiago, supplied \$3.0 million in aid to Cape Verde in 1979. Dutch assistance is concentrated on Santo Antao and in 1977-79 amounted to \$24 million. French assistance, centered in Sao Nicolau Island, was more than \$7.5 million in 1979 and should remain at that level for the next several years.

AID assistance in Cape Verde started out as a relief-oriented feeding and employment generating program. In 1978 AID shifted its priorities to a longer-term development effort. The strategy is in tune with the objectives of the Club du Sahel and the Permanent Interstate Committee for Drought Control in the Sahel.

The objective of the strategy is to assist in providing the GOCV with the required capability to reduce its reliance on foreign aid for food donations. Thus, our strategy envisions continued and increased assistance to the agricultural sector to replicate successful AID-funded rural works projects involving soil conservation and water resource development, and augmentation of the amount of irrigated land so as to increase food production. The Rural Works Project is very labor intensive. More than 10,000 workers have cleared land, constructed check dams and terraces and planted trees in four valleys to protect against soil erosion and increase the acreage of arable land. With the addition of local water supply activities, rural extension and stronger planning, the Watershed



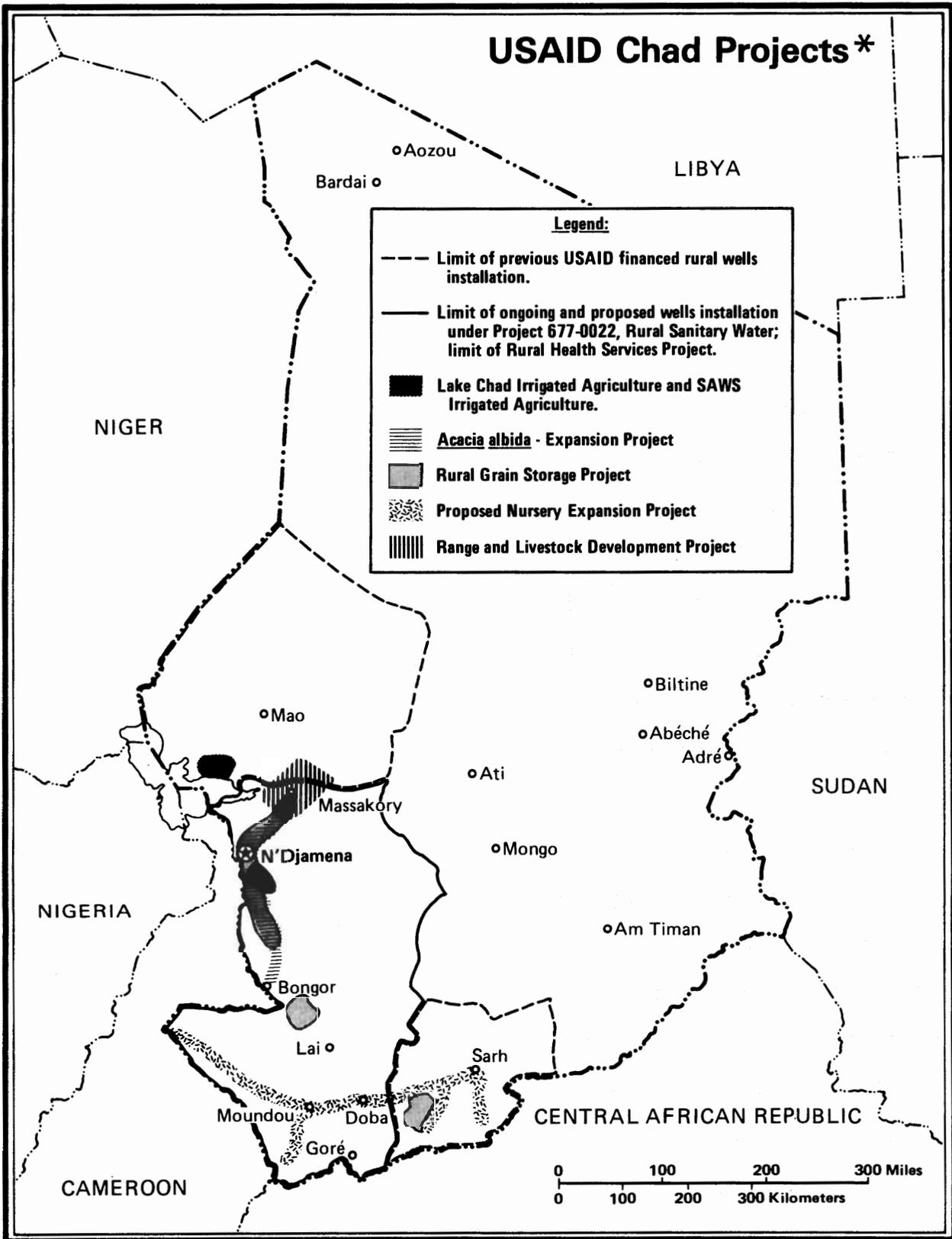
## 2. CHAD

In March 1980 all American personnel were evacuated from Chad due to the outbreak of civil war. There are now no active AID projects in Chad. Only the training of participants outside Chad and the supply of PL 480 food grains for feeding Chadian refugees in North Cameroon remain as active program elements.

In addition to war damage, Chad suffers from many of the negative factors inhibiting development in the poorer areas of the world: a severe lack of transportation and communication networks, a deteriorating resource base, an absence of effective national health and educational systems, an inadequate food production capacity and declining per capital income.

Immediately prior to the renewed hostilities in March 1980, AID had completed discussions on emergency post-war assistance with most Chadian Ministries and Directorates. These led to a series of requests for assistance addressing high priority needs. These requests were consolidated into a relief and rehabilitation grant for review as part of a multinational effort to revitalize Chadian institutions. The outbreak of war and evacuation of all foreign aid personnel suspended this effort.

At the present time, planning for the future assistance to Chadian development is uncertain. Until the newly formed Government has stabilized and can begin to re-evaluate its development program, long-range planning cannot be done.



\* Activities Suspended

### 3. THE GAMBIA

The structure of the Gambian economy has remained virtually unchanged in recent years. Agriculture and related activities (forestry, animal husbandry, and fishing) account for the major portion of the GDP; commerce and tourism provide the next largest amount, with government and other services ranked third. In recent years, efforts have been made to diversify the country's economic base. However, these efforts have been hampered by the paucity of natural resources, the small size of the domestic market, and the lack of adequate supplies of energy.

The Government's present five year development plan, 1975/76-1979/80, which has been extended for one year, has the dual objectives of reducing unemployment and of narrowing the disparity between urban and rural incomes. The first objective is being approached through gradually reorienting the educational system and through promoting small-scale enterprise in the urban sector. The second is to be attained through expanding and diversifying agricultural output, improving public health and education in rural areas, creating rural growth centers, expanding the road network and continuing adjustments in agricultural product pricing policies.

On a broader scale, the Government is thinking increasingly in terms of river basin development, as Gambian agricultural development ultimately depends on the ability to utilize a rather substantial supply of fresh water. However, the actual abstraction of the water is quite complicated, owing to the 100 mile intrusion of salt water. Without salinity control, Gambian potential for increasing agricultural production is limited. Yields in rainfed, dryland crops

will increase slowly at best over a long period with the introduction of improved production programs. The Gambia's dependency upon groundnuts as its major source of export earnings has caused it to suffer wide fluctuations in its economic profile over the years owing to agricultural production swings brought about by the irregularity of rainfall. For example, during the period 1960-1969, growth averaged 4.5 percent. Between 1969-1977, however, severe droughts dropped the average growth rate to a mere 1.5 percent. Since 1977 the country's financial situation has deteriorated even more sharply.

For the future, the medium term outlook is moderate and only slow economic growth (3-5 percent maximum) can be envisaged. The short-term prospects are not favorable, especially with the low groundnut production estimated for 1979/80.

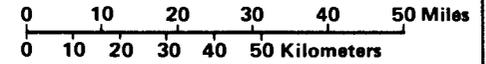
U.S. development interests in the Gambia are to help it improve the living standards of the rural poor, increase its capability to achieve food self-sufficiency and reduce its dependence on a single crop. Despite its fragile economy and the socio-political difficulties such fragility can effect, the Gambia has maintained an admirable record of democratic practices in the fifteen years of its independence from Great Britain. U.S. assistance in the country's economic development can serve to help and enhance these democratic traditions.

Central to the AID strategy over the next several years is the assumption that an anti-salinity dam will be built across the Gambia River in the mid 1980's. While participation of the U.S. in the actual construction of the proposed dam, as well as other

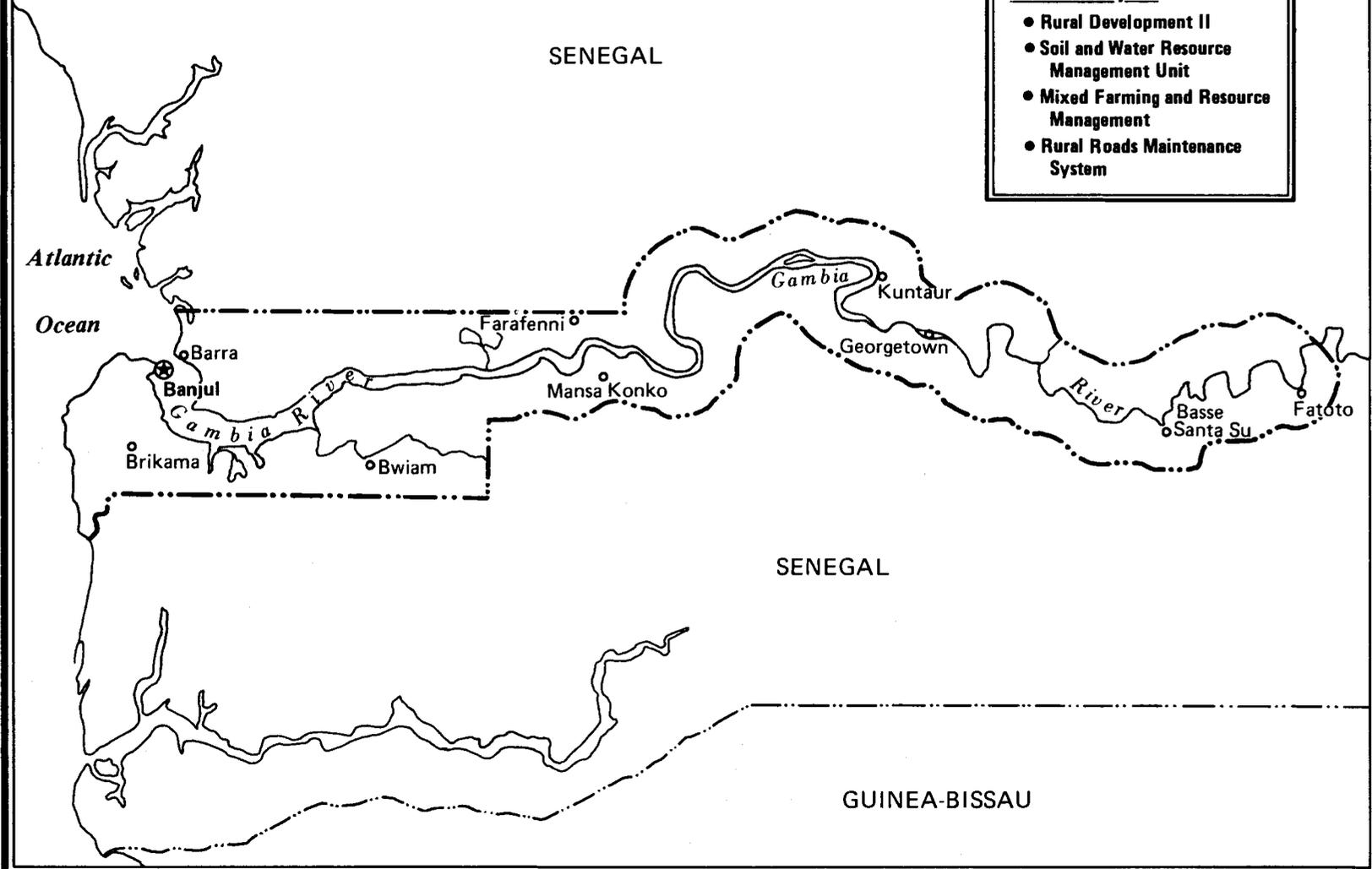
basin dams forecast for the future, has not been considered at this point, AID proposes to assist the basin countries (the Gambia, Senegal and Guinea) through a regionally funded project to analyze the environmental and socio-economic aspects of their river basin development plans and to assist in regional institution building. Plans are underway to develop a bilateral project in support of the program.

In view of the dam construction assumption, AID is concentrating its current bilateral efforts on improving the country's traditional rainfed agricultural practices, as well as strengthening the government's capability to better manage its resources. AID is also contributing towards improvements in the rural transportation sector and, in a new initiative, intends to assist the Government meet its basic human needs goals supporting a plan to bring primary health care to all rural areas.

# The Gambia



- Gambia Projects**
- Rural Development II
  - Soil and Water Resource Management Unit
  - Mixed Farming and Resource Management
  - Rural Roads Maintenance System

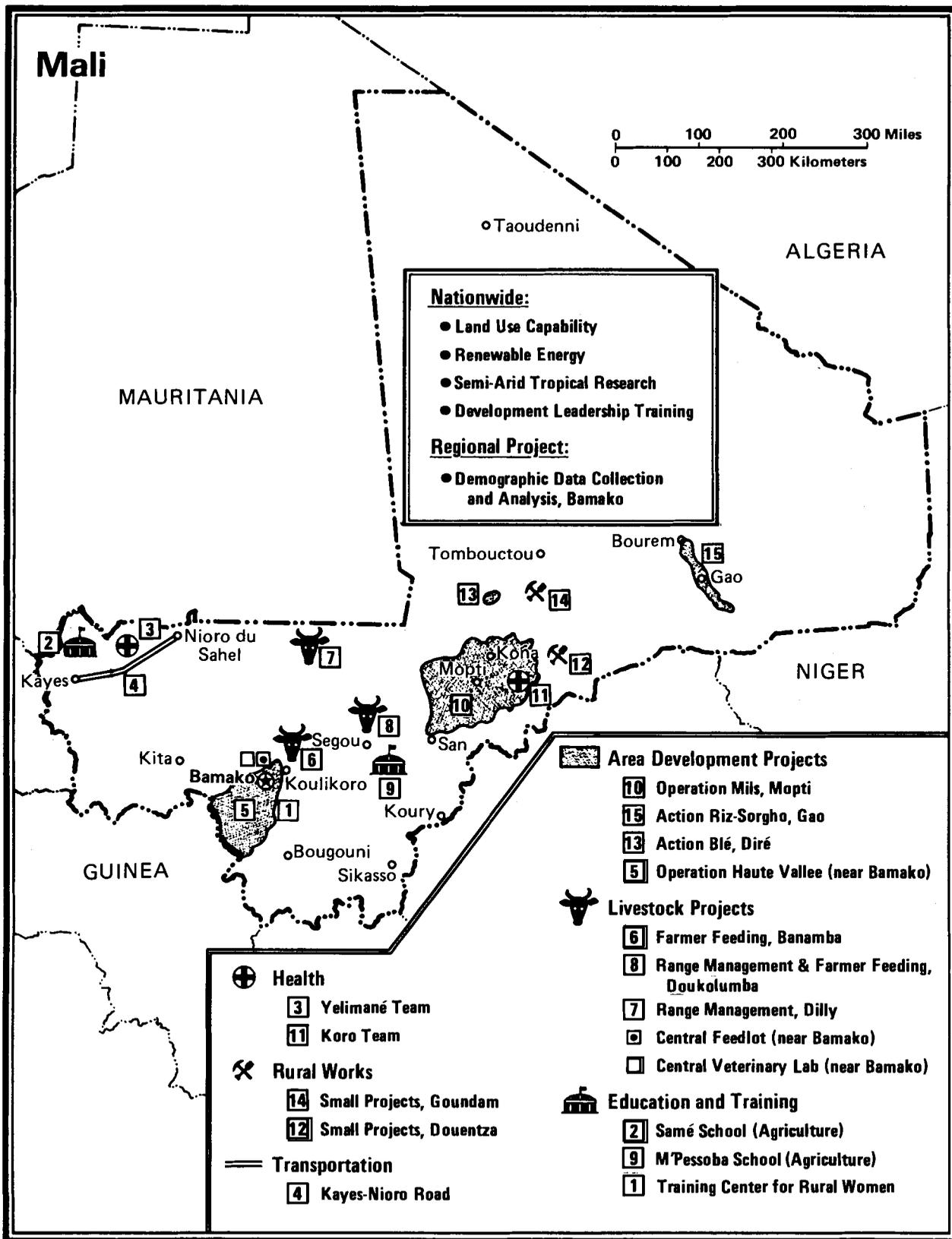


#### 4. MALI

The objective of the AID program is to enable Mali to achieve sustained self-sufficiency in food and improve the quality of rural life. In the agriculture sector, focus continues on four crop production projects. Productivity and income of 65,000 farm families is being increased by second phase assistance to the Operation Mils Project in developing an effective planning capacity in agricultural development, upgrading millet and sorghum research facilities, on-the-job training for extension agents, constructing storage facilities, forming village associations, villager training in blacksmithing and functional literacy and farm-to-market road improvement and maintenance. The Operation Haute Vallee Project is assisting 6,000 farm families by improvement of rural roads, an irrigation system, expansion credit and extension services for use of draft animals and fertilizer. The Action Riz-Sorgho Project has constructed 17 kilometers of permanent dikes with gates to control water for rice production on 2,500 hectares of land along the Niger River, and a research station is nearing completion to test rice and sorghum varieties and farming methods. The Action Ble Project has installed 150 pumps at another location on the Niger River from which 1980/81 production of wheat is expected to increase by 3,700 tons. Closely integrated with crop production, assistance in livestock production improves the livelihood of Mali's 500,000 herder families and one million sedentary families. Present activities include the development of controlled range management systems in the Sahel zone, establishment of an extension training school, completion of the Tienfals feedlots with 3,000-head capacity and a credit and cattle-fattening program for sedentary farmers, assistance for the Central

veterinary laboratory which has capacity to produce all needed animal vaccines, survey of the system for delivery of animal health services, and tse-tse-fly and trypanosomiasis research and training. These activities are being combined into a single livestock project to integrate better research, production and marketing operations.

To support government planning, research and extension operations, a land use inventory is being prepared; a series of technical farming approaches on sorghum, millet and other semi-arid zone crops are being adapted and tested; and facilities, equipment and technical assistance are financed for the Agriculture Apprentice Training Centers. AFRICARE has received a grant to establish a pilot station to breed fish, train extension staff and sell fingerlings to rice farmers. Other projects focus more directly on quality of life at the village level. The Renewable Energy Project is developing small-scale devices such as solar pumps, food dryers and more efficient wood burning stoves. Under Rural Health Services Development, 85 village health workers have been trained to provide consultation and sell basic medicines in 36 villages in remote areas of eastern and northwestern Mali. Expansion of the low cost health care system is under consideration. A grant to CARE provides for wells and training in hygiene and well and pump maintenance and repair in 30 villages in southern Mali. The human resources base is being developed through in-service training programs integrated into each project and advanced specialized U.S. training. A training center for rural women is being established in collaboration with the Malian National Women's Union.



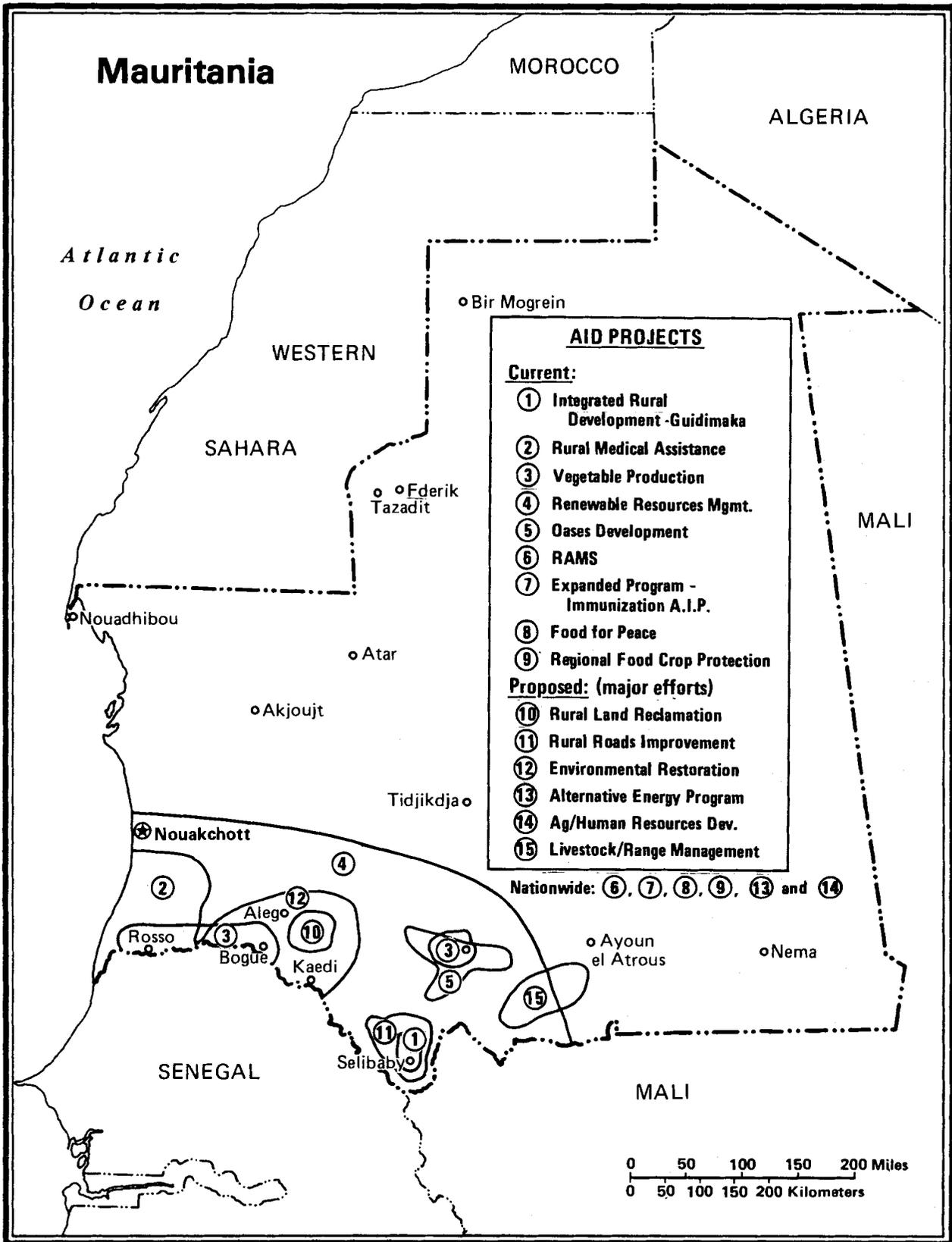
## 5. MAURITANIA

Mauritania is committed to an overall goal and strategy of food self-sufficiency and self-sustaining economic development. It places a clear priority on the development of its rural sector. Persistent drought conditions as well as the kind of constraints to development usually experienced by the world's poorest countries are the serious obstacles to rural development. Two thirds of Mauritania can be characterized as desert, limiting productive land for agricultural and livestock development to the southern part of the country. Already poorly endowed with natural resources (especially water), extensive environmental degradation represents the most serious problem. Furthermore, this process of environmental degradation appears to be accelerating in the interior of the southern part where a majority of the traditional population is living. Unless halted, environmental degradation could lead to abandonment of the interior, and to uncontrolled urbanization with all its consequences and the disappearance of most of the country's major economic resources. The impact of recurrent drought has been further aggravated by increased human and animal population pressures.

Along with the country's precarious ecological balance, complementary problems and constraints to Mauritania's development include: low agricultural/livestock productivity; increased unemployment in urban centers; poor communications; ineffective institutions for education and training; poor health and nutrition of the population; the lack of adequate rural infrastructure; the inadequacy of basic data as well as institutional capability for planning and managing a development effort; and serious constraints on financial resources for development.

Within the overall framework of the Club du Sahel/CILSS strategy and in direct response to the government's overall strategy and priority problems highlighted above, AID has developed a country strategy and implementation program to assist Mauritania in rehabilitating and strengthening the dryland farming areas. The strategy is two-pronged. It focuses on maintaining existing rainfed agricultural areas free from further deterioration and secondly, to restore some of the natural resources lost to environmental degradation.

Over the last decade, the strategy has also emphasized increasing food production through strengthened farmer incentives. This approach will be complemented by a PL 480 Title II Section 206 program of food assistance to strengthen the Mauritanian Cereals Office capacity to assure grain farmers of a reliable price for their production while at the same time meeting some of the immediate food needs of the population. Secondly, AID places emphasis on physical and human resources in the rural sector by establishing a collaborative arrangement between Title XII University and the National Agricultural Training School and Associated Research center at Kaedi; supporting the Government's preventative medicine program to expand immunizations and to improve village level delivery of basic health services; launching environmental programs such as an inventory of renewable resources, sand dune stabilization, reforestation, and an alternative energy program. Perhaps the most important part of AID's program is institution building, whereby AID is providing comprehensive planning assistance to the government in the preparation of its long-term development program.



## 6. NIGER

Niger is faced with several critical, but manageable, constraints on providing a full social and economic opportunity for its predominantly rural population. Traditional methods of exploiting Niger's marginal agricultural resources are inadequate to meet its increasing population pressure. Even if a better understanding of the optimum carrying capacity and maximum production methods of a studied modern agricultural technology were available, a low literacy rate and shortage of trained mid-level technicians, poor extension and marketing infrastructure, and an inability of the Government to support development of these structures, makes quick dissemination and adoption of global technical approaches unlikely. Finally, while 90 percent of Niger's population depends upon the agricultural sector for its livelihood, only about one-fourth of the country's total land area is suitable for agriculture or livestock production, and even the exploitable areas are of marginal and diminishing quality. In view of its limited emergency food reserves, deteriorating soil conditions, and 2.7 percent population growth rate, the ability of the country to continue to feed itself is challenged.

In response to this situation, and consonant with broader Club/CILSS objectives and strategies, the Government of Niger has identified food self-sufficiency as its primary goal in the 1979-83 five year plan. As evidence of its seriousness in achieving this goal, the Government has dedicated the major portion of its normal budget to this task. The Government has also diverted a majority of its increasingly important mining sector revenues into a National

Investment Fund (FNI) which finances the country's development investment program. Most of these funds have also been budgeted for agriculture and for the education and health sectors which provide essential support to the agriculture sector.

Niger's own financial resources for long-term development of its agricultural programs is insufficient. AID, therefore, has joined with other donors, including the UNDP/FAO, IBRD, France, the FED, Canada, Belgium and the Arab Development Institutions, in helping the Government to achieve its goals through geographically focused "productivity" projects which introduce proven technologies. Additionally, the U.S. and other donors are training Nigerien technicians in agronomy, seed multiplication, range management, forestry, animal husbandry and improved extension to insure that suitable technologies are adopted by Nigerien farmers. The AID program approach, on the national level, concentrates on the strengthening of institutional capacity in agriculture and rural development, and on the local level, on activities in rural development, improved farming techniques and health services. These local activities reinforce and test the implementation linkages between the national and local development efforts.

The AID program in Niger has reached a significant turning point. The projects initiated during Fiscal Years 1975-78 have attained their major objectives of expanding the information base and testing training, health, productivity and participatory modules, thus providing a solid foundation upon which future efforts are being designed.

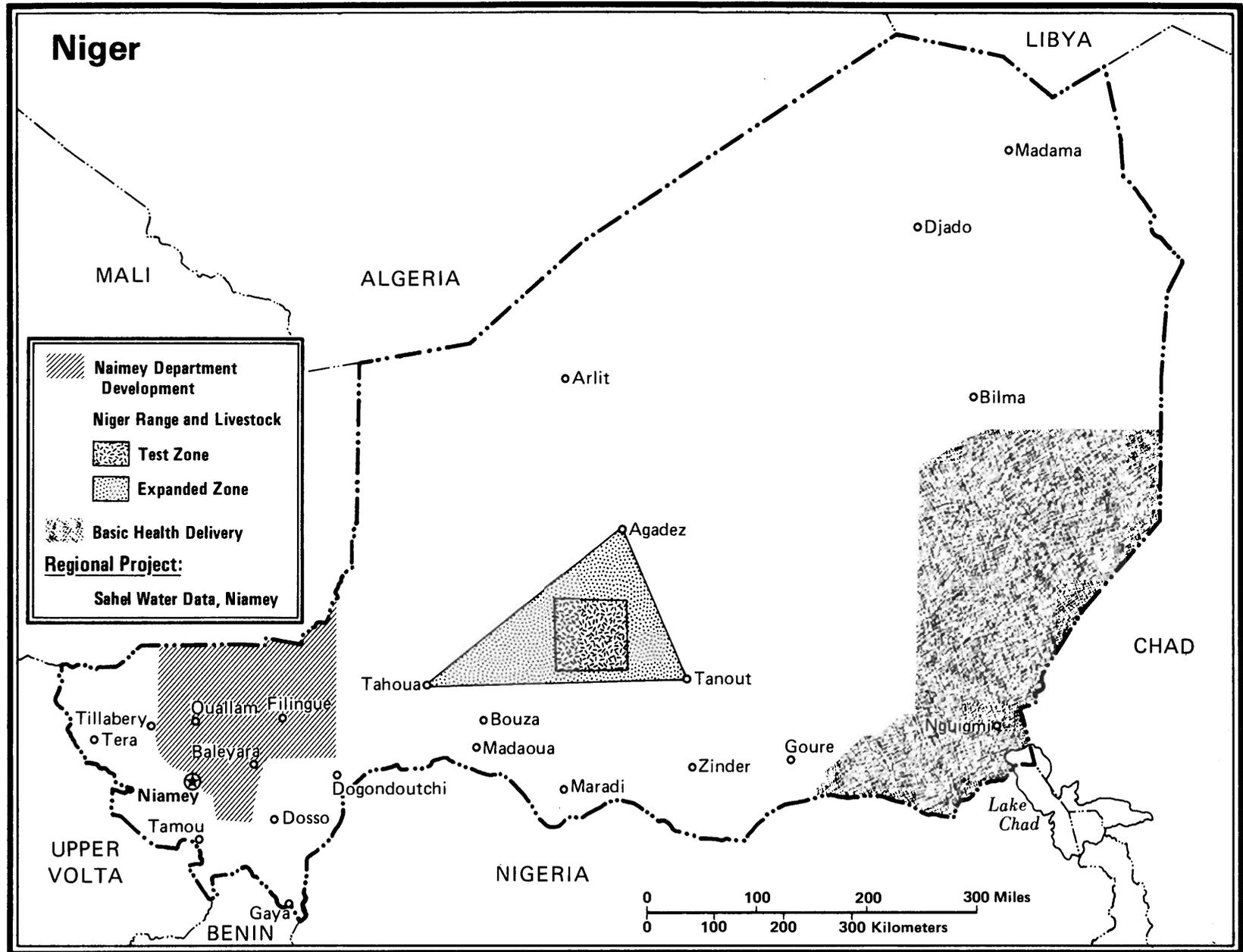
The Niger Cereals Project which terminates in early 1981 has provided Niger with the facilities and expertise needed to develop

improved seed varieties and distribute them to farmers. This project will be followed-up with two projects: (1) Niger Cereals Research and (2) Agricultural Production Support. The former provides the technical assistance and training required to satisfy Niger's plant research needs and the latter establishes reliable systems for delivering the farm inputs required to increase crop yields. These two follow-on projects provide support to the Niamey Department Development Project and six other donor regional productivity projects presently underway.

These seven productivity projects are extending improved farm techniques and agricultural inputs directly to the farmer. Phase I of the AID productivity project, Niamey Department Development, ends soon and Phase II will begin early in 1981. The first phase of this project accomplished 31 to 34 of its major objectives and laid a sound basis for the second phase which is designed to increase the productivity of farms by institutionalizing self-managed village organizations which will handle farm inputs and marketing. Additionally, our Niger Range and Livestock Project completes its first phase this year. The first phase consisted of research and module testing related to herd size, range and water management, herd nutrition and health, herder organization, etc. Phase II will introduce these results to a larger number of nomadic herders. These schemes for rationally utilizing their range to its maximum potential will increase both the quality and quantity of meat and animal by-products and improve the preservation of pastoral resources. The Forestry and Land Use Project and the Rural Health Improvement Project are linked to productivity programs through providing assistance to

Niger's soil conservation and tree planting programs. The health project is in its second year of training village health teams which will provide village level essential health services.

In sum, AID's Niger portfolio assists Niger to achieve self-sufficiency in food grains, improved range management and livestock production, improved management of natural resources, and improved health and well-being for the rural population. The tangible results achieved by the Government of Niger reflected substantial progress towards food self-sufficiency.

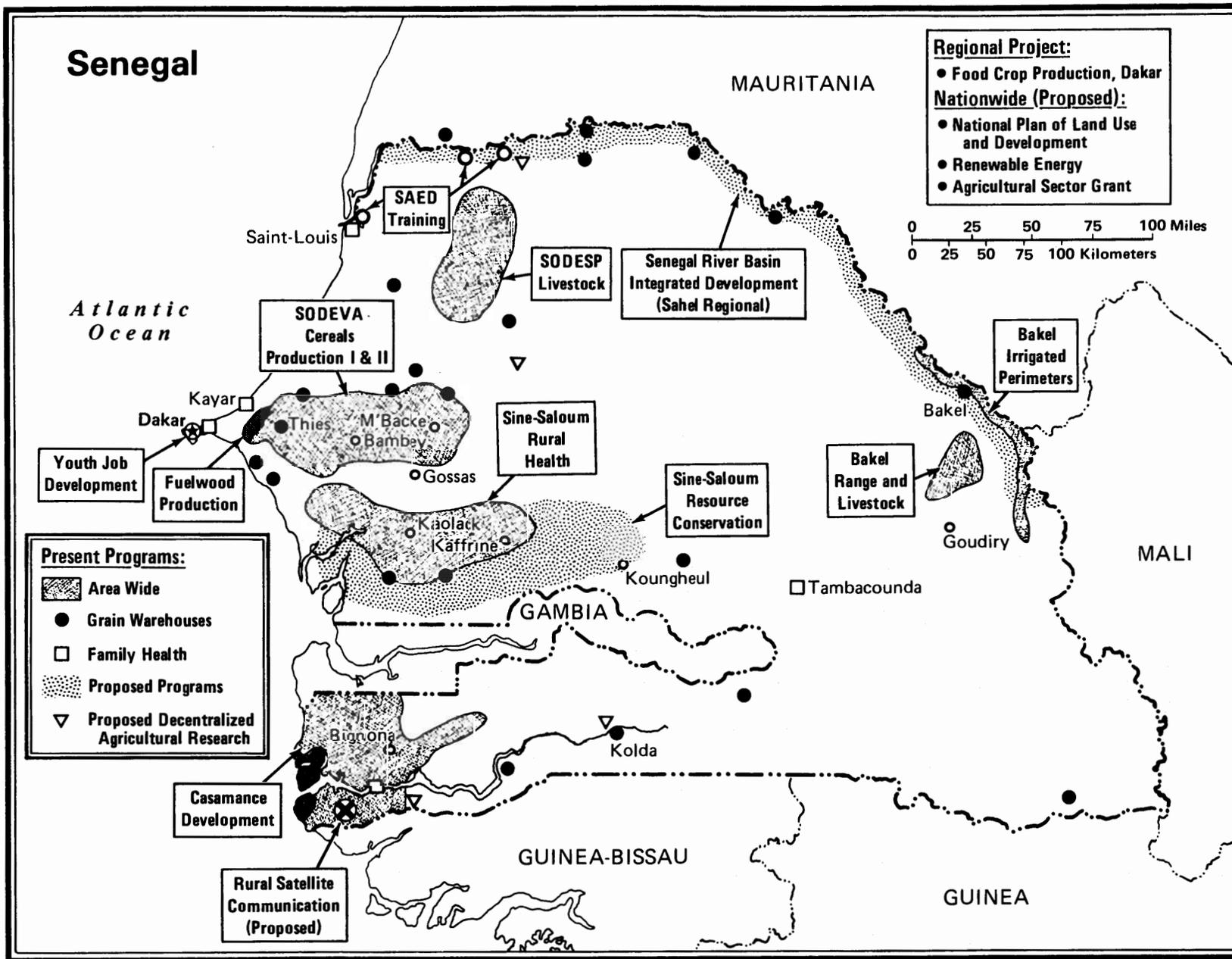


## 7. SENEGAL

Senegal, in common with the other countries of the Sahel, faced an accelerating economic crisis by mid-1980. Many factors have played a part, including the failure of rains in recent years and the steep petroleum price increases since 1979. But Senegal's economic decline has, in fact, been underway for two decades, with GDP per capita having fallen one-half percent per year since independence in 1960. Throughout this period, Senegal has been dangerously dependent for export earnings upon a single and vulnerable crop, peanuts. In addition, Senegal's major rural institutions for credit, marketing, and extension are badly in need of reform, as recognized by the Government of Senegal.

In the summer of 1980, with the support of the World Bank and France, the Government developed a national reform plan and took impressive steps to put the plan into effect. The plan charts the fundamental restructuring of much of the economy, notably the thorough reform of agricultural policies and institutions. The elaboration of this plan coincided with the Joint Assessment of AID programs in Senegal carried out by the two Governments throughout 1980. This assessment will conclude with agreement upon the major lines of the AID program in the five years to come.

The primary U.S. development interest in Senegal, as in the Sahel region generally, is the development of the country's capacity to feed its people, even in the face of recurrent drought. Under Sahelian conditions, this goal is directly linked with reforestation in an effort to prevent further deterioration of soils. Associated with this primary goal are improved rural health and nutrition standards.



Over the five years since the U.S. established a bilateral development program in Senegal, AID strategy has been to increase food production in a carefully balanced fashion.

On the one hand AID has promoted rain-fed millet and sorghum production in the central peanut basin. On the other, AID has supported initiatives to produce irrigated rice and corn in the Senegal River Basin to the north, and in the Casamance Basin to the South. Furthermore, AID has balanced these cereal production schemes with two activities in the north and east in livestock production and range management.

Meanwhile, to reinforce these food production programs, AID has invested in agricultural research, grain storage, crop protection, and in efforts to assist agriculture policy formulation in support of food production.

AID has complemented its agricultural programs with important village health and family planning initiatives. Most recently, to protect Senegal's land resource base, AID has supported the introduction of fuelwood production activities and fuelwood conservation techniques (small stoves, solar dryers).

## 8. UPPER VOLTA

Over 90% of Upper Volta's 6.5 million people are farmers who lead a subsistence lifestyle due to a broad set of natural and man-made problems. Rainfall in this land-locked country ranges from average in the south, to poor in the northermost parts. Soil quality is mediocre to poor. Low levels of education, a low literacy rate, and a poor transport system make for a grossly inadequate agriculture extension system and render such development necessities as a functioning supply and marketing system inefficient. Poor farming techniques and overgrazing pose a serious threat to the environment. Over-exploitation of the forests (for cooking or fuel) is also a major contributing factor to the barren landscape prevalent through much of Upper Volta. Finally, health conditions are poor. Very few people have access to potable water, and the available rural health care is negligible. Infant mortality and life expectancy statistics are appalling.

Upper Volta does not have a large base upon which to finance its development. The 1980 national budget of \$191 million was derived mostly from customs duties and related taxes - most expenditures are for personnel costs, leaving little margin for investment. Most of Upper Volta's development activities are financed by donors who, for the past few years, have transferred resources in excess of the Government's national budget.

The Government is committed to food self-sufficiency, reduction of underemployment, and access for all Voltaics to such basic human needs as health care, potable water and education. Achievement of these aims will require a long-term effort of both Voltaics and

donors alike, given the wide ranging set of constraints that development is faced with.

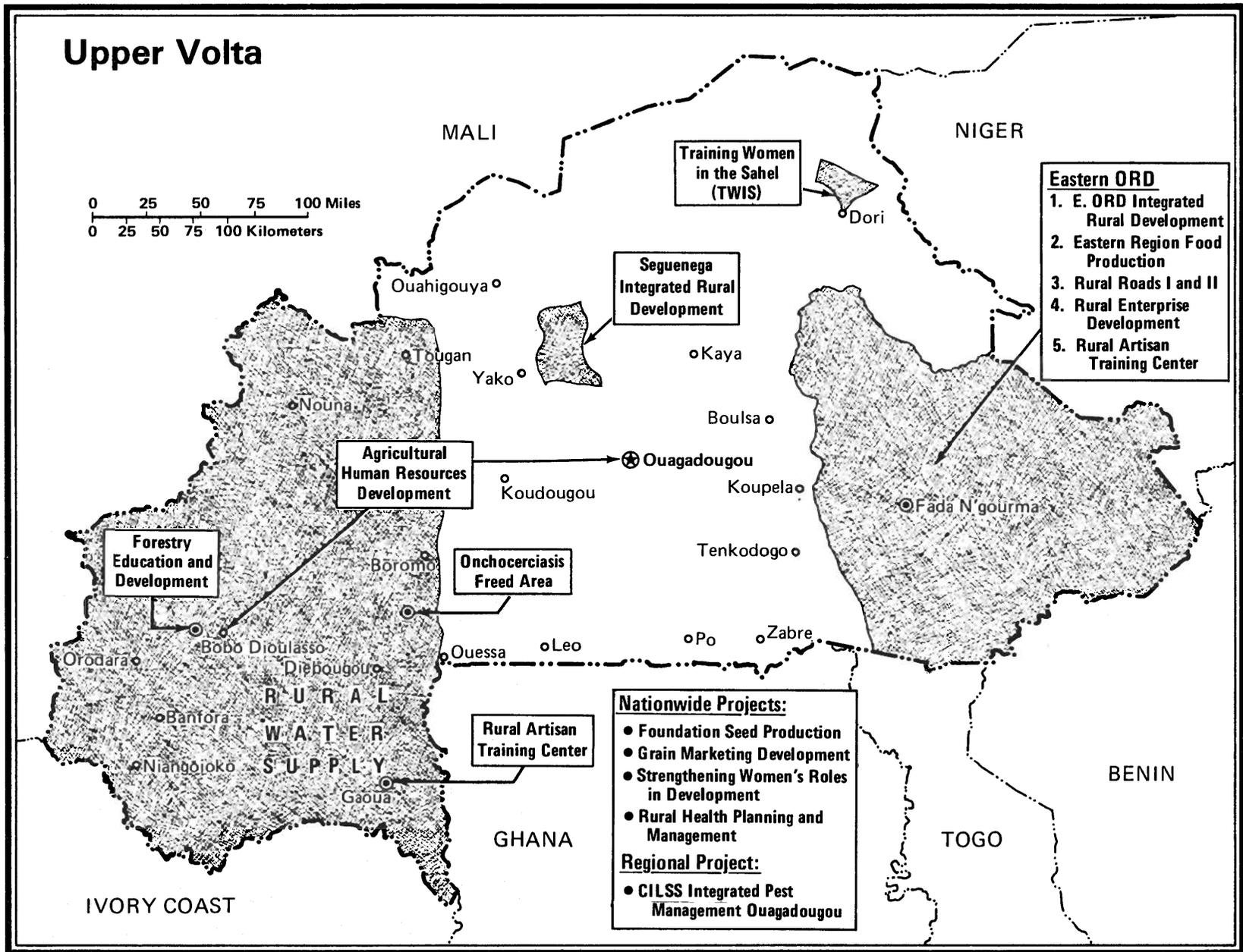
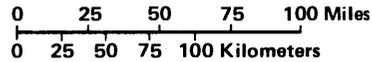
The current AID program is supportive of Voltaic development goals as well as CILSS strategies and objectives. Since its inception in 1973 with emergency food aid, it now encompasses four themes: food self-sufficiency, environment/ecology, population/health, and human resource development. The lion's share of the AID program in Upper Volta is in agriculture and rural development. Projects address nearly all stages of the food production system: research, seed multiplication, training, extension and demonstration, improved transport links and storage and marketing. Some projects have a countrywide impact, e.g., research carried out under regional aid projects, training of extension personnel, and marketing. Others, because of the large resources required and to avoid overlap with other donors, are more appropriate for geographic concentration. Good examples of these are integrated rural development and roads projects.

Activities in the area of environment/ecology, population/health, and human resources development are more modest than in agriculture, but are significant nevertheless. The major features of the health program is an ongoing program of provision of potable water in the southwestern area of the country. A large Food for Peace nutrition program provides supplemental foods and nutrition education to some 360,000 recipients. As the first part of a possible long-term commitment to the health sector, AID intends to assist the Ministry of Health with the establishment of a planning and management unit.

Conservation of wood, Upper Volta's main source of energy is important to Voltaic development. To help the government increase

its effectiveness in managing this scarce resource AID is undertaking the following: (a) assistance to the country's forestry school to increase its output of trained students, (b) management assistance for the largest forest in Upper Volta, and (c) several small pilot projects that are investigating alternative methods of woodlot development and management.

# Upper Volta



ANNEX AU.S. Contribution  
to the  
Sahel Development ProgramAGRICULTURE

-- Agricultural Production: These projects seek directly to increase agricultural production and improve the incomes of Sahelian farmers.

<u>Country</u>	<u>Project</u>	<u>Purpose</u>	<u>Obligation (\$000)</u>		
			<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u> <u>(Proposed)</u>
Cape Verde	Tarrafal Water Resources	Carry out a water exploration program on 600 hectares on Sao Tiago Island and establish an irrigation program.	100	-	-
Cape Verde	Watershed Management	Develop a national watershed management plan for controlling erosion and developing existing water resources, plus train extension agents in crop management, diversification and plant protection.	1,457	2,057	1,696
Chad	CARE Food Delivery	To provide food aid to the Chadian refugees in North Cameroon.	163	-	-
Gambia	Rural Development II	Contribute to food self-sufficiency through production of high-yield crops, development of appropriate technology and improvement of agricultural management.	-	400	3,480
Mali	Operation-Mils	To increase agricultural production and the well-being of families in the Fifth Region.	3,180	1,210	2,900
Mali	Semi-Arid Tropical Research (ICRISAT)	To develop improved varieties of millet and sorghum through genetic and agronomic research and to make these varieties, along with information on better farming practices, available to Malian small farmers. This project is being implemented through the International Crop Research Institute for the Semi-Arid Tropics (ICRISAT).	-	50	300

<u>Country</u>	<u>Project</u>	<u>Purpose</u>	<u>Obligation (\$000)</u>		
			<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u> <u>(Proposed)</u>
Mali	Action-Riz-Sorgho	To increase cereal production in the Seventh Region a chronically deficit area.	350	600	-
Mali	Action Ble	To help meet the chronic food deficit of Mali's northern Fifth and Sixth Regions and provide part of the wheat requirement of the southern regions through increased production of cereals.	300	500	670
Mali	Operation Haute Vallee	To increase productivity, production and marketing of food crops throughout the Haute Vallee.	3,150	3,000	3,230
Mauritania	Integrated Rural Development	Experimental program to increase food production in Tenth Region near Selibaby. Small-scale program affects some 10,000 small farmer and herder participants.	-	800	1,800
Mauritania	Vegetable Production	Promote vegetable production among small farmers and cooperatives in rural areas affecting 2,000 farmers in 1979.	-	500	-
Mauritania	Integrated Development of Oases	Develop, verify and demonstrate interventions to help oasis residents achieve greater self-sufficiency in agricultural production.	1,142	1,000	1,500
Mauritania	Agricultural and Human Resources Development	To strengthen the Mauritanian capacity to train rural development workers particularly in extension and research by strengthening the agricultural training school and research center in Kaedi and to develop within the Kaedi institutional framework a branch center in a dryland environment.			1,300
Niger	Niamey Department Development Phase I and II	Increase food production, establish credit cooperative services and literacy programs in 210 villages.	850	2,000	3,500

<u>Country</u>	<u>Project</u>	<u>Purpose</u>	<u>Obligation (\$000)</u>		
			<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u> <u>(Proposed)</u>
Senegal	Senegal Cereals Production: Phase II	Improve research and extension services to approximately 15,000 farms in Senegal's "peanut basin".	1,500	1,682	2,000
Senegal	Small Irrigated Perimeters	Introduce farmer-managed irrigated agriculture in the Bakel area on Senegal River affecting 31,000 people in 24 villages, plus test the feasibility of a solar pumping system.	925	1,000	434
Senegal	Casamance Regional	Increase food production through small irrigation schemes for over 3,000 farms families	3,000	2,000	2,066
Senegal	Agriculture Sector Grant	To help arrest and reverse Senegal's post independence decline in per capita food production and assist in laying the basis for overall economic recovery through development of agricultural production and income generation.			4,000
Upper Volta	Eastern ORD Integrated Rural Development	Increase agricultural and livestock production by improving Eastern Regional Development Organization delivery services to 10-15,000 families.	700	-	-
Upper Volta	Rural Enterprise	To design appropriate technology and credit packages	110	650	600

<u>Country</u>	<u>Project</u>	<u>Purpose</u>	<u>Obligation (\$000)</u>		
			<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u> <u>(Proposed)</u>
-- Institutional Development and Strategy Support: These projects improvements in the management of governmental technical services for agriculture, including research and marketing.					
Gambia	Soil and Water Resource Management Unit	Train soil and water management Specialists to help solve soil/water problems at national and village levels.	-	1,314	-
Mali	Land Use Capability	Assist the government perform an inventory of land and water resources, and develop a capacity to plan effective resource utilization.	400	1,130	-
Mauritania	Rural Land Reclamation	Help the government develop a policy for the management and conservation of water resources while building 15 rainwater retention dams to benefit 5,000 farmers, plus training farmers/herders in dam maintenance.	-	1,270	1,200
Mauritania	Rural Sector Assessment/ Manpower Survey	Assist in the development of an information base for identifying alternative rural development strategies, policy, options and projects.	1,600	1,100	-
Niger	Niger Cereals Research	Identify and test high yielding cereals production techniques which are adapted to land conditions.	-	1,300	1,790
Niger	Agricultural Sector Production Support	Improve the delivery of modern technology, agricultural equipment, and supplies to farmers.	-	2,450	3,500
Senegal	Rural Satellite Communication	To provide two-way communication facilities for rural development activities in Middle and Lower areas of the Casamance Region in support of agriculture, health, education, rural development and project administration and management.			550,000

<u>Country</u>	<u>Project</u>	<u>Purpose</u>	<u>Obligations (\$000)</u>		
			<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u> <u>(Proposed)</u>
Senegal	Agricultural Research & Planning	Improve agricultural policy planning and evaluation.	-	1,000	1,500
Senegal	National Plan, of Land Use & Development	To prepare a National Plan of Natural Resources based on remote sensing in order to plan and program use of the country's physical resources in more coherent, economic manner.	-	1,000	840
Upper Volta	Grain Marketing Development	Assist the National Cereals Office to provide the Voltaic farmer the opportunity to market food grains at reasonable and stable prices and help to stimulate food grain production for both internal needs and export.	900	1,481	-
Upper Volta	Foundation Seed Production	To improve supply of adapted, high quality food crop seeds.	-	910	-
Sahel Regional	Sahel Water Data Network and Management	Assist in meteorological and hydrological forecasting for water resources throughout the Sahelian states.	1,313	700	800
Sahel Regional	Regional Food Crop Production	Develop technically and environmentally sound plant protection practices to enable farmers to reduce food crop losses.	4,500	3,000	3,400
Sub-Total:			8,713	17,205	13,030

-- Pioneer Lands: These projects address the problems of opening up new, pioneer areas to agricultural development, including the settlement of population.

<u>Country</u>	<u>Project</u>	<u>Purpose</u>	<u>Obligations (\$000)</u>		
			<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u> <u>(Proposed)</u>
Upper Volta	Volta Valley Development	Plan, select and prepare lands for development to benefit 4,700 re-settled families plus conduct settlement operations with effective support for 400 families.	-	-	3,200
Upper Volta	Onchocerciasis-Freed Area Village Development Fund	Develop village capacity to organize, manage and invest in small enterprises through village development.	-	300	-
Sub-Total:			-	300	3,200

-- Water Basin Development: River and lake basins are vital assets to the Sahel and these projects address the need for their rational development, mindful of ecological and other constraints.

Sahel Regional	Gambia River Basin Development	Expand the planning and implementation capability of the Organization for the Development of the Gambia River Basin which will affect approximately the 1.5 million people in the Gambia River Basin.	200	1,500	5,150
Sahel Regional	OMVS Data and Institutional Development	Improve the capability of the OMVS to collect, analyze and use data needed to plan and create development programs.	2,993	1,900	1,200

<u>Country</u>	<u>Project</u>	<u>Purpose</u>	<u>Obligations (\$000)</u>		
			<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u> <u>(Proposed)</u>
Sahel Regional	OMVS Agronomic Research II	Assist OMVS in crop development and adaptive agricultural research.	-	1,100	1,800
Sahel Regional	LCBC Livestock and Mixed Agriculture	Promote efficient practices to restore the agricultural resource base and increase livestock and crop production.	500	-	-
Sahel Regional	OMVS Environmental Assessment	To perform an environmental assessment on the Senegal River Basin and to involve the riparian states in the analysis of the ecological implications of major projects.	282	-	-
Sahel Regional	OMVS Integrated Development	To increase Senegal River Basin agricultural production through an integrated develop- ment of the agricultural sector.	-	2,000	7,500
Sub-Total:			3,975	6,500	15,650

### LIVESTOCK

-- Livestock production projects emphasize the needs of the herding population and seek to improve livestock production without threatening the ecological balance of the Sahel.

Gambia	Mixed Farming and Resource Management	Foster the intensification and integration of crop and livestock enterprises within Gambian farming systems.	2,530	2,657	720
Mali	Livestock Sector I & II	Increase the welfare of Mali's small herders and farmers by improving the country's livestock industry through a comprehensive production and marketing sector program.	3,780	3,350	5,000
Mauritania	Livestock/Range Management	To design a livestock management extension program and range management resource utilization plan to raise the standard of living of herders in south- western Mauritania through increased animal produc- tion while stabilizing the stock rate to product range and water resources; to develop the GIRM's institutional capacity to carry out livestock programs.	-	-	800,000

<u>Country</u>	<u>Project</u>	<u>Purpose</u>	<u>Obligation (\$000)</u>		
			<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u> <u>(Proposed)</u>
Niger	Range and Livestock Management	Prepare a comprehensive range management plan and livestock extension program plus develop institutions (e.g., herder associations, training centers) to carry out these interventions.	2,299	-	-
Senegal	SODESP Live-stock Production	Provide controlled, rotational, year-round grazing, strategic location and management of watering points, and animal health services for some 400 Peul herder families.	1,500	2,000	2,000
Sub-Total:			10,109	8,007	8,520

#### FISHERIES

U.S. support to this sector is currently limited to improving the quality and numbers of well-trained technicians to help improve the production of continental fishing in the Sahel.

Sahel Regional	Sahel Regional Training for Inland Fisheries	Establish a regional school at Mopti, Mali to train technicians for planning and implementing fish production programs.	-	400	-
Sub-Total			-	400	-

#### ECOLOGY AND REFORESTATION

Mauritania	Renewable Resources Management	Survey renewable resources and implement demonstration projects in sand dune stabilization, reforestation and reserve pasturage as the basis for an integrated program of renewable resources management and conservation.	1,100	1,278	-
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<u>Country</u>	<u>Project</u>	<u>Purpose</u>	<u>Obligations (\$000)</u>		
			<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u> <u>(Proposed)</u>
Mauritania	Environmental Reforestation	Assist GIRM in reforestation of 25,000 hectares of land and in the application of village woodlots production techniques to offset gradual depletion of firewood.	-	1,000	1,000
Niger	Forestry and Land Use	Help prepare a comprehensive 20-year plan to rehabilitate and protect the country's soils, water and natural vegetation.	408	576	829
Senegal	Fuelwood Production, Phase I	Provide forest plantations for vegetative cover and to insure sustained firewood production.	700	730	-
Upper Volta	Forestry, Education and Development	Improve and expand a training center for forestry agents, plus develop a management plan for the national forest.	1,800	1,500	1,958
Sub-Total:			4,708	5,084	3,787

### ENERGY

These projects address development issues of renewable energy.

Cape Verde	Renewable Energy (AIP)	Assist the Government of Cape Verde in identifying and developing renewable energy sources as alternatives to firewood and imported fossil fuels.	-	500	-
Mali	Renewable Energy	Assist the government to demonstrate the feasibility of small-scale renewable energy technologies.	-	300	600

<u>Country</u>	<u>Project</u>	<u>Purpose</u>	<u>Obligations (\$000)</u>		
			<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u> <u>(Proposed)</u>
Mauritania	Alternative Energy	Identify and demonstrate more efficient means of energy utilization.	-	300	600
Senegal	Renewable Energy Phase II	To increase availability of fuelwood by: improved charcoal production; increased wood production in village woodlots; expand use of improved wood-burning stoves. In addition, this project will improve fish drying by use of simple solar dryers.	-	500	1,940
Sub-Total:			-	2,000	3,340

#### HUMAN RESOURCES

-- Training: People are the basic asset of the Sahel, and these projects address the development of human resources, within traditional and modern social contexts.

Cape Verde	Primary and Non-Formal Education	Provide school facilities to 60 remote communities and upgrade the professional skills of 200 teachers and 15 school administrators.	1,543	-	-
Cape Verde	Rural Works	Relieve unemployment through a program of rehabilitation of rural infrastructure using labor intensive means.	-	530	-
Chad	Food Delivery and Rural Works	Improve the quality of village life in Chad through a number of rural small-scale infrastructure projects.	163	-	-

<u>Country</u>	<u>Project</u>	<u>Purpose</u>	<u>Obligation (\$000)</u>		
			<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u> <u>(Proposed)</u>
Mali	Training Center for African Women	Train women as trainers of village women in basic skills to improve their nutrition, health, and quality of life.	500	-	-
Sahel Regional	Sahel Manpower Development Project	Pre-project and post-project academic and non-academic training in the U.S. and third countries. Includes short courses in the host country, regional training courses in Africa and special short courses in the U.S.	2,309	3,000	2,500
Mali	Development Leadership Training	To improve the management of major institutions of Mali's Government and economic system by providing relevant advanced U.S. training to a significant number of Malians in management and other fields related to public policy.	-	350	1,000
Mali	Agricultural Officers Training	Improve and expand the training of agricultural agents.	920	1,100	-
Niger	Literacy Support	To assist the GON develop its core of literacy, service personnel and to expand and improve the critical post-literacy program.	-	800	700
Senegal	Youth Job Development	Provide vocational training and follow-up job placement for unemployed youth.	500	858	-
Sub-Total:			5,935	6,638	4,200

<u>Country</u>	<u>Project</u>	<u>Purpose</u>	<u>Obligation (\$000)</u>		
			<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u> <u>(Proposed)</u>
-- Institution Building and Sector Support: These projects help strengthen Sahelian institutions that train people for development					
Niger	Rural Sector Human Resources Development	Enlarge the supply of trained manpower in Niger through institution building plus organize a cooperative training center, a manpower planning system, a project management center and support the adult literacy program.	995	860	631
Senegal	SAED Training	Develop within SAED, a training and management capability for vehicles and heavy equipment.	1,000	730	750
Upper Volta	Agricultural Human Resources	Improve the planning, administration of rural development projects through the creation and expansion of training centers for extension agents and for secondary and university level trained agricultural personnel.	2,000	1,000	1,512
Sub-Total:			3,995	2,590	2,893

### HEALTH

-- Rural Health Services: Health, a basic human need, is addressed by those projects which seem to improve the delivery of basic health care services to rural areas.

Mali	Rural Health Services Development	Implement a community based rural health system for 350,000 villagers at an estimated cost of \$11 per person; the basis for a national rural health service.	-	650	650
Upper Volta	Rural Health Planning and Management	To establish a planning unit in the Ministries of Health for the systematic analysis of health needs and resources and the development of health strategies and programs.	-	-	1,000

<u>Country</u>	<u>Project</u>	<u>Purpose</u>	<u>Obligation (\$000)</u>		
			<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u> <u>(Proposed)</u>
Mauritania	Immunization	Expand preventive health care in the rural sector.	400	-	-
Niger	Rural Health Improvement	Expand a viable rural health delivery system to reach 40% of the population and improved referral services for another 10%. The per-family cost is \$33 over life of project.	1,573	2,000	2,000
Niger	Basic Health Services	Build upon the traditional health care system and expand local participation in program of preventive medicine and curative care in the Diffa Department.	704	-	-
Senegal	Rural Health Services, Phase II	To create within the Region of Thies a network of staffed village health facilities supported by local communities and backstopped by Govt. supported health posts.	-	-	1,500
Sub-Total			3,677	2,650	5,150
-- Rural Water Supply: Clean, potable water in adequate amounts is a prerequisite for human health and productivity.					
Upper Volta	Rural Water Supply	Provide villages in south-western Upper Volta with potable water supply systems which will meet minimal daily needs.	2,500	1,825	4,455
Sub-Total:			2,500	1,825	4,455

<u>Country</u>	<u>Project</u>	<u>Purpose</u>	<u>Obligation (\$000)</u>		
			<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u> (Proposed)
-- Population: These projects address the concern for reducing the gap between rapid population growth and much slower economic growth and development.					
Senegal	Family Health Phase I and II	Establish medically-sound and culturally acceptable child-spacing services within Senegal's health care system.	500	500	970
Sahel Regional	Demographic Data Collection and Analysis	Build a Sahelian capacity for demographic data collections, analysis and use.	1,000	400	800
Sub-Total:			1,500	900	1,770

-- Family planning components are also included in the following Rural Health Projects:

Mali - Rural Health Services Development  
Mauritania - Rural Health Medical Assistance  
Niger - Rural Health Improvement  
Senegal - Rural Health Services

TRANSPORT

-- Rehabilitation and Maintenance: The rehabilitation and maintenance of the sparse Sahelian road system is a key to increased food production, better distribution of foods and services, and to the effective use of developmental resources.

Gambia	Rural Roads Maintenance Systems	Improve primary and secondary road maintenance through support for equipment, maintenance and management systems of the Public Works Department.	1,300	1,444	400
Mauritania	Rural Roads Development	Provide access to markets by improving existing tracks and trails which in turn will improve reliable access to major all-weather roads.	-	350	1,200

<u>Country</u>	<u>Project</u>	<u>Purpose</u>	<u>Obligations (\$000)</u>		
			<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u> <u>(Proposed)</u>
Upper Volta	Eastern ORD Rural Roads	Increase the capability of a road brigade to construct and maintain rural roads.	200	-	-
Upper Volta	Rural Roads II	Provide farmer access to markets and other social-administrative services.	-	2,100	1,425
Sub-Total:			1,500	3,894	3,025
<p>-- Road Construction: The construction of major roads is essential for the long-term development of the Sahelian region.</p>					
Mali	Kayes-Nioro Road	Construct road from Kayes to Nioro du Sahel in order to facilitate rural development in Mali's First Region.	2,400	-	-
Sub-Total:			2,400	.	-
Grand Total			66,939	79,798	103,096

Universities and Private Voluntary Organizations Associated with the Sahel Development Program through AID

A. Universities, Colleges and University Consortia

Mali : Texas A&M - Tse Tse Fly and Trypanosomiasis  
Research and Training

Harvard Institute for International Development  
Rural Health Services Development

Niger : Consortium for International Development  
Niger Cereals Project

Upper Volta : South-East Consortium for International  
Development (SECID)  
Agricultural Education  
  
Consortium for International Development (CID)  
Socio-economic Research and Livestock Development

Purdue University  
Farm Systems Research

Michigan State University  
Rural Development Planning and Research

University of Michigan  
Grain Disposal Research

Syracuse University  
Tax Administration (pending)

Mississippi State University  
Seed Production Technology (WAE)

Mauritania : South Dakota State University  
Renewable Resources Management

B. Private Voluntary Organizations

Mali : AFRICARE  
San Pilot Fish Production

CARE  
Rural Water Improvement

Niger : AFRICARE  
a) Basic Health Care Delivery  
b) Community Organization for Irrigated  
Perimeters  
Catholic Relief Services  
Agronomic Research and Extension

Upper Volta : Partners for Productivity  
Rural Enterprise Development  
AFRICARE  
Integrated Rural Development  
Save the Children Federation  
Integrated Rural Development  
Catholic Relief Services  
a) Food Distribution  
b) School Gardens and Water Development

Senegal : YMCA  
Urban Vocational Training  
  
Caritas  
Community Development  
  
AFRICARE/Peace Corps  
a) Reforestation  
b) Village Woodlots Development  
  
Catholic Relief Services  
a) Cooperative Farming  
b) Fisheries Cooperatives

Mauritania : Catholic Relief Services  
Food for Peace Distribution

The Gambia : Opportunities Industrialization Centers  
International Agricultural Training  
  
Booker T. Washington Foundation  
Socio-economic Market Study  
  
Cooperative League of U.S.A.  
Cooperative Management and Training

ANNEX C

PL 480 FOOD AID COUNTRY SUMMARIES

	<u>FY 1979</u>	<u>FY 1980</u>
	(\$ 000)	(\$ 000)
Cape Verde		
Title II	2,852	1,904
Chad		
Title II	2,827	0
Gambia		
Title II	691	1,212
Mauritania		
Title II	925	4,801
Senegal		
Title III		7,000
Title II	5,487	6,469
Upper Volta		
Title II	7,883	10,089
	<hr/>	<hr/>
TOTALS	20,665	31,475

Country levels reflect bilateral programs only. PL 480 contributions through World Food Programs are not reflected.

## ANNEX D

AID Pipeline of Project-Type Assistance by Fiscal Year to the SahelAs of 9-30-80 (in \$ thousands)

Table A

	Amount and Percent of Total Pipeline Composition by Fiscal Year <sup>1/</sup>						
	FY 75	FY 76	FY 77	FY 78	FY 79	FY 80	Total 9-30-80
Amount	1,590	2,670	7,521	25,822	55,627	73,374	166,604
Percent	1.0	2.2	4.4	15.2	33.2	44.0	100

Table B

AID Pipeline of Project-Type Assistance by Fiscal Year to the SahelAs of 9-30-79 (in \$ thousands)

	FY 75	FY 76	FY 77	FY 78	FY 79	FY 80	Total 9-30-79
Amount	4,990	5,539	18,720	53,572	77,349	-	160,170
Percent	3.0	4.0	8.5	33.5	48.3	-	100

A comparison of Tables A and B above shows that a substantial improvement has been made in Fiscal Year 1980 in the rate of liquidation of unexpended funds in the AID Sahel pipeline. Please note that only active projects are reflected in the amounts shown. The Fiscal Years 1975 and 1976 obligations are nearly completely liquidated and Fiscal Years 1977 and 1978 funds have been reduced by over 50 percent. "New Money" was utilized at a faster rate (9.1 percent) over last year. These results reflect fuller field staffing and increased emphasis on project implementation.

<sup>1/</sup> Based on data available in December, 1980.

ANNEX EGLOSSARY OF ACRONYMS

ADB	African Development Bank
ADF	African Development Fund
AFESD	Arab Fund for Economic and Social Development
AFRICARE	A U.S. Private Voluntary Organization
AGRHYMET	Institute for Agriculture, Hydrology and Meteorology
AID	Agency for International Development
BCG	Bacellus Calmette-Guerin, an Anti-Tubercular Vaccine
CARE	A U.S. Private Voluntary Organization
CEAO	French acronym for the West African Economic Community Comprised of Six Nations
CILSS	French acronym for the Permanent Inter-State Committee for Drought Control
Club	Club du Sahel
COE	U.S. Corps of Engineers
DNAFLA	French acronym for the Functional Literacy Department of the Malian Ministry of Education
ECOWAS	Economic Community of West African States Comprised of Sixteen Nations
EDF	European Development Fund
ENEA	French acronym for the National School of Applied Economics in Senegal
FAC	French acronym for France's Assistance and Cooperation Fund
FAO	Food and Agriculture Organization of the UN
FED	French acronym for the European Development Fund
FNI	French acronym for the Malian Government National Investment Fund
IBRD	International Bank for Reconstruction and Development of the World Bank Group

IDA	International Development Agency of the World Bank Group
IPDR	French acronym for Practical Institute for Rural Development
LCBC	Lake Chad Basin Commission
NBA	Niger Basin Authority
OECD	Organization for Economic Co-operation and Development
OMVG	French acronym for The Gambia River Development Organization
OMVS	French acronym for the Senegal River Basin Development Organization
SAED	French acronym for Regional Development Agency for Senegal River Valley
SAFGRAD	Semi-Arid Food Grain Research Development Project
SDPT	Sahel Development Planning Team
SMDC	Sahel Missions Director's Council
SODESP	French acronym for the Office for Livestock Development in the Sylvo-Pastoral Zone of Northern Senegal
SODEVA	French acronym for the Regional Agency for Extension Services and Development in Peanut Basin of Senegal
UNDP	United Nations Development Program
UNSO	United Nations Sudano-Sahelian Office
WHO	World Health Organization of the UN