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NIGER

EDUCATION SECTOR ASSESSMENT REPORT

Presented to:

Africa Bureau/Human Resources

Science and Technology

USAID/Niamey

Work Order No. 11, IQC #PDC-1406-I-11-1062-00

Improving Efficiency of Education Systems

(Project No. 625-0929)

by THE PRAGMA CORPORATION

April 6, 1984

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PREFACE

The Niger Education Sector Assessment team met in Washington, D.C. from June 5 to 7, 1983, for briefing by representatives from Africa Bureau and Science and Technology. The team began its work in Niger on June 9 and completed it on July 22. Findings and recommendations were summarized by the team in a briefing with the USAID and Embassy staff in Niamey before departure.

The team was under the joint coordination of Victor Barnes of Africa Bureau and Galen Hull of The Pragma Corporation.

The team was ably assisted by Elizabeth Thompson as administrative assistant. The USAID/Niamey staff was most cordial in providing logistical support. Special thanks go to Mr. George Corinaldi, HRD Officer, and his assistant, Mr. Soumana Adamou. Our appreciation goes also to all those in the Government of Niger who helped make our mission possible.

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1.0 Executive Summary

1.1 Introduction

The Education and Human Resources Sector Assessment is an overview of Niger's existing system of human resources development, broadly defined to include programs, policies and structures in formal and nonformal education, with specific reference in the latter sub-sector to agricultural education. The review was conducted in Niger by a team of specialists provided by The Pragma Corporation under an Education IQC work order with AID. The team used existing data and conducted research with the cooperation of an interministerial working group coordinated by the Ministry of Plan of the Government of Niger. The purpose of the assessment is to:

1. identify priority areas in education and training for the investment of internal and external resources;
2. focus attention on constraints to the development of human resources in Niger, and on the investment of the above-mentioned resources; and,
3. provide a baseline document for decisions regarding external donor investments.

The assessment begins with an economic and financial analysis of human resources development which includes analyses of fiscal capacity, human resource supply and demand, and indications of program costs.

The assessment then reviews the formal education system, which includes primary, secondary (including Franco-Arab schools), university and teacher education. Remaining sections concern literacy and adult education, agricultural education and training, health education, vocational-technical education and management training.

Each section presents a status overview of current programs and plans. Issues and constraints to program/-system development are identified through the analysis of existing programs and strategies in light of national goals and Niger's economic status.

1.2 National Goals

Three broad-gauged documents address the Government of Niger's (GON) stated goals with respect to human resources development.

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1. The Zinder Declaration which provides the basis of Niger's on-going efforts in education reform and the establishment of the Development Society, Niger's mechanism for rural development.

2. The Five Year Plan 1979-1983 with its stated goals of:

   a. food self-sufficiency
   b. attainment of true economic independence; and,
   c. installation of the Development Society.

3. The preliminary sub-sector drafts of the Interim Plan of Consolidation (PIC), a three year economic strategy to consolidate Niger's debt burden and to re-order development priorities in the face of reduced national revenues.

1.3 The Nigerien Labor Force*

A population census was conducted in Niger in 1977 which set the population of the country at approximately 5.03 million. The population growth rate since 1977 has been estimated at 2.77 percent per year, which would indicate a population of approximately 6 million in 1983. Nearly 50 percent of the total population is less than fifteen years old; 12 percent of Niger's population was urban in 1980, but this proportion is expected to reach 20 percent by 1990. Women compromise 50.5 percent of the total population. Approximately 90 percent of the labor force is employed in agriculture, with an additional 5.6 percent employed in nonformal activities in commerce and services in rural and urban areas. The remaining 4 percent of the labor force is employed in the "modern" wage economy. In 1982 this sector employed approximately 60,000 people.

The tables below present data on the Nigerien wage labor force in 1981 by sector and by qualification. Two aspects of the table deserve particular emphasis:

1. the small size of the wage labor sector relative to the size of the total labor force (4 percent);

2. the predominance of public employment in the wage sector. (See Tables 1.1 and 1.2.)

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* The adjective form of Nigerien, which is French, is used throughout the text to distinguish it from Nigerian, which normally refers to Nigeria.

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TABLE 1.1

Scheme of Equivalence between Occupational Position and Educational Qualification

N1 and N2	Engineers, Senior Management	College or Post Graduate
N3 and N4	Technicians, Mid-level Management	General or Tech/Secondary
N5	Qualified Production Workers, Clerical	First Cycle Secondary
N6	Unqualified Workers	Primary

TABLE 1.2

Structure of the Nigerien Wage Labor Force by Sector and Qualification (1981)

	N1 & N2	N3 & N4	N5	N6	Total
Civil Service	998	6,195	6,448	10,993	24,634
Public Works Construction	143	430	4,447	9,320	14,345
Services	623	566	4,700	5,436	11,325
Industry	160	417	2,310	3,530	6,417
Mines	113	736	1,755	3,058	5,662
TOTAL	2,037	8,344	19,660	32,342	62,383

Further analysis presented in Chapter 2.0 indicates that between 1981 and 1983 the level of public sector employment increased by slightly more than 4 percent per year. All of the increase occurred in the upper employment categories, while employment in lower categories registered an absolute decline. This trend indicates the continued annual absorption by the public service of large numbers of university and lycée graduates; it may or may not represent the satisfaction of public sector "needs" for trained personnel, as measured by increased efficiency or effectiveness in the operation of the civil service. It also indicates a decisive contraction of the employment opportunities available to those with less than a full secondary education and a substantial increase in the future personnel costs of the Nigerien government, the employer of first and last resort.

1.4 Constraints

Major constraints in the education and training sector are financial and human resources limitations affecting new and continuing activities in all subsectors. Present projections indicate that Niger's capacity to generate significant additional domestic financial resources is limited over the next four years.

All development activities in the sector will have to make more efficient and effective use of existing capital and human resources. Any new projects should be designed to address the following categorical areas:

1. reallocation of resources, both capital and human;

2. development of planning capabilities and resources specifically with regard to disaggregate information, as well as unit cost data across all sectors, including internal/external efficiency measurements;

3. recycling of public sector staff via in-service training, focusing specifically on management and administration;

4. better donor collaboration to effect more efficient application of external funding; and,

5. emphasis on development activities that affect the 95 percent of the population not in the formal wage structure.

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In addition, funding for new donor-sponsored projects should anticipate the need to include recurrent cost funding for the duration of the project and to have post-project recurrent costs which are minimal.

1.5 Issues

Analyses for each of the subsectors in this assessment identify issues in five categories: administration and supervision, internal efficiency, external efficiency, access and equity, and costs and financing.

Issues emerging from analyses are discussed in detail within each chapter of the assessment. In this summary some of the salient issues and recommendations are discussed briefly.

1.6 Sector Specific Overviews, Issues and Recommendations

1.6.1 Economic and Fiscal Analyses

The economic and financial analyses consist of an evaluation of the fiscal capacity of the Nigerien government to bear the recurrent costs of present and future programs of human resources development and an assessment of human resource supply and demand conditions in Niger, as well as their implications for the country's education and training system.

1. The fiscal capacity analysis suggests that the government of Niger should be able to maintain its programs in primary and secondary education at current levels in the coming decade. But it indicates also that expansion of the system or improvements in it that imply increased costs are likely to exceed the fiscal capabilities of the National Education Ministry. The indication is especially serious in higher education, where even the maintenance of the present system is extremely costly.

2. The analysis of human resource supply and demand indicates that even under the most favorable circumstances the Nigerien educational system will produce a surplus of graduates at every level in the coming decade. The wage sector of the economy employs only about 4 percent of the Nigerien labor force. It is growing far too slowly to accommodate the graduates of an education and training system which has grown very rapidly in recent years.

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The analysis points toward a rather bleak and in some ways paradoxical conclusion: although Niger is among the least advanced countries in Africa on virtually all measures of human resources development, the financial and economic situation of the country is such that major new investments in the human resources sector are not called for at this time. Instead of new programs what is needed now is a major effort to maintain and consolidate present programs while working to adapt existing structures more closely toward the satisfaction of present and anticipated national needs. Government and donor activities should thus be aimed at the more efficient use of current resources, rather than toward the establishment of new institutions or extensive expansion of the present system.

Expansion can be justified for the primary school and the nonformal educational system on the grounds of both equity and efficiency. These sectors provide education and training that is of immediate and lasting benefit to the majority of Niger's citizens. Insofar as expansion becomes possible in the future through reduction in costs, donor assistance, or economic recovery, efforts should be concentrated at the above levels of education rather than at higher levels of the system. Emphasis should be placed on increased efficiency in the use of present resources, and a closer articulation between the outputs of Niger's education and training system and the real needs of the country's economy.

From these observations are derived the following recommendations:

1. Development of a local human resource planning office capable of weighing the competing demands of various Ministries and other agencies for additional trained personnel and of evaluating these demands in light of the country's economic and financial circumstances.

2. Greatly improved coordination and control in the administration of the country's education and training institutions.

3. While reductions in the costs of educational programs will be required if improvements or expansion in Niger's educational system are to be made possible, it is important that the proposed reductions be carefully evaluated with regard to short term benefits as well as long term costs.

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4. Greatly improved capacity for financial control and for the analysis and management of costs should be established within the Nigerien educational system as a prerequisite for improvements in the internal efficiency of the system.

5. Increase the role of the private sector in supplying alternatives to government-funded schooling as a mechanism for reducing dependence upon government educational resources and dispersing the cost of education.

1.6.2 Primary Education

Primary education in Niger lasts for six years and is organized into three two-year units along the lines established by the French educational system and still common throughout francophone West Africa. Children begin school between the ages of 6 and 8. They are allowed eight years to complete six classes, and may repeat the same class twice. The final year may be repeated only once. Attrition occurs between grades 2 and 5, for which the prescribed maximum failure/repetition rate is 15 percent. At the end of the sixth grade pupils take the CFEPD (Certificat de Fin d'Etudes du Prémier Degré) examination which determines their success or failure in primary education. The failure/repetition rate at this juncture is approximately 40 percent. Success on the CFEPD exam entitles the pupil to the primary school diploma but not necessarily to admittance to the CEG (Collège d'Enseignement Général), the first level of secondary education, for which entrance is restricted to those students receiving the highest exam scores.

At the beginning of the 1982-83 school year, there were 253,065 pupils enrolled in Niger's primary schools. Of these students approximately 4 percent were enrolled in the franco-arabic school system, which is an alternative formal school system within the purview of the Ministry of National Education (MEN). It parallels the traditional curriculum, with the exception of additional classes in Arabic language and studies.

Overall responsibility for the administration of primary education falls upon the Directorate of Primary Education within the Ministry of National Education (MEN). Educational planning is the responsibility of the Office for Educational Planning and School Construction with MEN.

Virtually all financial support for primary education in Niger is provided by the Ministry of National Education. The ministry assumes responsibility for the construction, furnishing and maintenance of schools, the payments of teachers' salaries and the provision of textbooks and other materials.

The unit cost of primary education, including costs of teachers' salaries, textbooks and materials and other recurrent expenditures, is approximately 22,000 CFA per student per year (about $60 at current exchange rates). Although the costs of keeping a student in school for a year in Niger appear to be rather low, higher attrition rates mean that the cost of producing a primary school graduate is relatively high.

Other major characteristics of primary education in Niger include:

1. an enrollment rate of 21 percent of the primary school age cohort;
2. low internal efficiency with only approximately 50 percent of those who enter first grade making it to sixth grade, and 25 percent receiving a grade school diploma;
3. an entirely francophone curriculum;
4. 75 percent of the teaching staff (with the exception of the Franco-Arab schools) has received training representing a very high level of trained teachers;
5. considerable reluctance on the part of a large segment of the population to send their children to formal schools.

The foremost issue concerning primary education is the pending implementation of the educational reform, its timing and the exact content of the reform to be put into place. Of subsidiary importance are the issues of financing primary education and the establishment of an effective planning and evaluation system.

The two general recommendations which grow out of the more detailed considerations contained in the subsector analysis are:

1. Any further qualitative and quantitative development of primary education will depend on the implementation of the reform. It is essential that the reform be carefully implemented and that an on-going system of monitoring of the reform's results be established.

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2. There is a need to further disassociate primary education from the idea that its only purpose is as a conduit to higher education and guaranteed employment in the public sector.

1.6.3 Secondary Education

Secondary education is made up of two cycles: the lower cycle of four years takes place in the 62 CEGs (Collège d'enseignement général) across the country which are all located in administrative centers; the second cycle takes place in various institutions:

1. the nine 3-year lycées (including 2 normal schools/long cycle)
2. three 2-year normal schools/short cycle
3. the Technical Education Center
4. CFCA (Centre de formation des cadres de l'alphabétisation), the Literacy Training Center, plus institutions belonging to other ministries.

Passage from the lower to the second cycle is determined by examination results on the BEPC (Brevet d'etudes de premier cycle). The second cycle of studies of those who pass the BEPC exam is determined by a process of channeling carried out by the Office of Scholastic Orientation in the MEN.

Until three years ago all students who passed the BEPC were "oriented" into a second cycle institution; in 1982, however, 1,080 of the 4,395 students who received their BEPC diploma were not placed into a second cycle institution. This occurred in spite of the declining BEPC passage rate, which fell from 81 percent in 1979 to 73 percent in 1982.

The aggregate student/teacher ratio for the CEG is 32:1. However, a good number of CEG teachers are not fully qualified, having been promoted after several years of primary school teaching without further pedagogical training. The CEG staff comprises 34.3 percent non-Nigerien teachers. Within the second cycle the student/teacher ratio is 20:1 and foreign teachers represent 27.8 percent of the teacher corps.

Entrance to secondary school is highly selective. About 35 percent of the primary sixth grade pupils have continued on to the first cycle of secondary school over the past four years. Location of CEG's in administrative capitals also limits rural access to these institutions.

Secondary education is administered by the Office of Secondary Education in the MEN. There are also ten inspectors for each "department" (regional divisions) who also have pedagogical counselors on their staff. These latter positions are the supervisory mechanism for the secondary education system.

Private schools are of greater significance at the secondary level than at the primary level in Niger: approximately 15 percent of the students at this level are enrolled in private schools. The unit cost of public secondary education, including teacher's salaries, textbooks and materials, and other recurrent costs, is approximately 80,000 CFA per student per year (about $220 at current exchange rates). Nearly 50 percent of all public expenditures on secondary education is provided directly to students either in the form of boarding facilities (recently eliminated) or in the form of direct subsidies.

The major goals for secondary education as presented in the PIC are:

1. emphasis on the quality of instruction
2. increase in percentage of students passing on to higher level
3. improved working conditions for teachers and upgrading of teacher trainers.

Niger's secondary educational system has been unusual in Africa until this year in that virtually every student completing secondary school was assured of finding modern sector employment. This is no longer the case. The problem of unemployed school leavers emerged late in Niger but is likely to increase over the next few years. At the same time there are subject areas in which the demand is not met; too few students complete studies in the applied sciences and those trained in administrative and technical subjects are often ill-prepared.

These two circumstances suggest that the appropriate strategy for Niger's secondary educational system is one of consolidation, rationalization and reallocation.

General recommendations for the secondary education sector are the following:

1. The MEN should monitor and evaluate the external efficiency of secondary education; specifically as it is affected by continued constriction of the wage labor sector and consequent limited employment opportunities.

2. Reinforce general planning capabilities within the MEN.
3. Study unit costs of the different types of higher secondary schooling.
4. Seriously reconsider the pedagogical and sociological consequences of the decision to eliminate boarding facilities;
5. Emphasize science teaching.
6. Systematically review and revise the government scholalrship policy to bring about a closer fit between manpower requirements and the external efficiency of the educational system.

1.6.4 Higher Education

The system of higher education in Niger consists of the University of Niamey and research institutes associated with it. First established in 1971, the University received its official status as a state university in 1974. By the 1982-83 academic year, the enrollment had reached a total of 2,142. Still, over half of all Nigeriens on government scholarship are studying in universities abroad, most of them in other West African Countries. Outside of Africa, the largest concentration of Nigerien students is in French universities. In the early years of the University of Niamey's development, a majority of students were from other African countries, particularly from Upper Volta. However, by 1982 nearly 90 percent of all students were Nigeriens.

The majority of Nigerien university graduates are those educated abroad. In 1979, 194 out of 266 graduates studied in foreign universities. But by 1982 there were 168 graduates from the University of Niamey out of a total 360. During the period from 1979 to 1982, by far the largest percentage of graduates from the University of Niamey were in the School of Pedagogy.

The University continues to rely to a large extent on expatriate professors, although the proportion of Nigerien nationals increases each year. However, by 1982, over half of the teaching staff remained expatriate, and most of the Nigeriens were at the assistant level. Foreign technical assistance accounts for a significant portion of the teaching staff. The largest contribution is that of the French government (FAC), followed by Belgium.

The organization of academic programs within the University of Niamey follows the French university system. There are three cycles, each of which leads to a diploma. The first cycle consists of a two-year course of studies

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leading to a University Diploma known as DUES in the sciences and DUEL in letters. The second cycle consists of another two-year course of study leading to a license degree after the first year and a maîtrise at the end of the second. The third cycle is the graduate program leading to the doctorate. An advanced studies diploma, DEA, is awarded after one year of graduate work.

The University consists of six Schools (or faculties): Sciences, Letters and Human Sciences, Agronomy, Pedagogy, Health Sciences, and Economics and Law. By 1982, enrollment within the Schools was fairly evenly distributed, except for the School of Agronomy, which represented less than two percent of total enrollment. As a measure of internal efficiency it may be noted that those Schools with the largest enrollment and highest student/teacher ratio generally have the highest attrition rates. The Schools of Pedagogy and Agronomy have the highest rates of success in final exams, whereas the lowest rates are in the Schools of Economics and Law, Sciences, and Letters. The School of Agronomy has the lowest student/teacher ratio as well as the largest percentage of Nigeriens on the teaching staff. By the same token, those Schools with the lowest student/teacher ratio also account for the highest per student costs. Some of the Schools, such as Pedagogy, Economics and Law, are seriously overcrowded because of inadequate classroom space. Library and laboratory facilities are also generally insufficient.

The primary mission of the University is to train teachers and researchers. The increase in Nigerien teaching personnel at the first cycle (junior high) level in recent years is due mainly to the production of graduates from the School of Pedagogy. Three-fourths of all junior high teachers are Nigerien nationals. However, at the high school level Niger continues to depend to a very large extent on expatriate teachers because the University School of Pedagogy does not train teachers at the high school (lycée) level. Hence, the need for the country to develop its own capacity to train high school teachers.

As in other sectors of the educational system, the main issues in higher education must be viewed in the light of increasing financial constraints. The government continues to spend a large portion of its budget on student scholarships, both at home and abroad. A key issue that is emerging from the government's planning process is the extent to which expenditures on scholarships for study abroad can be reduced while redirecting scarce resources toward the development of the University of Niamey. It is clear that the country is producing more graduates in the fields of Economics and Law than apparent demand can absorb.

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Conversely, the need for graduates in the sciences is not being met. A more rational scholarship policy must be devised to direct more students into the sciences and technical studies and away from the liberal arts. This policy is in turn related to the need for a coherent human resources planning policy for all levels. Incentives will have to be created to attract more students toward the teaching profession which presently suffers from a low level of prestige.

General recommendations for higher education are the following:

1. Priority on educational planning should focus on the system's ability to expand the number of trained mid-level personnel rather than on advanced degree training.

2. Within the university, priority should be given to the School of Pedagogy, which is developing a program to train high school teachers.

3. The present underutilizaiton of the School of Agronomy must be addressed, both for economic and development reasons. The program as it exists is far too costly and is not addressing national development requirements including training agricultural researchers.

4. The GON, in conjunction with the Ministry of Higher Education, should revise the existing scholarship structure so that it is more responsive to national employment requirements and provides incentives to students to enter priority training areas.

1.6.5 Teacher Training

Formal teacher training takes place in three types of institutions in Niger:

1. the normal schools/short cycle which are two-year programs for students who have received their BEPC; they become primary school teachers;

2. the normal schools/long cycle which are four-year programs for students who have received the BEPC. Graduates are also qualified primary school teachers (at a higher level of qualification than the short cycle) and are eligible for entrance to the School of Pedagogy at the university level;

3. the School of Pedagogy of the University of Niamey with the following programs:

   a. two-year program for pedagogical advisors at the primary school level;
   b. one-year course for primary school inspectors;
   c. two-year course for CEG (middle school) teachers.

There is a division of ministerial responsibilities for these various programs. The School of Pedagogy is regulated by the Ministry of Higher Education and Research while the other programs are under the auspices of the Ministry of National Education. There is no central coordination between these ministry programs.

The teacher training institutions in general are severely overcrowded, inadequately staffed and poorly equipped. Nearly half of the teaching staff are foreign nationals, and many do not have sufficient backgrounds in pedagogical training.

In general the curriculum lacks practical teacher training/student teaching and that which is conducted is frequently not adequately supervised. Other acknowledged inadequacies in the teacher training system are the following:

1. insufficient pedagogical content in the curriculum;
2. a curriculum which is identical to a *lycée* except at the fourth year;
3. examinations which do not sufficiently test pedagogical skills;
4. no training of teachers for the *lycée* level.

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General recommendations for the teacher training sector are the following:

1. Address the need for reform of teacher training, specifically with regard to the reformed primary school curriculum and the use of maternal languages in the first three years of primary schooling; in-service retraining should be the primary mode of re-orientation. However, teacher training institutes should also reflect a revised curriculum approach

2. Introduce a general re-orientation of the curriculum in existing teacher training institutes to emphasize pedagogical skills through student teaching and other applied techniques.

3. Upgrade the skill level of teachers through inservice teacher training in schools and teacher training institutes.

4. Establish teacher training at the lycée level.

1.6.6 Vocational/Technical Training

Twelve training institutions comprise the formal vocational and technical sector in Niger. Four training centers organize nonformal skills training programs, and at least six industrial companies and parastatals have in-house training services.

In 1982, 2,300 students were enrolled in the sector with 216 full time teachers and instructors, most of them expatriates (70 percent). In addition, more than 400 Nigeriens are participating in technical studies programs abroad. The situation of employment for graduates has been deteriorating steadily for almost two years, and it will become increasingly difficult to secure a wage-earning job in this sector.

Seven ministries and parastatals are responsible for the organization and supervision of the various training centers and technical education institutions, including the Ministry of Education (MOE) and the Ministry of Public Services. Students are selected by the Directorate of the Orientation of the MOE. The Directorate of Vocational Education, in the Ministry of Public Services, is responsible for the placement of all graduates, and the Bureau of Scholarships in the Ministry of Higher Education is responsible for the distribution of scholarships for

studies abroad. These three institutions constitute the structuring elements of the sector. There is no specialized directorate of technical education at the MEN to coordinate and supervise the training activities of the whole sector.

In the absence of systematic measurement of the performance of graduates on the job, the cost of training, and the level of efficiency, this sector is not clearly articulated, particularly with regard to planning and needs projections. There are missing links in the sector (teacher training and paraprofessional training), and the mix of skills offered does not adequately meet the demand. Particularly hard to find are good typists, plumbers, carpenters, maintenance technicians, foremen, mine workers, and generally skilled workers.

The Zinder Declaration indicates the government's full awareness of the present sector conditions resulting from the diminished public revenue and shrinking employment. Their recommendations revolve around three main themes: (1) reallocation of resources, (2 rationalization and coordination of training, (3) completion of the existing network of training institutions by creating a technical teacher training college and a paraprofessional training center (Institut Universitaire de Technologie).

The issues in the vocational and technical education and training sector are as follows:

1. inadequate training materials;
2. a heterogeneous faculty, often unprepared for technical education;
3. inadequate school management in some schools;
4. insufficient equipment and poor maintenance in the public schools;
5. inadequate planning and projection of vocational technical needs.

These inadequacies result in part from the rapid expansion of the system and from the lack of capabilities in educational technology at the ministry level (to plan, design, supervise, and evaluate the training services).

General recommendations for this sector are are follows:

1. Improve the planning of the sector relative to the mix of training programs by specialty and levels of training;

2. Coordinate vocational-technical training programs with manpower requirements through increased collaboration with MEN and the Ministry of Plan.

3. Improve the efficiency of individual schools by providing the educational technology necessary to design and produce more appropriate training programs and materials (including ongoing evaluation of these programs, available to them and to the GON);

4. Prepare and deliver nonformal, short-term skills training programs to projects, organizations and agencies involved in productive activities;

5. Investigate alternative ways to increase the number of Nigerien teachers in the vocational/technical schools and the number of Nigerien paraprofessionals.

1.6.7 Agricultural Education

Agricultural education in Niger is discussed in terms of the formal and nonformal institutions providing training. Within the formal education sector, there are agricultural schools which provide instruction at the secondary and tertiary levels. Nonformal agricultural education, on the other hand, refers to direct farmer training or technical agricultural education outside the traditional educational system. Several different institutions are involved in this type of training in Niger.

Formal Agricultural Education

Rural development personnel for the agriculture service of the Ministry of Rural Development and other public or semi-governmental positions are trained at seven different levels corresponding to the civil service classification:

A1 level:	professional agriculturalist
A2 level:	field managers and senior extension staff
B1 level:	agriculture/livestock technician
B2 level:	assistant technicians
C level:	extension agents
D level:	field extension workers, and auxiliary personnel.

The highest level of formal agricultural education takes place at the University School of Agriculture (ESAE) where "applied engineers" graduate with qualifications for the A2 level of government service. To qualify for service as a

senior agriculturalist or veterinarian (A1 level), study must be undertaken abroad.

The middle levels of formal agricultural education (qualifying individuals for the B1, B2, and C levels) take place at two separate institutions - one focusing on agriculture and the other on livestock. The Institute for Practical Training for Rural Development (IPDR) located at Kolo is the principal institution in Niger for agricultural training, and the Animal Production School (ECE), which is being relocated from Niamey to Kolo, is the counterpart of IPDR in animal husbandry.

A fourth school which is of less significance provides training in the tanning of hides and skins (ESEM). This is the only agricultural institution which trains rural development personnel at the D level.

Nonformal Agricultural Education

There are several nonformal training centers which work directly with young farmers or farmer couples. These include: The Young Farmer Training Centers (CFJA), the Rural Improvement Centers (CPR), and the Technical Promotion Centers (CPT). While the CFJAs were the first of these centers in Niger, they are presently being phased out or converted to CPTs, due to the overlapping function and the increasing importance of the latter. The CPTs and CPRs are linked with various provincial productivity projects aimed at increasing agricultural production. The strategy of the projects, in addition to establishing farmer couple training centers (CPTs & CPRs), is to organize cooperative associations of village groups, and reinforce the government extension, agricultural credit, and input supply services. Each training center has the capacity to train twenty couples during a full growing season (April-October) in the use of a technical package including animal traction and fertilizer, and the production of millet, cowpeas, and sorghum.

Traditionally, within the formal agricultural education system, there is concentration on theory rather than applied curriculum. The curricula are geared to meeting the needs of the government services employing the graduates, but it is questionable whether the government services are meeting the needs of the agricultural sector and economy at large. Not unrelated to inadequacies in curricula are those of teaching staff. The quality of education hinges on the teaching staff. Teacher training is weak at every level in agricultural education.

The CPTs share a number of similar problems with the formal agricultural education institutions. The technical package which is the curriculum may not be adequately adapted to the different soil types or climatic areas. There are also inadequacies in the quality of the teaching staff. Though the GON plans to have "C" level personnel at each CPT, a number of departments have CPTs run by personnel with far less training.

Other problems surrounding the training at the CPTs include: the institutional structure involving the various services, problems of credit and agricultural inputs, selection of farmer couples, and successful reintegration of ex-trainees into their villages as pilot or demonstration farmers.

With the limited number of places at the formal institutions, access is necessarily limited. Less than 25 percent of the population ever goes to primary school, and this forms an extremely narrow educational base from which few proceed to the middle and higher levels of schooling. Access to education is limited even more to women, due to traditional village mores and Islamic culture. Data was not available on the breakdown by gender of ESAE graduates, but not a single woman has completed the four year curriculum at IPDR.

Similarly in the CPTs, access to training is not completely open nor is it equitable. Though the CPTs address the need to train women in principle, more needs to be done to balance the training skewed toward men and to address the needs of women directly. By mandating that trainees be "couples" there is necessarily an equal number of men and women trainees; however, selection emphasis is on the male. A large part of the women trainees' time is taken up with child care and meal preparation responsibilities.

Within the human resource planning sector, previous efforts have been flawed by methodological deficiencies which have produced the following:

1. serious overestimations of personnel who can be effectively employed by government over the next decade;

2. presentation of manpower estimates by civil service grade and functional agency instead of skill category, which makes effective planning of agricultural education programs very difficult;

3. effective exclusion form manpower planning of the entire private sector in Niger;

4. a wide diversity in estimates of personnel "needs" for public sector agencies depending upon which donor agency is doing the analysis and the individual view put forward about the ideal structure of personnel within agencies and ministries.

With regard to the intra-institutional costs of training agricultural personnel at various levels, best available estimates indicate:

1. costs per year of university training in agriculture are approximately $9,500 per student;

2. costs at the two schools training B and C grade personnel average about $4,650 per student per year;

3. costs of training per D grade trainee average $1,700 per year;

4. and, finally, training costs at the CPTs and CPRs are estimated at about $50 for a farm couple per year.

Prospects for permanent employment of agricultural graduates in public sector agencies in Niger is poor, given any realistic projection of the future growth path for the Nigerien economy. The more realistic expectation is for unemployment of agricultural graduates by the GON unless steps are taken quickly to:

1. reduce the size of classes entering existing training institutions;

2. increase budgetary allocations to the Ministry of Rural Development (MDR) at the expense of other ministries and agencies;

3. increase recurrent cost contributions to projects by external donors to allow direct payment of salaries and other personnel costs to project-level employees; and

4. increase opportunities for private sector employment of graduates from training institutions in Niger under GON incentive programs and further liberalizations of the economy.

General recommendations drawn from the analysis are the following:

1. The training of qualified researchers and research technicians has been seriously overlooked within the formal higher education structure; consequently there is a very weak base for credible agricultural research at all levels. At present, neither the formal agricultural institutions nor the GON is addressing this need. Research capacity, beginning with INRAN, needs to be funded and developed so as to create indigenous research capability.

2. There are appropriate agricultural education institutions in place but the quality of the curriculum and teacher training needs to be improved. Emphasis should be placed on upgrading the quality of teaching staff and the technical curricula.

3. The supply of trained personnel will soon exceed the effective demand. Donors should consider absorbing some of the excess personnel through project staff positions.

4. The public sector work force is comparatively young and will be in place until retirement. With this slow rate of turnover and stagnated sector growth, donors should focus on in-service training programs of personnel to provide needed skills amongst current staff.

5. The GON should move from training geared solely to the government service and expand the orientation of existing programs to train in agricultural skills needed by the private sector.

6. Public and private sector projections of demand for skilled personnel in the agriculture sector should be calculated. The current practice of needs assessment, given the restricted absorptive capacity of the government and the nascent private sector, distorts accurate projections of future personnel requirements.

7. CPT effectiveness and cost-efficiency could be improved if CPTs were located closer to the village they serve and eventually placed in villages.

1.6.8 Management Education and Training

The incidence and level of management education and training in Niger is inadequate to manage development in

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either the public or private sectors. One measure of the need can be seen in the fact that more than 50 percent of personnel engaged in the planning and administration of education and training programs are expatriates. The situation is similar in other sectors. Mechanisms for developing managerial skills and capabilities, formal training, and/or acquired experience, are very few in number.

In the public sector, the large majority of mid-level and many of the senior level GON managers are either graduates of the Ecole Nationale d'Administration (ENA) or the University of Niamey. A number have also received graduate training abroad at a variety of foreign universities and institutions of higher education. In the private sector there are very few facilities or opportunities for the training of individual entrepreneurs. Indeed, private sector entrepreneurs are for the most part illiterate, further compounding the difficulties of increasing their skills and numbers. The inevitable corollary of this situation is that a large number of key posts in the public sector are filled by expatriate experts at high cost to the government in addition to the dependence upon foreign resources that this engenders. Similarly, the vacuum created by the shortage of qualified and skilled Nigerien entrepreneurs in the private sector has been filled by non-Nigerien entrepreneurs and investors to the degree permitted by government.

A number of efforts to alleviate these major development constraints have been made with some success. The government consistently sends a moderate number of persons abroad each year on study grants or scholarships. Most of these fellowships are awarded for study in technical disciplines such as agronomy, medicine, education, engineering, rural development, and mining. However, very few overseas fellowships are awarded in the field of management, business administration, or related areas. This year 1,231 overseas fellowships included only 32 in management related fields of study.

The GON has also revised the ENA curriculum to include a few more courses on management related subjects. However, this has proven to be inadequate as has the number of graduates that the school can turn out each year (53 in 1983 in the face of an imputed demand in the public and private sectors for 300).

The UNDP supports two ILO administered programs which provide for the upgrading of skills in the Nigerien Civil Service (fonction publique) on the one hand, and in parastatal mixed economy companies (Sociétés d'économie mixtes - SEM) on the other hand. Both of these programs include provisions for the creation of permanent, institutional entities which will create and expand indigenous management training capabilities. However, this has yet to be achieved.

As regards the private sector, management development programs are provided either internally by a small number of companies, such as the BRND through the GON Chamber of Commerce, the Office de Petit et Moyen Entreprise Nigerien (OPEN), Bureau of Small and Medium Size Businesses and, to a small degree, by ENA in the context of the "Nigerization" program.

The major issues in the sector are the following:

1. Government Human Resource Development priorities are in primary and secondary education and vocational education and technical training at the expense of higher education (ENA and university) where budgets have been frozen since 1981; there has been zero or negative growth in the sector;

2. Government scholarship policies overwhelmingly favor technical and scientific disciplines, humanities, and modern languages over management training; this maintains dependence upon expatriate technical assistance in public and private sectors and frustrates the Nigerization program;

3. The government recognizes the need for expanding private sector management capabilities, but resources are not being made available;

4. A policy decision must be taken with reference to Nigerization and be supported by the resources needed to continue and extend OPEN and UNDP/ILO programs in the private and semiprivate sector.

The recommendations made here are intended first and foremost to remedy the serious lack of a coherent, efficient management education/development system. From a financial standpoint the first effort must be to increase the efficiency and productivity of existing institutions and organisms, and funding for new initiatives with low

recurrent costs should be sought from external assistance sources. The recommendations are as follows:

1. Revise the ENA higher level curriculum.
   A more appropriate studies program should be developed for higher level ENA students, and a revised curriculum should be introduced, taking into account the various skills needed by administrators/managers in the various sectors involved in Nigerien development.

2. Revise the University of Niamey curriculum to include a business administration program.

3. Establish a Unified Scholarship Office.
   The present policy of dividing the management of scholarships between the Ministries of Plan and Higher Education is awkward and inefficient. Scholarships should be placed under the authority of a single GON entity which would be responsible for human resources planning, including programming of staff needs in the public and private sectors.

4. Utilize Regional Resources.
   There are a number of excellent management education institutions and programs available in several West African countries. These should be used for training Nigeriens on both a short and long term basis as well as for the training of trainers during and after the development of an indigenous Nigerien training capability.

5. Consider the development of permanent training centers.
   In order to ensure the ongoing growth and development of the management center, it is necessary that a corps of skilled trainers be developed. This project should include both long term training of O/D analysts and other management specialists (regionally and overseas) as well as the constant updating of the trainers' skills as the field of management sciences continued.

6. Establish Management Civil Service Grade.
   Government positions are all classified by grade by <u>fonction publique</u> regulations which have force of law. In order to make a career as a management development specialist attractive, a change in existing regulations, which presently does not include a classification for management trainers, must be made.

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7. Expand OPEN, Chamber of Commerce.
The most efficient and innovative programs in private sector entrepreneurial development are those mounted and supervised by the government-funded OPEN. Given the success of their operations, it is strongly recommended that they be extended through the provision of additional technical assistance and other support from external sources. Similarly, the Chamber of Commerce is the next best instrument for private sector development and its programs need to be expanded through support from external sources.

1.6.9 Literacy/Adult Education

Adult education includes the variety of literacy, technical, and community development education activities designed to increase the socio-economic status of the majority of the Nigerien population. Efforts range from the transfer of cooperative management skills to education through radio and television. One of the largest efforts in adult education is implemented through the National Literacy and Adult Education Office of the Ministry of Education. The Ministries of Plan, Information, Rural Development, and Youth, Sports, and Culture all have adult education programs.

An examination of these programs shows that there is little coordination among them. Thus, they are often duplicative and sometimes conflicting. Adults question the value of these efforts as training alone is not sufficient to remove constraints impeding rural development efforts. Complimentary action is necessary to provide resources, credit, and the infrastructure necessary to allow efficient use of newly acquired skills.

Indications are that people newly literate in national languages soon lose their abilities because there is little for them to read and write. Government business continues to be conducted in French. Development activities have yet to be decentralized, preventing the participation of adults in self-management of rural development projects.

In addition, adult educators are not trained adequately in methods of adult pedagogy. Their approach is highly directive rather than facilitative, and the capabilities of the adult population are often underestimated. Generally, the demand for adult education is low, reflecting an accurate perception on the part of the rural population regarding the benefits and quality of that education.

Literacy classes, for example, have an attrition rate of over 53 percent, and only 7 percent ever become fully literate.

Few women are reached through adult education efforts, as there are an insufficient number of women trainers, and activities are not adapted to women's needs.

Recognizing these problems, the Government of Niger is making efforts (with the institution of the Development Society policy) to coordinate adult education activities by promoting the establishment of self-managed village development committees. The GON would like villagers to plan their own development projects through the committees. Projects would be funded through a Village Initiated Project fund, allowing villagers to contract rural development technical services to provide necessary technical advice and training. Initially, the GON will set up multidisciplinary training teams to help villagers organize and plan their own projects.

This is a step toward the development of a coherent and inclusive strategy necessary to provide the practical skills villagers need to effectively initiate and manage their own programs. In addition, when establishing multidisciplinary teams, a careful review of the functions and effectiveness of various technical service extension agents should be made to eliminate those services which are superfluous. The GON should either create an active coordinating committee for those essential services or consolidate all rural development adult education related efforts under one ministry.

General recommendations for this sector are the following:

1. All training programs for adult educators should be Oeviewed to assure that content, method, length, and approach are relevant to the needs of adults. In view of the potential for education through television or radio which reach 85 percent of the population, emphasis should be given to obtaining the necessary financial resources and coordination to maximize their use.

2. The government should give precise legal status to the national languages so literacy training can be made functional and responsive to needs of adults regarding self-management and continuing education.

More efforts should be made to promote transcription of oral history, folklore, and songs, and the production of novels, texts, and technical materials into national languages.

3. An extensive study should be undertaken to determine what effect literacy training has on the lives of adults to improve planning of future literacy activities. Educational programs are of interest and use to adults only insofar as new knowledge and skills will contribute directly to improvement of their social and economic situation.

4. Train adult educators in specific adult pedagogy so as to focus on the facilitative aspects of instruction.

1.6.10 Health Education

The Ministry of Public Health and Social Affairs (MPS/AS) has three divisions particularly concerned with health education: the Division of Social Affairs and Maternal Child Health (DAS/PMI), the Division of Training, Health and Nutrition (DEESN), and the Division of Hygiene and Mobile Medicine (DHMM). These divisions, which are represented at the regional and local levels, are charged with supervision of health personnel involved in preventative health care activities. At the village level are the village health teams composed of a secourist (village health care worker) and a matrone (traditional midwife) who are trained in primary health care delivery. Maternal and child care centers, found in major towns, work with pregnant and nursing women, providing prenatal care and infant and young child nutrition education. Hygiene/Sanitation agents work with mobile health clinics, town sanitation departments and/or regional health centers to assure environmental sanitation.

Radio, television, and newspapers also provide information to educate the population about health concerns at present. The MPS/AS policy on health education in the past viewed health education as an integral part of the daily routine of all health personnel. The National Debate on Health held in Maradi in March 1983 devoted much attention to the weakness of this approach, which results in education of a few motivated individuals through scattered efforts.

The Maradi Debate has recommended the institution of a national program on health education to be supported through emphasis on health education and prevention in formal training of intermediate and mid-level health personnel, as well as integration and systematization of health education activities into nonformal rural development education efforts.

General recommendations in this sector are the following:

1. Although the MPS/AS lacks the financial and human resources necessary to provide adequate supervision of preventative health care activities, better use should be made of existing resources through concerted and organized efforts to change the popular mentality regarding health from an emphasis on curative practices to increased preventative care. Media campaigns, the development of appropriate audio-visual aids, and better integration of applied preventative health care activities into personnel training will promote improved health practices.

2. Nutrition education should be promoted in conjunction with agricultural production projects and women's income generating activities to provide disposable income for expenditures on food supplements, medicines, support of village health teams, and transportation to local health centers.

3. Improved coordination between the MPS/AS and the National Radio and Television Office will increase quality and quantity of health education programming. Effective health education and preventative health care demands the coordinated participation of donor agencies in support of a sector approach to assist the government in its desire to improve and expand health services.

2.0 Economic and Fiscal Analysis

2.1 Introduction

This chapter provides an analysis of the fiscal capacity of the government of Niger to bear the costs of current and proposed educational programs in the coming decade, as well as an aggregative analysis of manpower supply and demand in the Nigerien labor market. It was originally hoped that it would be possible to include an analysis of program costs within the educational system as well, but data on costs disaggregated by program and school type are lacking. Such data on costs as are available are presented in the chapters that deal with specific sectors of the educational system.

The fiscal capacity analysis begins with a brief overview of the recent history and likely prospects of the Nigerien economy. This is followed by an assessment of the anticipated effects of future economic developments on public revenues in Niger, and specifically on the budgets of the principal agencies involved in the administration of the country's educational system. Alternative projections of government revenues and educational costs are developed in order to evaluate the ability of the system to bear the costs of present programs and to absorb the costs of new ones.

The analysis of manpower supply and demand, though strictly constrained by limitations in the available data, represents an effort to assess the "fit" between the outputs of Niger's formal educational system and the projected requirements of the local labor market for workers with various levels of educational qualifications. More detailed estimates of manpower supply and demand within specific sectors (including agriculture and education) are presented in the relevant chapters.

The present chapter concludes with an analysis and with a number of recommendations regarding appropriate government and donor policies, given the present economic and financial circumstances of Niger's educational system. These remarks and recommendations are general in character; they establish the context within which the analyses and recommendations put forward in subsequent chapters for particular sectors and programs within the educational system must be evaluated.

2.2 Fiscal Analysis

Possibly the most critical problem facing the Nigerien educational system in the coming decade is the capacity of the system to bear the costs of present and proposed educational programs. The Nigerien economy has been subjected to some major shocks in recent years. The prospects for economic growth and expansion in public revenues are limited at best in the short term. In the absence of such growth, the prospects for expansion and reform in the educational system are equally limited; not only can new initiatives be undertaken only at the cost of corresponding cutbacks (or greatly improved efficiency) in existing programs, but the capacity of the educational system to support the recurrent cost burden of current programs is also called into doubt. In this section of the chapter we explore the fiscal capacity of the Nigerien educational system, looking first at the prospects for growth in the Nigerien economy and subsequently at the possibilities for growth in government revenues and in the resources available to the principal agencies involved in the educational system.

2.2.1 The Nigerien Economy

The economy of Niger has been buffeted in the past decade by forces outside the control of domestic planners and policymakers. The Sahelian drought of the early 1970s, the boom and subsequent collapse of prices in the uranium market, the worldwide recession, and the recent successive devaluations of the French franc (to which the CFA franc is tied) have all had major effects on the economy of Niger. Periods of rapid growth have been abruptly followed by periods of contraction. This pattern has been especially marked in the years since 1977, as Table 2.1 makes clear. The real annual rate of growth in GDP rose from 3.5 percent in 1977 to 13.6 percent two years later, only to fall to 1.1 percent in 1981 and below zero in 1982 and 1983.

One cause of these recent fluctuations in the Nigerien economy has been volatility in the world market for uranium. Uranium exports accounted for 62 percent of Niger's foreign exchange earnings in 1977, and for nearly 80 percent in 1981. The price of uranium increased by more than 100 percent in 1975, after the first of the OPEC oil price increases, and the demand for uranium (and its price) rose steadily through the 1970s. More recently, however, the stabilization of the price of oil and the emergence of serious problems in the nuclear power industry have led to a

TABLE 2.1

Structure of Gross Domestic Product by Sector, 1977-1981

(in billion CFA francs at current market prices)

	1978	1979	1980	1981
Rural Sector	174.5	197.6	229.0	278.7
Agriculture	(95.7)	(105.4)	(120.8)	(152.0)
Livestock	(61.4)	(72.2)	(85.2)	(100.3)
Forestry and Fishing	(17.4)	(20.0)	(23.0)	(26.4)
Mining	36.0	61.6	65.6	54.3
Industry, Handicraft, Energy	46.8	23.4	27.9	36.0
Manufacturing	(4.0)	(5.7)	(6.3)	(7.5)
Handicraft	(41.6)	(17.1)	(20.0)	(23.4)
Water and Energy	(1.2)	(0.6)	(1.6)	(5.1)
Construction and Public Works	19.5	29.7	37.2	34.0
Commerce, Transport, Services	70.3	79.9	101.1	120.9
Commerce	(39.6)	(46.1)	(52.7)	(65.2)
Transport	(14.1)	(17.4)	(21.5)	(25.5)
Services	(16.6)	(16.4)	(26.9)	(30.2)
Government	25.4	30.4	38.6	45.4
Import Taxes and Duties	16.6	20.0	29.1	28.3
GDP at Current Market Prices	389.1	442.6	528.5	597.6
GDP at 1976 Prices	270.4	307.1	322.2	325.7
Nominal GDP Growth Rate	25.7	22.2	19.4	13.1
Real GDP Growth Rate	8.3	13.6	4.9	1.1

Source: Toh, 1983 (revised figures)

collapse in uranium prices. Recovery in the industry is likely to be slow. As a result, an abbreviated period of rapid growth in Niger has come to an end, and the economy has entered what may prove to be an extended period of stagnation.

While Niger's dependence on uranium revenues and the recent instability of the uranium market have had significant negative consequences for many parts of the Nigerien economy, other sectors of the economy have continued to perform relatively well. The construction and public works sector, which is closely tied both to the health of the mining industry and to the availability of uranium revenues to fund the government's public investment programs, has not done well. However, the other sectors of the economy have shown slow but consistent growth in the years since 1977. Progress has been especially notable in the rural sector, where climatic conditions have been favorable and the livestock herds have been reconstructed since the Sahelian drought. These have contributed to an average annual growth of approximately 19 percent in current prices in the years between 1977 and 1981.[1] Though this rate of Nigerien GDP accounted for by agriculture and livestock has shown a signficant increase since 1980, as the Nigerien uranium industry has declined, this trend may be expected to continue, particularly if the production of cash crops, including groundnuts and cotton should begin to approach pre-drought levels.

Table 2.2 presents estimates of the Nigerien balance of payments in the years between 1979 and 1983. The most significant feature of the data is the turn-around in the trend of Niger's trade and current account balances, which had shown large and increasing deficits for some time. The data indicate that reductions in imports and an improvement in the relative prices of Niger's exports may produce a positive trade balance in 1983 for the first time in many years. Massive debt services are nevertheless likely to keep the country's current account balance heavily in deficit for several years to come. The government's continued recourse to commercial credit markets to finance extra-budgetary expenditures can only exacerbate the problem.

The table also indicates an apparent shift in the pattern of heavy, and increasing dependence on external capital support. The inflow of private capital to support expansion of the mining sector and the government's borrowing to support its public investment program were sufficiently

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TABLE 2.2
Niger: Balance of Payments Summary, 1979-83

	1979	1980	1981	1982	1983*
Trade Balance	-51.4	-58.2	-61.1	-23.9	4.7
Exports, F.O.B.	(109.7)	(138.9)	(150.1)	(116.5)	(132.4)
Imports, F.O.B.	(-161.1)	(-197.1)	(-211.2)	(-140.4)	(-127.7)
Net Services	-11.3	-15.4	-24.5	-65.5	-64.9
Net Transfers	16.5	17.3	20.2	22.5	25.8
Current Account Balance	-46.2	-56.3	-65.4	-67.0	-36.1
Capital Account, net	40.2	51.4	74.1	20.3	25.8
Long Term	(40.2)	(51.4)	(74.1)	(32.2)	(37.2)
Short Term					
Errors and Ommissions	4.3	-3.6	0.8		
SDR Allocation	0.4	0.5	0.5		
Overall Balance (deficit)	-1.3	-8.0	10.0	-46.7	-10.3
Exchange rate of CFA francs (annual average, CFA francs per U.S. dollar)	212.72	211.30	271.73	328.62	365.33
Terms of Trade (average 1978-83 = 100)					
Export Price Index	121.0	126.8	85.6	84.0	92.3
Import Price Index	95.1	115.8	107.4	103.1	101.8
Terms of Trade	127.2	109.5	79.4	81.5	95.6

*Projections

Source: Toh, 1983 (revised figures)

large to offset current account deficits in the years before 1982, but the collapse of the world uranium market and the weight of the government's debt service obligations have greatly reduced these flows, contributing to large overall balance of payments deficits in 1982 and 1983. Such deficits are likely to persist for the next several years, particularly in light of the government's continued reliance on commercial borrowing to finance a significant portion of its annual expenditures.

The prospects for the Nigerien economy are particularly bleak in the short run. No substantial recovery in the uranium industry appears imminent and the aggregate rate of economic growth is likely to remain sluggish as a result. Moreover, the continued burden of debt service are likely to keep Niger's overall balance of payments heavily in deficit for the foreseeable future, with profound negative consequences for the government's ability to provide services or to finance the investments necessary for future growth. Furthermore, should the rains fail, as they did in the early 1970s, the current crisis would quickly evolve into a catastrophe.

With regard to the longer term, however, it is possible to be somewhat more optimistic. The health of the agricultural and commercial sectors, which provide a living for the majority of Nigeriens, is only indirectly reflected in the government statistics, yet these sectors have nevertheless exhibited modest growth in recent years, and may continue to do so if climatic conditions and the economic circumstances of neighboring countries remain favorable.[2] If local farmers can be persuaded to rediversify into cash crops like groundnuts and cotton, or if livestock owners can be induced to sell or process more of their herds in Niger, these may represent a basis for continued economic growth. From the point of view of the Nigerien government, however, and especially for the purposes of the present analysis of the fiscal capacity of the Nigerien educational system, it is certainly safest to assume that the economy of Niger will grow only slowly if at all in the coming decade.

2.2.2 Government Revenues and the National Budget

The current economic crisis has had a profound effect on the revenues of the Nigerien government, and on its ability to support ongoing programs or to undertake the investments required for future economic growth. At the peak of the uranium boom, in 1979, the government put

forward an ambitious five-year development plan which called for large public investments in all sectors of the economy in all regions of the country. These investments were to be financed largely by the revenues obtained from uranium production, but as the price of uranium fell an increasing proportion was financed through public borrowing, often on commercial terms. The government of Niger thus finds itself in a double bind financially, faced simultaneously with declining public revenues and rapidly increasing service obligations. While the fiscal crisis may be eased in the short term through retrenchment measures, debt refinancing, and external assistance, it is likely that the government of Niger is now at the beginning of an extended period of budgetary austerity. Existing programs will be maintained only with difficulty and new programs will be initiated only with great reluctance, or with substantial external support.

The evolution of Nigerien government revenues from 1978 to 1983 in current prices is presented in Table 2.3. The most striking feature of the table is the absolute decline in total revenues that is anticipated for 1983; the fall from 93.9 to 81.2 billion CFA represents a decline of more than 13% in nominal terms, and more than 20% in real terms.[3] (It should be noted, however, that actual government revenues in 1982 fell far short of the anticipated level. The principal cause of this decline in public revenues is the reduction in the levels of production, income, and profits in the Nigerien uranium industry. Between 1979 and 1982 government revenues from the uranium industry fell from 24.1 billion CFA to 11.0 billion CFA, a decline of more than 50 percent in nominal terms. These losses have in recent years been covered in part by increased taxes in other sectors of the economy and by increased external borrowing, but these measures have not sufficed to make up the shortfall in uranium revenues. The borrowing has greatly increased the government's debt service obligations. The effects of this loss of revenue have been intensified by the recent devaluations of the French and CFA francs, which have reduced the value of government revenues in international markets by nearly 50 percent in the last two years.

The evolution of Nigerien government budgetary expenditures from 1978 to 1983 by functional categories is presented in Table 2.4. Two features of the table deserve emphasis. First, the annual burden of public debt services

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TABLE 2.3

Niger: Government Revenue

Fiscal Years (October 1 - September 30)

	1978	1979	1980	1981
	(in billions of CFA francs)			
Tax Revenue	34.2	47.1	59.2	59.5
Taxes on Income and Profits	11.0	16.5	21.0	15.4
Taxes on Goods and Services	6.2	10.4	12.8	15.9
Taxes on International Trade	14.2	17.0	22.1	25.0
Stamp Taxes	2.8	3.2	3.3	3.2
Non-tax and Other Revenues	9.2	12.2	12.9	21.1
Total Revenue	43.4	59.3	72.1	80.6
(Uranium Revenues)	(18.0)	(24.1)	(24.6)	(13.0)

(Table 2.3 continued)

	1982	1983
	(in billions of CFA francs)	
Tax Revenue	61.6	67.0
Taxes on Income and Profits	12.6	13.5
Taxes on Goods and Services	17.0	17.5
Taxes on International Trade	28.2	32.1
Stamp Taxes	3.8	3.9
Non-tax and Other Revenues	32.3	14.2
Total Revenue	93.9	81.2
(Uranium Revenues)	(11.0)	(N.A.)

Source: Toh, 1983

has increased from 2.3 billion CFA francs in 1978 to 19.9 billion CFA francs in 1983; in percentage terms, the amortization of public debt has risen from 5 percent of government expenditure in 1978, to nearly 25 percent of public expenditure in 1983. Second, the percentage of budgetary expenditure devoted to investment has been declining since 1980, and the current economic crisis is most clearly reflected in the reduction of nearly 75 percent in proposed investment expenditure from 1982 to 1983. This proposed reduction represents a belated accommodation to fiscal reality. The realized investment expenditure has declined significantly in each of the last two years, from 24.6 billion CFA francs in 1980 to 13.0 billion in 1981 and to 10.4 billion CFA francs in 1982.

These two aspects of recent budgetary policy in Niger are both attributable in large part to the recent decline in uranium revenues and both have serious implications for Niger's future. The heavy burden of public debt imposes further stringent limitations on flexibility in public policy, which is already strictly constrained by declining levels of public revenues. In addition, it practically rules out the possibility of future borrowing for any purpose in the near term, as the government of Niger is clearly nearing the limit of its ability to repay its present obligations. The associated reductions in investment expenditure, while understandable and probably inevitable in the short term, nevertheless constrain the possibilities for future economic growth by postponing the investments in sectors that make future growth possible.

These economic and financial difficulties suggest that the government of Niger may find it hard to maintain the levels of programs and services that it now provides in the coming decade. In the following section of this chapter, we examine levels of public expenditure in the human resources sector. We will attempt to determine what are consequences of Niger's present problems for the nation's efforts in education and training.

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TABLE 2.4

Budgetary Expenditure

Fiscal Years (October 1 - September 30)

	1978	1979	1980	1981	1982	1983
	(in billions of CFA francs)					
Current Expenditure	30.4	37.4	46.1	54.6	67.9	74.2
Public Debt	2.3	3.3	4.2	8.7	16.6	19.9
Wages and Salaries	10.9	12.8	18.3	19.1	23.1	23.6
Materials and Supplies	8.7	12.0	12.1	13.4	14.7	16.8
Subsidies and Transfers*	8.5	9.3	11.5	13.4	13.5	13.9
Investment Expenditure	13.0	21.9	26.0	26.0	26.0	7.0
Total Budgetary Expenditure	43.4	59.3	72.1	80.6	93.9	81.2+

*This category includes expenditures not included in wages and salarie or materials and supplies.

+Actual budgetary expenditures in 1982 were approximately CFA 73 billion and the expenditure figure in 1983 is expected to fall below the projected CFA 81.2 billion.

Source: Toh, 1983

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2.2.3 Expenditures for Human Resources Development

A number of ministries in the Nigerien government share the responsibility for human resources development expenditures. The Ministry of Labor and the Civil Service sponsors programs in management training, the Ministry of Rural Development is responsible for the training of agricultural extension agents, and the Ministry of Health and Social Affairs directs efforts in health education. However, by far the largest shares of programs and of expenditures in human resources develoment are under the authority of the Ministry of National Education and the Ministry of Higher Education and Research. Therefore, the analyses that follow give principal attention to the budgets of these ministries. In the conclusion of this section some attention is given to the broader context of human resources development in Niger.

The Ministry of National Education manages Niger's formal educational system at the primary and secondary levels, including the Franco-Arabic schools at the primary level and technical and normal schools at the secondary level. The Ministry of Higher Education and Research is responsible for education at post-secondary levels, including the university, various training and research institutes, and foreign study. Because of this division of responsibility, and because of differences in the character of its respective budgets, the expenditures of the two Ministries will be discussed separately.

2.2.3.1 Primary and Secondary Education

The fiscal capacity analysis will project the revenues available to an agency or organization in a given period and the recurrent costs of present and proposed programs over the same period. This will allow assessment of the capacity of the organization to meet its present financial commitments or to take on new ones. The utility of the analysis thus depends to a very large extent both on the quality of the baseline data from which the projections are made and on the character of the assumptions about future economic growth and government revenues that guide the projections.

The baseline data on which the present analysis is based are presented in Table 2.5. The table provides information on current enrollments in primary and secondary schools and

TABLE 2.5

Baseline Educational Data, 1982-83

Enrollments	
Primary School	253,065
Primary Enrollment Rate	21%
Secondary School	43,830
CEGs	37,920
Lycees	4,140
Normal Schools	841
Technical Schools	924
Rates of Growth	
Population	2.8%/yr.
Primary Enrollments	6.6%/yr.
Secondary Enrollments	14.0%/yr.
Instructional Expenditures (in millions of CFA francs)	
Primary Level	5,567.4
Secondary Level	3,506.4
As % of MEN budget	84%
Pupil/Teacher Ratios	
Primary	42/1
Secondary	42/1
CEG	44/1
Other	33/1
Cost/Pupil (1982)	
Primary	22,000 CFA/yr.
Secondary	80,000 CFA/yr.

on recent rates of growth in enrollments at both levels. The table also presents some information on instructional expenditures and pupil/teacher ratios by educational level, which provides a basis for estimates of per pupil costs in the Nigerien educational system. These estimates are in turn used to project the financial obligations of the Ministry of National Education in the coming decade on the basis of four alternative sets of assumptions about the future development of the system. The essential elements of these four sets of assumptions are described in Table 2.6.

Table 2.6

Alternative Patterns of Growth in the Nigerian Educational System, 1984-1993

	Enrollments	Costs	Projected Instructional Expenditures 1984 - 1988	Projected Instructional Expenditures 1989 - 1993
			(millions of CFA francs)	
Alternative I	2.8%/yr	Constant	49,325	105,954
Alternative II	Primary: 6.6%/yr Secondary: 14%/yr	Constant	60,281	157,763
Alternative III	2.8%/yr	2%/yr	52,422	118,871
Alternative IV	2.8%/yr	5%/yr	57,390	141,482

Alternative I assumes that the objectives of the proposed Programme Interimaire de Consolidation will be adopted and maintained through the coming decade. The plan calls for the maintenance of present enrollment rates and educational programs. Alternative I thus assumes that real per pupil costs will remain constant between now and 1993, and that enrollments at both primary and secondary levels will grow only as far as the relevant age cohort.

Alternative II assumes that urbanization and other sorts of social change will continue to increase the social demand for education and that enrollments at both primary and secondary levels will continue to rise at the rates that

have been maintained in the past five years as a result. Alternative II also assumes that present instructional costs will be maintained at a constant level in the coming decade.

Alternative III assumes that enrollments will grow only at the rate of population growth, but that the real costs of instruction will increase by two percent a year. This is largely because of the progressive upgrading of the teaching force that is likely to occur in the coming decade, as new graduates from the normal schools and the School of Pedagogy at the University are recruited, and as the present teaching force acquires more seniority.

Alternative IV, like Alternative III, assumes that enrollments will increase at the rate of population growth, but assumes as well that the real costs of instruction will increase by five percent per year. Such increases might come about either as a result of the overproduction of teachers in Niger's normal schools in the coming decade and the consequent reduction of pupil/teacher ratios in the educational system. Or they may come as a result of the implementation of the fall program of reforms put forward at Zinder, including the addition of "practical subjects" to primary and secondary school curriculum and the extension of the basic education cycle to nine years.

An implicit assumption in all of these alternative projections is that the marginal cost of an additional student in Niger's educational system is equal to the average capacity in existing schools. The marginal cost of additional students may be considerably less than average cost, and may even approach zero. In other instances, however, (e.g. in urban areas where schools are already filled to or beyond capacity) the marginal cost of expansion in enrollments may be such that expansion is "most" likely to occur in these latter, high marginal cost areas. The assumption that marginal cost is equal to average cost is probably justified in the aggregate, and may even underestimate the real costs of expansion to some extent.

Estimates of the revenues that will be available to the government of Niger and to the Ministry of National Education in the coming decade were calculated, based on three alternative sets of assumptions about economic growth in Niger. For convenience, these sets of assumptions are designated as "Pessimistic," "Optimistic," and "Most Likely." Our principal concern here is with the revenues that will be available to the MEN, (Ministry of National Education).

The quantity of resources available to the MEN in the years between 1983 and 1993 depends in part on the total quantity of resources available to the government of Niger, and in part on the percentage of government revenue that is allocated to the Ministry. Both of these determinants are taken into account in the estimates of future revenues.

The "Pessimistic" alternative assumes that in the near term the real value of Nigerien government revenues will continue the decline that began in 1981, falling by an additional 25 percent between 1983 and 1987. It is further assumed that this period of adjustment will be followed by a period in which there is no growth in the real value of government revenues, and that only in the late 1980s will the resources available to the government begin to approach the level of the late 1970s. This alternative also assumes that the weight of Niger's public debt and other financial obligations will prevent the percentage of national revenues allocated to the Ministry of National Education from rising above its present level of aproximately 15 percent.

The "Optimistic" alternative assumes that the government of Niger will succeed in maintaining the real value of its revenues in the difficult years immediately ahead, and that public revenue will begin to increase at an accelerating pace in the late 1980s and after. This alternative also assumes that the commitment of the Nigerien government to the eucational system is sufficiently strong that the share of public revenues allocated to the Ministry of National Education will be increased from 15 to 17 percent.

The "Most Likely" projection assumes that there will be a real decline in government revenues in the next several years, but that the decline will be less steep than that anticipated in the "Pessimistic" alternative. As in the "Pessimistic" alternative, it is assumed that this period of decline will be followed by a period in which the value of public revenues is maintained but not increased, and that growth in the value of the resources available to the government of Niger will resume only in the 1990s. The "Most Likely" alternative also assumes that the present allocation of 15 percent of public revenues to the Ministry of National Education will be maintained in the short term, but that as Niger turns the corner on its debt-service obligations the percentage of government resources allocated to the educational system will rise from 15 to 17 percent.

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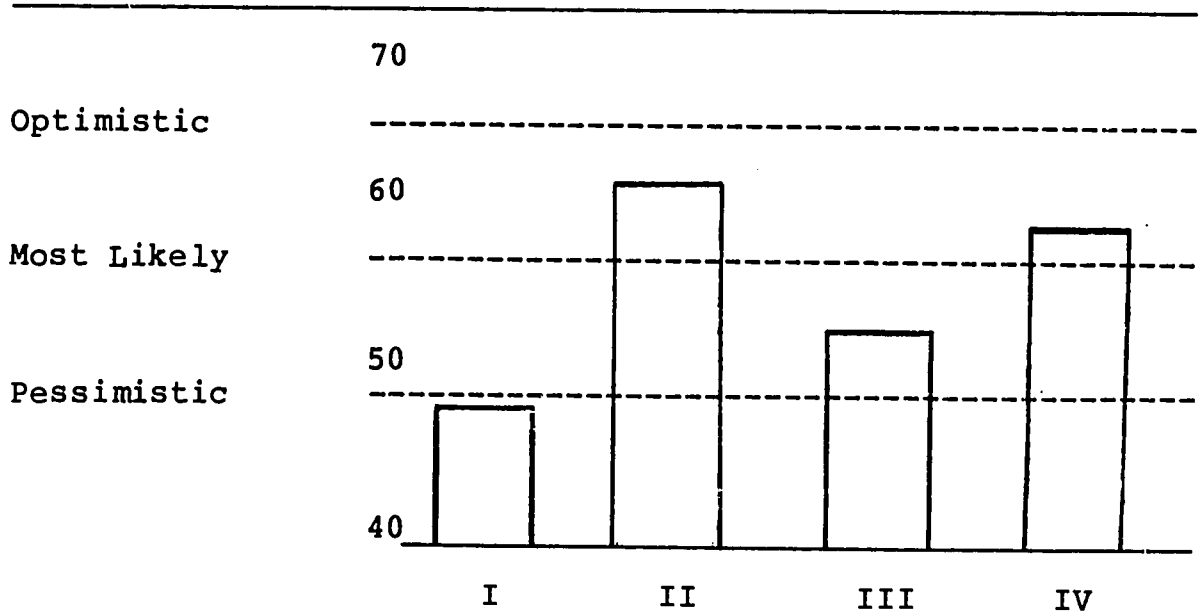
Figures 2.1 and 2.2 present comparisons of the four alternative estimates discussed above for future recurrent costs in Niger's educational system with these three sets of assumptions about the quantity of revenue that is likely to be available to the Ministry of National Education in the coming decade. Figure 2.1 presents the comparisons for the years between 1984 and 1989; Figure 2.2 evaluates the adequacy of Ministry revenues to likely costs over the next ten years.

These figures suggest that the maintenance of present rates of growth in the primary and secondary educational systems is beyond the means of the Nigerien government in the next ten years, and thus that the rate of primary school enrollment is likely to remain in the vicinity of its present level of 21 percent for the foreseeable future. Figures 2.1 and 2.2 also suggest, however, that if government revenues exceed the levels projected in the "pessimistic" estimate above, the Ministry of National Education should be able to bear the recurrent cost burden of its present programs, though perhaps with some difficulty. If the real costs of instruction can be held constant or reduced (i.e. if the nominal rate of growth in educational expenditures can be held below the rate of inflation) the objectives set forth in the Programme Interimaire de Consolidation of maintenance of the enrollment rate at 21 percent with no reduction in educational quality is attainable.

Figure 2.1

Comparison of Revenues and Instructional Costs, 1984-1989

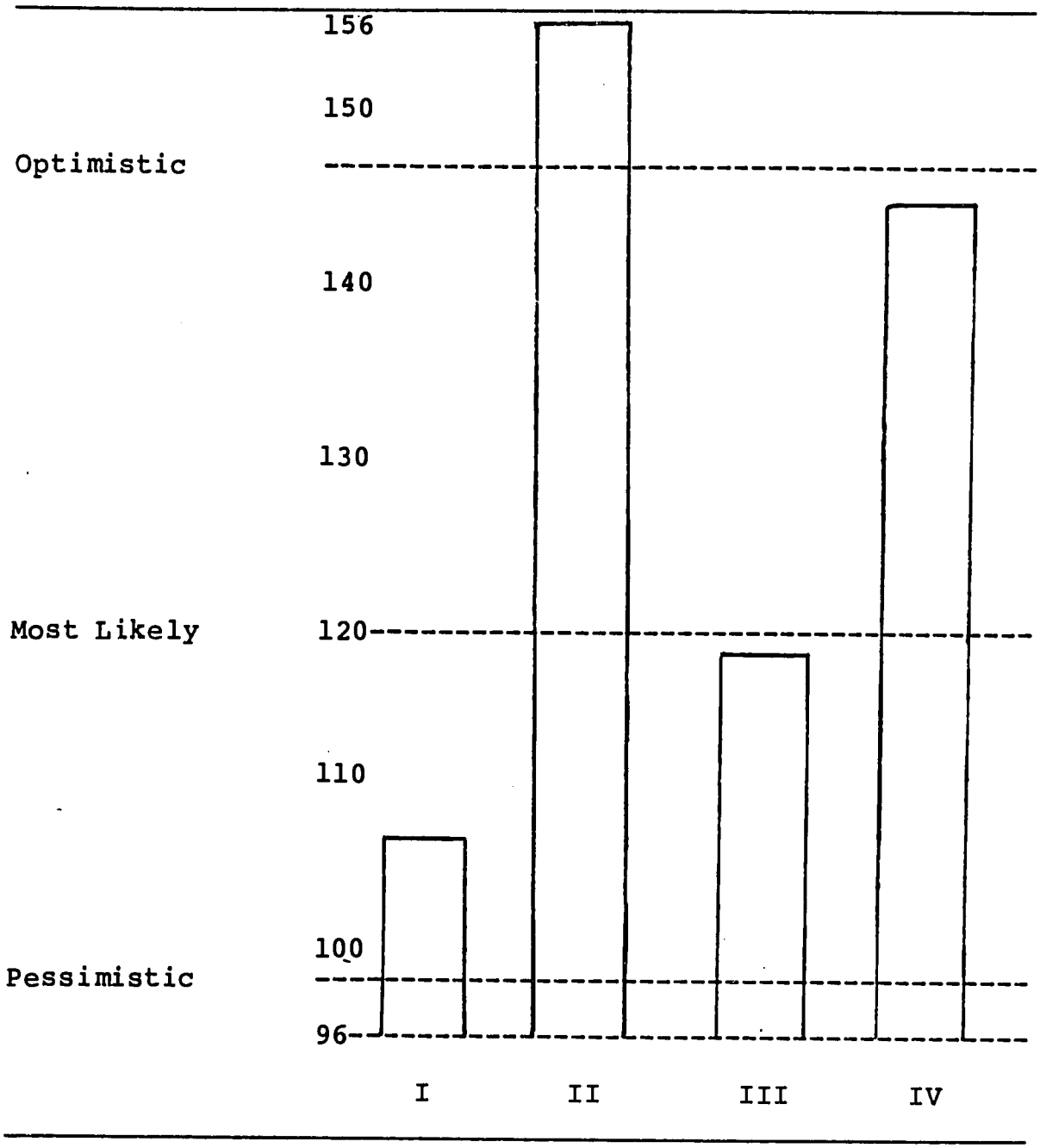


Source: Sector assessment team estimates

-53'

Figure 2.2

Comparison of Revenues and Instructional Costs, 1984-1993



Source: Sector Assessment team estimates

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Uncontrolled expansion of enrollments, ill-considered educational investments, or significant increases in instructional or other costs would put the financial stability of the system very much at risk. Even moderate annual increases in educational costs will overwhelm the fiscal capacity of the Ministry unless public revenues exceed the "Most Likely" projection above.

There are reasons for both optimism and pessimism in the assessment of the likelihood that the Nigerien educational system will be able to maintain its present level of services in the coming decade. On the positive side, the national government has shown an unusual willingness to consider and debate the sorts of strategies that will be necessary if growth and improvement in the system are to be possible in the foreseeable future, and to undertake some difficult and unpopular actions in order to reduce educational costs. The Zinder Declaration announces the government's intention to encourage private initiatives in education and to decentralize some educational costs to parents and local authorities. However, the mechanisms by which these goals are to be accomplished are not yet specified. The closing of the dormitories and the rationalization of scholarship policies at the secondary school level suggest that the government of Niger is prepared to make the difficult choices that will be required if the educational system is to be improved or even maintained in the coming decade.

On the negative side, the expenditures of the Ministry of National Education increased substantially between 1982 and 1983 by nearly four percent in real terms. Upward pressures on costs are likely to continue in coming years because of rising enrollments and the upgrading of the teaching force, among other things. Unless these pressures can be reined in by the government the consequences for Niger's educational system are likely to be severe.

2.2.3.2 Higher Education

The higher educational system is considerably more complex than the primary and secondary systems. Training at the post-secondary level is carried on both within Niger and abroad, and administrative responsibility for the sector is divided between the Ministry for Higher Education and Research and the semi-autonomous University of Niamey. The principal responsibility of the Ministry of Higher Education research is the allocation of scholarships

to students; more than 95 percent of the Ministry's annual budget is devoted to this purpose. The University of Niamey is independent of the Ministry, and assumes full responsibility for the functioning of the university, including the payment of faculty and staff salaries, the maintenance of buildings, and the administration of student hostels and dining facilities. These last are, in principle, self-supporting, but the other expenses of the university are covered by an annual subvention from the government.

This subvention has remained for the past three years at one billion CFA francs per year, which means that the real value of the resources available to the university has declined by 20 percent or more since 1980. The decline in the real value of the university's subvention has been met by a number of economic measures, most notably the reductions in the salaries of expatriates on local contracts and the replacement of foreign faculty with Nigeriens. The budget of the Ministry of Higher Education and Research also remained the same in 1981 and 1982, but in 1983 the quantity of resources allocated to student scholarships was increased by 25 percent, from 1.6 billion CFA francs to 2 billion. It is not clear whether this increase represents an increase in the value of the scholarships, a change in the mix of students studying abroad and in Niger, or some combination of the three.

Before undertaking a fiscal capacity analysis of the higher educational system in Niger, two important points should be made. The first is that the system is extraordinarily expensive when the number of people whom it serves directly is taken into account. In 1982 there were approximately 2400 Nigeriens enrolled in post-secondary educational institutions at home or abroad, and the total cost to the government was something over 2.6 billion CFA francs. The average public expenditure per student in higher education was thus more than one million CFA francs. Nearly two-thirds of this amount was given directly to the students in the form of scholarships. It is thus apparent that students in higher educational institutions are a highly privileged group, and from the point of view of equity alone it is essential that the government plan very carefully indeed before expanding enrollments at this level.

Secondly, the available evidence (analyzed in the following section of this chapter) suggests that Niger is likely to face a significant aggregate surplus of university-educated manpower in the coming decade, given the current structure and anticipated growth of the labor force in the wage sector of the economy. At a cost of more than

one million CFA francs per student per year the production of redundant university graduates is a luxury that a country facing Niger's present economic difficulties can ill afford. The resources required to keep additional students in school are badly needed in other sectors of the economy. From the point of view of efficiency as well, then, the government of Niger must proceed very cautiously as it plans the future development of the higher education sector.

The present analysis concerns the fiscal capacity of the Nigerien government to maintain or improve its present programs in the higher education sector. The same alternative assumptions about future growth in government revenues in Niger are used that guided the preceding analysis of the fiscal capacity of the Ministry of National Education. The projections of aggregate government revenues are thus the same in the two analyses. In the present analysis, however, the "Optimistic" alternative assumes that the share of public revenues allocated to post-secondary education will rise to 4 percent of total government revenue, while the "Pessimistic" alternative assumes that it will fall to 2.8 percent. The "Most Likely" projection assumes that 3.5 percent of public revenues will be allocated to the higher education sector, as has on the average been the case in the last several years. Revenue projections for the coming decade based on these alternative sets of assumptions are presented in Table 2.7.

The projection of costs in the higher education sector is more complicated than it is in the primary and secondary education sectors, because of the diversity of programs included in the sector. In the preceding analysis it was implicitly assumed that the marginal cost of expansion in enrollments was equal to the average cost of present enrollments, and it was argued that for several reasons this assumption was probably fairly realistic. Within the higher education sector, however, such an assumption is untenable. While costs in the sector may in some instances increase as a function of rising enrollments, they may also decrease with rising enrollments or rise with declining enrollments, depending on the mix of students by program. If the percentage of students at foreign universities declines, for example, the total cost to the government of education at post-seondary levels may decrease, even if the total number of students increases. Similarly, if the number of students entering relatively costly fields like agronomy and natural science increases, the total cost of the program may rise, even if the level of enrollment is held constant.

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Table 2.7

Revenue Projections, 1984-1993, Constant Projections

(in millions of CFA francs)

	1984	1985	1986	1987	1988	1984-1988	1989	1990	1991	1992	1993	1984-1993
Optimistic (4%)	3251	3251	3251	3316	3382	16,451	3484	3588	3696	3807	3921	34,947
Pessimistic (2.8%)	2048	1843	1751	1751	1751	9,144	1786	1822	1858	1895	1933	18,438
Most Likely (3.5%)	2702	2567	2516	2465	2465	12,715	2465	2515	2565	2616	2669	25,545

Source: Sector assessment team estimates.

For this reason, the assumptions about the future growth of costs in the higher education sector that are used in the present analysis are kept extremely simple. Alternative I assumes that the real cost of programs in higher education will be held constant in the coming decade, while Alternative II assumes that the real cost will increase by 5 percent per year. Any number of possible changes in enrollment levels, government policies, or mix of students could combine to produce either of these outcomes.

Projections of costs in the post-secondary education sector based on these alternative sets of assumptions are presented in Table 2.8.

Table 2.8

Projections of Post-Secondary Education Costs, 1984-1993

(in millions of CFA francs)

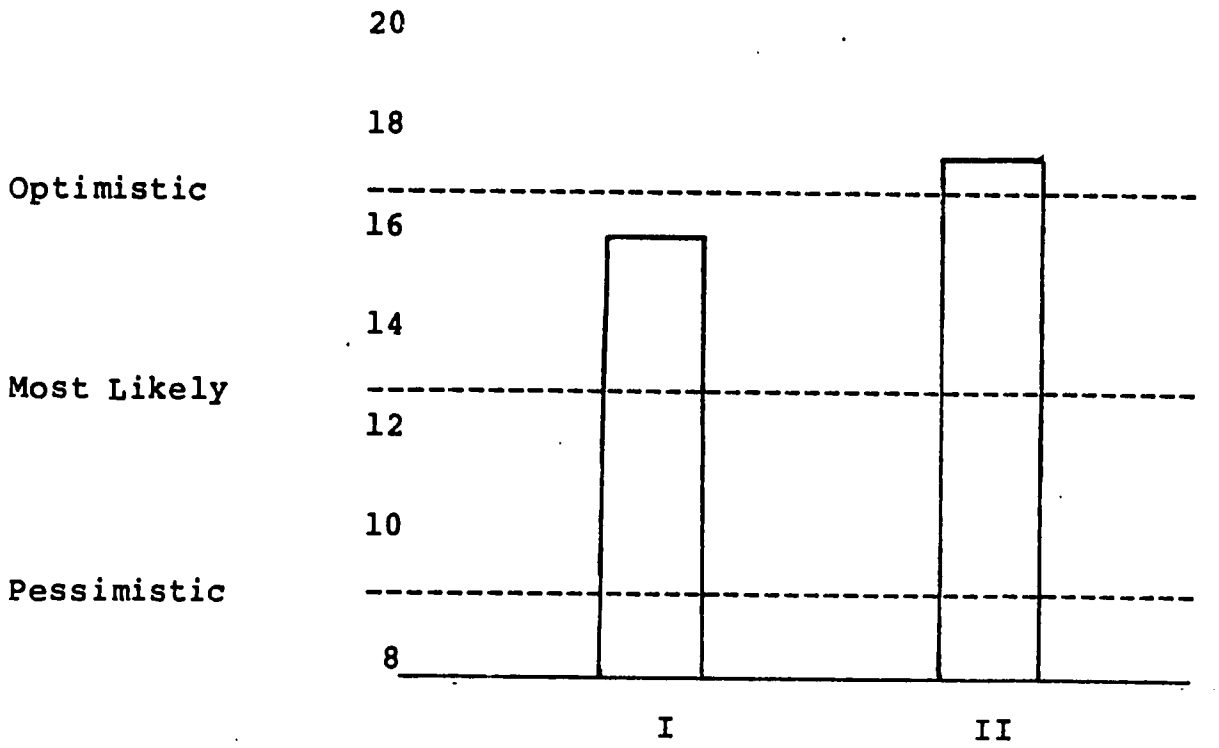
	Costs	1984-1988	1984-1993
Alternative I	Constant	15,336	30,671
Alternative II	+5%/yr	16,948	38,578

These projections are compared to the revenue projections developed above in Figures 2.3 and 2.4.

These figures indicate that the government of Niger is likely to encounter considerable difficulty in maintaining its programs in post-secondary education in the coming decade barring the realization of unexpectedly high levels of government revenue. They suggest that financial constraints will rule out any expansion in these programs in the foreseeable future. Indeed, these figures imply that significant reductions in program costs will be necessary unless the government's present budgetary problems prove less severe and persistent than now appears likely.

Figure 2.3

Comparison of Revenue and Cost Projections, 1984-1988



Source: Sector Assessment team estimates

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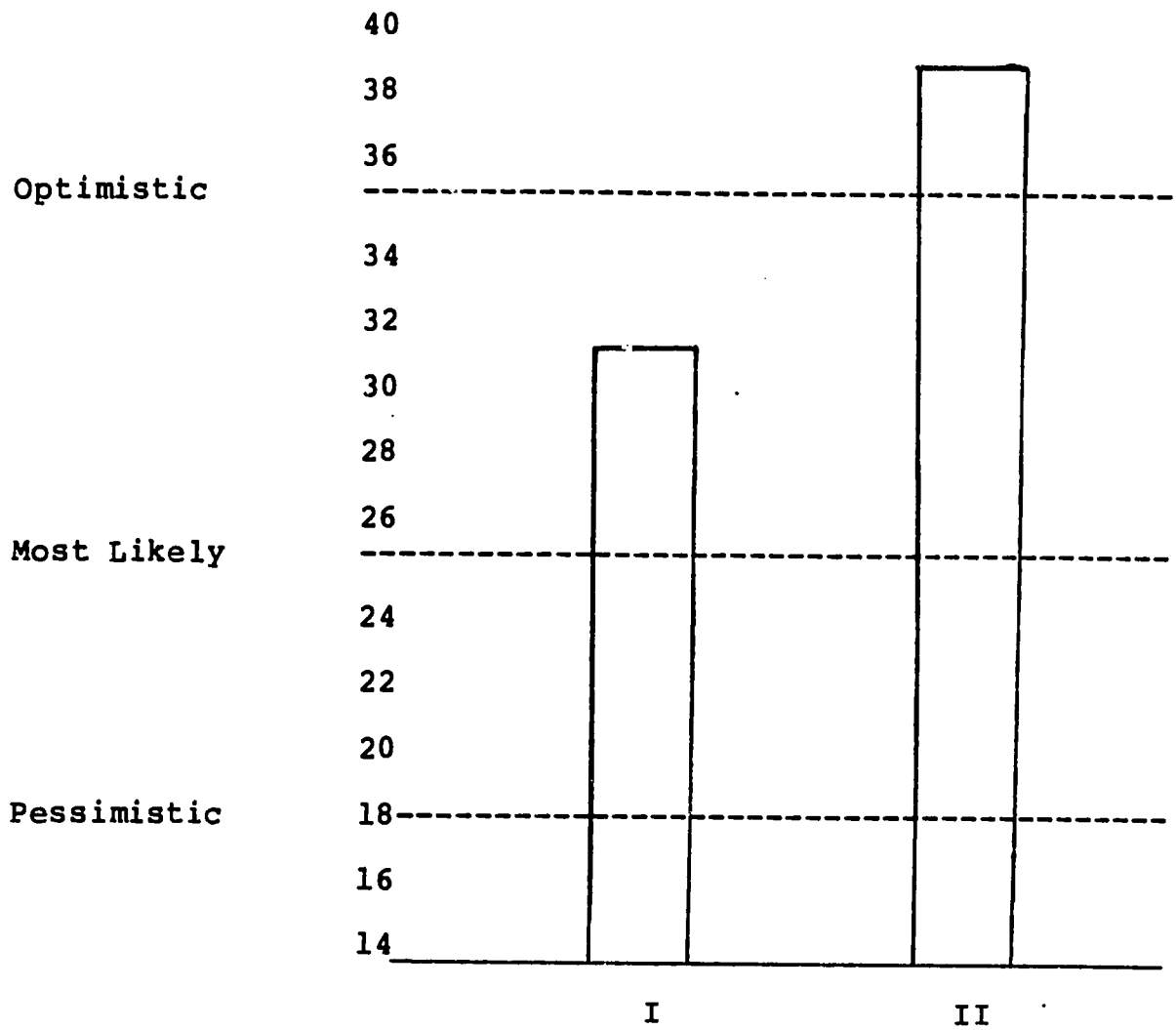
Figure 2.4

Comparison of Revenue and Cost Projections, 1984-1993



Source: Sector Assessment team estimates

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Two points should be made in conclusion. First, as was suggested above, both equity and efficiency considerations argue in favor of reductions in government expenditures in the higher education sector, as do the claims of financial necessity. The allocation of public revenues to higher education, and especially the government's scholarship policy represents an enormous expense to the government which is of direct benefit to only a tiny fraction of the Nigerien population. Unless these expenditures can be shown to be of broader social benefit in contributing to national development objectives, reductions should certainly be made wherever possible.

Second, the government of Niger is clearly cognizant of the need for reductions in public expenditures in the higher education sector, as is shown by the fact that the budget of the University of Niamey has been frozen for the past three years. The budget of the Ministry of Higher Education and Research was also frozen in 1981 and 1982, but it has been increased by 25 percent in 1983. While the government's commitment to austerity and the control of costs in the higher education sector is impressive, it is important that the program of reductions be guided by a careful consideration of the anticipated role of the sector in the achievement of national development goals, so that the reductions do not hinder the future growth and development of Niger. This subject is dealt with in greater detail below, in the section on analysis and recommendations.

2.3 Appropriate Donor Response

The fiscal capacity analysis presented above suggests that improvements in the educational system are unlikely to be achieved in the coming decade in the absence of substantial external support. However, the character of such support must be carefully considered if it is to have a positive and not a negative effect on the system. Specifically, the initiation of projects that entail significant recurrent cost burdens--including the construction of new schools, the introduction of vocational training in primary or secondary curricula, and the installation of additional teacher training capacity without provision for the external assumption of those burdens--is likely to be counterproductive. Projects which offer some hope of improvement in the performance of Niger's schools without imposing additional cash demands on the Ministry of National Education will probably prove most effective in improving Niger's educational system. These projects are like those which are included in the World Bank's Second Education Project, that provide technical assistance and training aimed at improved internal efficiency and financial management. More detailed discussion of these topics is presented in the concluding section of this chapter.

2.4 Human Resources Supply and Demand

In this section of the chapter we undertake a highly aggregative analysis of the likely changes in the Nigerien labor market in coming years and of the anticipated "fit" between the local demand for educated workers and the supply of such workers that is likely to be produced by the Nigerien educational system. The present analysis will be carried out at a rather high level of abstraction, and will examine the condition of the labor market and the educational system in overall terms. In subsequent chapters, however, including agricultural education, teacher education, and vocational/technical training, an effort will be made to present a more fine-grained evaluation of specific human resource needs in particular sectors and of the capacity of existing educational and training institutions to meet those needs.

The present analysis should be interpreted with a great deal of caution, for three principal reasons. The first is the quality of the data on which it is based. No comprehensive survey of the Nigerien labor force has ever been undertaken, and such data as exist are out-of-date, difficult to interpret, and subject to potentially large errors. (This is less true of some of the micro-level data on which the analyses in subsequent chapters will be based.)

The second is that techniques of human resource analyses are inherently unreliable. Projections of human resource needs must assume fixed relationships between jobs and particular levels of formal qualification, but these could quite easily change. In Niger, where educated manpower is particularly scarce, substitutions between different kinds of labor is quite common.

The third reason for exercising caution in the analysis of human resource needs in Niger is the heavy predominance of the public sector in the national economy. The employment practices of public and parastatal enterprises are not commonly responsive to market forces, and the distinction between the "supply" and the "demand" of trained personnel in the public sector is difficult to maintain. The government of Niger employs virtually every Nigerien graduate from the national university each year; the Ministry of National Education employs almost every normal school graduate. As these agencies are responsible for funding and administrering the very institutions from which they recruit their new employees, it is difficult to speak of a labor "market" in these sectors in any real sense. This is also true in the sectors dominated by parastatal

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organizations, though perhaps to a lesser extent. In such circumstances, where public agencies assume responsibility for the employment of the trained personnel that they themselves have produced, the relevance of human resource analysis is subject to question.

Thus, the human resource analysis should be interpreted as offering no more than the roughest sort of indication of possible imbalances in the labor market for trained people. These qualifications take on even greater force in Niger's present economic environment, where the future course of the economy is highly uncertain.

2.4.1. The Nigerien Labor Force

The census conducted in Niger in 1977 set the population of the country at approximately 5.03 million. The growth rate since 1977 has been estimated at 2.77 percent per year, which would indicate a population of approximately 6 million in 1983. Nearly 50 percent of the total are less than fifteen years old. The urban population is small but growing rapidly. Only 12 percent of Nigeriens lived in towns in 1980, but this proportion is expected to rise as high as 20 percent by 1990. Women comprise 50.5 percent of the total population.

The overwhelming predominance of young people in the population of Niger means that the potential labor force represents a relatively small percentage of the total population. The number of adults between the ages of fifteen and sixty-four is approximately 2.8 million or 51 percent of the total. It is estimated that 90 percent of the labor force is employed in agriculture, with an additional 5-6 percent employed in nonformal activities in commerce and services in rural and urban areas. The remaining 4 percent of the labor force is employed in the "modern" wage economy. In 1982 this sector employed approximately 60,000 people. The present analysis is concerned exclusively with this fraction of Niger's population, and with the opportunities and constraints that will determine its future growth.

2.4.2 The Demand for Educated Personnel

All of the available evidence suggests that the recent decline of the Nigerien economy has brought about a corresponding absolute decline in the level of employment in the country's already small wage sector. While the level of employment in the mining sector appears to have stabilized

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after a sharp decline in 1981, the numbers of the people employed in the closely related industrial and public works sectors have fallen in each of the last two years. In the former case this decline is attributable to a rising number of business failures and to the general contraction of the economy; in the latter case it is due to the abrupt deceleration of the government's program of public investment. As the Nigerien economy shows few signs of rapid growth or even significant recovery in the short and medium term, it is unlikely that the level of employment in the wage section will increase substantially in the next several years, though some additional stabilization may be expected. Such labor market data as are available lend support to this view. They show a significant continuing decline in the number of registered job openings in each year since 1979.

Table 2.9 presents data on the Nigerien wage labor force in 1981, by sector and by qualification. Two aspects of the table deserve particular emphasis. First, and most important, is the small size of the wage labor sector relative to the size of the total labor force; the 62,383 persons employed in this sector represent barely 4 percent of the working population of Niger. Second is the predominance of public employment in the wage sector. The employees of the civil service comprise nearly 40 percent of the total, and parastatal enterprises under the partial control of the government predominate in the other sectors as well.

TABLE 2.9
Structure of the Nigerien Wage Labor Force, 1981
by Sector and Qualification

	N_1 & N_2	N_3 & N_4	N_5	N_6	TOTAL
Civil Service	998	6,195	6,448	10,993	24,634
Public Works/ Construction	143	430	4,447	9,320	14,345
Services	623	566	4,700	5,436	11,325
Industry	160	417	2,310	3,530	6,417
Mines	113	736	1,755	3,058	5,662
TOTAL	2,037	8,344	19,660	32,342	62,383

Source: ILO, 1981

There are no data on the Nigerien labor force more recent than those from 1981, except in the public sector. The data on employment in the public sector from March 1983 by qualification are presented in Table 2.10.

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TABLE 2.10

Structure of Public Sector Employment, 1983, by Qualification

N_1 & N_2	N_3 & N_4	N_5	N_6	TOTAL*
1,757	8,936	5,656	10,475	26,824

* TOTAL excludes traditional chiefs and employees on short term contracts.

Between 1981 and 1983 the level of public sector employment increased by slightly more than 4 percent per year, but it is interesting to note that all of the increase occurred in the upper employment categories, while the number of people employed in the lower categories registered an absolute decline. The number of civil service employees in senior management positions nearly doubled, while the number in mid-level management positions increased by more than 40 percent. This trend indicates the continued annual absorption by the public service of large numbers of university and lycée graduates. It may or may not represent the satisfaction of public sector "needs" for trained personnel, as measured by increased efficiency or effectiveness in the operation of the civil service. It also indicates a decisive contraction of the employment opportunities available to those with less than a full secondary education, and a substantial increase in the future personnel costs of the Nigerien government.

The purpose of human resource analysis is the evaluation of the "fit" between a nation's requirements for trained personnel and the capacity of the national education and training system to produce such human resources. The interest is therefore in the discovery of potential bottlenecks in the economy where shortages of particular kinds of labor could slow or halt the progress of economic growth. The primary concern of human resource analysis is thus with the availability of highly-trained workers in sufficient quantity to meet the present and anticipated requirements of the national economy. The supply of unskilled or minimally skilled workers is assumed to be infinitely elastic at a single, low price, in the Nigerien case.

Our concern, then, is with the ability of Niger's secondary schools and national university to produce the skilled personnel necessary to sustain the process of economic growth in Niger.

As has been noted above, the past few years have seen a contraction in the wage sector of the Nigerien economy. It is likely, however, that this contraction has been most pronounced in the lower employment categories within the sector, as laborers and minimally skilled workers have lost their jobs in construction and public works. This contraction at the lower levels of the sector has probably been accompanied by a slowing of growth or stagnation in employment at the higher levels. The estimates of personnel demand below are based on assumptions of two percent annual growth in employment at the lower levels of the wage sector between 1981 and 1985, and five percent annual growth between 1985 and 1990. Annual growth of five percent between 1981 and 1985, rising to ten percent thereafter, is assumed at the upper levels. These estimates are probably on the high side.

The scheme used to establish the equivalence between specific job categories and requisite levels of qualification is that used in the public service; the scheme is presented in Table 2.11.

TABLE 2.11

Scheme of Equivalence between Occupational Position and Educational Qualification

N_1 & N_2	Engineers Senior Management	College or Post-Graduate
N_3 & N_4	Technicians Mid-level Management	General or Tech/Secondary
N_5	Qualified Production Workers Clerical Workers, etc.	First Cycle Secondary
N_6	Unqualified Workers	Primary

Estimates of the demand for workers with various levels of formal qualifications in 1985 and 1990 are presented in Table 2.11. As was noted above, given the depth and likely duration of the economic crisis now facing Niger, these estimates are probably high. The estimates may be readily translated into estimates of anticipated demand for workers with various levels of educational qualification by reference to the scheme of equivalents above. In order to evaluate the extent to which these anticipated personnel requirements will pose an obstacle to economic growth in Niger, however, it is necessary to estimate the supply of educated people with various levels of qualification that will be produced by the country's educational system.

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TABLE 2.12

Estimates of Nigerien Human Resource Needs by Level of qualifications, 1985 and 1990*

	1981	1985		1990	
N_1 & N_2	2,037	2,476	+ 439	3,987	+ 1,950
N_3 & N_4	8,344	10,142	+1,788	16,334	+ 7,900
General	7,259		+1,556		+ 7,397
Technical	1,085		+ 232		503
N_5	19,660	21,281	+1,621	27,160	+7,500
N_6	32,342	35,008	+2,666	44,680	+12,338

* Within the midlevel management/technical category (N_3 & N_4), separate estimates of the demand for general secondary and technical graduates were prepared, on the assumption that 50 percent of employment opportunities in the public sector would require workers with technical training.

2.4.3. The Supply of Educated Personnel

The data that would be required for a cohort analysis are unfortunately not available, but data on the structure of school enrollments by grade level for 1983 were used to estimate the probable flow of students through the Nigerien educational system in the coming decade. For the purposes of this analysis we assume that the government will control the rate of increase in school enrollments, and that both enrollment rates and transition rates from one level of schooling to the next will remain constant. For both empirical and methodological reasons, this analysis is likely to underestaimte the numbers of students who will achieve a given level of educational qualification.[4]

The data suggest that the flow of a single cohort of students through the Nigerien educational system will yield an approximate output of workers with levels of qualification as indicated in Table 2.12.

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Of the 1,000 graduates of secondary schools (both general and technical), perhaps 350 will go on to complete university or other post-secondary training in Niger or abroad and approximately one third of these will enter teaching.

TABLE 2.13

School Leavers and the Nigerien Workforce, 1981

No schooling	135,000
Some Primary School	35,000
Terminal Primary School Graduates (CFEPD)	2,000
Some First Cycle Secondary School	3,000
C.E.G. Graduates (BEPC)	4,000
General Secondary Graduates	800
Technical Secondary Graduates	200*

* This estimate of the annual output of technical graduates in Niger is quite low because it excludes those who complete their studies at several specialized training institutions maintained by other Ministries within the Nigerien government to prepare workers for employment in specific sectors. See the chapter on vocational/technical education.

Source: Ministry of Education

If it is assumed that the number of graduates at each level of the formal educational system will remain constant in the coming decade, then we obtain the following estimates of the supply of personnel with various levels of qualification in 1985 and 1990 (See TABLE 2.14).

As the numbers of students completing given levels of the educational system have in fact shown an increase since 1980, these data undoubtedly underestimate the future supply of trained personnel in Niger.

Having developed estimates of the supply of educated personnel that will be produced by the Nigerien educational system and of the demand for educated workers that is likely to be encountered in the Nigerien economy in the coming

TABLE 2.14

Personnel Supply from 1985 to 1990

		Base per year	1985	1990
N_1 & N_2	University	350	1,400	3,150
N_3 & N_4	General or Technical			
	Secondary	1,000	4,000	9,000
	General	800	3,200	7,200
	Technical	200	800	1,800
N_5	Lower Secondary	4,000	16,000	36,000
N_6	Primary	2,000	8,000	18,000

Source: Sector assessment team estimates

decade, it is a simple matter to compare the estimates to determine whether there are any potential imbalances in the Nigerien labor market which might pose an obstacle to the country's future economic growth.

2.4.4. Human Resource Supply and Demand Analysis

Table 2.15 presents projections of the supply of and the demand for workers with various levels of educational qualifications in 1985 and 1990. In examining the data, it should be recalled that the projections have been prepared in such a way that the supply of educated personnel is likely to be significantly underestimated because no expansion in the quantity of enrollments or outputs at various levels of the system has been incorporated in the estimates. Also, the demand for educated workers is likely to be overestimated because the assumptions governing the projection of future employment growth in Niger are extremely optimistic. If any shortages of educated personnel are in prospect for Niger, the present analysis would thus almost certainly bring them to light.

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TABLE 2.15

Supply and Demand Estimates of

Educated Personnel in Niger, 1985 and 1990

	Demand	Supply	Shortage/Surplus
		1985	
N_1 & N_2	439	1,400	+ 961
N3 & N_4	1,798	4,000	+ 2,202
General	(1556)	3,200	(+ 1,634)
Technical	(232)	800	(+ 568)
N_5	1,621	16,000	+14,379
N_6	2,666	18,000	+ 5,344
		1990	
N_1 & N_2	1,950	3,150	+ 1,200
N_3 & N_4	7,990	9,000	+ 1,010
General	7,397	(7,200)	(- 197)
Technical	539	(1,800)	(+ 1,207)
N_5	7,500	36,000	(+28,500)
N_6	12,338	18,000	(+ 5,662)

In fact, however, the data in Table 2.13 suggest rather forcefully that the present system of education in Niger will be more than adequate to the country's needs for educated personnel in the wage sector in the foreseeable future. Indeed, the data suggest that Niger is likely to face an employment crisis similar to those faced in other developing countries in the coming decade, as increasing numbers of educated or partly educated school leavers attempt to find jobs in a shrinking or stagnant "modern" sector. There is a considerable body of anecdotal and other evidence which indicates that for the first time the current cohort of BEPC (intermediate level secondary) leavers is experiencing a great deal of trouble in finding jobs, and there is every reason to suppose that this problem will extend itself to the upper secondary level and even to arts and social sciences graduates from the university before Niger's present economic problems are resolved.

Several comments should be made in conclusion. The first is simply that the present analysis is highly aggregative, and provides only the broadest possible view of the market for educated personnel in Niger. It is certainly the case that there are serious shortages of particular skills in the Nigerien economy, and it is likely that the "fit" between the skills possessed by the recent graduates of the Nigerien educational system and the requirements of the jobs they fill is often poor. The present analysis does not address this question; it simply indicates that at the aggregate level no shortages of educated personnel are likely to be encountered in Niger in the foreseeable future.

An exceptionally careful and detailed attempt to examine the "fit" between the specific skills available in the Nigerien economy and the skills required for continued economic growth has been presented in the study prepared by the Ministry of Planning in association with the European Economic Community. This study provides a far more detailed analysis of Niger's specific training needs and the country's ability to meet them than has been attempted here. In subsequent sections of the present study, however, some effort will be made to present more detailed analyses of the demand for and supply of specific skills in particular sectors of the Nigerien economy.

It should also be noted that the present analysis (and indeed the Ministry of Planning study as well) deals only with a relatively small sector of the Nigerien economy. The overwhelming majority of Nigeriens are sustained by agriculture and by "traditional" commercial and service

activities in urban and rural areas, and they will continue to be so in the future. While the importance of the "modern" wage sector for the economic growth of Niger and for the financial and political stability of the government should not be underestimated, it is nevertheless important to recall that this sector is of relatively little consequence to the present or future well-being of most Nigeriens.

Third, the "employment crisis" referred to above should be assigned its due importance, and not more. Niger is unusual in that the problem of "educated unemployment" has emerged relatively late in the process of development. However, the problem is endemic in Africa and in other regions as well. The consequence in Niger as elsewhere is likely to be credential inflation, where the qualifications required for particular jobs are up-graded in response to the availability of more highly educated candidates in the applicant pool. A further consequence is likely to be widespread unemployment especially among junior secondary school graduates, as the difficulties of finding work in the urban wage sector continue to mount. Those prevented from obtaining employment in the "modern" sector are likely to return finally to those economic activities that have sustained their parents in the past, in rural areas or in the urban informal sector. The economic effects of this process are difficult to evaluate, although the opportunity cost of producing redundant university graduates is extremely high. However, the political consequences may be severe, as individual and family expectations regarding wage sector employment are increasingly frustrated.

With regard to the prospective surplus of high level personnel in the Nigerien labor market, two points should be made. The first is that the process of Nigerization may offer some scope for the absorption of the surplus. In 1978 more than 70 percent of middle and senior level managers and technicians in Niger were foreigners. It is important to recognize, however, that in the replacement of expatriate with local workers the "fit" between the requirements of particular jobs and the skills possessed by university or secondary school graduates may be less than perfect. Thus, while localization may represent a viable strategy for some employment creation in Niger in the future, it is essential that the process be carefully planned in consultation with the private and parastatal sectors in order that those workers who replace foreigners receive appropriate training, on-the-job or elsewhere. (See Chapter 11.0 on Nigerization.)

The second point is that the government has up to the present been both the employer of preference and the employer of last resort for university graduates, absorbing nearly all of those completing their studies at the national university or abroad in most years. This situation cannot possibly persist. The budgetary constraints now confronting the government must strictly limit the numbers of upper level, highly paid civil servants that the various ministries can add to their payrolls in the coming decade. It is questionable whether the rapid expansion of high level government employment accompanied by contraction in employment at the lower levels will make a positive marginal contribution to government efficiency. A large proportion of those entering government service are graduates in law, arts, and letters who lack training in management and the other skills relevant to the performance of their duties. It is therefore essential that some provision be made for the reorientation of university students into disciplines where their skills will find a market (e.g. agronomy, engineering) and into careers other than government service. This question is dealt with in more detail below.

The present analysis has two principal implications for government and donor policies in the areas of education and human resources development. First, the analysis suggests that Niger's aggregate human resource requirements will be satisfied by the present capacity of the educational system for the foreseeable future. Therefore, public and external efforts to augment the country's human resources should be aimed at the provision of those specific skills in administrative, scientific, and technical areas that are essential for the continued development of the country rather than toward the production of more highly trained personnel in the aggregate. Second, the analysis indicates that the "modern" wage sector of the Nigerien economy is likely to remain relatively small for some time. This suggests the need for greater efforts to improve conditions and increase productivity in agriculture and the "traditional" commercial and service sectors through improvements in primary education and programs in literacy training and agricultural education. This may be the best way of aiding the Nigerien economy and of improving the lives of the majority of the people.

2.5 Analysis

The preceding analyses point toward a rather bleak and in some ways paradoxical conclusion: although Niger is one

of the least advanced countries in Africa on virtually all measures of human resources development, the financial and economic situation of the country is such that major new investments in the human resources sector are not called for at this time. The economic and political future of the country is sufficiently uncertain that large infusions of resources in the short term are likely to be counter-productive. The fiscal and administrative capacities of the agencies responsible for the education sector are stretched to their limits now. The "modern" sector of the economy will be unable to absorb the present output of the secondary and higher education sectors for the foreseeable future. New initiatives are thus likely to create more problems than they solve.

Instead of new resources or new programs, what is needed now is a major effort to maintain and consolidate present programs while working to adapt existing structures more closely toward national needs. Government and donor activities should thus be aimed at the more efficient use of current resources, rather than toward the establishment of new institutions or the expansion of the present system.

This view is consistant in most respects with the view of the government of Niger, as expressed in the Programme Interimaire de Consolidation (PIC) and the Zinder declaration of March 1982. In keeping with the government's realistic evaluation of the present and future economic and fiscal difficulties that Niger faces, both of these documents call for the consolidation, and reorientation of existing programs rather than for expansion or the development of new institutions. In two crucial respects, however, the present analysis differs from that presented by the government of Niger.

In both the Zinder Declaration and the PIC, the government calls for expansion in enrollment in the first level of secondary school, by means either of elimination of the CFEPD examination and the extension of the basic education cycle to nine years or of an increase in the pass rate from the last year of primary to the first year of secondary. In support of this position the PIC cites the enormous shortage of trained personnel ("les deficits encore enormes en cadres"). The analysis above, however, suggests that there is a surplus of first-level secondary school graduates.

The expansion of enrollment at this level is thus likely to be costly for the government, and to contribute little to the development of Niger.

Expansion at this level will also reduce the resources available to those sectors where expansion can be justified, on grounds both of equity and efficiency. These are the primary school system and the nonformal educational system, which are the sectors that may provide education and training that is of immediate and lasting benefit to the majority of the population. No expansion in the human resources sector at any level is likely in the short term. As expansion becomes possible in the future through reductions in costs, donor assistance, or economic recovery, efforts should be concentrated here rather than the higher levels of the system. At post-primary levels government and donor activities should emphasize increased efficiency in the use of present resources as well as a closer articulation between the outputs of Niger's education and training system and the real needs of the economy.

2.6 Conclusions

In summary, the fiscal capacity and manpower analyses leads to four major conclusions.

Conclusion 1. There will be little economic growth in Niger for the next decade. The government will have limited revenues and will have to reduce its levels of expenditure.

Conclusion 2. No expansion of the primary and secondary education systems is possible, given likely future revenues. The current enrollment rate can be maintained only if instructional costs are reduced or held constant.

Conclusion 3. The government cannot maintain its current post-secondary programs. Given the likely revenue projections, the government will have to reduce expenditures at this level.

Conclusion 4. There will probably be an oversupply of educated manpower in the future at all levels.

2.7 Recommendations

First Priority - Increase efficiency of primary and secondary education.

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Recommendation 1: Detailed data on expenditures by category and institution should be collected and analysed. To be able to reduce or at least contain costs, it is essential to improve the government's knowledge of proper financial control and budget-making.

Recommendation 2: Create a local human resource planning authority. An office is required which will collect and analyze data and which will have the authority to choose priorites based upon these analyses. It will have data on actual demand in the public sector, on costs and on economic conditions. It will have the capacity to weigh the competing demands of ministries for additional trained personnel and evaluate this on the basis of economic and financial circumstances. It will have the authority to reject requests if they have no economic justification.

Recommendation 3: Ways should be found to maintain or improve school quality rather than expand the system. If any expansion is possible, it should be at the primary level. The available evidence offers no support for the reforms proposed in the Zinder Declaration to expand the first level of secondary school. In fact, it offers more support for reductions at this level. This could be achieved by raising the grades required for passage on the CFEPD and BEPC examinations.

Second Priority - Reduce and redirect expenditures at the post-secondary level.

Recommendation 5: The budget for the university and for scholarships must be closely examined. There is no evidence to support any overall expansion in university level programs, although there might be a need to shift emphasis from some fields to others. Also, it may be more cost-effective to train students in Niger than to pay the enormous costs of sending them abroad. A program of student loans instead of grants may satisfy the demand for higher education while placing more of the burden on those who will reap the benefits. This will also make a university education more relevant to future labor market conditions.

Recommendation 6: Ways should be found to induce students to enter fields where the skills are more needed in national development. The scholarships policy and the university entrance policy could provide incentives for entering such needed fields as science, medicine or agriculture. This would also have to be linked to labor market demands in which the government plays a large part.

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Third Priority - Donors should concentrate on improving efficiency.

Recommendation 7: The most appropriate role for donors is to aid the improvement of human resource planning, data collection and financial management. In the short term, information is required to allow decisions on the best ways to improve efficiency.

Recommendation 8: If new initiatives are possible, they should be undertaken with extreme care, so as not to increase the recurrent cost burden of the government.

FOOTNOTES

1 "Current market prices" refer to the actual prices paid for goods and services in a given year. Changes in output measured in current prices therefore exaggerate the rate of growth because of the impact of price inflation. The rate of growth in the rural sector of the Nigerien economy has nevertheless exceeded the rate of inflation in most years.

2 It has been estimated that anywhere from 50 to 90 percent of Niger's annual exports of livestock cross the border into Nigeria without being reflected in government trade statistics, and this may be true in other sectors as well, though to a lesser extent.

3 Because of the effects of inflation on the purchasing power of Niger's currency, the real decline in the purchasing power of government revenues is significantly larger than the nominal decline.

4 The reasons for this are two. First, the rate of increase in enrollments at both primary and secondary levels has substantially exceeded 2.8 percent per year in the years since 1950. In addition, the use of cross-sectional data from a single year to estimate future flows of students through an educational system is likely to underestimate the numbers of students who will reach the higher levels of the system.

3.0 Primary Education

3.1 Structure

Primary education in Niger lasts for six years, and is organized into three 2-year units similar to the structure established by the French and still common throughout Francophone West Africa:

1st grade: CI or cours d'initiation
2nd grade: CP or cours préparatoire

3rd grade: CE 1 or cours élémentaire 1
4th grade: CE 2 or cours élémentaire 2

5th grade: CM 1 or cours moyen 1
6th grade: CM 2 or cours moyen 2

Children begin primary school between the ages of six and eight, although there may be some flexibility to these limits at the time of pupil recruitment. They are allowed eight years to complete six classes; thus they may repeat only twice. The final year may be repeated only once. Unless handicapped or otherwise disabled, all pupils pass from the first to the second grade automatically. Attrition occurs between each of the grades two through five, for which the failure/repetition rate is not to exceed 15 per cent according to the prescriptions of the Ministry of National Education (MEN). At the end of the sixth grade, pupils take the CFEPD (Certificat de fin d'études du premier degré or Certificate of Completion of Primary Education) examination which determines their success or failure in primary education. Here the failure/repetition rate is not controlled, and remains around 40 per cent. Success on the CFEPD exam entitles the pupil to the primary school diploma, but not necessarily to education at the secondary level, since available places in the (CEGs) Collèges d'enseignement général or Middle Schools are reserved for those with the highest exam scores. Approximately 20 percent of the cohort originally enrolled in primary school receives a diploma.

The eight-year eligibility limit applies only to public education. Pupils in private primary schools (private education at this level represents less than three percent of total enrollment) may repeat as often as necessary. These pupils, however, may be forced to remain in private secondary education if repetition is frequent because the age limit for entrance into a public CEG is between 12 and 14 years.

At the beginning of the 1982-83 school year there were 253,065 pupils enrolled in Niger's primary schools and 6,028 primary classrooms. This latter figure does not reveal the number of grades or classes being taught because of the widespread practice of twin classes (two education levels in one classroom). Of the 253,065 pupils, approximately four per cent were enrolled in the Franco-Arabic primary system (both private and public). The aggregate level of enrollment for primary school is approximately 21 per cent of the eligible age group (7-12 years).

Table 3.1

ırollments at Primary Level, 1977-80. Public School[1]

	Classes						
	C. I.	C. P.	C. E. 1	C. E. 2	C. M. 1	C. M. 2	TOTAL
'6-77	36,172	37,425	28,375	17,805	16,472	16,072	152,321
							11.2%
'7-78	36,528	36,800	34,812	24,570	17,429	19,196	169,335
							6.7%
'8-79	34,991	37,215	35,076	30,419	21,735	21,269	180,705
							12.8%
'9-80	43,144	38,560	36,191	31,308	27,725	26,768	203,766

ıess than 3 per cent of Nigerien students at the primary level are in vate schools.

rce: MEN

3.1.1. Status and Structure of Franco-Arabic Schools (Medersa)

Franco-Arabic or médersa education in Niger is concentrated at the primary level, with only a few schools at the first cycle secondary level.[1] Franco-Arabic schools are totally integrated into the national education system. The Franco-Arabic curriculum is a lay curriculum which includes the Arabic language, culture, and some Islamic education. Passages and texts from the Koran may be used to teach the language. The goal of the system is to offer a culturally and linguistically enriched curriculum and to provide an alternative for Nigeriens who might otherwise resist purely francophone education.

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In médersas the curriculum is taught in both French and Arabic. The structures of the Franco-Arabic primary school and the Collège d'enseignement général (CEG) are identical to those of their traditional counterparts (i.e., six years of primary followed b the Certifica de fin d'études du premier degré (CFEPD) Franco-Arabic exam, and four years of first cycle secondary (at a Franco-Arabic CEG) followed by the Brevet d'études du Premier Cycle exam). The same rules for repetition and failure apply.

Approximately 43 percent of Franco-Arabic Primary School curriculum is taught in the Arabic language; the remainder is taught in French (see Table 3.2).

Table 3.2

Subjects Taught in the Medersa Curriculum

French Subjects	Arabic Subjects
Language	Language
Oral Expression	Oral Expression
Reading	Reading
Writing	Writing
Physical Education	Physical Education
Arithmetic	Arithmetic
Drawing	-
Recitation	-
-	Singing
-	Science
Sensory Perception	-
Practical Manual Work	-
-	Islamic Education
-	The Koran
Metric System	-
Geography	-
Health	-
Natural Science	-
-	History
-	Grammar
Agriculture	-

Source: Sector assessment team

The CFEPD exam for the médersa pupil is different from the one given to Cours moyen 2 (CM2) pupils of the traditional system. The CFEPD for Franco-Arabic schools contains 50 per cent Arabic language material.

In the two Franco-Arabic CEGs of Niamey and Zinder, the curriculum is divided in a comparable manner between French and Arabic, and the Franco-Arabic BEPC exam for final or third year students is similarly 50 per cent in each of the languages.

3.1.1.1 Administration and Supervision

From the time of their inception in 1958 médersas have been a indistinguishable. All of the relevant statistics for the Franco-Arabic system are therefore aggregated within the regular primary education statistics. In 1974, a separate office for the supervision and administration of Franco-Arabic schools was established. In 1979, this office was transformed into the Department of Arabic Teaching (Direction de l'enseignement arabe), in the same National Education Ministry (MEN).

The DEA was not structurally elaborated until the 29th of September, 1981, when, according to decree number 060/MEN/DEA/DPECS, Franco-Arabic primary education inspectorates were created in Niamey and in Zinder. The Niamey regional office is charged with the supervision of médersas in the Departments of Niamey, Dosso, and Tahoua; the Zinder regional office with the Departments of Zinder, Maradi, Agadez, and Diffa. At the national level the DEA is administered by its Director, Deputy Director, and Secretary. Each of the regional inspectorate offices is administered by a Franco-Arabic primary education inspector, a pedagogical advisor, an official for secondary Franco-Arabic education, and a secretary. In general the inspector is an Arabic speaker, and is responsible for Arabic inspection, and his pedagogical advisor is responsible for French inspection. The regional inspectors are often supported by their traditional school counterparts in the department and arrondissement capitals.

3.1.1.2 The Private Médersa

Since 1980 seven private médersas have been officially recognized by the MEN and incorporated into the Franco-Arabic system. Today approximately 10 per cent (seven out of 63)[2] of the médersas in Niger are private. The Supreme Military Council, through the MEN, has encouraged the establishment of private médersas and facilitates their creation.

The average enrollment figures for the private médersas are twice those of the public ones (approximately 300 to 150 per school). Most private Franco-Arabic schools have been founded by erudite Islamic scholars, Arabists, and learned malams (marabouts). According to the DEA, there are two applications presently pending, both in the Niamey area. The sustained popularity of these schools, and other private schools, represents a trend which may be important in the future of education in Niger.

Existing private médersas are concentrated in the Department of Niamey, with six in the city of Niamey itself, and the one older school, recognized in 1983 in Kiota, Dosso Department. There are no secondary-level private Franco-Arabic CEGs.

Table 3.3

Costs for Médersas in Niamey

CLASS	Trimester 1	Trimester 2	Trimester 3	Annual Total
CI	4,050 CFA	4,050 CFA	4,050 CFA	13,150 CFA
CP	4,050 CFA	4,050 CFA	4,050 CFA	13,150 CFA
CE1	5,550 CFA	5,500 CFA	5,500 CFA	16,650 CFA
CE2	5,550 CFA	5,500 CFA	5,500 CFA	16,650 CFA
CM1	7,000 CFA	6,000 CFA	6,000 CFA	19,000 CFA
CM2	7,000 CFA	6,000 CFA	6,000 CFA	19,000 CFA
Total cost for six years of private médersa education:				97,600 CFA

Source: MEN

3.1.1.3 Access and Equity

Statistics relevant to access and equity in the Franco-Arabic primary system are available only for the beginning of the 1982-1983 school year. It was then that médersa statistics were disaggregated from the traditional primary statistics, and that the DEA began to produce their beginning-of-the year reports (Rapports de rentrée) for each inspectorate region. At the beginning of 1982-1983, the 8,423 pupils enrolled in public médersas represented only 3.3 per cent of the 253,065 enrolled in public primary education throughout Niger. This percentage

increased only slightly to 4 per cent when the 1,803 private médersa enrollment is included.

Except for the concentration of private médersas in Niamey, the public médersas are equitably distributed throughout the country, despite their relative few numbers. There is a médersa in all of the 35 arrondissement capitals (with the exception of the recently-created arrondissement capital of Tchiroverane, for which the médersa remains in Agadez, the former arrondissement capital). The distribution of médersas by Department is shown in Table 3.4.

Table 3.4

Distribution of Médersas by Department

REGION	DEPARTMENT	MEDERSAS	TOTAL
Niamey	Niamey	13	
		5 (private)	
	Dosso	5	
		1 (private)	
	Tahoua	10	
Regional Total			34
Zinder	Zinder	11	
	Maradi	7	
	Diffa	5	
	Agadez	5	
Regional Total			28
NATIONAL TOTAL			62

Source: Sector assessment team

Less than 1/3 of the pupils are girls in both the public and private médersas. The percentage of girls is therefore only slightly lower than the same figure for the traditional primary schools.

Table 3.4

Enrollment by Sex

	Boys	Girls	Total
Public	5,657	2,766	8,423
Private	1,205	598	1,803
Total	6,862	3,364	10,226

Source: MEN

For the Franco-Arabic CEG V in Niamey, the distribution is even less equitable with 541 boys and 121 girls registered for the 1982-83 school year. These figures are not available for the Franco-Arabic CEG Zinder.

3.1.1.4 Constraints

The Franco-Arabic system is presently constrained by an uncertainty with regard to its adaptability to the anticipated educational reform. The use of Arabic in the médersa curriculum can be seen as a kind of reform, begun 25 years ago, which is designed to reorient the curriculum in order to make it more relevant and appealing, linguistically and culturally. The use of national language curricula, as in the ongoing experimental schools, goes even further than the médersa system in this area. Whether or not the Franco-Arabic school will be eclipsed in this role by the national language content of the future Nigerien school is the question.

Certain of the public médersas suffer from insufficient enrollment. A new médersa may be flooded with recruits during its first year or two, but after that, enrollments tend to drop off. This is due to parents' realization that the Franco-Arabic system is really no different from the traditional French system. Parents therefore either switch their children to the traditional school or withdraw them entirely from formal schools and place them in Koranic schools. The Franco-Arabic system is further constrained by inadequate teacher training. This is especially true for the Arabic components of the curriculum, for the following reasons:

1. Arabic pedagogy is not offered in any of the teacher-training establishments of Niger.

2. Learned malams who are employed in the Franco-Arabic system may have had no formal pedagogical training, either in Arabic or in French.

Pupils who successfully obtain their primary diploma in the Franco-Arabic system are eligible to go to a traditional CEG, or to one of the two Franco-Arabic CEGs (Niamey and Zinder). Many stay in the Franco-Arabic system because of the intense competition for positions in the traditional CEGs. Those successful in the Franco-Arabic CEPC exam have reached the end of the Franco-Arabic system in Niger, and may either return to the traditional system (pursuing the second cycle of secondary school), or further their Arabic and Islamic studies outside of the country. There are scholarship opportunities to continue studies in other countries such as from the GON, Egypt and other parts of the Arab world. Many of the Arabic teachers in the Franco-Arabic system have studied outside of Niger, especially in Cairo at the University of Alazahr.

For the 1981-82 school year, of the 549 students studying in Arabic countries at the secondary level, the following numbers were studying in the Arabic language. Most were taking general courses of study. The statistics do not reveal the numbers directed towards Arabic teaching.

Table 3.6

Sponsored Secondary Students Studying Abroad in Arabic

1981-1982

Country of Study	Male	Female	Total	Source of Financing
Saudi Arabia	5	o	5	Saudi Arabia
Kuwait	1	0	1	Kuwait
Sudan	6	0	6	Sudan
Tunisia	1	0	1	Niger
Egypt	55	0	55	Egypt
	24	2	26	Niger

Source: MEN

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Students who do not go abroad, but rather go through a normal school, are trained as French teachers, and upon graduation may be employed either in the traditional system or in the FS system to teach both languages. There is no pedagogical training specifically for Arabic teachers in any of the teacher-training schools of Niger. Outside of the Franco-Arabic system, other opportunities for teaching Arabic exist in secondary schools and at the University of Niger, where Arabic is taught as a second language.

3.1.1.5 Plans

In the Zinder Declaration, one of the medium-range reform goals states "integrate the médersas into the new structure of the Nigerian school." Exactly how this reform might be carried out has yet to be elaborated. Some interpret this goal as meaning that French will be eliminated from the médersa curriculum and be replaced by the national language curriculum which will be taught side by side with a reformed Arabic curriculum. Others speculate that the reformed médersa will include national language instruction for two years and Arabic and French instruction in the latter four years. There are presently no specific proposals regarding the future of the médersas.

3.1.2 Status and Structure of Koranic Schools

The Koranic school is an institution of religious instruction which, with the exception of certain nomadic groups, is universal in its distribution throughout Niger. With approximately 95 per cent of the population belonging to the Muslim faith, the vast majority of sedentary villages in Niger have one or more Koranic schools, led by a malam.

There are different forms of traditional Islamic education in Niger; at one extreme there are small village-level Koranic schools with locally-trained, lesser malams who are itinerant and may have only minimal knowledge of Arabic and the Koran.

At the other end of the spectrum, there are the large and permanently established schools of religious instruction and Islamic education, which attract both children and adults as students from a wider geographic area. These are headed by a learned and highly qualified malam who has generally pursued his education with respected scholars in Niger, northern Nigeria, and other parts of West Africa, or the Middle East. These malams have made important contributions to religious education, and to the Franco-Arabic (médersa) system for which significant numbers are recruited for Arabic instruction.

By far the majority of Koranic education in Niger takes place in the smaller Koranic schools and with itinerant malams.

The Koranic school curriculum consists of reading, writing and memorizing the Koran. The malam's role is one of training and social preparation of the child for his future role as an adult in Islamic society. With regard to materials, the child is equipped with a millet-stalk stylus, a calabash gourd ink pot, ink made from gum arabic mixed with ground charcoal, and a wooden tablet or slate. Arabic characters and Koranic passages are thus written, recited, and washed off, again and again, until internalized by rote memorization. Though this training requires the learning of Arabic writing, it does not necessarily entail learning the Arabic language or its grammar. Some sources indicate that pupils may learn to recite major portions of the Koran, without understanding the meaning of the Arabic words. In some cases students do not discuss the meaning in their own languages until a much later stage, after having read the entire Koran.

In general, Koranic instruction begins for children between the ages of three and five. As a student progresses through the Koran, there are celebrations upon the mastery of various parts. The Koran is divided into 60 hezib or chapters, and celebrations such as sabbi, wasula, amma and sabka commemorate mastery of major sections and finally the entire Koran. Advanced male students may then go on to study the Hadith, or rules of Islam, and other Arabic documents describing Islamic practices and interpretation of the Koran. Advanced study eventually involves the translation of such documents into one's mother tongue and long discussions about their significance and application. Children and adults may begin Koranic study at any age. For men especially, continued study is a widespread activity which may continue throughout one's lifetime.

All Koranic malams of Niger are members of the Islamic Association of Niger. They are also integrated into the structures of the Development Society (see the chapter on NFE). At the level of the Village Development Council in every Samariya village, the village marabout (malam) is a member of the council. He is usually the imam and religious leader of the village, and thus the most learned and respected of the malams. In this role, he has regular contact and a semiofficial relationship with the officers of the cell, subsection and section-level officers of the Association. He therefore functions as the representative of the Association at the village level. This infrastructure incorporates the system of traditional rules, and therefore is a means for reaching nearly all Nigeriens.

The village marabout represents all the malams of his locality, and may function as their porte-parole in the event of a misunderstanding or complaint. Complaints from or against a malam can therefore be dealt with through the village marabout or at a higher level within the Association and Development Society. The Association has already taken steps which would exercise control over the activities of the itinerant marabout, and also an examination procedure to test the instructional level of malams involved in the interpretation of the Koran.

Given the near universal distribution of Koranic schools, 95 per cent of school-age children have access to Koranic instruction. Opportunities for those completing their instruction remain limited to the realm of Koranic instruction, with no formal opportunities for training or advancement within that system. The option of participation in both Koranic instruction and formal education is practiced; however, it remains an area for further investigation and documentation.

Koranic instruction is by definition inequitable in its application to the sexes. Due to constraints imposed on women by Islam, adult women are never allowed to study in the public forum represented by the Koranic school. An adult woman may be tutored at home with the approval of her husband, often by a malam who is a relative of the spouse.

The Koranic schools continue to serve as a preferred form of education for a substantial percentage of the population. In this capacity skepticism of the formal system is perpetuated and formal enrollment in that system remains low.

Four major steps have been taken by the GON toward Koranic school reform: 1) elaboration of the structure of the Islamic Association, 2) integration of that religious structure into the Development Society, 3) regulation and testing of malams and 4) regulations controlling itinerant malams. They also provide the infrastructure necessary for further reforms, as they are elaborated.

The description of Koranic education provided here is for the purpose of documenting the structure and organization of the system, and to show its interaction with the system of formal education. It is not likely that this subsector represents an area where donor intervention is appropriate.

3.1.3. Experimental School Structure

The experimental school program began with one school in Zinder in 1973-74, where teaching in the first two grades was done in Hausa. In 1975-76, a second experimental school opened in Tillabery, using Zarma as the language of instruction. No formal structures were established to assist these schools or to guarantee quality of instruction until 1980. The National Institute for Research and Pedagogy (Institut National de Documentation de Recherche, et d'Animation Pedagogique INDRAP) had official responsi- bility for school supervision until that time, and the schools were technically within the purview of MEN. With the creation of the Permanent Secretariat for the Reform of 1980, a third administrative body to watch over the experimental schools was established. The respective roles of these bodies, however, have not been clearly defined.

By the beginning of the 1982-83 school year there were 20 experimental schools, which is 11 more than projected for the plan period, with the following distribution by language:

Language	Number of Schools	Number of Classes
Hausa	9	19
Zarma	4	8
Tamajaq	1	3
Kanuri	3	5
Fulfulde	3	3
Total	20	37

In total 68 teachers have been given initial training for work in these schools. This represents 11 more than the target projected in the five-year plan. Twenty-four other teachers will complete this training by August 1983. Placement of trained teachers in experimental schools is behind schedule.

The planning, development and elaboration of a new curriculum for implementation in the reformed experimental schools is in its beginning stages at INDRAP and has yet to be officially adopted by the MEN. In the proceedings of their seminar/workshop on the development and evaluation of curricula (May 23-27, 1983), the following content percentages were suggested for grades one to three:

Table 3.7

Suggested Curriculum for Grades 1 to 3

Subject	1st grade	2nd grade	3rd grade
Maternal language education	40	40	25
Scientific education	-	-	20
Mathematic education	30	30	30
Practical activities	15	15	15
Sociocultural and sports activities	15	15	5

Source: INDRAP, Proceedings of seminar/workshop, May 23-27, 1983.

The proposed curriculum content and teaching methodology encourage increased participation of the pupil in his/her own education. The maternal language content is designed not only to teach reading and writing, but also cultural orientation, making use of a wide range of traditional oral literary forms. Similarly, in math and science, the skills taught are made relevant to the child and his/her environment. Scientific education includes the étude du milieu--the use of one's living environment as the basis for exploration and discovery--and encompasses basic applied physics and biology, local history and geography. Practical and productive activities are oriented toward the development of relevant manual skills, a production cooperative, school gardens, and cooking. The use of traditional games is encouraged in the sociocultural and sports element.

It should be noted that the teaching of a second national language or French during the 3rd grade is not included in this proposal, but will very likely become a part of the language component.

3.2 Goals and Strategies

The Five-Year Plan of 1978-79 through 1982-83 called for an increase of the primary education enrollment rate to 25 per cent, and also for the creation of 2,593 new classrooms (see Table 3.8). These planned goals were only partially realized: the enrollment rate increased to 20 per cent, and the number of new classrooms increased by only

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1,545. The average classroom size remained constant. The experimental school program is presently ahead of schedule in relation to the goals of the Five-Year Plan.

In 1982 an evaluation of the experimental school program was carried out for the primary years one to four. The results of this evaluation are not presently available, but according to preliminary accounts the advantages inherent in maternal language education were substantiated by the results. The need for ongoing evaluation continues in order to assess the impact and long-term effects of these schools. The project for the development of primary school reading texts for the experimental schools (years one to three) in all five languages is being carried out by INDRAP, the educational research and materials development branch of the Ministry. INDRAP is printing national language readers in the five major languages, one for each of the first three years in each language. The books are illustrated anthologies of traditional literature, including stories, poems, riddles, and tales. They are graded, and include texts which the teacher can read to the pupils as well as those that a pupil can read. The texts represent the culmination of years of work on orthography development and standardization, and two years of collection and development by INDRAP.

3.2.1 Zinder Declaration

Niger's long history of proposals for educational reform culminated in the 1982 Conference-Debate of Zinder. The resulting document, known as the Zinder Declaration, contains comprehensive recommendations for the reorientation and reorganization of the entire system of education and training in Niger. The Zinder Declaration touches all sectors, and can perhaps best be understood as an expression of the human resource requirements needed for the implementation of Niger's Development Society (DS) (see NFE section for discussion of DS). It thus translates the philosophy and organizational goals of the DS into the necessary changes in the structure, management and content of education and training.

The Zinder Declaration is divided into three sections:

1. the orientation and development of the school,
2. training and encadrement,
3. financing and planning.

The major objectives of the proposed reform as they affect primary education are to:

1. expand primary education by changing to a 9-year program of basic education,
2. introduce national languages into the schools,
3. introduce technological and productive activities into the curriculum,
4. integrate disciplines through the method étude du milieu;
5. reform the financing of education.

The latter involves programs that will relieve the GON of part of the great financial burden of education through: the elimination of cafeterias and dormitories in sedentary areas, the creation of school gardens and educational cooperatives, requiring local collectives and village communities to bear some of the cost, requiring the financial contributions of parents, and using local materials and traditional architectural methods.

3.2.2 Interim Consolidation Program

Due to the financial constraints of reduced uranium revenues, another Five-Year Plan was not elaborated. In its stead a two-year Interim Consolidation Program/Plan interimaire de consolidation (PIC) has been elaborated. No major steps towards the general application of the reform are projected for the 1984-85 period. The following goals for primary education are, however, included in the PIC.

1. maintain enrollment level at 21 per cent;
2. construction of 627 new classrooms;
3. rebuilding of 597 temporary classrooms into permanent structures;
4. reduce cost of the school construction, using local materials, local contributions;
5. use of 1,500 graduates of normal school short cycle, plus 100 teachers being retrained to carry out in-service teacher-training seminars;
6. improve working conditions and office facilities of inspectors through building six new primary inspectorates in the six new inspectorates opened during the Five-Year Plan;
7. increase knowledge of educational materials available.

In specific areas relating to the reform the PIC calls for:

1. the introduction of national languages into the curriculum for classes 1 and 2;
2. the introduction of practical and technological activity programs into the curriculum;
3. the evaluation of experimental schools and implementation of indicated changes in curriculum content and the retraining of teachers;
4. the strengthening and activating of the national commission for educational reform.

The PIC does not provide financial or statistical details on how these elements of the reform will be implemented, nor in what stages.

Table 3.8

Primary Education and the Five-Year Plan

(1978-79 - 1982-83): Goals vs. Realization

	1978/9	1982/3	Planned Goal	Difference Between Planned Goal and Realization
Enrollment Rate	18.2%	20.9%	25%	- 4.1
Number of Classrooms	4,483	6,028	7,076	-40.4%
Pupils per Class	42.2	42.0	42.4	0

Source: Sector Assessment Team Compilation

3.8 External Efficiency

The external efficiency of primary schooling lies in a judgement of its relevance to the larger economic and social institutions of society, and more particularly to the contribution of primary schooling to the country's productive capacities. In this respect there is a consensus of opinion that the primary school curriculum and structure are not adapted to local conditions. Indeed, with minor exceptions, both the structure and the curriculum are those of the pre-independence period (See Section 3.____).

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3.9 Internal Efficiency

The internal efficiency of primary education is relatively low, and reflects the extent to which the school is an element which remains foreign even to those who have entered it. All children are automatically passed from first to second grade, but repetition rates increase to 12-15 per cent for the subsequent four years. In the last grade, repeaters amount to approximately 30 per cent. Pupils are allowed two repetitions over the six years of primary schooling. Repeating a third time means automatic dismissal.

There are important regional variations in all of these statistics (e.g. see Table 3.9). Although the data are available, there has been little systematic analysis done of them. For example, average pass rates on the CFEPD exam over the period 1979-82 vary from 23.6 per cent in the Filingue arrondissement to 64.4 per cent in Tanout, while the national average is 35.2 per cent. Indeed, beyond the most summary of statistical indicators, the Ministry's planning services have done no systematic analysis of the available data. Such work would be of great use in planning primary school development.

The educational factors usually considered to have an impact on internal efficiency are: 1) teachers, 2) teaching materials, 3) curriculum and its relevance, and 4) school buildings.

Table 3.9

Repetition Rates, Primary Level, by Districts, 1979-1980

	C. I.	C. P.	C. E. 1	C. E. 2	C. M. 1	C. M. 2
Agadez	1.9	9.4	9.2	10.8	9.4	32.4
Diffa	5.0	12.1	24.3	14.5	10.9	18.4
Dosso	2.8	17.8	19.4	17.3	18.8	41.1
Maradi	0.7	6.9	12.3	14.7	9.4	20.7
Niamey	1.1	13.8	13.9	12.8	16.8	31.8
Tahoua	2.8	16.0	13.0	12.9	15.7	29.5
Zinder	1.6	11.1	13.4	13.3	14.0	26.4
Total Niger	1.8	12.4	14.3	13.7	14.7	30.3

Source: MEN

3.4.1 Teachers

Over the period of the Five-Year Plan (1979-1983) the number of primary school teachers increased by 29 per cent, from 4,612 to 5,959. Of particular note is the fact that the number of teachers with pedagogical training (instituteurs who have completed secondary school plus one year of teacher training, and instituteurs adjoints who have completed only the first cycle of secondary school plus 1-2 years of teacher training) increased by 20 per cent. In 1978 they represented only 56 per cent of all teachers, whereas in 1982 they were 76 per cent. This is an especially high proportion for West Africa, and, indeed, may well be the highest in the region. In spite of this relatively favorable situation, there were still about 70 classes without teachers in 1982-83.

3.4.2 Teaching Materials

This mainly concerns books, but also includes supplies such as blackboards and notebooks. Text- books are furnished free of charge by the government although pupils pay a deposit of 1,000 CFA to cover one book for every two pupils. This is the case only for reading books since books for arithmetic and other subjects are rarely to be found. There is no empirical information on the real availability of textbooks, but spot checks indicate that most pupils do have at least partial use of a reading textbook. The textbooks are all imported, and are an expensive although pedagogically valuable item in overall educational expenditures.

Other teaching materials appear to be generally available. With the recent austerity measures, however, they may tend to diminish in availability (along with the textbooks).

3.4.3 Curriculum

The present primary school curriculum has undergone only a few noteworthy changes since independence. For the most part these changes involve curriculum and exam content in social studies subjects . Subjects and materials relating to France and Europe have been replaced by those relating to Niger and Africa.

In keeping with this change, more appropriate textbooks for all subjects have been adopted whenever possible. Texts based in francophone Africa have now replaced those developed for use in France.

The subjects currently being taught in the traditional francophone school are indicated below, with the time allocated per week.

Table 3.10

Subjects Taught in Francophone Schools

Subject	Hrs/wk CI	Hrs/wk CP	Hrs/wk CE1	Hrs/wk CE2	Hrs/wk CM1	Hrs/wk CM2
French	7	7	6	6/30	6	7
Reading	6	5/40	7	7/05	4	3/30
Writing	3/20	3	2	4	4	1
Trans-cription	---	1/40	0	0	0	0
Arithmetic	4/40	4/40	4	3/50	5	5
Art	2/40	1/40	1	45	1	1
Music	1	1	1	1	1	1
Phys. Ed.	2	2	2/30	2/20	2/30	2/30
Recess	2/30	2/30	2/30	2/30	2/30	2/30
Civics	50	50	1	1	1	1
Science	0	0	1	1	3	2/30
History	0	0	30	30	1	1
Geography	0	0	1	1	1	1
Directed Activity	0	0	30	30	1	1
Total	30	30	30	30	30	30

Source: MEN

3.4.4 Classroom Contact Hours

As of March 1, 1983, official government hours were changed to implement the five-day work week and the two-day week end. The effect this had on the school day was to reduce the number of classroom hours from 32 to 30 per week. Due to the heat at midday and the early sunset at certain times of the year, the hours are from 8:00 to 12:00 in the morning (20 hours), and from 3:30 to 6:00 in the afternoon (10 hours), with Wednesday afternoon free.

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3.4.5 Class Enrollments and "Twin" Classes

The division of the six primary school years into three two-year units establishes the three groups which may be used to combine classes into classes jumelées or "twin" classes, teaching two grades in one classroom. The system of "twin" classes is widely practiced, especially in rural areas. The MEN therefore produces two different curriculum formats in the form of daily schedules allocating class periods to different subjects and activities. For "twin" classes where one teacher is teaching two grades, a single common curriculum format guides the teaching of the two grades.

New schools are initially constructed with three classrooms, and one teacher may be asked to maintain a new school by himself for its first two years, necessitating "twin" classes the second year. (See Table 3.5 for evolution of "twin" classes.)

Table 3.11

Classes and "Twin" Classes Added

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Teacher 1	CI	CP	CI-CP	CI-CP	CI-CP	CI-CP
Teacher 2			CE 1	CE1-CE2	CE1-CE2	CE1-CE2
Teacher 3					CM1	CM1-CM2

Source: MEN Rapport Annuel

The degree to which "twin" classes are practiced is exemplified in statistics (see Table 2) of the Maradi Inspectorate (encompassing the arrondissements of Guidan Roumdji and Madarounfa, and the metropolis of Maradi).

Table 3.12

Twin Class in Selected Areas in 1982

Area	Schools	Classrooms	Grades Taught	"Twin" Classes
Maradi (commune)	18	139	140	1
Guidan Roumdji	48	143	215	72
Madaraounfa	42	132	201	69
TOTAL	108	414	556	142

Source: Sector assessment team estimates based on calculation of the difference between classrooms and grades taught.

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3.4.6 School Buildings

Considerable progress has been made in this area over the period of 1978-1982. In all 1,545 new classrooms were constructed, representing an increase of 34 per cent in the number of available classrooms. For a while the number of available classrooms exceeded the number of available teachers. In spite of this progress, only about 40 per cent of the stock of classrooms are of permanent construction, and there are few ongoing maintenance activities for the existing schools.

3.5 Access and Equity

Access to primary education has increased dramatically since independence in 1960, when the 21,000 school children represented only 4.7 per cent of their age group. In 1970 there were 84,000 pupils; 187,000 in 1979; and in 1982-83 there were 253,000 pupils enrolled in primary school, representing 21 per cent of the age group. (Private school enrollment is not great, and represents only about three to four per cent of total enrollment.) This means that the average annual growth rate of primary school enrollment was about 30 per cent in the first decade of independence, 13 per cent in the second decade, and about nine per cent over the past four years. In spite of this progress, the enrollment rate for primary education remains the lowest in West Africa, as was the case in 1960.

Enrollment rates in the cities, where only about 10 per cent of the total population lives, are much greater than in the rural areas. The enrollment rates for the four principal cities are as follows:

Niamey = 49 per cent
Maradi = 56 per cent
Zinder = 46 per cent
Tahoua = 23 per cent.

This is striking, when we realize that the enrollment rate for the entire country is 21 per cent. Rates in the rural areas are well below that, with wide variations. For example, it is about 65 per cent in the oasis town of Bilma; 14 per cent in the district of Maine-Soroa (Diffa); 22 per cent in the town of Agadez; and 13 per cent in the district of Dakoro. In other words, in addition to large urban-rural differences in enrollment rates, there are also noticeable differences among rural districts.

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Many fewer girls are enrolled than boys, a fact that is also subject to significant variations according to geographic area and rural-urban differences. Of the entire primary school population, only 35 per cent were girls in 1980. There were regional variations from 26 per cent in the Maradi region to 44 per cent in the Niamey region. The dropout rate for girls, however, does not appear to be higher than for boys. Also it is interesting to note that in the experimental schools the proportion of girls is much higher than in the regular schools, approaching 50 per cent.

Table 3.13

Educational Indicators, Primary Level, by Districts, 1980 - percentages

	Enrollment Number	Enrollment Rate	P/T Ratio	% Girls	% Qualified Teachers	% Dur	% CFEPD
Niamey I	18,964	49.0	43.7	50.5	65.4	42.3	34.1
Niamey II	13,543		47.2	49.3	70.7	53.8	
Tera	10,450		47.3	39.3	84.8	33.2	
Filingue	9,516		40.8	37.6	76.0	52.0	
Kollo	10,286	33.1	41.5	39.8	66.9	46.5	23.9
Say	4,879	22.6	39.0	43.6	60.8	38.8	25.1
Tillaberi	8,434	27.6	39.8	41.1	60.4	51.6	40.9
Ouallam	5,950	21.3	42.2	44.0	62.4	39.9	26.7
Agadez	5,032	22.3	35.7	34.8	76.6	26.1	37.1
Bilma	1,019	64.8	27.5	39.8	81.1	2.4	26.2
Arlit	2,453	33.2	45.4	37.8	70.4	36.4	44.0
Tahoua	9,097	23.3	37.1	34.5	79.6	40.3	31.6
Madoua	5,010	15.1	39.8	32.2	77.7	31.0	39.1
Bouza	3,783	11.1	38.6	26.5	83.7	23.2	27.8
Tchin-Tabaraden	2,048		28.1	28.4	56.2	36.3	
Birni n-Kosse	5,610		45.2	27.3	80.6	39.6	
Illela	4,643		41.5	27.2	83.0	25.2	
Keita	5,325		36.2	28.8	77.6	27.3	23.4
Zinder	7,867	45.8	41.4	40.5	76.3	48.4	59.0
Tarout	6,807	17.5	39.2	30.3	88.5	35.9	42.0
Magaria	8,624	14.8	37.5	33.1	67.0	47.6	47.8
Matameye	4,995	17.0	40.3	32.6	73.4	26.2	39.8

Table 3.13 continued

	Enrollment Number	Enrollment Rate	P/T Ratio	% Girls	% Qualified Teachers	% Dur	% CFEPD
Goure	4,460		33.5	15.1	80.5	53.5	25.6
Mirriah	10,354	16.8	44.8	31.1	78.8	49.4	31.8
Do so	7,291	20.8	45.3	34.3	78.9	52.2	
Loga	4,153	32.8	53.9	31.6	79.2	35.2	
Doutchi	11,947		54.6	30.9	76.3	44.3	
Gaya	5,777		46.6	32.7	75.0	30.1	
Birni N'Gaoure	5,284	20.1	42.3	32.9	83.2	36.7	
Diffa	2,613	22.0	29.7	42.5	96.6	24.4	45.0
N'Guigmi	1,464	22.5	29.9	44.1	91.8	17.3	46.8
Maine Soroa	2,518	14.0	26.5	37.3	81.0	15.0	
Maradi	6,836	55.7	57.9	38.6	69.5	90.9	46.6
Guidan Roumdji	6,516	20.0	46.9	19.6	67.6	64.7	36.4
Madarounfa	6,039	18.9	45.8	19.7	74.2	56.7	27.3
Tessaoua	6,744	20.1	42.7	31.4	71.5	75.9	32.1
Aguie	4,337	15.1	44.3	23.5	68.4	75.0	24.4
Dakoro	4,274	13.4	35.0	119.2	62.3	61.2	34.2
Mayahi	5,469	14.3	44.1	27.6	72.6	52.7	40.7

Source: MEN

In the past four years a substantial effort has been made to increase the availability of primary education. Over the period of the Five-Year Plan of 1978-1982, the number of classrooms increased by 34 per cent, from 4,483 to 6,028, with the average number of pupils per class decreasing from 42.2 to 42.0. In spite of this effort, the number of new classrooms constructed represented only 60 per cent of those called for in the Five-Year Plan covering that period. The number of new teachers increased by 29 per cent over the same period (see sections on status: Internal Efficiency).

These aggregate statistics should not hide the fact that there are wide variations within the country in terms of class size, the enrollment of girls, teacher qualifications and the quality of the school buildings as indicated in Table 3.14.

3.6 Administration and Supervision

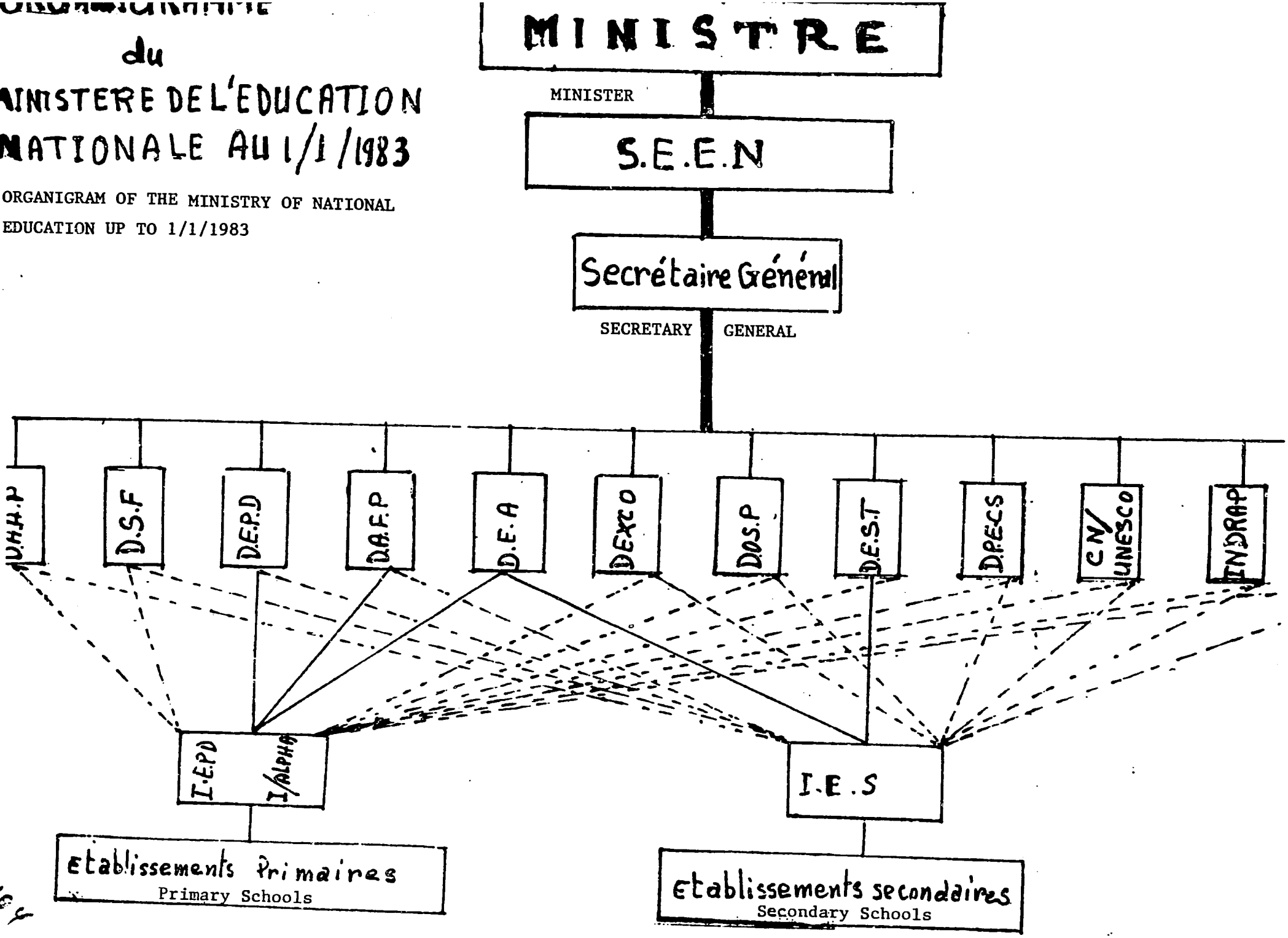
Overall responsibility for the administration of primary education falls upon the Directorate of Primary Education (Direction de l'enseignement du premier degré) within the MEN. In each regional department there is an inspectorate (Inspectorat départemental) associated with one or more inspectors. There are 30 inspectors in all throughout the country, which represents an increase of 150 per cent since 1978-79. These inspectors collect school statistics, handle personnel matters, and make decisions concerning the construction of new classrooms. There are 352 pedagogical counsellors who advise and supervise teachers. This is a large increase since 1978-79, but is much lower than the number needed. These people do much of the work that had traditionally been done by the inspectors whose functions have become increasingly administrative.

Educational planning (the responsibility of the Direction de la planification de l'éducation et de la construction scolaire) is relatively absent. Aside from the statistical yearbooks, which are simple compilations of aggregate statistics (the most recent of which is for 1979-80) there is little statistical analysis. There is, however, sufficiently disaggregated data to perform useful analysis on regional disparities, the quality of school buildings, and teacher qualification.

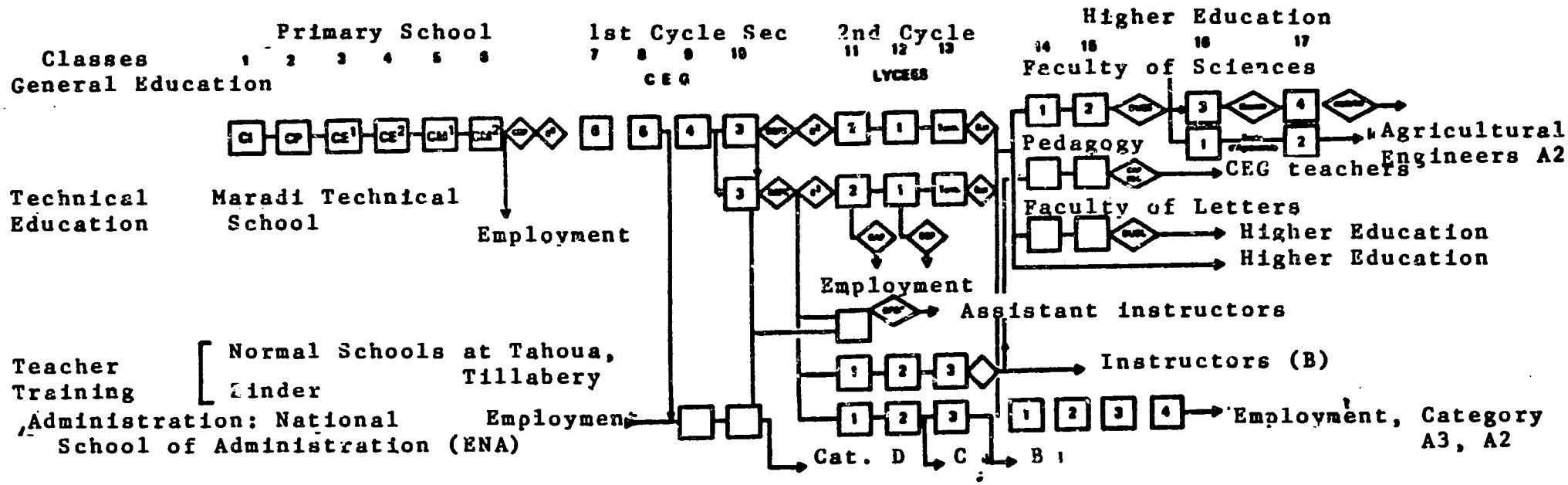
(insert C - MEN diagram

ORGANIGRAMME du MINISTERE DE L'EDUCATION NATIONALE AU 1/1/1983

ORGANIGRAM OF THE MINISTRY OF NATIONAL EDUCATION UP TO 1/1/1983



Structure of Education in Niger



Notes
1. Professional Training Outside of the Ministry of Education, excluding agricultural education.
2. For example, for training outside of the Ministry of Education.

Source: World Bank, Report on the Education Sector in Niger, December 1974.

3.7 Costs and Finance

3.7.1 Status

Virtually all financial support for primary education in Niger is provided by the Ministry of National Education. The Ministry assumes responsibility for the construction, furnishing, and maintenance of schools, the payment of teachers' salaries, and the provision of textbooks and other materials. It has been proposed in the Zinder Declaration and elsewhere that some of these costs be shifted to parents and local communities, but little along these lines has yet been done.

With the exception of the Koranic schools, private initiatives in primary education are of minimal importance. Fewer than three per cent of primary school students in Niger are enrolled in private schools. Almost half of the private primary schools are located in the city of Niamey. The government has expressed an interest in encouraging increased privatization in the educational system, but it is not yet clear what this commitment will amount to in practice.

The unit cost of primary education, including the costs of teachers' salaries, textbooks and materials, and other recurrent expenditures, is approximately 22,000 CFA francs per student per year (about $60 at current exchange rates). Although the cost of keeping a student in school for a year in Niger appears to be rather low, the high rates of attrition mean that the cost of producing a primary school graduate is in fact relatively high. There are no disaggregate figures by region available.

3.8 Analysis

3.8.1 Constraints

The major constraints to primary education are: budgetary restrictions, and continued popular resistance to an educational structure that remains foreign to the experiences and concerns of the vast majority of the population.

The government of Niger has called for the assumption of greater responsibility by private agencies, local communities, and parents for the financing of local educational opportunities, but no strategy for the accomplishment of this goal has yet been worked out.

Pursuit of privatization and decentralization is unlikely to be of much consequence in the short and medium term. However, the long run it may reduce the present financial burden on the Nigerien government and provide the Ministry of National Education with greater flexibility in the development and implementation of educational policies.

Per pupil costs of primary education are not inordinately high in Niger, particularly in the light of the large percentage of trained teachers in the schools. These costs may be reduced even further, however, through fuller use of the present capacity of the primary school system. In rural areas the number of students per teacher is often very low, and the marginal cost of additional enrollments in these areas may consequently approach zero. Though resistance to schooling is apparently widespread and well rooted in some rural areas, implementation of the maternal language curriculum may begin to break down such resistance, and enrollments in these areas may increase as a result, at virtually no cost to the government.

It may also be possible to reduce costs in the primary educational system through improvements in the internal efficiency of the system, and specifically through reductions in the current high rates of repetition, attrition, and failure. Changes along these lines should be carefully planned and managed, however, and it is important that this not be accomplished at the cost of a reduction in the quality of the education that the schools provide.

The fiscal difficulties now faced by the government of Niger and the Ministry of National Education require that every effort be made to reduce costs within the formal educational system in order increase the ability of educational authorities to respond flexibly to new circumstances and new opportunities within the system. This need has been acknowledged by the government of Niger, and a number of cost-cutting measures have already been introduced. A concommitant need is for the careful evaluation of the recurrent cost implications of all proposed new programs, and - in cases where these new programs represent the initiatives of external donors - assumption of the recurrent costs by external agencies, at least in the short and medium terms. We recommend that the MEN acquire the capacity (in its Planning Office) to carry out recurrent cost studies of all such programs.

The popular resistance to education which is reflected in a low attendance rate and low pupil/teacher ratios, particularly in rural areas, is a constraint which implies a

need for implementation of the reform but requires further study to determine its causes. Despite some understanding of religious and cultural resistance, to date the study can only draw impressionistic conclusions as to the reasons for low levels of attendance. Preliminary evidence suggests that implementation of the Reform (at least linguistic and curricular components) could alter the popular perception of education. However, there are also indications that the implementation of the reform (at least its initial stages) would entail increased costs with uncertain efficiency benefits. Further study needs to be conducted in this area.

3.8.2 Issues

3.8.2.1 External Efficiency

One of the major outcomes of primary schooling appears to be a distaste for, and an inability to return to, the agricultural activities of one's parents. This situation contributes significantly to the reluctance of many parents to send their children to school. They fear that their children will never return home and contribute to the family's productive activities. In other words, there is a widespread perception that the opportunity cost of (even) primary schooling is higher than any benefits that may accrue to the child's family. Furthermore there is the general perception that schooling instills in children the sole ambition of becoming a fonctionnaire (secure bureaucrat) rather than returning with their acquired knowledge to the productive world of their parents.

The present organization and curriculum of primary education serve mainly to prepare pupils for secondary education, which only further separates them from the major productive forces of society (i. e. agriculture and rural production). The experimental schools represent an attempt to change this situation and render the primary schools more attractive to the population by bringing their content closer to the cultural and productive bases of the population by making them less foreign.

3.8.2.2 Internal Efficiency

The picture of internal efficiency is paradoxical. On the one hand we observe a large amount of attrition among primary school pupils with only about 35 per cent of those originally enrolled entering the sixth grade and only 20 percent receiving a diploma. On the other hand, we find that a relatively large proportion of the teachers have had teacher training, that reading textbooks are generally available, and that the school buildings are in satisfactory condition.

In these circumstances, we can only conclude that there is something about the substance of the schooling experience that discourages the pupils. In this analysis, we would refer to external efficiency - namely that the very nature of the structure and the curriculum of primary schooling are responsible for the high level of attrition in the system. There is little relationship between the proportion of trained teachers in an inspection and internal efficiency (success rate on the CFEPD).

3.8.2.3 Access and Equity

Variations in enrollment rates stem from the very different perceptions of schooling held by the rural and urban population. This suggests that by its very substance (structure and curriculum) there is a built-in selection factor against the rural populations. The most convincing evidence for this is the underutilization of many rural classrooms.

Education at primary and secondary levels consumes 15 per cent of the national budget, yet only attracts 21 per cent of the eligible primary age population, and much less at the secondary level. Furthermore, those who do attend schools are highly unrepresentative of the eligible population, since they come disproportionately from the urban areas in which only 10 per cent of the total population lives. This is an inherently unequal situation, especially when we analyze it from a financial perspective.

3.8.2.4 Administration and Supervision

The major issue here is the depth of the educational planning capacities for analysis which could be the basis for policy decisions. There are already a large quantity of unexploited data such as the statistical reports of each school district (inspection scolaire) for recent years. Such analysis would lead to an understanding of the educational system that would be very useful in further planning activities such as school implantation, disaggregated projection for teachers, probable demand for primary schooling by district, and optimal utilization of existing capacity.

3.9 Conclusion

All of our observations, indicators and the ensuing analysis lead to one basic conclusion: primary schooling as it presently exists is unadapted to the conditions and needs of the vast majority of Nigeriens, as well as to the productive capacities of the country.

From this perspective, we conclude that the considerable financial sacrifice that Niger is making is likely to provide few tangible returns to the productive capacities of the country.

3.10 Recommendations

1. The respective roles of INDRAP, MEN and the Permanent Secretariat for the Reform should be clearly defined and the ensuing working relationship should focus on the coordination of ministry functions specifically with respect to implementation of the education reform package as well as articulation of outstanding reform issues.

2. The educational planning offices within MEN and the mechanism for implementing planning recommendations within the MEN and the Ministry of Plan should be strengthened and more clearly defined. Specifically, the MEN Office of Planning should develop the capacity for cost and financial analysis which would include a capacity to project recurrent costs of programs, as well as the unit costs of various types of secondary education.j Furthermore, currently available aggregate data should undergo systematic analysis beyond the current summary of statistical indicators.

3. Regarding access/equity issues, several issues should be addressed:

a. The MEN should review the current distribution variations of teacher/student rations by region and by urban/rural breakdown. The resulting analysis should also specify to remedial steps the remedial steps to be taken to rectify any inordinate discrepancy in regional teacher/-student ratios.

b. Although the assessment team had little opportunity to observe textbook availability and use, there was an impression of shortages, especially in math and science, amongst much of the school population. Attention to materials availability should be a high priority and should also consider materials production for implementation of the reform.

c. School buildings and their conversion from semi-permanent to permanent structures, should be focused on addressing access/equity questions, particularly in rural/-urban considerations.

4. The GON should articulate a policy position vis-a-vis private schooling with respect to the growing number of private médersas (Franco-Arab schools and the desirability of private school alternatives to the national system in general.

5. Specific to the médersas, the GON should:

a. Establish a definitive MEN policy towards the médersa role within the reformed educational system.

b. Explore the possibility of transforming those médersas with class enrollment well below the national average for primary schools into experimental schools with national language curricula.

c. Establish a disaggregate data base to enable the evaluation of the médersa system by indicators such as repetition and dropout rates, employment patterns of graduates and continued education patterns for médersa graduates.

d. Study the feasibility of establishing a médersa lycee which would complete the school cycle.

Recommendations specific to Reform

Implementation of the reformed curricula throughout the country is necessary. It is essential that reform be well prepared and thought out within the institutional context of INDRAP, which should be reinforced. Reform preparation would include the following:

1. The format of the national language curriculum should be put into its final form.
2. The national language curriculum should be translated into the five national languages (not including Arabic, Tubu and Gurmance at this time).
3. Linguistic training should be provided at the intermediate and advanced level for at least five students in Fulfulde, Tamajaq, and Kanuri, and two to three students in Hausa and Zarma. At least one student for each should be given training relevant to terminology, textbook and curriculum development. Others should be given linguistic and pedagogical training in preparation for teacher training, both in the normal school

system and at INDRAP. A system of recruitment, years of training, and resulting advancement and promotion for the various personnel levels undergoing the training would have to be worked out with the GON.

4. Increased collaboration between adult literacy, CFCA and INDRAP should be encouraged so that experience can be shared, duplication of efforts can be avoided, and the use of common textbooks might be explored. Collaboration would also help standardize efforts in each language, and thus avoid problems which as the use of different orthographies for the same language.
5. Further development of texts and teachers' guides is necessary, as is the development of texts in math, science, agriculture and other subject areas.
6. Teacher training for the national language curricula should begin immediately within teacher training institutions. The future well-being of the reformed school lies in well-trained teachers who are oriented toward the reform throughout their training. Current retraining is too brief, and the cost is prohibitive (188,291 CFA per teacher).
7. Developmental research for the reform of the examination system at all levels should be begun. A formal mechanism for collecting information on experimental teaching methods that have evolved, and terminology that has been created should be established. Information should be made available to other teachers and those involved in the elaboration of curricula and tests.
8. School inspectors and pedagogical advisors should be trained in the implementation of the reformed curriculum. It is especially important that they be equipped to make frequent visits to experimental school teachers, especially during the interim period between now and the time when the full range of national language materials is available.
9. An ongoing evaluation should be made and a system for maintaining results under the reform should be installed in order to make corrections and modifications where appropriate.

4.0 Secondary Education

4.1 Status

4.1.1 Structure

Secondary education is made up of two cycles. The lower cycle of four years takes place in the 62 CEGs (College d'enseignement général, equivalent to junior high school) across the country which are all in administrative centers (préfectures or sous-préfectures). Students enter the lower cycle after having passed the Certificat de fin d'études du premier degré (CFEPD) exam.

The second cycle of secondary education takes place in four main types of institutions:

- the nine three-year lycées (including the two écoles normales, cycle long); teacher training schools.
- three two-year écoles normales; teacher training schools.
- the Centre d'enseignement technique; Technical Education Center.
- the Centre de formation des cadres d'alphabétisation (CFCA); Literacy Agent Training Center.

It also takes place in institutions belonging to other ministries, as well as in other countries where there are scholarships available. This chapter will be limited to the CEGs and the lycées, since the other more specialized institutions are discussed in other chapters of this report. (See Chapter 8.0 Vocational-Technical Education and Chapter 6.0 Teacher Training.)

The three years of lycée lead to the baccalauréat ("bac") exam which determines whether or not the student receives the diploma (the baccalauréat itself).

Passage from the lower to the second cycle is determined by one's results on the Brevet d'études du premier cycle (BEPC). The second cycle of studies for those who pass the BEPC is determined by a process of channeling (orientation) carried out by the Direction de l'orientation scolaire within the Ministry of National Education (MEN). This is a complex process that takes into

account two major factors: (1) the student's dossier, which includes his or her grades, BEPC results, aptitude (on the basis of a test), expressed preferences, and teacher opinions; and (2) the number of available places in the different second-cycle schools (which are often a function of the needs of certain ministries). For the past two years more students have passed the BEPC (thereby acquiring the BEPC diploma) than there have been available places in the various second cycle schools.

4.1.2 Programs and Projects

The tables below show that the rate of accomplishment of the Five-Year Plan (1978-79 to 1982-83) objectives declined regularly from year to year. For the lower cycle the results were as follows concerning number of students and number of classes:

Table 4.1

Number of Students Planned vs. Enrolled
(1978-1982)

	1978/79	1979/80	1980/81	1981/82	1982/83
Students Enrolled	19,491	24,451	28,731	33,612	37,920
Projected Numbers in the Plan	---	24,980	31,370	38,700	46,480
Rate of Accomplishment	---	97.9%	91.6%	86.9%	81.6%

Table 4.2

Number of New Classrooms Planned vs. Constructed
(1978-1982)

	1978/79	1979/80	1980/81	1981/82	1982/83
Planned	---	126	130	200	220
Constructed	---	104	98	74	82
Rate of Accomplishment		82.5%	75.4%	37%	37.3%

The nonconstruction of new classrooms is related to the ten CEGs that had been planned but not constructed.

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Because of this shortfall in the number of new classrooms the number of students per class in the CEGs increased from 38.7 in 1978-79 to 44.0 in 1982-83. It should be noted, however, that there are regional variations in this ratio from 42.7 in some Niamey CEGs to about 50 in Maradi.

The picture for the lycées is quite different. The Plan called for the construction of two new lycées, and both were constructed and put into service. In addition, a third lycée was constructed. In all, 82.3 per cent of the new lycée classrooms called for in the Plan were constructed. Also, all of this was accompanied by an 84 per cent increase in the number of students in the lycées. It is important to note that two-thirds of the 39 classes of second (first year of lycée) created last year were in the science and technical fields. Laboratory capacity, however, is insufficient.

4.1.3 External Efficiency

There are two factors that need to be considered in any discussion of the external efficiency of secondary education: the prospects for further education and the behavior of school-leavers in the labor market.

Until three years ago all students who passed the BEPC were "oriented" into a second cycle institution. In 1980 only 81 brevets were not oriented, and in 1982 alone, 1,080 of the 4,395 students who received their BEPC diploma were not placed in a second cycle institution. These people could either look for a job or go into a private training institution. In this respect, it is interesting to note that the pass rate on the BEPC has declined from 81 per cent in 1979 to 73 percent in 1982.

Students who pass the "bac" are entitled to enter the university or another higher educational institution, or to accept a scholarship abroad. Indeed, the generally acknowledged purpose of the lycée and the "bac" exam is to prepare and select students for higher education.

There is very little information on what happens to those students who either drop out or are not "oriented." After having received their BEPC, some go to vocational training centers and private courses (see Chapter 10.0 on Vocational Education), and others look for work. We do know that the student demand for technical training at the second-cycle level is strong. We also have some indications

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that the phenomenon of educated unemployment (unemployed with some secondary education) is just beginning to appear. In any case, we know that the only possibility for those who follow the nonscientific/technical track is to continue to the university level with the hope of receiving a government position. This hope is increasingly less realistic, since it appears that the government will no longer be able to absorb into its service all lycée and university graduates.

4.1.4 Internal Efficiency

Results on the BEPC have been rather good over the past four years, even though there has been a decline from 81 per cent in 1979 to 73.3 per cent in 1982. There are, however, wide variations from CEG to CEG with some having pass rates below 50 per cent.

Results on the baccalauréat have been erratic over the past four years. Although the number of students taking the exam has steadily increased from 926 in 1979 to 2,110 in 1982, the percentage passing the exam over those years has been as follows:

50.1 per cent in 1979
53.0 per cent in 1980
48.6 per cent in 1981
46.7 per cent in 1982

A more detailed picture is seen from Table 4.3 which shows the results by section (or speciality).

4.1.4.1 Teachers

In the CEGs there were 1,181 teachers in 1982/83, making for a student/teacher ratio of 32:1. CEG teachers are supposed to have graduated from the School of Pedagogy of the University of Niamey. Many of them, however, were only instituteurs in 1982/83, meaning that their highest level of schooling was the baccalauréat plus one year of teacher training oriented towards primary school teaching. Many of these teachers taught for several years in primary schools, and were then promoted to the CEGs, which are in larger towns and have a higher status. This means that a good number of CEG teachers are not fully qualified for their work. Also 34.3 per cent of CEG teachers are not Nigerien.

Table 4.3

		A Lit. & Philo.	B Economics	C Math & Physical	D Biol. Sciences
1979	No. taking the exam	268	65	91	357
	No. passing	141	47	52	139
	per cent passed	58	72	57	39
1980	No. taking	400	242	135	493
	No. passed	163	123	88	271
	per cent	46	51	65	55
1981	No. taking	477	312	105	429
	No. passed	218	188	50	185
	per cent	46	60	48	43
1982	No. taking	731	357	156	637
	No. passed	340	164	69	275
	per cent	47	46	44	43

Year		E Normal	F Technical	G Technical	Totals
1979	No. taking the exam	-	61	84	926
	No. passing	-	35	50	464
	per cent passed	-	57	60	50
1980	No. taking	14	90	115	1489
	No. passed	7	50	67	789
	per cent	50	56	58	53
1981	No. taking	9	69	115	1516
	No. passed	5	36	57	737
	per cent	56	52	50	49
1982	No. taking	14	78	137	2110
	No. passed	10	32	95	985
	per cent	71	42	69	47

Lycée teachers are supposed to have graduated from the Ecole de pédagogie or another part of the university in order to be fully qualified. In 1982/83 there was a total of 255 lycée teachers making for a student/teacher ratio of about 20:1. Also 27.8 per cent of the teachers are foreign, and many of these are in the scientific areas.

4.1.4.2 School Buildings

The quality of the CEG buildings varies greatly. Of particular interest is the general lack of science labs. The same is the case for the lycées which do have science labs, although these are often inadequate.

The dormitories in all CEGs and lycées are being closed as an economy measure, so students will have to find lodging in the town. Most of the dormitories will be converted to classrooms, according to government plans.

4.1.4.3 Textbooks

The government provides one textbook for each subject for every two to three students. Actual availability varies, however, as does the quality of the books.

4.1.4.4 Curriculum

The secondary school curriculum has hardly changed at all since independence. Some minor changes have been introduced in the history and geography curricula in order to make these courses relevant to national concerns. Nevertheless, other courses are basically as they were before independence. These curricula are, however, somewhat adapted to African situations and, whenever appropriate, the references are African.

4.1.5 Access and Equity

Entrance into secondary school is already highly selective. About 35 per cent of the primary sixth grade pupils have continued on to secondary school over the past four years (1979-1982). Also, all CEGs are in towns that are administrative centers, meaning that children from smaller towns have to live away from home in order to go to secondary school. The elimination of boarding facilities will make secondary school attendance even more difficult for these children.

Table 4.4 shows the regional distribution of CEG enrollments.

There are nine lycées and a total of 4,983 students in 1982/83. They are all located in the major towns with three in Niamey and one each in Dosso, Maradi, Diffa, Tillabery and Zinder. About 40 per cent of all lycée students are in Niamey.

Table 4.4

CEG Enrollment by Region, 1982/83

Department	CEG Enrollments	Per cent Total CEG Enrollments	Students per Class	Per cent Total Population (as of 1980)	Per cent Girls
Agadez	1,319	3.5	44.0	2.6	24
Diffa	1,169	3.1	45.0	3.2	32
Dosso	4,517	11.9	43.4	13.4	25
Maradi	6,570	17.3	46.9	18.5	18
Niamey	13,665	36.0	42.7	23.5	23
Tahoua	4,091	10.8	43.1	19.3	21
Zinder	6,589	17.4	45.1	19.2	--
TOTAL	37,920		44.0		

The proportion of girls in secondary education is lower than in primary education. Table 4.5 below gives a global view of the situation over the past several years, whereas the table above shows how it varies by region.

Table 4.5

Percentage of Girls in Secondary Education by Grade
1976/77 - 1979/80

	1976/77	1977/78	1978/79	1979/80
6th	29.0	30.0	28.4	28.7
5th	29.4	28.8	28.2	27.9
4th	27.7	29.9	28.6	29.0
3rd	27.4	26.3	29.3	29.4
2nd	28.7	23.6	23.5	31.7
1st	25.2	26.8	25.7	22.1
Terminal	30.5	30.0	29.6	28.1

4.1.6 Administration and Supervision

Secondary education is administered by the Direction de l'enseignement du second degré at the MEN. Also, the channeling (orientation) into the second cycle of those who pass the BEPC is done by the Direction de l'orientation which is also in the MEN.

There are ten inspectors who are the Ministry's top representatives for secondary education in each department. Their tasks are to collect the school statistics, process administrative matters, and to provide pedagogical advice to teachers. Although this last point was their originally defined task, their administrative duties consume large portions of their time. There are also conseillers pédagogiques who provide pedagogical advice to teachers.

4.1.7 Cost and Finance

Private initiatives are of greater significance at the secondary level than at the primary level in Niger. Approximately 15 per cent of the students at this level are enrolled in private schools, with the majority at the first level of the secondary system (CEG). Private institutions have apparently taken root at this level because of government restrictions on the number of times that students can repeat grades. Students who have failed more than twice enroll in private CEGs in the hope of passing the BEPC exam as private candidates. Public institutions are generally of higher status, and are probably of higher quality as well.

Within the public sector full responsibility for the functioning of secondary schools is assumed by the Ministry of Education, though the Ministry has recently ended its policy of providing boarding facilities or scholarships to all secondary students. In addition, the Ministry provides subsidies to at least some institutions in the private sector. These subsidies are evidently provided in the form of scholarships to students studying at these institutions.

The unit cost of secondary education, including expenditures on teachers' salaries, textbooks and materials, and other recurrent costs, is approximately 80,000 CFA francs per student per year (about $220 at current exchange rates). There are undoubtedly large cost differentials within the secondary educational system by level and by school type. The available data, however, are not broken down in such a way that these variations can be measured.

Nearly 50 per cent of all public expenditures on secondary education have been provided directly to students either in the form of boarding facilities (recently eliminated) or in the form of direct subsidies. Approximately 56 per cent of CEG students now receive scholarships. All students in post-BEPC institutions receive support from the government, though the type and quantity of this support differ significantly across institutions.

4.2 Goals, Strategies and Plans

The Interim Consolidation Program (PIC) includes a more detailed plan for secondary education than that already described for primary education. The PIC incorporates many of the tenets and recommendations of the Zinder Declaration concerning secondary education. The PIC prescribes:

1. Major goals

- emphasis on the quality of instruction;
- improvement of percentage of students passing on to higher level classes;
- improvement of working conditions of teachers and upgrading the functions of teacher trainers (to be carried out in view of Nigerization, with relevant steps to be taken consequently).

2. Objectives

a. General Secondary Education: First Cycle

- raise passage rate from CM2 to 6th to 40 per cent;
- increase number of students;
- create 183 new classes;
- transform dormitories of CEGs so as to create 15 classrooms;
- use the 69 available classrooms unoccupied at the beginning of the 1982-83 school year;
- one new CEG to be constructed in Tibiti;
- during the PIC period, CEG class size to be maintained, as will teaching schedules;

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- reformulate curricula so as to include more hours for scientific subjects (to insure this, 12 laboratories are to be constructed and 31 are to receive equipment);

- deteriorating school buildings to be repaired and rebuilt;

- water and electricity hookups to be connected for the new CEGs;

- fans to replace air conditioners.

b. General Secondary Education: Second Cycle

- as need arises, lycée dormitories to be transformed into classrooms;

- add six new classrooms to Maradi lycée, and two to Lycée Fatima, Zinder;

- due to great need, a high proportion of students to be channeled to scientific subject areas;

- carry out inventory of all existing laboratories and available laboratory equipment;

- in both 1st and 2nd cycles, steps to be taken to remedy the problems of absenteeism, drop outs, and student pregnancies. This will involve parent education, family guidance, and civic education.

4.3 Analysis

4.3.1 Constraints

As with primary education, the major constraint is financial. The continuation of relatively high unit costs and stagnating resources will certainly be a threat to the realization of the government's stated goals (see section 4.2). This is to be considered along with the growing demand for secondary school places from primary school-leavers and, especially, for second cycle places from BEPC holders. However, the greatest constraint on the development of secondary education in the near future is likely to be that of resisting the temptation to expand. The demand for places is high because of the numbers coming up from lower levels of education, but the modern sector (administration, industry) has a limited capacity to absorb secondary school leavers.

4.3.2 Issues

4.3.2.1 External Efficiency

When students enter secondary school, they are committed to the "modern" sector, meaning that it becomes socially and psychologically difficult - if not impossible - for them to return to the rural areas and traditional life and production. This fact is reflected in the secondary school curriculum, as well as in its structure. The modern sector, mainly urban government employment, is, however, stagnating, if not declining. This means that the original raison d'être for secondary education is seriously in doubt.

Preliminary evidence suggests that the phenomenon of educated unemployment is beginning to appear. This is associated with an economic recession as well as the inability of the second cycle to absorb all the qualified graduates of the lower cycle (i.e., agriculture). This suggests that the problems we have seen in primary education are extended into secondary education. This leads us to the following question: in purely economic terms, and taking into account the country's productive capacities, what are the needs for middle and higher level skills to which secondary education can contribute? Answering this question requires an analysis of the labor market, with an especially hard look at the administrative sector to which so many secondary school students aspire.

The foregoing suggests that a critical analysis should be made of the curriculum which is still that of the preindependence era with minor modifications. The primary education reform which proposes to adapt education to indigenous social and economic surroundings, has important implications for secondary education, in that a radically reformed primary school curriculum would produce students who are unprepared for the present secondary school curricula.

4.3.2.2. Internal Efficiency

At present the attrition rates in secondary education are not very high. This can be attributed to the fact that those who are admitted to secondary school have already overcome most of the filtering mechanisms both socioeconomic and educational. Once in secondary schools, they are likely to try to realize the investment represented by success in primary schools. Another incentive to succeeding is the social stigma of failure, as well as the lack of job markets for secondary school dropouts.

This relatively favorable situation could very well change, however, with the elimination of boarding facilities. There are solid indications from other countries that boarders succeed better in school than others. In the case of Niger, we can imagine that boarding facilities (food, light, proximity to classrooms) greatly enhance a student's ability to concentrate on schoolwork. Although it is an expensive proposition, the elimination of boarding facilities for students who must leave home to attend secondary school will certainly have an adverse effect on their school performance. This means that the investment already made by the individual and the state is likely not to reach maturity, when viewed in purely educational terms.

Also there is the issue of science teachers and the facilities needed for science teaching. These facilities are sorely lacking, and this contributes to the low level of production of science graduates as well as the difficulties schools have in attracting students to science courses.

4.3.2.3 Access and Equity

Secondary education in Niger is extremely selective and greatly favors the urban over the rural population. At a particular disadvantage are rural girls who would have to leave home in order to pursue secondary studies.

The decision to eliminate boarding facilities will only exacerbate these tendencies and make secondary schools even more elite institutions. It will become even more difficult for the rural populations to send their children to secondary schools (very few are inclined to do so in any case), and the urban population will have a virtual monopoly on secondary education, especially at the *lycée* level. This will have implications for the whole structure of social mobility in the country, at least that which is determined by higher levels of education.

4.3.2.4 Administration and Supervision

The major issue here is the coordination between educational planning and changes in the financial and employment situations. Many of the data exist for this analysis, and need only be systematically exploited.

4.3.2.5 Cost and Finance

The reduction of costs at the secondary level can be accomplished most directly and most appropriately (see Chapter 2.0) by raising the examination scores required for

admission to secondary school. This will reduce the level of enrollment while limiting access to those students best qualified for further study. Such a policy would not only serve to reduce costs at this level, but would improve the internal and external efficiency of the system as well.

Though the government of Niger has initiated the difficult process of regulating and rationalizing the system of student scholarships, subsidies to students remain the single largest item of expenditure in the secondary educational system. Much remains to be done, however, to shift a larger proportion of the costs of secondary schooling to those who benefit directly. Cost reductions at this level should emphasize further cuts in the amount of subsidies to students. Such a program might usefully be implemented in association with a program to use scholarships as an instrument for encouraging students to enter those fields viewed as priorities by the government. This is already being done to some extent, through the payment of special allowances to teacher training and technical school students, and these efforts will be extended in the future.

4.4 Conclusions

Niger's secondary educational system has been unusual in Africa until this year in that virtually every student completing a secondary level course was assured of finding some kind of modern sector employment. This is no longer the case. Perhaps as many as 25 per cent of this year's BEPC graduates were not "oriented," and this situation is likely to grow worse and to extend itself to higher levels of the system as Niger's economic and financial crises intensify. The problem of "educated unemployment" has emerged late in Niger, but it is likely to increase in the next few years.

At the same time, however, Niger's secondary educational system often fails to produce the kinds of graduates that are needed for the accomplishment of the country's development objectives. Too few students complete their studies in scientific subjects, and those who undergo specialized training in administrative and technical subjects are often ill-prepared for the position they are expected to fill (see Chapters 8.0 and 9.0).

These two circumstances suggest that the appropriate strategy for Niger's secondary educational system in the next few years is one of consolidation, rationalization and

reallocation, and certainly not one of expansion (as called for in the PIC). Efforts should be made to control the rate of growth in enrollments through manipulation of passing grades on CFEPD and BEPC exams, while attention within the system is focused on improvements in the quality of the education provided and on improvements in the allocation of students among fields of specialization. While the emergence of some "educated unemployment" and a break in the perceived inevitable link between secondary or higher education and guaranteed government employment are likely to be positive developments for the Nigerien economy in the long run, in the near term the cost of secondary education and especially of subsidies to students is such that expansion of enrollments should be held to a minimum. Rather than adding new students to the system, attempts should be made to adapt the education provided at this level more fully to the exigencies of the Nigerien labor market.

Such efforts should be combined with measures aimed at the reduction of costs in the secondary educational system. The first requires that a detailed analysis of costs by institution and program type be undertaken, and probably implies as well a further shift in the cost of schooling at this level from the government to parents and students.

4.5 Recommendations

1. A mechanism should be established to monitor the external efficiency of secondary education. This would mean attempting to establish what happens to secondary school-leavers and graduates in the form of a tracer study with a mechanism for following up on students for at least one year after leaving school.

2. Greater emphasis should be given to science teaching. This would include the revision of the existing curriculum, which is not adapted to the experience of the students, the construction of science labs, and greater emphasis on the training of science teachers.

3. A study on the unit costs of the different types of higher secondary schooling should be undertaken.

4. Serious reconsideration should be given to the pedagogical and sociological consequences of the decision to eliminate boarding facilities. Particular thought should be given to the impact of this decision on access to secondary schooling for rural girls as well as the pedagogical consequences of the decision for these populations.

5. It is necessary to reinforce the planning capacities of the MEN in order for it to conduct studies on the relationships between inputs into secondary education (costs, teacher quality, laboratory facilities, building quality) and the quality of education received by the students. Particular attention needs to be paid to the issue of costs of science education, the possibility of growing disequilibrium between the worlds of schooling and work and disparities in access to higher levels of education. In this context, greater effort should be made to develop the amount and quality of school data received from the secondary inspectorates as well as the uniformity of the information received.

4. A greater effort must be made at the secondary level (and especially within the general academic program) to encourage students to specialize in those subjects that will enable them to pursue advanced training in those technical and scientific fields where Niger's need for qualified personnel is greatest. Scholarship policy may be manipulated to this end, as it already is in the effort to induce students to enter teaching. To be successful, such a program will require closer cooperation between the Ministry of National Education and the agencies responsible for higher education.

Table 4.6

Secondary School Enrollment, Public and Private[1]
1977 - 1980

First Cycle

	6th	5th	4th	3rd	Total	Percent Increase
1977 (Girls)	5574 (1617)	4115 (1209)	3182 (880)	2679 (735)	15,550 (4,441)	
						20.4 (22.6)
1978 (Girls)	6409 (1920)	5355 (1544)	3931 (1175)	3117 (835)	18,715 (5,444)	
						24.1 (21.8)
1979 (Girls)	8269 (2350)	6102 (1723)	5053 (1447)	3799 (1112)	23,223 (6,632)	
						23.2 (26.4)
1980 (Girls)	9721 (2971)	8090 (2257)	5989 (1735)	4820 (1419)	28,620 (8,382)	

Second Cycle*

	2nd	1st	TERMINAL	TOTAL	Percent Increase
1977 (Girls)	589 (169)	477 (120)	485 (148)	1543 (437)	
					30.9 (19.2)
1978 (Girls)	1082 (255)	481 (129)	457 (137)	2020 (521)	
					12.3 (10.0)
1979 (Girls)	872 (205)	901 (232)	493 (146)	2268 (573)	
					29.4 (44.3)
1980 (Girls)	1248 (396)	791 (175)	896 (256)	2935 (827)	

* Private schools enrolled approximately 14 percent of secondary level students in 1980.

5.0 Higher Education

The University of Niamey is the principal higher education institution in Niger. One other government-funded agency also provides university-level training--the National School of Administration (ENA). ENA offers a college-level diploma in general and public administration (ENA is described more fully in section 11.0). The University of Niamey graduated 168 students in 1982; ENA graduated 64.

Higher education within Niger is only part of the picture. Historically, Nigeriens have been educated abroad, and the majority of university graduates in 1982 were still Table 5.1 presents statistics for university graduates in Niger and abroad from 1979-82.

Table 5.1

University Graduates on Government Scholarship by Region: 1979-1982

Location	1979	1980	1981	1982	TOTAL
Niger	72	53	166	168	459
Abroad	194	262	252	192	900
Total	266	315	418	360	1359

Source: Ministry of Plan. Review of the Five-Year Plan, 1982, p. 55

No private higher education institutions exist in Niger. An Islamic University funded by a group of Islamic nations in West Africa and the Middle East is under construction and slated for completion in three or four years.

Most university study in Niger and abroad is funded by government scholarships. Donor agencies do provide scholarships for a few Nigeriens; however, discussion focuses on the University of Niamey and government of Niger scholarship programs. This section briefly describes the higher education system in Niger and analyzes the university of Niamey and the external scholarship program in terms of

external efficiency, internal efficiency, access and equity, administration and supervision, costs and financing. An analysis of the system follows the same categories and leads to a set of conclusions and recommendations which close this section.

5.0 Status

Status includes a presentation of the goals and strategies for higher education followed by brief descriptions of the overall structure of higher education in Niger and specific programs. Discussion of the system is then categorized into the five areas identified above.

Information for the assessment was located from three sources: the University of Niamey, the Ministry of Higher Education, and the Ministry of Plan. The University of Niamey Rectorate maintains enrollment and scholarship records, but no longer publishes an annual report. The primary concern of the Rectorate's data is to monitor the status of students on government scholarship. Its publication, Statistique des resultats universitaires, lists exams results. The Ministry of Higher Education publishes an annual report, Annuaire de l'enseignement superieur, which lists the names of all students on scholarship at home and abroad. The Human Resource Planning Office at the Ministry of Plan analyzes data received from the Ministry of Higher Education. The Interim Program of Consolidation (PIC) prepared by the Planning Office analyzes higher education in relation to Niger's human resource needs. Tables used in the section are derived mainly from PIC.

5.1 Goals and Strategy

The system of higher education in Niger has never been the subject of long range planning. Indeed, the review of the Ministry of Plan in 1982 points out that the five year plan scarcely mentioned higher education. The UNESCO study of Niger's education system conducted in 1978 provided a descriptive overview of higher education but offered little analysis. The EEC study of manpower needs in Niger (1981) touched upon the School of Agronomy, the need for more technical training, and suggested the creation of a school of management but did not examine the higher education system as a whole. University authorities and Ministry of Higher Education officials have helped in the elaboration of the Interim Program of Consolidation (PIC) which appeared in draft form in March 1983. All agree, however, that the system of higher education is in need of a long range plan.

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The broad outline of the university's role in national development is contained in the Declaration of Zinder. In keeping with the goal of "Nigerization" of the nation's education system, the university is to be transformed "to correspond with training and employment opportunities", with priority given to scientific and technical fields rather than liberal arts. The Declaration calls for the National School of Administration to be transformed into a more applied program of training for government personnel, and for the School of Pedagogy to become an Advanced Teacher Training College. It further emphasizes the need for advanced technical and professional training. It proposes that university level research be reoriented toward the goals of educational reform such as the use of national languages for instruction. The Declaration also envisages an obligatory national service program in which university graduates would teach at least one year in a public school.

In his speech during the Zinder conference, the Minister of Higher Education lamented the fact that the university was concerned more with granting degrees than training Nigeriens in practical skills. He called for the University to become more integrated into national society and less dependent upon imported teaching methods and materials as well as foreign culture.

These themes were taken up in the Ministry of Plan's review of the educational system and the PIC. The draft PIC suggests that the strategy for higher education should give priority to the development of the schools within the University of Niamey and reduce the number of scholarships for study abroad. Scholarships should be extended according to the nation's development priorities, with emphasis placed on the training of trainers. The PIC specifically deplores the large enrollment in the School of Economics and Law and the fact that the relatively few women enrolled in the university are concentrated in that school rather than in the sciences. Possible plans for university development are treated in more detail in section.

5.1.2 Structure of Higher Education

Administrative responsibility for the higher education system is divided among the University of Niamey and the Ministry of Higher Education and Research. The first is responsible for the staffing and administration of the university and the second for handling student scholarships. While it is acknowledged by the Nigerien government that the university is producing too many graduates in law and humanities and too few in sciences and agronomy, responsibility for the problem is difficult to assign because of this administrative division. Closer coordination of effort among ministries, in cooperation with

a strengthened human resource planning authority, would accomplish a great deal in the effort to bring about a closer "fit" between Niger's needs for trained personnel and the outputs of the country's education and training system.

5.1.3. Academic Programs

This discussion focuses on the University of Niamey and its programs. The National School of Administration (ENA), Agrhymet, EAMAC, and the Islamic UNiversity are also described briefly.

5.1.3.1 University of Niamey

Before the Center of Higher Education of Niamey was established in 1971, Nigeriens had no options for higher education in their own country. The Center opened with a enrollment of 103 students from Niger and Upper Volta in the School of Sciences. In 1973 a School of Letters opened with 24 students. The Center attained official status as the University of Niamey on June 4, 1974.

The organization of academic programs in the University of Niamey follows the French university system. There are three cycles, each of which leads to a diploma. The first cycle consists of a two-year course of study leading to a university diploma. In the School of Sciences this degree is referred to as DUES (Diplôme universitaire d'études scientifiques) and in the School of Letters as DUEL (Diplôme universitaire d'études de lettres). The second cycle consists of another two year course of study: at the end of the first year a licence degree is awarded, and at the end of the second a Maîtrise. The third cycle is the graduate program leading to the doctorate. The DEA (Diplôme d'études approfondies) is awarded after one year of graduate study.

The university statutes provided for the creation of six schools and two research institutes. The schools include Sciences, Letters, and Human Sciences, Agronomy, Pedagogy, Health Sciences, Economics and Law. The institutes are for research in human sciences and research in the teaching of mathematics. Following is a description of the schools and institutes.

School of Sciences

The School of Sciences was the first to be established and until 1978 had far more students enrolled than any of the other schools. The school trains teachers for lower and upper secondary education and higher education as well as researchers. The school consists of the following departments: mathematics, physics, chemistry, biology,

geology, and agronomy. The school had a total enrollment of 427 students in 1982, and the teaching faculty consisted of 62 professors and assistants as well as 16 visiting professors.

School of Letters and Human Sciences

The objectives of the School of Letters and Human Sciences are much the same as those for the School of Sciences, as well as the training of personnel in the fields of translation, literacy, information, and cultural activities. The school is divided into the following departments: English, geography, history, modern letters, linguistics, and philosophy. During the 1982-83 academic year the school had an enrollment of 541, the largest in the university, and a faculty consisting of 47 full or part-time professors and assistants. Professors within the school have collaborated with INDRAP in the study of national languages.

School of Economics and Law

The School of Economics and Law did not come into being until 1980, and enrollment grew quickly from 242 to 531 in 1982. The school only had a teaching staff of 15, of whom six were in economics and the rest in law. Both departments offer programs leading to a maîtrise, although no intermediate degrees are proposed. Courses in public and private law are designed to train jurists and administrators. The economics program includes training in accounting, statistics, and rural economics.

School of Pedagogy

Since its establishment in 1971, the School of Pedagogy has gone by various titles, including the CAP/CEG supported by a UNDP/UNESCO project. Initially students in the school were drawn mainly from the Zinder and Tillabery Teacher Training Colleges. In 1975 the school began training pedagogical advisors and inspectors for primary education. At the end of two years of study the students either take up positions as advisors or continue for a third year of training to become primary education inspectors. Of the first 15 graduates in 1977, eight were appointed pedagogical advisors by the Ministry of National Education and seven continued training to become inspectors. The teaching staff in 1977 consisted of only four professors, two of them Niger nationals.

In 1977 the Belgian government entered into an agreement with Niger to assist the School of Pedagogy in the training of trainers, enabling the program to expand. The Belgian project, currently scheduled to end in 1985,

consists of 12 professors on the regular faculty, two visiting professors, 65 scholarships to students enrolled in the school, three doctoral scholarships in Belgium, and 5 million Belgian francs' worth of equipment per year. The Belgian Cooperation also provides teachers for training colleges at Zinder and Tillabery.

By 1982 the enrollment of the School of Pedagogy had risen to 294. The teaching staff of the school consisted of 20 professors, the majority provided under the Belgian assistance project. The school offers a program of studies in four sections or departments. The DAP/CEG section consists of two years of study in both theoretical and practical subjects. The pedagogical training involves practice teaching in a secondary school (CEG) and audio-visual techniques. A diploma is granted upon successful completion of two years of study in the program. The other sections are as follows: primary education pedagogical counseling and literacy, primary education inspection, and secondary education pedagogical counseling.

School of Health Sciences

The school of Health Sciences trains medical doctors to provide preventive, educative, and curative services to both urban and rural communities. It also trains health assistants capable of working with medical teams. The Doctor of Medicine degree requires a full seven-year course of study. The school granted its first six doctor of Medicine diplomas in 1981. In 1982 enrollment was 227 with a teaching staff of 12 professors.

School of Agronomy and Livestock

The School of Agronomy was established in 1971 and has remained the smallest in the university in terms of enrollment. Only 54 students were enrolled in 1982. Students who have achieved the DUES/AGRO II diploma in the School of Sciences are admitted to Agronomy for two additional years of study in agriculture. Professional personnel at the B level may also be admitted from the Ministry of Rural Development if they pass an examination set by the Ministry in conjunction with the Ministries of Higher Education and Public Works. The program of the school focuses on practical studies aimed at training agricultural engineers (A2) in the Ministry of Rural Development. Those who pursue theoretical engineering (A1) have been sent abroad, most of them to Europe.

Each student who completes the first year of study (Agro 3) in the school is required to do two months of field training during the vacation period. A report on the field training experience is then required. The following

subjects are included within the various departments: vegetable production, zoology, animal health, rural engineering, water and forests, social sciences,1 and soil science. A maîtrise is conferred upon successful completion of the program. A third cycle (Agro 5) leads to a Diploma of Advanced Agronomy (DA) and consists of at least one year of teaching or research in an institution of higher education. In 1982 the School of Agronomy had a teaching staff of 13 professors and assistants as well as 21 visiting professors. The French Aid Agency (FAC) provides professors and financial assistance.

The Institute for the Teaching of Mathematics (IREM)

The Institute for the Teaching of Mathematics (IREM) was set up in 1972 to accomplish several purposes: continuous training for secondary teachers of mathematics, research on the teaching of mathematics, and the revision of mathematics curricula. IREM cooperates with the School of Pedagogy in the training of math teachers. The research staff of IREM is small and composed largely of professors who have other fulltime positions but contribute to the institute's activities.

Institute of Research in Human Sciences (IRSH)

The institute of Research in Human Sciences (IRSH) has existed as a research center since the colonial era. Its present physical facilities were constructed in 1964, and in 1974 it was officially integrated into the University of Niamey. IRSH is headed by a director and has maintained a research staff of seven for the past five years. The objectives of IRSH are primarily to conduct studies on the country's ethnic groups and to coordinate social science research related to development. IRSH has a library and research departments in archeology, audio-visual techniques, linguistics, and socio-economics. The Institute maintains a list of publications which it has sponsored and are for sale on the premises.

5.1.3.2 The National School of Administration (ENA)

The National School of Administration (ENA) provides training for Nigerien civil servants at primary, secondary and higher levels. The three year post baccalaureate program leads to a diploma. There were 53 graduates in 1983.

5.1.3.3 The Islamic University

The Islamic University is the creation of the Islamic Conference Organization which groups Islamic nations in West Africa and the Middle East. Plans for the physical facilities of the Islamic University are elaborate. Construction is well under way at the site located in the traditional religious center at Say, south of Niamey. When completed three or four years hence, the campus will house a university hospital, a mosque, faculty and student housing, a sports complex, and five colleges or faculties: arts and philosophy, human sciences, basic sciences, medicine. The university will serve the entire region of West Africa.

5.1.4 External Efficiency

The efficiency of the system of higher education must be assessed by examining the production of graduates in relation to the human resource needs of the nation. Several generalizations emerge from the data available and from interviews with university authorities. Unlike many other African countries, Niger does not yet appear to have a problem of placing university graduates. The overwhelming majority of Nigerien graduates abroad return home to work and nearly all those who graduate, whether at home or abroad, are placed within the various agencies of the government. However, those who do not complete their studies and look for employment in the private sector are beginning to experience unemployment. In addition, the projections in section 2.0 indicate that a surplus of university graduates in certain fields will be experienced in the future. Thus, there is a need for matching future university enrollment to manpower needs.

As table 5.2 shows, the overwhelming majority of graduates are form the School of Pedagogy (329 out of a total 459). This is explained in part by the fact that the basic degree program in the school is for two years, whereas the degree program in other schools ranges form four to seven years. The director of the School of Pedagogy indicated that virtually all of the graduates have taken up teaching positions within the educational system or have gone on for further positions within the educational system or have gone on for further study abroad.

To these figures must be added the number graduates who have studied abroad. Table 5.3 indicates the number of university graduates from selected foreign countries, but does not account for all graduates during the period from 1979 to 1982. Of the total of 742, those who studied in France account for nearly half (343).

Table 5.2

University of Niamey Graduates on Scholarship: 1979-80

School	1979-80	1980-81	1981-82	1982-83	Total
Pedagogy	56	41	125	107	329
Science	7	4	7	11	29
Agronomy	6	0	6	7	19
Health Sciences	0	0	6	11	17
Letters	0	2	15	21	38
Agrhymet*	0	4	4	2	10
EAMAC*	3	2	3	9	17
Total	72	53	166	168	459

*Agrhymet and EAMAC are not part of the University of Niamey but are considered as part of the system of higher education.

Source: Ministry of Plan, Review of Five Year Plan, p. 53.

Table 5.3

University Graduates by Country of Study: 1979-82

Country of Study	1979-80	1980-81	1981-82	1982-83	Total
France	81	109	90	63	343
Ivory Coast	25	37	22	29	113
Senegal	12	26	34	24	96
Togo	22	17	15	17	71
Algeria	5	17	17	3	42
Upper Volta	6	9	14	15	44
Canada	11	8	11	3	33
Total	162	223	203	154	742

Source: Ministry of Plan, Review of Five Year Plan, p. 54.

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Table 5.4 illustrates the extent to which economics, law, and letters predominate as the selected fields of study. Nearly half of all university graduates are assigned as teachers in the secondary or university system. The remainder are dispersed throughout the various government agencies. Very few appear to take up jobs within the private sector.

Table 5.4

University Graduates by Subject:1981-82

Subject		Subject	
Economics & Law	74	Teaching/French & English	11
Letters	39	Teaching/History/Geography	46
Math/Science	8	Teaching/Physical Education	2
Medicine	23	Accounting	2
Dentistry	3	Telephone/Telegraph	2
Pharmacy	3	Teaching/Physical Education	2
Veterinary Medicine	5	Secretary/Administration	2
Engineering	32	Journalism	6
Agronomy	5	Social Work	1
Teaching/Math	36	Library Science	2
Teaching/Science	14	Hotel Management/Tourism	3
Total			360

Source: Ministry of Plan, Review of Five Year Plan, p. 40.

Although many graduates of non-teaching programs are assigned to secondary schools, there is a shortage of Nigerien teachers in the secondary school system. Table 5.5 compares the number of Nigerien and foreign teachers in the secondary system in 1977-78 and 1982-83.

The proportion of Nigerien teachers in the first cycle is quite high (776 out of a total of 1,181, but for all other cycles the proportion of foreign teachers is overwhelming (see Table 5.10). Hence the need for the training of additional secondary school teachers is pronounced, particularly at the second cycle and technical levels.

In the absence of a human resources plan for the nation, it is difficult to gauge the extent to which the university is meeting needs in other fields.

Table 5.5

Nigerien and Foreign Secondary Teachers: 1977-82

Cycle (Grade level)	Nigeriens	Foreigners	Total
First Cycle	776	405	1,181
Second Cycle	71	184	255
Technical Schools	50	71	121
Normal Schools/long cycle	18	30	48
Normal Schools/short cycle	30	28	58
Total: 1982-83	945	718	1,663
Total: 1977-78	267	401	668
Percent Increase	+678	+317	+995

Source: Ministry of Plan, Review of Five Year Plan, p. 15.

5.1.5 Internal Efficiency

The matter of internal efficiency is related to the financial investment in education by the state and the effective application of resources within the higher education system. The following measures of internal efficiency are discussed: cost per student, enrollment and attrition rates, Nigerization of teaching faculty, student/teacher ratios, research and development, and facilities and equipment.

5.1.5.1 Cost per Student

An important distinction is to be made between costs per students within Niger and abroad. The Ministry of Higher Education has administered scholarships since 1980. More than half of the students on scholarship are studying abroad. Costs for students abroad (Africa and Europe) for the first and second cycles are one and one half times those in Niger. Few students complete their education within the University of Niamey, except for the School of Pedagogy, and are consequently sent abroad for additional studies. The cost per student per year at the University of Niamey is 580,000 CFA (about U.S. $1,526.00), which includes scholarship, travel, and housing (see Table 5.6). It does not, however, include family supplements, preparation of thesis, or medical expenses.

Table 5.6

Yearly Cost per Student by Region (in U.S. dollars)

	NIGER	AFRICA		EUROPE	U.S.
Undergraduate	1,526	Dakar	2,168	2,203	3,947 (Tuition)
		Abidjan	2,171		
		Lome	1,846		
		Ouaga-dougou	1,652		
Graduate		Dakar	2,687	2,545	
		Abidjan	2,697		

Source: Ministry of Plan, Review of Five-Year Plan, p. 20.

5.1.5.2 Enrollment and Attrition Rates

Enrollment at the University of Niamey grew rapidly from 360 in 1974 to 784 in 1977. Table 5.7 shows the increased in enrollment for the period from 1978 to 1982 when it reached 2,142. The School of Sciences had the highest percentage of students with one third of the total in 1978, while the School of Letters and Human Sciences had 22 percent and Pedagogy had 21 percent. When it was opened in 1980, the School of Economics and Law accounted for 16 percent of the total. By 1982, enrollment was fairly evenly distributed among the six schools with the exception of Agronomy with only 2 percent.

It is important to note that during the early years of the university's history a significant portion of the students enrolled were non-Nigeriens, primarily from Upper Volta and other neighboring francophone countries. In 1973, over half of all students were foreign nationals, but by 1981 they accounted for only 11 percent. Most of the foreign nationals come on scholarship form their own governments.

The government of Niger incurs considerable expense in the training and education of its youth (see Chapter 2.0). It is, of course, more costly to send students abroad than to educate them at home. While the University of Niamey is assuming an ever greater role in higher education, the majority of Nigerien university students are still enrolled abroad. The review of the five year plan conducted by the

Ministry of Plan in 1982 indicates that of the 2,403 university students on scholarship in 1981, over half were studying abroad. Of these, more than half were in West Africa. The largest single concentration of Nigerien students was in French universities (271).

Table 5.7

University of Niamey Student Enrollment: 1978-1982

School	1978-79 no.	1978-79 %	1979-80 no.	1979-80 %	1980-81 no.	1980-81 %	1981-82 no.	1981-82 %	1982-83 no.	1982-83 %
Sciences	307	33	291	30	435	29	402	22	427	20
Letters	205	22	219	23	292	20	443	24	541	26
Pedagogy	195	21	224	23	268	18	284	16	294	14
Health Sciences	167	18	177	18	213	14	227	12	271	13
Agronomy	61	6	61	6	45	3	45	3	54	2
Economics & Law	0	0	0	0	242	16	245	23	531	25
Total	935	100	927	100	1495	100	1826	100	2118	100
Percent Increase	0		+3.96		+53.81		+22.14		+15.99	

*to the 2118 students should be added 24 Chadians not specified in the above schools, bringing the total to 2142.

Source: Ministry of Plan, Review of the Five Year Plan, 1982, P. 55.

Attrition rates at the University of Niamey vary sharply from one school to another. According to the Office of Scholarship statistics for 1982, the School of Pedagogy maintains the highest percentage of passing grades in final exams for all classes. Agronomy, with far few students, also has a very high success rate in exams. The failure rate tends to be highest in all schools during the first two years of the academic program. The Schools of Economics and Law, Sciences, and Letters have tended to maintain the lowest passing rates. Students who fail the first session in June are allowed to take the October exams. Often,

however, the rate of success in the second session exams is considerably lower than during the first session. The complaint is often heard that the need for teachers is so great that even those who do not complete their studies find jobs in secondary schools. No data was located on the attrition rates of Nigeriens studying abroad.

5.1.5.3 Nigerization of Teaching Faculty

The government of Niger is anxious to nationalize its teaching personnel. The percentage of university level professors and assistants who are Niger nationals remains low. As Table 5.7 indicates, the percentage of total teaching staff who are Nigeriens has increased slightly from 34 in 1978 to 43 in 1982. At 62 percent, the School of Agronomy has the highest ratio of Nigeriens. A majority of the Nigerien personnel in the university are at the assistant level.

Table 5.8

Nigerien Professors as Percent of Total: 1978-82

School	1978-79	1979-80	1980-81	1981-82	1982-83
Science	41	42	45	43	44
Letters	23	25	29	36	41
Pedagogy	13	29	37	37	37
Health Sciences	40	58	50	50	47
Agronomy	50	55	50	61	62
Economics	0	0	40	26	33
Total	34	39	41	41	43

Source: Ministry of Plan: Review of Five-Year Plan, p. 22.

The 1982-83 academic year saw the issue of foreign contract professors thrown into relief. In an effort to reduce university costs, the government asked foreign professors on contract to accept a substantial reduction in salary. Several chose to resign rather than accept the reduction. It is not likely that they can be replaced with Niger nationals in the short run. The government will have to solicit more volunteer teachers and those on programs of bilateral assistance. Directors of the various school will likely be forced to call upon more adjunct professors from secondary schools and government agencies. Expatriate professors on contract who remain have expressed uncertainty about the future.

Foreign technical assistance continues to provide an important portion of the teaching and research staff of the university as well as a source of funding for Nigerien university personnel. By far the largest contribution is that of the French government. In 1977 French professors represented roughly half of the teaching faculty at the university. By 1983 there were 69 French professors associated with the university, including the National School of Administration. While there has been a sizeable increase in the number of French professors in the last five years, they are a smaller percentage of the total due to the relative increase in Nigerien personnel. The greatest concentration of French professors has been in the Sciences and Letters. The French development agency (FAC) recently evaluated its program in Niger and is considering increasing assistance to the School of Pedagogy as well as the technical schools.

5.1.5.4 Student/Teacher Ratios

The student/teacher ratios at the University of Niamey vary among the schools, ranging from three students to one teacher in the School of Agronomy to 30 to one in the School of Economics and Law. University authorities consider the maximum acceptable ratio to be no more than 14 to one, which therefore implies that Economics and Law is already seriously over-enrolled. At the same time, the schools with the lowest student/teacher ratios account for the highest per student costs. Table 5.9 lists student/teacher ratios by school from 1978-79 to 1981-82.

Table 5.9

Student/Teacher Ratio By School

School	1978-79	1979-80	1980-81	1981-82	1982-83
Science	6	5	8	7	7
Letters	8	8	8	11	14
Pedagogy	13	13	17	15	12
Health Sciences	33	15	14	13	16
Agronomy	6	7	5	5	3
Economics & Law	0	0	48	23	30

Source: Ministry of Plan, Review of Five-Year Plan, p. 23.

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5.1.5.5. Research and Development

It is a common occurrence in African universities that recently trained nationals are either placed directly in administrative positions or over-burdened with teaching assignments, leaving little time for serious research. This is certainly true of the University of Niamey. Most academic research is conducted within the various institutes, including those not officially affiliated with the university, such as INRAN and INDRAP. IRSH publishes the work of university researchers and maintains a library which is at the disposal of students and professors.

5.1.5.6 Facilities and Equipment

In the early years of the university, many of the classes were held in makeshift facilities such as secondary schools or INDRAP. The School of Science was the first to have its won facilities in 1977. by 1983 all of the schools except Pedagogy were housed in recently constructed facilities on the left bank campus. Student dormitory facilities were also located on the left bank campus. Some of the schools, such as Pedagogy and Economics and Law, are already over-crowded in terms of classroom space, while others such as Agronomy are lacking in adequate laboratory facilities. Most are also lacking in vehicles for research and field work.

5.1.6 Access and Equity

The publication entitled The Student Guide indicates that students admitted to the university must have passed the baccalauréat or possess an equivalent diploma, passed special examinations organized by the school concerned, or in the case of civil servants passed the examination organized by the host ministry in conjunction with the Ministries of Public Works and Labor. Admission requirements for foreign students on scholarship form their won government or international agencies are similar. Those who are studying at their won expense must submit an application to the Ministry of Higher Education.

Foreign students comprised more than half of total enrollment at the University of Niamey until 1974; by 1980 they still accounted for nearly 40 percent. However, by 1982, foreign students represented only 11 percent of the student population. While the majority of these were on scholarship from their government, some form Benin, Togo, Guinea, Mali, and Cameroun were enrolled at their own expense.

Nearly all Nigerien students receive either a government scholarship or their regular salary as civil servants while attending the university. In 1982 the monthly stipend for students was 35,000 CA (or about U.S. $90.00). In addition, married students received a supplement as well as an allocation for each child. The government also supports travel and medical expenses. Students must buy their own textbooks.

There are no official figures available to indicate the regional representation and socio-economic status of Nigerien students attending the University of Niamey or studying abroad.

The main issue of equity that can be documented concerns the percentage of women students in the university. The relatively small number of girls enrolled at the primary and secondary levels is reflected in university enrollment. Only one third or all those who are admitted to the baccalauréat are women. In the sciences, the proportion of males to females is one to seven. At the university fully 80 percent of all women students are to be found in the arts or economics and law where they account for 27 percent of enrollment. In the Schools of Agronomy, Health, and Sciences women comprise only nine percent of the total.

5.1.7 Administration and Supervision

The University of Niamey is a young institution still attempting to define its role in the development of the nation. Having been established a decade after Niger received its political independence, the university was spared the sometimes painful process of nationalization experienced by other African universities founded during the colonial era. The administration of the university has from the outset been in the hands of nationals, although foreign advisors have played an important role and a majority of the teaching and research faculty are foreign nationals.

The university statutes of 1974 provided for financial and administrative autonomy. Although its budget is separate from the regular budget of the government and the university is free to solicit funding from other sources, the university is heavily dependent upon the state. As with all other national institutions, the university has seen its operational budget frozen since 1980.

The university is governed by a council and headed by a rector. The post of vice-rector is assisted by a secretary general and technical advisors. The council is presided

over by the rector and is composed of the directors of the various schools and institutes, a professor elected by the faculty within each school, the secretary general, and student representatives. The council meets twice a year and may be called into an extraordinary session by the rector. The council is responsible for deliberating on the allocation of the budget.

The rector is appointed by the council of ministers and must hold the degree of Docteur détat, the highest degree in the French university system. The university has had only three rectors since its founding. Each of the schools and institutes is managed by a director and a school council responsible for the budget and the conduct of teaching and research. Within each school, there are departments, each headed by a director. The institutes are primarily research centers that do not provide academic courses.

5.1.8 Costs and Financing

The university's operational budget and the government investment fund are the subjects of analysis in Chapter 2.0. As indicated in the economic analysis, the government has frozen the university of Niamey's budget and increased the level of foreign scholarships.

While reductions in the quantity of public revenues allocated to the higher educational system are indicated by the prospective surplus of university graduates in the coming decade, it is not immediately apparent that freezing the university budget while increasing the level of student scholarships represents an optimal strategy in this regard. It will probably limit Niger's ability to produce highly qualified personnel within domestic institutions in the future. Evaluations of this kind cannot be made quickly or casually, but some attempt to weigh the short and long term costs and benefits of alternative courses of action should be incorporated into future planning efforts. In any case, the government cannot afford to maintain the current levels of funding for both the University of Niamey and the foreign scholarship program.

5.2 Plans

The Declaration of Zinder states that the country's economic problems result in large part from a lack of middle-level personnel such as skilled labor and managers. The emphasis is thus to be placed on training at this level. It is proposed that the goals of the university be transformed to correspond with training and employment

opportunities in the short run, with priority given to scientific and technical fields and a de-emphasis on liberal arts. Most of the medium-range proposals have to do with teacher training and are examined in the following chapter.

5.2.1 University Technical Institute

For several years the proposal to establish a university-level technical institute has been considered. Its purpose would be to complete the program of technical studies at the middle level now existing. The Ministry of Plan's study of 1983 includes an outline for such a project, to create an institute with particular focus on mechanics. Its curriculum would be designed to meet needs in rural hydrology, applied technology, the mining industry, and private enterprise. The project proposal provides for two years of study leading to the diploma of technician. The first year class would consist of 50 students chosen from among holders of the baccalauréat or equivalent diplomas.

5.2.2 The government of Niger is in the process of defining its objectives in the Development Society as well as in the Declaration of Zinder. In mid-1983 the Ministry of Plan elaborated its Interim Program of Consolidation which is the initial phase of study for the next Five Year Plan. The PIC calls for a reduction in the enrollment in the liberal arts compared with the sciences and technical studies. The PIC proposes that emphasis be placed on the training of trainers and that the disproportion between men and women students be reduced. It suggests that women students be encouraged to enroll in the sciences rather than in the arts where they are now concentrated. The PIC acknowledges that every effort must be made to orient the most outstanding high school students toward a teaching career.

The PIC further proposes that programs of study leading to the licence and maîtrise degrees be added to the curriculum in schools where they have not been developed. These include the School of Economics (three-year management program) and Law, as well as the School of Science (geology, chemistry, biology, and geography). It emphasizes the need for the training of middle-level personnel in technical studies and the establishment of advanced studies in a university technical institute.

With respect to applied research, the PIC calls for a national program to coordinate research in all sectors. It is noted that appropriate infrastructure (facilities and equipment) must be provided for the proposed activities.

In a system in which virtually all university students are granted government scholarships or are on the civil service payroll, it is evident that decisions regarding scholarships will have direct effect upon the nature and extent of student enrollment. The PIC gave this matter high priority, calling for the reduction of scholarships abroad and an increase in those for students at the University of Niamey. Furthermore, it proposed that scholarships be granted according to national development priorities. The study proposed the establishment of a single scholarship office responsible for implementing the human resource policy in terms of the distribution of scholarships at all levels. The office would be housed in the Ministry of Plan.

5.3 Analysis and Recommendations

The analysis briefly presents constraints affecting improvements in the higher education system and then discusses major issues. A set of conclusions and recommendations closes the section.

5.3.1 Constraints

The major constraints to improving the higher education system are the lack of sufficient trained Nigerien personnel and limited funding. In addition, the lack of information on manpower needs and programs directed to meet those specific needs reduces the efficiency of the higher education system.

5.3.2. Issues

The discussion of issues is grouped into the five categories -- external efficiency, internal efficiency, access and equity, administration and supervision, and costs and financing.

5.3.2.1 External Efficiency

The major issue in external efficiency of the higher education option in Niger is the need to match programs and enrollment to national manpower needs. In general terms the issue of external efficiency is the extent to which the national economy can absorb university graduates. Thus far, Niger does not appear to have a serious problem of unemployed university graduates. Nor does it share the common problem of brain-drain with many other African countries. However, graduates are often not employed in the fields for which they were trained. The nation may soon be faced with too many graduates in such fields as law and economics. At present the university exists primarily to fulfill the resource needs of the various government

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agencies. Often those needs are not clearly defined. University and government agencies charged with program planning and design must constantly balance practical versus theoretical approaches in an attempt to meet national needs.

Until recently, nearly every student who passed the baccalauréat was guaranteed entrance into the university. Public authorities have concluded that the enrollment within the various schools is not balanced according to development priorities. Of the 1153 secondary students who passed the "bac" exam in 1982, only 157 were in technical fields. The issue, then, is how to alter the present education system in order to enroll more students in the technical and scientific fields at the university level.

Employment of secondary teachers is another example of a recognized need inadequately addressed. Although many are not trained as teachers, the majority of university graduates are employed s secondary school teachers. Nevertheless, the shortage of Nigerien secondary teachers persists. Given this documented need, it would seem reasonable to enroll more students in teacher training programs and less in areas such as law and economics. This would provide more teachers in less time because the teacher training program involves fewer years of study. This would also provide persons with pedagogical training for secondary schools, which may improve the quality of instruction at that level.

In order for the university to be more responsive to development needs, it must also be attuned to the private sector. A concerted effort should be made to identify the educational and training needs of private firms and to incorporate them into the university curriculum. This is particularly true in the field of management (see Chapter 11.0) for which there are limited resources in Niger.

5.3.2.2 Internal Efficiency

Of the internal efficiency factors addressed earlier - cost per student, enrollment and attrition rates, nigerization of teacher faculty, student/teacher ratios, research and development, and facilities and equipment - the two major issues seem to be student costs and Nigerization of the faculty. Both of these factors must be considered with regard to the personnel and financial constraints of the system and the manpower needs of the country. Both factors also reflect on a more fundamental issue - whether or not a national university is appropriate at all for Niger. And this fundamental issue in turn reflects on enrollment, student/teacher ratios, and adequacy of facilities and equipment.

There are several questions related to student costs which need to be considered for possible policy changes. Should the government continue to provide scholarships to all university students? Can some students finance all or part of their studies? Should foreign study be financed by the government at present levels and for what areas of study? Should study only be financed by government in areas of national manpower needs?

Although the administration of the University is now firmly in the hands of Nigeriens, there is still a large concentration of foreign, particularly French and Belgian, faculty members. More Nigerien faculty are needed, and they are needed at the higher ranks of the system. How can qualified and experienced Nigeriens be recruited to fill these positions? Would qualified Nigeriens be available if higher salaries were offered, or do Nigeriens need to be prepared for these positions? The School of Pedagogy provides an example of the latter solution. Nine students enrolled in doctoral studies abroad are expected to join the faculty after completing their studies.

Given costs, faculty constraints, and the fact that over half of the students are still studying abroad and that many Nigeriens studying at the University of Niamey continue their studies abroad, the more fundamental issue of the need for a national university must be addressed. There is documented need for an institution to train secondary teachers and school administrators. Since many university graduates become teachers, perhaps the School of Pedagogy should be strengthened. It may be appropriate to strengthen the National School of Administration. Is there a need for university study in some of the other fields? If so, which fields and to what level? The issue of providing adequate facilities and equipment rests upon determining what role the University of Niamey should play as to the issues of enrollment rates and student/teacher ratios.

5.3.2.3 Access and Equity

The government has expressed the desire to increase the number of women students in the university. In particular, it is hoped that more women can be oriented toward scientific and technical studies. It is clear, however, that this can only be done by increasing the number of females at the primary and secondary levels and by orienting their interests to science and technological studies because by the time students take the baccalauréat exam, their field of study has already been largely determined.

5.3.2.4 Administration and Supervision

The government of Niger is in the process of defining

its development goals, outlined in the program known as the Development Society. It is a basic premise of the program that higher education should serve the development needs of the society. And yet it is clear that university admissions and scholarship policies have not entirely served those needs. In order to do so, the authorities will have to devise an effective policy on the role of the University of Niamey and scholarships for foreign study. There is a continuing social demand from families to have their children follow a course of study leading to the traditionally prestigious careers in law and administration rather than tecnical fields and other areas of national need. To induce change in the system, public attitudes will have to be changed. Positive incentives to attract youth to fields of national manpower needs will have to be found because by the time students reach the university level, their attitudes toward career selection have already been formed.

An illustration of how this problem manifests itself is to be found in the production of university graduates in economics and law. The ILO study of 1980 (based on data from the Annual Report on Human Resources for 1976-77) projected that the greatest portion of Nigerien graduates enrolled abroad would be in law and administration, followed by economic and commercial studies. Yet when the University of Niamey opened its own School of Economics and Law in 1980, students flocked into the program. By 1983, the PIC called for a drastic reduction in the number of admissions to that school. Better planning might have helped to avoid the situation. The issue is one of public will to enforce a change in policy that is in accord with development needs.

The proposal to create a single scholarship office for both middle advanced level studies may be rational and efficient, but it will have to contend with the realities of inter-ministerial interests. The authority to select students for scholarships and to determine which universities abroad or which schools within the University of Niamey they will attend carries with it power and influence. The Ministry of Higher Education, created only recently, is not likely to cede this authority to another.

5.3.2.5 Costs and Financing

Financing of higher education is at a critical juncture, as it is for the entire system of education beacuse of the economic crisis. The University of Niamey's operating budget has remained virtually the same since 1980. While the broad outlines of needs in higher eduation have been set forth in the Declaration of Zinder and the PIC, there is no indication of how these needs will be financed.

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It is clear that notions of altering and/or expanding educational programs will have to contend with the necessity of reducing government expenditures.

Most of the issues presented above must be resolved in terms of decisions to allocate scarce resources. There are two notable areas of expenditure that are most likely to be cut in the short range: scholarships for study abroad, and foreign contract personnel. This poses a serious dilemma. How can the process of Nigerization proceed if students cannot pursue advanced studies abroad and the University of Niamey is incapable of providing comparable programs at home? Rather than simply reduce funding for existing programs, the government needs to evaluate those programs. If programs do not meet national needs, they should be modified. If the same or better training can be obtained in another institution nationally, regionally, or abroad at less cost, then the University of Niamey should not offer that program at the time. Proposals for new programs, i.e. the creation of the University Technical Institutie and the management section of the School of Economics, should be subjected to the same scrutiny and rejected if not found related to development needs and cost effective to provide nationally.

Eventually Niger may have the personnel and resources to provide a full range of higher education programs. At present, resources are insufficient to do so, and priorities must be translated into economically feasible policies.

In conjunction with program decisions, the government should determine scholarship policies. Can and should some Nigeriens pay part or all of their own university educations? Will scholarships only be available in specified courses of study with government service requirements attached? Is a student loan program feasible? If evaluation indicates that some programs in Niger should be discontinued, it may mean that the foreign scholarship program will increase. This could be cost effective if duplicate programs are not being supported nationally.

5.3.3 Conclusions

Three major conclusions result from reviewing the available data on higher education.

Conclusion 1: The majority of University graduates are not in fields of national development needs. Although almost all graduates are employed by the government, they are often employed in areas for which they were not trained. There is no data on the appropriateness of the employment of graduates or the quality of their work. The government

cannot continue to employ all university graduates irrespective of fields indefinitely. University training must be matched to manpower needs.

Conclusion 2: The government cannot continue its present level of support to both the University of Niamey and the scholarship program. Priorities must be established and funds allocated accordingly.

Conclusion 3: There is a need for a long range higher education plan. Data on higher education is not easily accessible. Closer coordination is needed among the agencies involved in higher education.

5.3.4 Recommendations

Recommendation 1: Develop a long range higher education plan based upon national development needs and recognition of budget constraints. In order to develop this plan, a manpower assessment is necessary. The capacity and cost of the University and other national and foreign institutions to train persons to meet those manpower needs also must be assessed as a basis for the long range plan.

Recommendation 2: Revise the scholarship program. Scholarship allocations should be awarded on the basis of student need, and the majority designated for study in fields where manpower shortages exist. The results of the studies to develop a long range plan will be crucial to development of a rational and consistent scholarship policy. In the meantime, the scholarship program could begin setting a new direction by awarding scholarships primarily for study in fields of recognized manpower need.

Recommendation 3: Strengthen the School of Pedagogy (or other institution) so that it has the capability to train second cycle teachers for the lyceés. This level of secondary education is still dependent on foreign instructors; Nigeriens must be prepared for these posts. While the long range plan is in development, efforts to strengthen secondary teacher training should continue.

Recommendation 4: Increase and strengthen policy and program coordination between the Ministry of National Education and the Ministry of Higher Education.

Footnotes

1. Sidikou, 1982.

2. Sidikou, ibid.

3. University of Niamey, Guide de l'Etudiant: 1981-82. Published by the Office of Admissions and Scholarships.

4. UNESCO, Education Sector Analysis, 1978, Annex 1.

5. Ministry of Plan, Review of the Five-Year Plan, pp. 21-22.

6. Ibid., p. 19.

7. Ministry of Plan/European Economic Community, 1983, Study E, pp. 296-98.

8. Ministry of Plan, Review of the Five-Year Plan, p. 19.

9. International Labor Organization (ILO), 1980.

6.0 Teacher Training

Formal teacher training takes place in three types of institutions in Niger--short cycle normal schools, long cycle normal schools, and the University of Niamey. Both normal school programs prepare teachers for the primary level; however, long cycle graduates are often placed at the CEG (junior high) level. University programs prepare pedagogical advisors for the primary and secondary level, primary school inspectors, and CEG level teachers. There is no program for training second cycle/lycée-level teachers in Niger.

Among less-developed countries, Niger has an unusually high proportion of certified teachers at the primary level; 75 percent of the primary teachers are certified. The proportion of certified Nigeriens at the secondary level is much lower - percent. Of these, __ percent are certified at the primary level and, therefore, not fully qualified for the CEG level at which they teach. Over 34 percent of the CEG teachers and almost 28 percent of the lycée teachers are foreign. Thus, without considering the quality of teaching, there is a need for pedagogical training of 25 percent of practicing primary teachers. An even greater need exists for the training of additional junior and senior secondary level teachers. Government studies indicate a system-wide need for in-service training of teachers at all levels.

6.1 Status

The discussion of the status of teacher training includes a review of the national goals, the formal structure of the system and the programs. The system is then viewed in terms of external efficiency, internal efficiency, access and equity, administration and supervision, and costs and financing.

6.1.1 Goals and Strategies

In the Zinder Conference on the educational system in Niger there was general agreement that the teaching profession was becoming less and less attractive, even though teacher training was considered to be a priority for development. The Declaration urged the government to take necessary steps to encourage more Nigeriens to become teachers. In the list of recommendations for immediate implementation, it was proposed that teacher training institutions be reinforced and transformed in the light of planning for the nation's development needs. The type of training to be given priority, however, concerns middle

level personnel destined for the productive sectors, such as rural development and small business as well as upper level technicians. There is no specific reference to the need to upgrade the training of teachers for primary and secondary schools.

Nonetheless, the 1982 MOP/EEC study of proposed projects gives considerable attention to the need for a systematic inservice training of teachers at the primary and junior high level. The proposed projects fall into two general categories.[1]

a. The creation of new training program and the reorientation of current training programs at all institutions, with a view towards implementing proposed educational reforms.

b. The inservice training of teaching personnel within the primary and junior high schools. Four principal objectives are cited:

- improvement of teaching (pedagogical) skills;
- integration of the school into the village community;
- civic instruction on the principles of the Society for Development;
- increase in the cultural level of students through the dynamics of self-education.

The study then elaborates five project proposals:

- the creation of a polytechnic normal school for primary teachers;
- refresher courses (perfectionnement) for personnel on the job;
- complete recycling of junior high teachers;
- training of teacher trainers;
- a study of the pedagogical content of curricula in the teacher training schools as well as the literacy training centers.

Each of the proposed projects is outlined in further detail in 6.2 Plans.

6.1.2 Structure

The short-cycle normal schools are administered by the directorate of primary education, and the long-cycle schools are under the authority of the directorate of secondary education, all within the Ministry of National Education

(MEN). The School of Pedagogy is part of the University of Niger and therefore is under the Ministry of Higher Education.

6.1.3 Programs

Table 6.1 summarizes data on the formal teacher training programs in Niger. Following are further descriptions of the programs:

a. The normal schools (écoles normales), short cycle, which are two-year schools which students enter after having received their BEPC (four years of secondary education). There are three of these schools: Tahoua, Maradi, and Dosso. Graduates receive the Certificate for Teaching Assistants/Certificat de fin d'études normales pour instituteurs adjoints (CFEN-IA) and are qualified to teach in the primary schools. The two-year course programs are designed to prepare students to master and teach the primary school curriculum. In 1982/83 the total number of students enrolled in these schools was 1,304 with 43 institutional staff members.

b. The normal schools (long cycle), which are four-year schools into which students enter after having received their BEPC. There are two of these schools: one in Zinder for boys and one in Tillabery for girls. Enrollment between the two schools was with 51 instructors. The graduates receive the Diplôme de fin d'études normales (DFEN), which grants them the title of instituteur, and qualifies them for primary school teaching, although they often wind up in the CEGs. The first three years of these schools have the same curriculum as the lycées, and all students take the baccalauréat exam. Those with the best results graduate into the School of Pedagogy at the University, and the others go to the école normale for a fourth year devoted to pedagogical subjects.

c. The School of Pedagogy of the University of Niamey, which has the following programs:

1. A two-year program to train pedagogical advisors for primary and literacy schools leading to a Diploma in Pedagogical Advising and Primary Education/Diplôme de conseiller pédagogique et d'enseignement primaire (DCPEP). In 1981-82, this section had 53 students.

2. A section that is divided into two programs: one year of study for advisors at the first-cycle

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level of secondary schools, and the other for those at the second-cycle level. This section had only three students in 1981-82.

3. A one-year course of study to train primary school inspectors. In 1981-82 there were only seven students in this section.

4. A two-year course of study to train junior high (CEG) teachers, consisting of four options:

- o mathematics — 62 students
- o physics, chemistry, natural sciences — 29 students
- o English — 32 students
- o French, history, geography — 99 students

The 285 students enrolled in the School of Pedagogy in 1981-82 represented about 15 per cent of the total enrollment in the University. There were 17 full-time professors on the faculty, and about the same number of part-time or visiting professors. The number of graduates oriented towards teaching in junior high school rose sharply from 12 in 1979 to 70 in 1981.

6.1.4 External Efficiency

Data on the graduates of Niger's teacher training programs are not readily available. Such evidence as has been gathered, however, suggests that the country's present institutions for the training of teachers for primary and secondary schools are likely to produce a significant surplus of graduates in the coming decade.

An effort to project the supply-and-demand conditions for teachers in Niger was made in the MOP/EEC study. It concluded that the following numbers of primary school teachers would be needed in Niger in the years between 1982 and 1990:

Table 6.2

Projected Need for Primary Teachers

1983	1984	1985	1986	1987	1988	1989	1990
640	710	720	800	830	880	930	990

Source: MOP/EEC Study

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The data presented imply that the Nigerien primary school system will expand at a rate of approximately 10 per cent per year through the 1980s; the number of students and teachers in the system will more than double by 1990. On the basis of these projections, the study concludes that there will be a significant shortfall in the number of qualified primary school teachers available to fill new posts in the coming decade.

Even if one accepts the MOP/EEC projections of growth in enrollments, the magnitude of the shortfall is not likely to be very great, except in the final years of the decade. According to the MOP/EEC study itself, the three short-cycle normal schools are able to produce 540 graduates or more per year, while the long-cycle normal schools at Zinder and Tillabery are probably equipped to produce at least 200 more. (Precise data on enrollments and graduates from these two schools are not available.) This suggests that with the installed capacity of the Nigerien teacher training system the country is likely to be able to produce enough teachers for its primary schools, though some expansion might be required in the late 1980s.

In fact, however, the primary school system in Niger is growing considerably more slowly than the MOP/EEC study assumes, and the emerging fiscal crisis will require that it grow more slowly still in coming years, as the government has acknowledged in the Programme intérimaire de consolidation (PIC). The real rate of growth in primary school enrollments between 1979 and 1983 was 6.6 per cent per year; in the PIC the government has established as its objective the maintenance of the present enrollment rate of 21 per cent, which implies that primary school enrollments will grow only as fast as the total population, at 2.8 per cent per year. The fiscal capacity analysis in Chapter 2.0 indicates that the government of Niger cannot afford to assume the educational enrollment at a more rapid pace than this in any case.

Projections of the demand for new teachers based on the recent rate of growth in primary school enrollments and on the government's plan to maintain the present enrollment rate are presented below:

Table 6.3

Projections of Demand for New Primary School Teachers

	1983	1984	1985	1986	1987	1988	1989	1990
2.8 per cent	169	173	178	183	188	194	199	205
6.6 per cent	398	424	452	482	514	547	584	622

Source: Sector assessment team calculations.

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These figures suggest not only that the present teacher training system will be sufficient to satisfy Niger's needs for primary school teachers for the foreseeable future, but also that inasmuch as the real rate of growth in enrollments is closer to the former estimate than to the latter (as announced government policy intends), there is likely to be a significant overproduction of primary school teachers in the 1980s.

At the secondary level the dimensions are difficult to establish because of a lack of data and various complicating factors, including the predominance of expatriate and foreign teachers in Niger's secondary schools. The "Nigerization" of the teaching force at the upper secondary level is unlikely to take place any time soon because there are no institutions at present that are capable of training Nigerien teachers at this level. At the lower secondary level, however, the output of the School of Pedagogy at the University of Niamey is likely to be adequate to the country's needs in the coming decade. The School of Pedagogy graduates approximately 70 qualified junior secondary teachers each year, and if the government is successful in holding the rate of increase in enrollments to the rate of population growth, the annual demand for new teachers at this level is unlikely to exceed 60 in the coming decade.

In evaluating the external efficiency of Niger's teacher training system therefore, it appears that the present system is sufficient to satisfy the educational system's demand for primary and lower secondary teachers in the coming decade. Indeed, as in so many other areas of the Nigerien economy, the present training system is likely to produce more qualified primary teachers than there are jobs to be filled in at least the short and medium term. The system does not nave programs to prepare senior secondary teachers. Until this problem is addressed, foreign teachers will continue to be employed because sufficient qualified Nigeriens are not available.

6.1.5 Internal Efficiency

The teacher training institutions in Niger are severely overcrowded in general, inadequately staffed, and poorly equipped. In 1979-80 the only two schools which had students beyond the first year of studies were Zinder and Tillabery. Zinder alone, with 711 students, represented half of total enrollment of the four teacher training institutions. Maradi was opened later and was expected to accommodate a maximum of 425 students. By 1983, however, 518 students were already enrolled there. In 1979-80 the

total number of teachers in the four schools was 62. Of these, nearly half were foreign nationals, including ten from France.

The November 1981 Ministry of Planning/European Economic Community (MOP/EEC) study provided a description of the inadequacies of the normal school at Dosso, which was apparently typical of the other schools. It noted that the students where generally not motivated, that there was no practical program of studies, that the practice teaching component was not supervised, and that the school library was totally lacking in pedagogical materials. In 1983, visits to the schools at Zinder and Maradi by sector assessment teams revealed similar conditions there. All of the teacher training schools provide students with dormitory accommodations and scholarships.

6.1.6 Access and Equity

Access to teacher training schools is determined by the MEN's orientation service (see Chapter 6.0 Secondary Education), which bases its placement decisions on BEPC results, as well as on individual preferences and teacher recommendations. Generally speaking, the better students are placed in the lycées and the normal schools. The latter, however, have lost much of the prestige of earlier years. The Tillabery long-cycle school is reserved for girls, and the Zinder school for boys. The only other school where girls are enrolled is at Dosso, where they represent about one-third of the total. In the School of Pedagogy women students are still a very small percentage of the total.

6.1.7 Costs and Finance

Various agencies share the responsibility for the financial support of teacher training institutions in Niger. The Ministry of National Education manages the two long-cycle and three short-cycle normal schools, while the University of Niamey supports the School of Pedagogy. Scholarships for students are provided by the Ministry of National Education in the case of the normal schools, and by the Ministry of Higher Education and Research in the case of the School of Pedagogy at the University. In addition to this, a great deal of recurrent cost support in the form of expatriate teacher salaries is provided at both levels by foreign donors, including the Belgians and the French.

No disaggregated data on the costs of teacher training are available. Students in Niger's normal schools, however, are provided with additional scholarship money as an induce-

ment to enter the teaching profession and remain in it. Though the additional amounts provided are not small, they are still not large enough to make normal schooling an attractive prospect, and teaching remains the least preferred alternative for students undergoing orientation.

6.2 Plans

Following are brief descriptions of the plans proposed to address the needs for increased numbers of certified teachers and for upgrading the skills of practicing teachers.

6.2.1 Polytechnic Normal School/Ecole normale polytechnique (ENP)

The purpose of the ENP would be to provide an alternative to the existing short-cycle training schools. The ENP curriculum would orient the student more directly to the cultural environment and would include introduction to agricultural and artisanal techniques as well as group management. The ENP would eventually replace the short-cycle schools, while additional ENPs would be put in place. It would serve to retrain primary teacher trainers. The program would consist of four years of study: two years leading to the CFEN diploma, one year of practice teaching, and a year of pedagogical "reflection" at the ENP. The project would begin with two groups of 40 students, and increase to a total of 180 after three years. The ENP would also undertake to provide on-the-job pedagogical training for 90 teachers for a period of three months. The ENP project would require eight expatriate personnel over a four-year period.

6.2.2 Retraining of Junior High Teachers

The objective of this project is to provide junior high teachers with two months of inservice training and return them to their schools. The proposed program places emphasis on pedagogical improvement and on civic instruction, as recommended in the Declaration of Zinder. It is anticipated that all junior high teachers would have been retrained in this manner within two years. With about 500 teachers to be retrained, it is proposed that there be five sessions of 100 students each. A similar program is envisaged for the School of Pedagogy. The primary responsibility for this project would fall upon the personnel of INDRAP, aided by two expatriates in the first phase, and by representatives of the Ministry of Youth, Sports, and Culture in the second.

6.2.3 In-service Teacher Training

This project aims at upgrading the teaching skills of primary teachers. It is seen as being a complement to the transformation of teacher training schools into polytechnics, since only 4,000 of the 11,000 primary teachers needed by 1990 will have been trained in one of the ENPs (according to projections). It is further anticipated that it will take this program a decade to reach all primary teachers. The program would be organized by the ENPs (each with an expatriate expert in pedagogy), and would consist of three-month training sessions for no more than 300 students in a session. Once again the principal implementer is to be INDRAP, whose present capabilities are to be reinforced through the use of television, radio, correspondence courses, and pedagogical reviews.

6.2.4 Transformation of Short-Cycle Teacher training Schools into Polytechnics

This project is related to the creation of the ENPs, and represents the extension of the same model to existing short-cycle schools such as Dosso, Tahoua, and Maradi. It is premised on a policy of stabilizing the rate of enrollment at the primary level and attempting to improve the quality of existing institutions. The transformation of the three schools already functioning would follow the creation of the first model ENP. They would continue to serve the urban environment, while the newly created ENPs would be placed in the rural areas. The new ENPs would total eight over a five-year period. The curriculum would be extended to three years, and the number of students admitted would be reduced. Their maximum capacity would be set at 420 (in contrast to the more than 500 presently enrolled at Maradi). Each of the schools would have its facilities upgraded and expanded. Personnel for the revised schools would be Nigeriens trained at the center located in the ENP.[4]

6.2.5 Training of Teacher Trainers

In order to complete the program of establishing the system of ENPs and transforming the existing short-cycle schools into ENPs, it is proposed that the Ministry of National Education provide for the training of teacher trainers. In its first year, the program would begin in the experimental ENP; eventually it would expand to the others. Proposed in the program is the use of four expatriates, specialists in the training of trainers, a project leader, a specialist in math-science teaching, a specialist in vocational skills, and a specialist in group dynamics (techniques d'animation). Each would have a Nigerien counterpart and a Nigerien specialist in maternal languages.

6.3 Analysis

The analysis begins with a brief comment on the constraints affecting the teacher education system in Niger followed by a discussion of issues. The section closes with a set of conclusions and recommendations.

6.3.1 Constraints

The major constraint facing the Nigerien system of teacher training is the lack of a training program for high school teachers and the limited ability, given fiscal and capacity restrictions, of the University of Niamey, School of Pedagogy to respond to this need. Coordination of teacher training, which is the responsibility of two ministries, suffers from poor coordination and limited planning.

6.3.2 Issues

The discussion of issues is organized under the topic heading of external efficiency, internal efficiency, access and equity, administration and supervision, and costs and financing.

6.3.2.1 External Efficiency

The present teacher training system of Niger is likely to be adequate to meet the educational system's demand for primary and lower secondary teachers in the foreseeable future, at least in quantitative terms. There are several areas, however, where significant problems are encountered. As is the case elsewhere in the educational system, Niger's teacher training institutions do not produce enough graduates trained in science and mathematics, with the result that most of the teachers in these subjects are foreigners. Moreover, Niger has no capacity for training senior secondary school teachers, and as a result, many teachers at this level are expatriates. The fiscal circumstances of the government of Niger require that these problems be addressed within the context of existing institutions (e. g. through the upgrading of the School of Pedagogy at the University of Niamey) rather than through the establishment of new training capacity. Nevertheless they constitute questions that deserve the attention of policymakers and external aid agencies.

A further problem, common to other African countries as well, is the lack of morale and motivation among teachers at all levels, and among prospective teachers as well.

Teacher training is almost invariably the last choice of students being "oriented" for post-BEPC training, and rates of dropout and attrition are high. The government of Niger has taken account of this problem, and has attempted to compensate for it by offering larger scholarships to students in normal schools. clearly more will have to be done such as insuring that teachers' salaries are paid on time, if teaching is to be made a more attractive profession. Some progress in this direction is likely to be made in any case, if the anticipated surplus of educated personnel at all levels develops in the coming decade, since preferable to unemployment.

6.3.2.2 Internal Efficiency

From the information gathered throughout Niger's teacher training system, it is apparent that it is in transition. There is an interest in detaching the system from the traditional approach and gradually developing a uniquely Nigerien model relevant to the nation's human resource needs. The financial and other means necessary to accelerate the passage through this transitional period are not available. Therefore elements of the reform are incorporated as they are formalized, and the necessary retraining of staff has been, and will continue to be, carried out as training specialists become available.

The impression of an inefficient system belies this gradual process of transition and reform. Steps are being taken to overcome the following commonly acknowledged inadequacies of the teacher training establishment:

- insufficient pedagogical content and training in the curriculum;
- a curriculum which looks too much like a lycée or other nonpedagogical establishment;
- examinations which do not adequately test for pedagogical skills;
- the unsuitability of the curriculum and lack of relevance to Niger's economic and technical needs;

As steps are taken to overcome these problems, certain disparities and contradictions arise from the resultant incongruities of old elements clashing with new ones. The results of the CFPD exam indicate that the system is in transition. A look at the beginning-of-the-year reports of the teacher training schools shows that the content of the curriculum and the composition of the teaching personnel again confirm this transitional stage. At the short-cycle schools of Tahoua and Dosso (1982-83), for example, the

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following subjects were taught: French, mathematics, history, geography, psychology, sociology, natural sciences, physics, chemistry, physical education, Arabic, general pedagogy, and national languages. The trainers, or encadreurs, taught general and special pedagogy, professional ethics, and civic instruction. These encadreurs are teachers at the instituteur level who are experienced; they supervise practice teaching sessions, and follow up on subject matter covered by the teachers. At Dosso there was a full teacher for general pedagogy, whereas at Tahoua only a trainer was available for this course. At Dosso there were two national language teachers and one at Tahoua.

In examining the list of educational materials used for these subjects, it is apparent that they are indeed adapted to the Nigerien context, though this adaptation has taken place within the framework of the old French curriculum. Thus, at the teacher training level, as is the case at the primary school level, one observes Nigerization and adaptation of curricular materials within the confines of an overall structure which is not appropriate, and for which specific qualitative reorientation has yet to be completely elaborated and implemented. For example, the French language still remains a predominant element of the curriculum.

It is apparent from the above list of subjects taught that some of the reform elements of the Declaration of Zinder are being incorporated, though not systematically. Clearly the presence of professors of national languages in both schools examined represents an important reform measure. The need to improve the quality of national language instruction is apparent, given the lack of appropriate materials, trainers of trainers, and the ability of trainers to satisfy the needs of students in all five national languages. Thus, a concrete element of the reform infrastructure can be said to be in place. There remains to be developed all of the qualitative support for that area of reform. Other reform elements apparent from these schools' reports are: school gardens, school cooperatives which are operating at varying levels of efficiency and success in the teacher training schools, and shop and manual labor training facilities which are as yet inadequate. Here again, the structures have been put in place, and the qualitative support mechanisms and follow-up need to be provided.

There is a need to reorient the pedagogical content of the teacher training schools in keeping with the reform, and with the new kind of teacher-student relationship and

classroom environment proposed in the Declaration of Zinder. It is this kind of attitudinal reform which may be the most difficult to inculcate and implement. This kind of change is difficult to effect in programs for retraining teachers, and therefore it is important that it be dealt with at the level of teacher training so that the malady can be confronted rather than the symptoms. With regard to the technological, agricultural, and practical components of the reform, there is a great need for specific pedagogical materials and devices and teachers' guides which will facilitate this change. These and other aspects of the reform which have thus far enjoyed only minor success need to be fully elaborated and implemented at the teacher training level so that the chance to judge their true value and potential can be objectively evaluated.

6.3.3 Conclusions

Data limitations permit only very general conclusions on the teacher training system in Niger.

Conclusion 1: The high percentage of trained primary teachers (75%) and projections indicating adequate numbers of graduates to meet classroom needs indicate that emphasis should be placed on inservice training to upgrade teacher skills rather than expansion of preservice programs for primary teacher training.

Conclusion 2: There is a need for qualified Nigerien teachers at both junior and senior secondary levels.

Conclusion 3: Plans for reforming the teacher training system should be reviewed carefully and priorities established on the basis of manpower needs and within the financial constraints of the system.

6.3.4 Recommendations

General recommendations for the teacher training sector are the following:

1. Address the need for reform of teacher training, specifically with regard to the reformed primary school curriculum and the use of maternal languages in the first three years of primary schooling; inservice retraining should be the primary mode of reorientation. However, teacher training institutes should also reflect a revised curriculum approach.

2. Introduce a general reorientation of the curriculum in existing teacher training institutes to emphasize pedagogical skills through student teaching and other applied techniques.

3. Upgrade the skill level of teachers through inservice teacher training in schools and teacher training institutes.

4. Establish teacher training at the lycée level.

Footnotes

1 Ministry of Plan/European Economic Community Study, p. 140.

2 Ibid., pp. 157-161.

3 Ibid., pp. 171-179.

4 Ibid., pp. 180-190.

7.0 Agricultural Education

7.1 Status

This section discusses agricultural education both within the formal education sector and outside of the traditional school system. Within the formal education system, it considers the training of professional agriculturalists, technicians, assistant technicians, extension agents, and field extension staff. In addition, several nonformal institutions which play a major role in direct farmer training are discussed. In this context nonformal agricultural education means direct farmer training or technical agricultural education outside of the traditional educational system. Institutions and training programs of a vocational/technical nature geared mostly to adults are described as nonformal.

7.1.1 An overview of the Agricultural Sector in Niger

It is estimated that 75 percent of the Nigerien population is concentrated in the more favored southern border areas on only 12 percent of the national territory. This "vital fringe" contains essentially all the arable land which can be used for rainfed and/or irrigated crop production and all of the major urban centers of the country except Tahoua and Agadez. The area now has a mean population density of just under 30 persons per square kilometer and human pressure on this land resource is increasing with each passing year.

Niger has neither significant arable land for crop production nor rangelands for livestock with more than 800 millimeters of reliable annual rainfall. Even in the zone of 600 to 800 millimeters of rainfall, the per capita availability of arable land has been estimated to be only about one-fifth of the Sahelian zone average.[1] It is only in the regions judged to have marginal or submarginal utility for crop production activities that Niger has land in abundance. This deficiency is not offset by irrigation possibilities where the availability per capita is again much lower than the Sahelian average and amounts to about 0.036 hectares per person in 1983, of which less than 10 percent is actually developed and functional.

In spite of being faced with a harsh climate and generally poor soil resources, which present formidable constraints to sustained agricultural development, the agricultural sector - i.e. cropping, livestock, forestry and

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fishing activities - still remains at the center of the Nigerien economy. In human resource terms, the contribution of and the dependency upon the agricultural sector are dramatic. Eighty-seven percent of the total Nigerien population is classified as living in the rural areas and approximately 90 percent of the total active labor force of 1,500,000 persons is directly engaged in crop production, livestock-raising, forestry and fishing. In addition, about five percent of the labor force works in nonformal secondary and tertiary sector activities (e.g. trading, transport, rural handicrafts, and service activities) and many of these jobs are directly tied to the rise and fall of productivity and revenues in the agricultural sector. Finally, many of the 60,000 Nigeriens counted as members of the "modern" salaried labor force are employed in activities directly related to servicing and supporting the agricultural sector.

Productivity in the agricultural sector is rather sharply divided between sedentary crop producers and transhumant livestock raisers, with minor contributioins from full-time fishermen and persons engaged in forestry activities. Crop production centers on rainfed grain crops (e.g. millet and sorghum), cowpeas, peanuts, and various fruits and vegetables. There are also localized areas of the country where production of rice, sugar, cotton, maize, tabacco, and other such crops is important.

Livestock-raising is an extremely important and very often undervalued rural activity which makes major contributions to national income figures, annual export totals, and the standards of living of many rural people. With respect to the last area of contribution, the transhumant herding groups of Niger - i.e. the Fulani and the Tuareg - are particularly dependent on the productivity of their animals, but livestock-raising is becoming an increasingly important on-farm enterprise among sedentary farmers, especially those who are adopting elements of the agricultural technical packages being promoted by the Government of Niger and the external donor agencies.

The structure of agricultural production in Niger is overwhelmingly that of smallholder farm families and herding groups with limited capital and managerial resources, using "traditional" production techniques. Modernization efforts in the sector are promoted by the Government of Niger and the external donor agencies through a series of agricultural and livestock productivity projects which are regionally based, and through nationwide sector support programs, like livestock vaccination campaigns, agricultural imput supply programs, and various farmer- training activities. The

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"typical" clients for these programs are farm families averaging five or six members and farming two to six fields totaling four to five hectares, with additional land in fallow and communal grazing for livestock.

Herder families are of similar size, but their production activities depend on much more extensive use of land for grazing their composite herds (i.e. herds made up of cattle, sheep, goats and, occasionally, camels. Most herder families have permenent dry-season base camps, but are quite mobile during and immediately after the rainy season as they follow their herds on the seasonal pastures.

The main issues in the agricultural sector in the decade of the 1980s and beyond are the following:

1. The appropriateness of the current agricultural and livestock technical package approaches being promoted in Niger and the need for effective agricultural research efforts to enlarge the scope for further productivity increases in rainfed cropping, livestock-raising, and systems that integrate both animals and crops;

2. The determination of the appropriate allocation of resources within the economy as to development of irrigated versus rainfed agricultural initiatives;

3. The determination of the appropriate future roles for the Government of Niger, individual citizens and citizens working together, and the private sector in initiation, funding, and implementation of development activities in the agricultural sector;

4. The implementation of effective means of mediating the growing competition for use of land and water resources betwen crop agriculture, livestock-raising, forestry activities, and fishing through effective land use policies and planning;

5. The need to devise methods of preventing further deterioration of the nation's land resource base while simultaneously making possible increases in agricultural productivity per unit area and per producer;

6. The need to rationalize the problem of national food stock sufficiency with the opportunities presented through mutually beneficial interregional and international trade.

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It is obvious in all these problem areas that effective and equitable solutions can only be arrived at in the medium and long term by well-educated, concerned citizens in Niger working together in groups.

7.1.2 Goals and Strategy for Development of the Agricultural Sector

The Three-Year Program for National Development, which was introduced by the Government of Niger on April 15, 1974, and covered the period 1976 to 1978, marked a return by the country to a formal system of economic and social development planning. It also was the first major articulation of national development policy by the present government. The overall goals set forward at that time for national development were the following:

1. The liberation of the Nigerien economy from constraints imposed upon it by natural factors;
2. The installation of a "Development Society" in the country;
3. The attainment of true economic independence for the Nigerien society.

The subsequent Five-Year Development Plan, which has been in effect since 1979, follows the initial goals laid out in the Three-Year Program with one exception. That exception entailed a redefinition by the government of Niger of the meaning and scope of the first goal stated above. Liberation of the Nigerien economy is now taken to mean "self-sufficiency" in basic foods for all Nigeriens, and this redefined goal is now considered to be the first priority of development policy.

The second goal of installing the Development Society is predicated on the social credo that development in Niger is to be for all the people and not selected individuals and, as such, requires the active participation of all the people. The Development Society is viewed as the social vehicle by which each person in Niger will have a real appreciation of his or her role in national development and will actively participate, therefore, in the national planning and decision-making process so that the objectives and priorities of development are the products of societal consensus.

It is stated vis-à-vis the third major goal of the Plan that the search for national economic independence is not to be considered as synonomous with economic autarky.

It is rather a search for the means of assuring that Niger in the long term will arrive at the point where the society has the indigenous capacity to manage its own national development and to be a real partner with other nations in the necessarily interdependent relationships of the world economy.

It is clearly seen in the Plan that management of the nation's development is not possible unless Niger can develop its own human, technological and financial resources which can then be applied in the attainment of the development objectives and priorities judged by the society to be appropriate for national development. The attainment of economic independence, then, is based on the principle of "counting on your own resources" for develoment and is deemed to be an ambitious objective, given that the economy is still searching for the appropriate stimulae for economic "takeoff".

Food self-sufficiency and raising the standard of living in the rural areas are the primary goals articulated for the agricultural sector. It is recognized in the Plan that both are long term goals which will require considerable investments in agricultural infrastructure and, particularly, in human resources. Planning objectives are set in the Plan for three separate but interrelated domains: rainfed agriculture, irrigated agriculture, and livestock production. It is stated that investments will be necessary over a period of twenty to twenty-five years before irrigated agriculture will be able to make a significant contribution to the economy of the country and, in the interim period the major burden of sustaining the population in basic foods will fall upon farm families growing crops under rainfed conditions.

The specific objectives to be attained in rainfed agriculture are the following:

1. Raising per hectare crop yields on lands already being cultuvated without compromising the fertility of the soils and attempting to bring areas of degraded soils back into crop production;

2. Reducing the vulnerability of rainfed crops to drought conditions by employing new cereal varieties with short vegetative cycles;

3. Introducing new technologies in agricutlure which will permit the intensificaiton of cropping activities on a per hectare basis;

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4. Using productivity increases in agriculture as the means for raising incomes of Nigeriens in the rural areas;

5. Sensitizing Nigerien farmers and training and aiding them in other ways to organize themselves for the modernization effort;

6. Putting in place a policy on agricultural prices and incomes that will permit Nigerien farmers to gain sufficient revenuess form their efforts to acquire the factors of production needed to modernize their farms;

7. Promoting a more intensive system of organization and assistance for formers in agricultural research, extension and cooperative development;

8. Bringing new lands into rainfed cultivation when such situations exist, and there is no risk of over-exploitation.

The Plan sets forth a strategy for the development in irrigated agriculture in Niger which is meant to be complementary to efforts in rainfed agricultural production. The essence of the planning strategy is that irrigated cropping, even though it will occupy only a small percentage of total available cropland, will yield a more or less guaranteed output of cereals - e.g. rice - in years when rainfall is poor, and therefore will contribute to food self-sufficiency. The strategy has two main lines for development:

1. Better utilization of existing irrigated perimeters and using them to acquire the experience necessary to prepare for new efforts;

2. Development of new perimeters on the basis of economic value.

The three objectives in develoment of irrigated agriculture then are the following:

1. To contribute to cereal production in covering domestic consumption needs;

2. To cover domestic needs in sugar and vegetable production;

3. To assure complimentary forage production for livestock herds and flocks.

In both rainfed and irrigated agriculture, the Plan sets out specific annual targets for production, input deliveries, and other government activities in great detail.

According to the Plan, the development policy for the livestock subsector has two main objectives:

1. The production of adequate supplies of meat and milk for domestic consumption needs;

2. The production of as much meat as possible in excess of domestic needs for export to neighboring countries.

In order to attain the production levels targeted in the Plan, the strategy calls for the gradual setting up of stratified zones for livestock production in Niger. These zones would be, respectively, from north to south the pastoral zone, the intermediate zone, and the agricultural zone.

In the first of these zones, the main breeding herds and flocks would be established under systems of regulated but extensive grazing. Young animals, produced under these conditions, would then be moved to the intermediate zone for growing-out on a combination of private "ranches", cooperative feeding areas, and government livestock installations. Feeds for these enterprises would be supplied from the agricultural zone. Finally, it is envisaged that, when this zonal system is in place, animals which are currently being held in the agricultural zone could be moved to the intermediate zone on a permanent basis. This would presumably free the more favored arable areas of the south for crop production exclusively and would end the competition for land use between livestock and crops.

As in the cases of rainfed and irrigated agriculture, the Plan sets forth quite specific targets for production and marketing of livestock. In all three subsectors, the princial vehicles for implementation of the development strategy are large, geographically based development projects which are to provide a multitude of services and inputs for farmers and livestock herders either directly or through organized cooperative groups.

7.1.3 The Structure of Agricultural Education in Niger

Agricultural education rests under the auspices of the Ministry of Rural Development which is responsible for farmer training and extension service. The Practical

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Institute for Rural Development/Institut Practique de Développement Rural (IPDR), the Livestock Production School/Ecole des Cadres de l'Elevage (ECE), and the School of Livestock Hides and Skins/Ecole de Surveillants de l'Elevage et des Marchés (ESEM) represent the major educational institutions concerned with agriculture education and extension.

7.1.3.1 The Extension System

In 1975, the GON adopted a policy of decentralization to increase the participation of the rural population in its own development. The services of the government under the direct management of the central ministries were decentralized and placed under the direction of the departmental governor, the préfet. Only a small nucleus of personnel remained in the central ministry while many positions were created at the department and arrondissement levels. At both the department level and the arrondissement level each of the services concerned with development activities is technically represented by a civil servant. These services include the National Credit and Cooperative Union/Union Nationale de Credit et de Coopération (UNCC) charged with establishing cooperatives, marketing, distribution of agricultural inputs, and providing credit to farmers; the National Agricultural Credit Bank/Caisse Nationale de Crédit Agricole (CNCA); and the Agriculture Service/Service Agricole Départmental (SAD). However, at the arrondissement level only the UNCC and agriculture service are consistantly represented.

The Departmental Agriculture Service is divided into five sections: Plant Protection, Agricultural Statistics, Administration and Finance, Extension, and Fruit and Legume Cultivation. These same sections are duplicated at the arrondissement level. However, because there are so few agriculture personnel in place in the multitiered structure, the amount of contact with farmers and the efficiency of the extension service is minimal. Figure 7.1 illustrates the hypothetical departmental structure for the Agriculture Service.

In conjunction with the GON policy to decentralize its services and involve the rural population in development, a new system of "development cooperatives" was initiated. UNCC is responsible for initiating the formation of village cooperatives after an information campaign has been conducted by the Animation Service of the Ministry of Plan. The cooperative system has different levels of organization beginning with the village-level unit, called the Groupement Mutualiste Villageois (GMV). The GMVs of five

to ten villages then form a cooperative. Where the market is sufficiently large to make it economically viable, five to ten cooperatives form a development cooperative/ association locale de coopératives (ALC). The cooperative unit is to be the basic economic organization in the commercial as well as the agriculture sector. The cooperatives are the mechanism for organizing the population to develop such services as supplying agricultural inputs, managing credit, and providing a primary marketing structure. When the development cooperatives are fully in place, the UNCC is to be dissolved, as its functions are to be carried out by the cooperatives.

At the lowest level, the extension service and the cooperative organization overlap. The plan for increasing the participation of the rural population in its own development (auto-encadrement) involves the use of farmers as voluntary demonstrators and/or as part-time agents paid in part by the cooperatives and in part by the agriculture service. The supervision of these farmer demonstrators and lower level auxiliary agents is the responsibility of the agriculture service. The cooperatives, however, play a key role in the selection of the farmer demonstrators by determining who in these villages will be trained at the Rural Development Centers (CPTs and CPRs).

The Extension System as such in Niger is not treated in this report as being part of the formal or nonformal agricultural education subsector. This information on the extension service is to provide the background against which agricultural education takes place. It is the service for which most of the agricultural education in Niger takes place.

7.1.3.2 The Formal Agricultural Education Subsector

Rural development personnel for the agriculture service of the Ministry, UNCC, or other public or semigovernmental positions are trained at seven different levels: professional agriculturalists, field managers and senior extension staff, agriculture and livestock technicians, assistant technicians, extension agents, field extension workers, and auxiliary personnel. All of these positions, except the auxiliary level, require a primary education followed by specialized training. The different civil service levels for these positions are presented in Table 7.3.

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Figure 7.1

The Extension System

The Departmental Governor	
Préfet	
Department Agricultural Officer[a]	[b]
Agriculture Officer[c] responsible for the arrondissement	Arrondissement
District Agricultural Officer[d]	District
Agricultural Extension Agent[e]	Groups of Villages
Extension Aides[f] Auxiliary Extension Agents Farmer Extension Agents Farmer Demonstrators	Village Level

[a]Usually an agricultural engineer/*ingénieur agricole*, Level A.

[b]At this level and below, agricultural extension as a separate organizational entity ceases to exist. The three principal functions of extension, plant protection, and statistics are performed by all personnel.

[c]Supposed to be an agricultural technician, Level B.

[d]Supposed to be an assistant technician/*agent technique*, Level C, however many districts still have auxiliary ("D" level) personnel in these positions. The auxiliary personnel are supposed to disappear as higher level personnel become available.

[e]The lowest level of paid agent, perhaps a graduate of the CFJA or equivalent level training.

[f]Seasonal aid workers, partially compensated village workers, and noncompensated farmers.

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Table 7.3

Classification of Civil Service Personnel Involved in Rural Development

Grade	Title	Position
	Agriculture	Animal Production
A1	Professional Agriculturalist	Veterinarian
A2	Field Managerial Personnel	Livestock Managerial Personnel
B1	Technicians	Livestock Technicians
B2	Assistant Technicians	Livestock Assistant Technicians
C	Extension Agents	Livestock Extenstion Agents
D	Field Extension Workers	Livestock Field Workers
	Auxiliary Personnel	Hides and Skins Instructors

The highest level of formal agricultural education takes place at the School of Agriculture/ Ecole Supérieure d'Agronomie et d'Elevage de Niamey (ESAE). This school was created in 1971 as part of the University of Niamey. The highest level of training attainable at the university (without study abroad) is that of applied rural engineer/engénieurs d'application du développement rural which qualifies an individual for a field manager or A2 level position. Training to qualify individuals for work at the A1 level must be acquired abroad.

The middle levels of formal agricultural education and training (qualifying individuals for the B1, B2, and C levels) take place at two separate institutions. Agricultural education in Niger, and in other countries where the population is divided between nomads and sedentary farmers, is sharply delineation between agricultural production and livestock production. Hence, there are separate curricula for livestock and agriculture at separate institutions.

The Institute for Practical Training for Rural Development/ Institut Pratique de Développement Rural (IPDR) located at Kolo is the principal institution

in Niger for agricultural training. It was created in 1933. Since 1976 the United Nations Development Program/ Food and Agriculture Organization (UNDP/FAO) has been coordinating a multidonor effort to assist the GON in expanding IPDR and reforming its program of instruction. It provides training for technicians/technicien supérieur (Grade B1) and assistant technicians/agent technique (Grade C).

The Animal Production School/Ecole des Cadres de l'Elevage (ECE) is the counterpart of IPDR in animal husbandry. It was created in 1971 with financial contributions of the European Development Fund/Fonds Européen de Développement (FED). Its method of training technicians (Grade B1), and assistant technicians (Grade C) is similar to that used by IPDR.

A fourth school, Ecole des Surveillants de l'Elevage et des Marchés (ESEM), provides training in the tanning of hides and skins. The ESEM, located in Maradi, first opened in 1956 to train instructors in hide and skin tanning. Since 1974, the school has been training about 22 persons per year as livestock inspectors and market counters who collect data and make lists of livestock sales and rural slaughterhouses. The entrance requirement for students is completion of primary education with a primary school certificate/ certificat d'études. While the ESEM has never been the focus of much attention, it is significant as the only institution which trains public servants at the D level. As such, it plays an important, if undervalued, role in rural development.

The programs of the major institutions of formal agricultural education - ESAE, IPDR and ECE - are discussed in greater detail in section 7.1.5.

7.1.3.3 The Nonformal Agricultural Education Subsector

In addition to the formal agricultural education institutions, several nonformal training centers work directly with young farmers or farmer couples. These are the Young Farmer Training Centers/Centres de Formation de Jeunes Agriculteurs (CFJA), the Rural Improvement Centers/Centres de Promotion Rurale (CPR), and the Technical Promotion Centers/Centre de Promotion Technique (CPT).

Common in other West African countries, the CFJAs were the first of these centers in Niger. There are four CFJAs which provide practical training in agriculture and one center - Centre de Formation de Jeunes Eleveurs (CFJE) -

for training in livestock. Young farmers are selected by the village cooperative to attend the nine-month training program from April to December at the CFJA. They learn various agricultural practices, particularly involving animal traction, on twenty to thirty hectares belonging to the center. When the trainees finish the program, they are given a pair of oxen and basic agricultural equipment on credit from the National Agricultural Credit Bank/Caisse Nationale de Crédit Agricole (CNCA). With the equipment and new techniques, the young farmers return to their villages to be demonstration farmers (paysan pilote) and as such fulfill an extension role.

The Technical Promotion Centers (CPTs) and the Rural Improvement Centers (CPRs) are similar in function to the CFJAs but are linked with various provincial productivity projects. These centers train farmer couples for a period of nine months in animal traction and improved agricultural practices. In addition, training in literacy and in health is provided. At the completion of training the couples are expected to return to their villages and carry out demonstrations for other farmers. The producti- vity projects, particularly the training component, are discussed further under ongoing nonformal agricultural education programs (Section 7.1.8).

The training of rural mechanics in blacksmithing and repair of equipment takes place at three equipment production centers managed by the UNCC. The three centers are located at Zinder, Dosso, and Tahoua, and graduate about 80 blacksmiths (artisans ruraux) per year to produce agricultural equipment. At Zinder, the center visited by the sector assessment team, there were no new students being trained this year, but retraining of past graduates was taking place. An apparent surplus of equipment and the lack of imported steel for continued production seemed to be the reason why there were no new trainees. Trainees are traditional blacksmiths, already semiskilled artisans, who are selected by their village cooperatives for training in modern technology.

Finally, considerable nonformal training in the form of on-the-job training is provided in conjunction with the major agricultural development projects. These projects, financed by foreign donors, train the local technical staff needed to operate and carry on their projects. Many of these projects also provide funds for overseas training at the university and graduate level to prepare Nigeriens to assume project leadership.

7.1.4 Goals and Strategy for Agricultural Education in Niger

The basic objectives identified in the National Five-Year Development Plan (1979-1983) are:

1. the modernization of agriculture and livestock production;
2. attaining a high rate of economic growth led by mining investments;
3. development of human resources; and
4. a reduction of regional disparities in income level.

Rural development has been the first priority of public investments by the government over the period of the Five-Year Plan (1979-1983). To increase employment opportunities in the rural areas the government has been investing more in agriculture, animal production, and other agriculture-related activities. There are over 30 agricultural and agro-industrial projects and over 20 different animal production projects listed in the Five-Year Plan.

The National Interim Plan (PIC) outlines government strategy for the years 1983-1985 does not diverge from the basic direction set in the Five-Year Plan with regard to basic objectives. The Niger Cereals Research Project, supported by USAID, has a substantial training component ($450,878) which is outlined in the PIC to include: 14 scholarships for advanced training in the U.S., 22 scholarships for short-term training in different countries, cooperative training, and in-service training seminars on extension, research, statistics, and seed technology.

The government's strategy for agricultural education includes improving the quality and expanding the output of its agricultural training. In line with its basic objectives, the government proposes to strengthen the University of Niamey, particularly in the areas of agriculture, forestry, animal production, education, and science.

At the secondary or middle level the GON is continuing to develop the IPDR at Kolo. A program for the reform and extension of IPDR, initiated by UNDP/FAO in 1976, has the following aims:

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1. to increase the capacity of the school from 200 to 450 students;
2. to upgrade and improve the curriculum and the methods of instruction;
3. to phase out the program for assistant technicians (Grade B2) and to focus on a better quality training program for technician-level staff (Grade B1). This means establishment of a four-year program for technicians (Grade B1) separate from the two-year training program for extension agents (Grade C).
4. to increase the practical experience aspects of the program and strengthen the field study program.

In addition to these aims, the plan for reform called for enough training abroad to enable IPDR to be fully staffed by Nigeriens by 1984 - a goal which will not be achieved.

Also at the middle-level of professional training, the GON is proceeding with a plan, initiated in 1978, to develop the Livestock Production School (ECE) and its training program.

The plan for developing ECE is very similar to that for IPDR. Both plans include upgrading the teaching staff, improving the curriculum and making it more applied and upgrading the level of technician (Grade B1) training. Since ECE is located in the center of Niamey surrounded by urban structures, a new school is being built at Kolo to accommodate a greater number of students in a more rural setting. The capacity of the new school will be 204 - over twice the capacity of the existing facilities - and will graduate 50 extension agents or assistant technicians (Grade C) and 25 technicians (Grade B1) per year.

7.1.5 Programs in Formal Agricultural Education

Formal agricultural education programs are described below by level of training and by institution.

The University School of Agriculture (ESAE) offers the highest level of formal agricultural education in Niger, (A2 applied engineers). Before entering the School of Agriculture, students must first complete two years of study in the School of Sciences and receive the science diploma (Diplôme universitaire d'études scientifiques - DUES). The School of Agriculture trains applied engineers for rural development (ingénieurs d'application du

développement rural) in a two-year program. Graduates of this program are eligible for Grade A2 positions, generally field managerial or senior extension staff.

A five-year program is required in the training of theoretical engineers (ingénieurs de conception). Only the initial four years are offered at ESAE with the fifth year taken abroad. After completion of this program, graduates are eligible for senior supervisory positions (Grade A1). In 1981, there were 19 applied engineers graduated; six of these obtained scholarships for study abroad.

There is no program at the university to train veterinarians (Grade A1). Hence, veterinarians are trained abroad in programs of at least five years' duration. Most Nigerien veterinary students go to the regional Veterinary School in Dakar, Senegal, for this training.

The Practical Institute for Rural Development (IPDR) at Kolo is the only middle-level agricultural (as distinct from livestock) school in Niger. It offers two professional courses of study at the secondary or middle level: one leading to technician (Grade B1) and the other to assistant technician (Grade C). To enter IPDR a student must have the certificate for completion of the first four years of secondary school/Brevet elémentaire premier cycle (BEPC). A certain number of non-BEPC holders who have had sufficient experience in the field and who pass the required examinations are also admitted each year. All students entering IPDR spend the first year in general studies and then choose a specialization in one of several areas of rural development: agricultural production either with a research or extension emphasis; rural infrastructure development (amenagement rurale) with a water and forestry or engineering emphasis; or rural sociology and economics with cooperative and animation emphasis.

Technicians (Grade B1) are trained in a four-year program of study. Students choose a specialization, or are selected into a special field based on their grades and the existing government need, after the first year. As graduates they are eligible for civil service appointment at the arrondissement level.

Assistant technicians or agents techniques follow a two-year program of study consisting of the core curriculum in the first year and a specialization in the second year. The graduates of this program are eligible for C-level positions.

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Because agriculture and animal husbandry are regarded as completely separate curricula, the respective training is offered in separate schools. The Livestock Production School (ECE) in Niamey provides middle-level formal training in animal husbandry. At present ECE does not train fully qualified technicians (Grade B1). A program in this area is being developed. There is a three-year program which trains assistant technicians (Grade B2) and a two-year course of study for extension agents (Grade C). The concentration in the curriculum has been on animal disease control.

7.1.6 Programs and Activities in Nonformal Agricultural Education

The system of the Technical Promotion Centers (CPTs) and Rural Improvement Centers (CPRs) is the main effort under way in nonformal agricultural education. There are 47 CPT/CPRs presently in existence and a total of 80 is planned by 1985.

The CPRs and CPTs are an important part of the productivity projects operating in the Departments of Zinder, Maradi, Tahoua, Dosso, and Niamey. Through an integrated rural development approach, various services are involved in these projects including: the agriculture service, the National Credit and Cooperative Union/Union Nationale de Crédit et de Coopération (UNCC), the National Agricultural Credit Bank/Caisse Nationale de Crédit Agricole (CNCA), and the National Institute of Agricultural Research/Institut National des Recherches Agronomiques au Niger (INRAN). Each productivity project is supported by a foreign donor and has a distinct administrative scheme. The strategy of the projects is to organize cooperative associations of village groups, establish the farmer couple training centers (CPTs and CPRs), and reinforce the government extension, agricultural credit, and input supply services within the project zone. The primary function of the program is to increase agricultural production to the greatest possible extent. The goal of one CPT for each agricultural district (arrondissement) in the project zones has not yet been reached. Each center has the capacity to train twenty couples during a full growing season (April-October) in the use of a technical package, including animal traction and fertilizer, for growing millet, cowpeas, and sorghum. On a credit basis, the farmer couple is then equipped with all the supplies necessary to apply these techniques on their own farm. Training is also provided in literacy, and in some cases, reforestation, animal husbandry, garden corps, and health practices.

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The most important difference between the CPT/CPR and the CFJA is in the training of farmer couples in a village-like environment rather than young unmarried men who are completely removed from their village context. There is a house for each couple, though meals are generally taken communally. The psychological and social environment of the CPT/CPR is closer to the actual village setting than is that of the CFJA, where trainees live in dormitories without their wives.

7.1.7 Plans in Formal Agricultural Education

With the extension and reform of IPDR and the expanded facility, 100 extension agents (Grade C) and 50 technicians (Grade B1) are the projected graduates per year. Many outside donors are assisting the GON in the development of this institution. Contributions include technical assistance, new construction and renovation of old buildings, fellowships for staff development, and equipment. Table 7.4 gives a breakdown of donor support to IPDR.

As indicated in Table 7.4, most of the donor commitments to IPDR were to be implemented by 1983 except for the assistance of the International Bank for Reconstruction and Development (IBRD). Some of the donors have extended their commitments to 1986, but due to incomplete data, these extensions are not reflected in the table. In 1981, the IBRD financed a US$ 2.7 million five-year program to improve education planning, upgrade civil service personnel, and upgrade the quality and expand the output of middle-level rural development workers. The IBRD loan is financing the final phase in the development of IPDR.

As part of the same Bank project, assistance is being provided for the expansion and upgrading of ECE. Over US$8 million are earmarked for construction of the new school, equipment, furniture, vehicles, and initial operating costs for a school farm. In addition the teaching staff is being upgraded, the curriculum improved, and the annual student capacity doubled.

The United States Agency for International Development (USAID) under the Agricultural Production Support (APS) Project is planning to establish a training center at Kolo as part of IPDR for the purpose of training cooperative field agents of the National Cooperation and Credit Union (UNCC). The center will have the capacity to train 40 agents per year with a twelve-month program consisting of nine months of coursework and three months of fieldwork.

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Table 7.4

Project for the Reform and Extension of IPDR at Kolo Donor Contributions

DONOR	Type of Assistance	Amount - US$million	Implementatio Period
IBRD	Construction, furniture, equipment, vehicles, technical assistance, fellowships, and initial operating costs for the development of the school farm, 160 dormitory places, 24 staff housing units, etc.	6.8	1982-1988
UNDP/FAO	Technical assistance, fellowships, equipment, and recurrent expenditures	2.0	1977-1983
FAO and Switzerland	Construction of 699m^2 for a general science laboratory, a staff house, and a storage barn	.4	1979
FAC	Technical assistance: 6 personnel for the crop production department	1.8	1977-1982
Belgium	Technical assistance of 8 1/2 staff years and associate experts for the FAO/UNDP component; 4 fellowships; construction of 240m^2 for 2 classrooms, 1 store for teaching, furniture, irrigation equipment; topographical supplies; and teaching materials	1.2	1978
European Development Fund	Two technical assistance personnel and 14 fellowships	.5	1978-1982
USAID	Five technical assistance personnel, consultants for evaluation, 13 fellowships; construction of classrooms, farm facilities, 50 dormitory places, kitchen and dining room; renovation of 250 dormitory places; furniture and equipment for offices, workshops and the ecology laboratory	5.0	1979-1983
Holland	Two technical assistance personnel	.1	1979-1981

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The new National Center for Cooperative Training/Centre National pour la Formation Coopérative (CNFC) is also slated to provide short courses of two weeks' duration for elected cooperative officials on the subjects of cooperative organization and methods of cooperative leadership and management.

7.1.8 Plans in Nonformal Agricultural Education

Each of the productivity projects has its own donor who is responsible for the administration of the project, including the affiliated CPTs or CPRs. The FED is supporting the Badeguichiri (Tahoua Department) and Zinder Department Projects; France has supported the initial phase of the Dosso Department Project; the World Bank (IBRD) is funding the Maradi Project and the second phase of the Dosso Project; Canada is supporting the Diffa Project, Germany, the Tahoua Project, and the United States has supported the Niamey Department Development Project. At this time an evaluation by the World Bank of the Maradi project is under way, and its continued involvement is uncertain.

7.2 An Analysis of Agricultural Education in Niger

The analysis of agriculture and agricultural education in Niger considers the identified needs of this sub-sector and the constraints to meeting them.

The focus of this analysis is on the two main approaches of the GON in the area of agricultural education. These are: 1) the development of the middle level institutions for agriculture and livestock training in the formal education system; and 2) the integration of farmer training centers in the productivity projects, a nonformal agricultural education effort. Both approaches have been described in the preceding paragraphs.

7.2.1 The Needs of the Agricultural Education System in Niger

There are some general needs of agricultural education in both the formal and nonformal systems; primary among them is the need for applied agricultural research. Extension information in the form of recommended agricultural practices, inputs, and technologies must be well-grounded in location-specific agricultural research. Linkages with the agricultural education system should serve to reinforce or, if necessary, redirect research efforts and to provide for farmer feedback to researchers:

The technical content of the agricultural curriculum should be adapted to the vagaries of the social and economic setting and climactic conditions throughout Niger. The failure to develop a curriculum technical package which reflects these variations is detrimental to farmer confidence in the extension services of the government and agricultural education in general. The coordination of research with extension and agricultural education at all levels, both formal and nonformal, is integral to achieving relevant research and agricultural education which responds to the needs of the farmer and the agriculture sector at large.

In addition to the need for research and for coordination of research with agricultural education, the responsibilities of the various services of the government directed toward rural development need to be clearly delineated so that they may function effectively and efficiently; these services include UNCC, CNCA, the agriculture service, the livestock service, ONAHA, rural engineering, the marketing parastatals and other governmental and semigovernmental organizations. This need is particularly felt within the current economic picture and constrained national budget. Specific needs within the formal and nonformal approaches will be discussed under those respective subheadings.

7.2.1.1 The Formal Agricultural Education Subsector

The need for and supply of qualified agricultural personnel directly affects the development of the rural sector. Various studies (see section 7.2.3.3) have projected the quantitative need for rural development personnel and the capacity of Niger to meet these needs. The formal agricultural education institutions, especially with the expansion underway at IPDR and ECE, are capable of producing more than the projected quantity of personnel needed at their current rate of graduates (see constraints in Chapter 2.0).

The quality of education currently produced within the formal structure is a different matter. The formal agricultural institutions have curricula which address the needs specified by the government services employing their graduates. In this sense, the schools do not serve to stimulate or prepare individuals for private enterprises, industry, or a competitive job market. The guarantee or requirement of government upon graduation creates a complacency and an attitude of superiority among the students vis-à-vis the villagers they are being trained to serve.

Aside from the intrinsic quality of education, the question arises as to whether formally trained individuals channeled into their various posts of government service are meeting the needs of the agricul- tural sector and economy at large in advancing Niger toward the goal food self-sufficiency. The system mandating, as well as rewarding, government employment of the educated is restrictive and thwarts individual initiative particularly in agricultural extension.

7.2.1.2 The Nonformal Agricultural Education Subsector

There are about 500,000 farms in Niger and most of them use traditional methods of agriculture. The Technical and Rural Promotion Centers (CPTs/CPRs) represent the largest nonformal or direct farmer training effort in Niger. Sixty centers are expected to be in operation by 1983.

These centers need well-trained permanent staff who are knowledgeable in agriculture and skilled in teaching. The selection of staff and particularly the director of centers must consider not only technical competence but socio-cultural appropriateness. Young unmarried directors, for example, risk alienation from their farmer/trainees based on social perceptions of village status and age.

In addition, the technical package which is the basis of instruction needs to be suited to the problems and available resources of the farmers. It should be based on farming systems research in which the farmers themselves have a major role by providing critical feedback and indigenous knowledge of farming conditions to agricultural researchers. Two-way communications should allow farmers to directly participate in problem-solving through the training centers, enable the farmers' real needs to be better understood by researchers, and to have research findings more directly communicated to farmers for application.

Several aspects of the CPT/CPR system of training are particularly relevant to their success. These include:

1. The importance of selecting couples who have the respect of their village, and who have enough land to use the techniques learned;

2. The problematic situation of cooperatives meeting CNCA regulations, i.e. cooperatives which are in arrears in repaying loans are not allowed to send any more farmer couples to the CPT. Several centers, as a result, are no longer functioning at full capacity.

3. The role that a CPT graduate couple is to play upon returning to the village is important, and should entail responsibility or leadership in the cooperative as well as providing demonstrations with new techniques.
4. The follow-up on the CPT graduates is very important to support them in their new practices and as agents of change.
5. The equipment available on credit to the farmer couple must be adapted to their environment and suitable to their needs. Indeed, the "technical package" as a whole needs to be sound and appropriate to the different environments.

These aspects of the CPT/CPR system have a direct impact on their success and certainly on their effectiveness in increasing agricultural production, and will be discussed in Section 7.2.1.2.

7.2.2 Constraints to Agricultural Education in Niger

General personnel constraints to agricultural education in Niger are the following: 1) a shortage of teachers and extension agents, well-trained serving the agriculture sector; 2) limited numbers of well-qualified students competing for places at the middle and higher level agricultural education institutions; 3) the paucity of literate people who can be effectively trained; 4) the limited capacity to produce trained agricultural teachers/researchers specifically for the university level; and 5) limited financial capacity of the public sector to absorb trained staff. Hence, personnel constraints confronting the agricultural education subsector are based in limitations of the educational system at the primary, secondary, and tertiary levels.

Costs and financing is another general constraint on agricultural education (see Chapter 2.0). The expansion and development of the agricultural training institutions carry with it substantial cost. Nonformal training presently dependent upon external financing must move in the direction of self-sustained financing if it is to survive beyond donor support commitments. Great emphasis needs to be placed on cost effectiveness, linked with better personnel planning, for all agricultural education activities.

7.2.2.1 The Formal Agricultural Education Subsector

1. The University School of Agriculture (ESAE)

An analysis of the operation of the ESAE indicates two related problems: 1) insufficient applied teaching and limited use of existing equipment, and 2) lack of well-trained teachers.

The first problem specifically relates to the lack of practical applications of subject matter. The school laboratories are not fully operational and the school farm does not have an important rôle in either curriculum or training. While the classroom teaching is generally satisfactory, omission of practical instruction/ demonstration is a serious fault.

The second major constraint of the University School of Agriculture is the inadequately trained teaching staff. Except for the director of the school, all of the faculty are assistants and master assistants (comparable to teaching assistants). There are no staff with advanced degrees or sufficient qualifications to carry out research or assist in upgrading the less qualified teachers. As such, there is no room for academic improvement or promotion within the university. Exacerbating the problem of teacher qualification is the large number of temporary instructors (21) compared to a permanent staff of thirteen. The proposal to add a fifth year to the curriculum (troisième cycle) to train theoretical engineers (ingenieurs de conception) at the A1 level is not feasible with present staffing and curriculum problems.

These problems are further exacerbated by the dearth of students in rural technical sciences. In 1981 there were only thirty students entering the School of of Agriculture compared to 200 pursuing studies in economics and law. Even fewer students are entering the School of Science, which means there will be few students qualified to pursue agriculture in their third and fourth years. The fields of hydrology, forestry, and rural engineering are particularly under-represented.

For the moment a considerable number of fellowships for external university training are offered through cooperative projects funded by outside donors, which augments the supply of senior level personnel available to ESAE, but this is not a long term solution to the University's agricultural staff needs.

2. Practical Institute for Rural Development (IPDR)

Some of the problems of the IPDR are due to the complexities inherent in simultaneously training two levels (Grades B & C) of personnel. For this reason, the Technical Committee has suggested investigating the feasibility of opening a second school in Maradi for training all the assistant technicians/agents techniques (Grade C), thereby separating the two curricula. However, no action has been taken as yet in this direction.

The teaching staff presents another constraint. While there are at present some Nigerien teachers, a number of them are simply displaced fonctionnaires who have neither a pedagogical background nor interest in teaching. With 42 permanent and 26 temporary teachers, it is a continual struggle to recruit and retain qualified staff. Some courses simply go untaught for this reason. Though the reform of IPDR called for complete "Nigerienization" by 1984, that goal is far from being realized with 25 expatriates presently employed. The recent expulsion of four senior agriculture students from the university will further set back the aforementioned goal.

There have also been many problems at IPDR deriving from the multiplicity of donor contributions and participation. The lack of strong administrative leadership in coordinating donor activity has seriously segmented the school.

3. School of livestock Hides and Skins (ESEM)

This is the only agricultural institution that prepares D level personnel. A limited output of 22 graduates per year means continued shortages of personnel at this basic level. ESEM graduates are responsible for collecting statistical data from the rural markets and slaughterhouses, the collection of which is now inadequate and inaccurately carried out. The condition of the school itself with buildings in need of repair and insufficient means of transportation would indicate an insufficient operating budget. All practical work is undertaken outside the school either at the tannery or the slaughterhouse. Theoretical courses are simply dictated with no attempt to use a more innovative or appropriate instructional methodology.

7.2.2.2 The Nonformal Agricultural Education Subsector

The Young Farmer Training Center (CFJA)

There are several problems unique to the CFJAs which limit their success. The trainees are young and unmarried and many of them do not return to their villages to fulfill the role for which they are trained. Secondly, perhaps because of the trainees' youth, they can meet with an overwhelming amount of village resistance to adopting new techniques. A third problem is that, for social reasons, no young, unmarried woman can be trained at these centers though their contribution to agriculture, particularly among the Hausa, is substantial. Graduates (pilot farmers) are not generally given a salary for their efforts as extension agents, and without remuneration it is questionable as to how much effort or leadership the CFJA graduates assume in their villages. In that there is an overlap in function at these centers with the CPTs, the future of these centers is being reconsidered.

Following the problem of the appropriateness of the technical package is the problem of the successful reintegration of CFJA and CPT graduates into their villages. Under the CPT system, the married couple can provide support to each other which facilitates their reentry and is an advantage over the CFJA.

A major criticism of the productivity projects has been that the institutional structure involving the various services - UNCC, Agriculture, CNCA, INRAN - has been ill-defined and malcoordinated. Typically the problem has been attributed to weakness deriving from limited personnel, budgets, and leadership with the implication that the solution lies in more personnel and funds. In actuality, the constraint in these systems may be that the systems themselves are ineffective, especially if the training taking place is not based on farmer needs, resources, feedback, and location specific research. The technical package is presented to the farmers as a "package" which requires a major capital investment and years of indebtedness, regardless of whether the farmer sees a need for all the components, understands their use, or can afford them.

The training of one farmer couple per village - selected by the cooperative - presents another constraint. Ideally, the trained couple will return to their village and extend their new knowledge to the others by way of demonstration, meetings, and visiting other farms. The

system breaks down when the farmer does not understand fully the new agriculture practices which are unproven in his village and the debt he has incurred on credit weighs on the whole village cooperative should he be unable to repay. The general rule, which has not been enforced until this year, is that a cooperative can only have 10 percent of its debt to CNCA outstanding at any one time. Actual levels of outstanding indebtedness are closer to 30 and 40 percent. As a result, many of these village cooperatives are not allowed to send any more farmer couples to the CPT for training. Consequently, the CPTs/CPRs are underutilized, with some centers having as few as ten rather than their full complement of twenty couples.

7.2.3 Issues in Agricultural Education in Niger

This section reviews four major issues facing agricultural education in Niger.

7.2.3.1 Access to and Equity in Agricultural Education in Niger

With the limited number of places at the formal institutions access is necessarily limited. The students at the middle and higher levels of formal education seem fairly representative of the different geographical regions of the country. Less than 25 percent of the population goes to primary school and approximately 8 percent of the adult population is literate, forming an extremely narrow educational base.

Access to education is limited for women and reflects traditional village mores and Islamic culture. Data was not available on the breakdown by gender of ESAE graduates. However, no women to date have completed the four year curriculum at IPDR.

In the nonformal agricultural education system, selection of the farmer couple for training is a major issue. The village cooperative and/or UNCC plays a major role in the selection process. Selection is made on the basis of credit-worthiness and therefore is limited to "landholders" with prior status and tenure in the village. This is so because the technical package entails the purchase of equipment which the ex-trainees usually buy with credit. Some villages with little confidence in the system have repeatedly sent their undesirables for training, but the quality of trainees is said to be improving in recent years. Presently, there is no system for assuring a completely open selection process, and given the credit

problem, there probably will not be one in the immediate future.

Though the CPTs address the need to train women in principle, more needs to be done to balance the training skewed toward men and to address the needs of women directly. By mandating that trainees be "couples" there is necessarily an equal number of men and women trainees. Selection emphasis, however, is on the male. The responsibilities of the women for child care and meal preparation take them away from the training activities.

Also, there is much to be considered in the social and economic implications of the training and who benefits. For instance, women at the CPT in Filingue have resisted working in the sorghum and millet fields with the men because profit that accrues from the increased production goes to the husband. Women must be given opportunities to learn agricultural and other skills which they see as directly beneficial.

7.2.3.2 The Internal Efficiency of Agricultural Education

1. The Formal Agricultural Education System

The formal agricultural education system is currently set up solely to provide trained personnel for the civil service at the various levels and specializations needed. The system's ability to produce the quantity of personnel needed at all levels is discussed in the following subsection (7.2.3.3) on external efficiency. The primary issue of internal efficiency of the formal agricultural education institutions has to do with the quality of the education provided.

The curricula of both the middle level and higher level institutions have traditionally been theoretical in approach. The reform and extension of both IPDR and ECE is addressing this imbalance by expanding the curriculum to include internships and practical field work. At the university, however, this problem is not yet being addressed and the individuals graduating as "applied engineers" are actually receiving very little applied training. At IPDR, labs and lab equipment are underutilized and the short supply of running water inhibits lab instruction.

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The lack of adequately trained teachers and the large turnover of staff is perhaps the most serious impediment to the quality of education taking place at the formal agricultural education institutions. The country does not have the capacity to meet its need for qualified teachers at the university level and, as a result, there are no PhDs or even Master degree level staff at the ESAE. This constraint at the university level impairs the quality of teacher training at every other level in the formal agricultural education system.

2. The Nonformal Agricultural Education System

With regard to per capita costs and reaching the target audience (farmers), nonformal agricultural education in Niger is internally more efficient than the formal education system. Considering the goal of the CPTs and the productivity projects in general - to increase food production - there are certain key factors which affect the efficient operation of the centers.

An important component of the technical package being transferred at the CPTs is animal traction farm equipment. The benefits to farmers from animal traction have been quite variable and have, on occasion, fallen well below expectations. Indeed, the whole package itself has not been adequately tested under realistic production conditions on producer farms, thus there is no conclusive data to indicate whether the current agricultural technology package represents the best set of practices for each of the agro-ecological zones. Training at the CPTs and CFJAs has been based on the underlying assumptions that: 1) there exists improved agricultural technology that can increase farmer productivity in Niger; and 2) that the recommended technical package which includes improved seeds, chemical and organic fertilizers, insecticides, proper plant spacing and thinning, timely planting and weeding, constitutes that improved technology. If the available improved technology cannot significantly increase productivity under conditions that prevail in Niger, the costs incurred in promoting the adoption of these new technologies are highly questionable.

Infrastructural weaknesses exist which also bear on the efficiency of the nonformal training centers. Even if the technical package is technically and economically viable in itself, farmers will not be able to adopt or fully utilize it without the necessary support services, particularly input delivery systems. As a case in point, the lack of credit (i.e. the requirement of cash payments) for fertilizer may hinder its use even if the farmer knows it to be beneficial and wishes to use it.

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Finally, while the GON plans to have a trained assistant technician (C level) in place at each CPT, the present agricultural teaching staff in a number of departments have had very limited training. Similar to the situation in the formal agricultural education institutions, inadequately prepared teaching staff seriously effects the efficiency of the operation.

7.2.3.3 The External Efficiency of Agricultural Education

To put in effect the programs and achieve the goals set out in the Five-Year Plan for 1979- 1983, as reviewed in section 7.1.2 of this chapter, there are specific human resources requirements. In attempting to review and assess the stated human resource needs in Niger, there is a tendency to evaluate personnel requirements by simple linear projections and/or ideal ratios of extension agents to farmers or upper-level positions. However, the situation in the sector is a good deal more complex than this approach would indicate.

If one takes the relationship between the need for extension agents and the number of activities to be achieved in the sector as a case in point, it should be evident that the effectiveness of extension agents already in place - and ultimately the need for new agents - is heavily conditioned by the progress being made in developing and transferring new agricultural technologies to the farm level.

If current agents in the field continue to operate in a situation where the following conditions occur, the effectiveness of the trainees will be marginal:

1. systems for delivery of agricultural inputs are deficient or nonexistent;

2. farmer access to adequate credit cannot be assured;

3. prices for agricultural products are not attractive enough to stimulate increased farmer productivity;

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4. access to markets for agricultural products is restricted;

5. road networks are not sufficiently developed to permit low-cost access to farms;

6. social amenities for farm families - like clean water, health care, electricity, or schooling - are absent or excessively costly;

The marginal social benefit and external efficiency of adding new agents to the system is also negative when these conditions are present.

The agricultural production of Niger depends on a great number of interrelated factors, including the availability of trained personnel. The development of such personnel should be guided, however, and, if appropriate, constrained by a realistic vision of the Nigerien situation. It should recognize also that almost the entire country has a marginal resource base for agriculture, that the productivity of this base is substantially affected by changes in annual rainfall patterns, and that the agricultural economy is very vulnerable to regional variations in agricultural input/output price relationships over which the government has little or no effective control.

Recent human resource requirement projections in agriculture conclude that more people trained to work in rural development are needed. In addition to the Ministry of Rural Development's projections of its needs, a number of other studies have been conducted . None of these studies effectively relates manpower planning to critical economic variables or calculates the effective demand - i.e. the financial ability of employers to pay employees - for personnel now being trained or projected for the future.

Ministry of Rural Development Human Resource Projections

The Ministry of Rural Development (MRD) each year compiles a list of the training needs for its associated Directorates and Offices. This list is then used by the Service for Human Resource Planning in the Ministry of Planning as a tool in orienting the further training of students working toward achieving the BEPC. At the post-secondary level, the Ministry of Higher Education and Research is charged with compiling the personnel needs and directing student enrollments accordingly.

In Table 7.5, the projected needs of the agricultural agencies of the Nigerien government, as compiled by the Ministry of Rural Development, are presented.[4]

In reviewing this list, it is diffi- cult to assess the real needs of the directorates and Offices of the Ministry in the short and medium term, much less the effective demand for personnel:

1. The actual and future needs of the ministry are expressed in terms of levels to be satisfied, but the satisfaction of needs is only accomplished after the training is completed. This in all cases implies a lagged response to the initial needs of two to five years.

2. The same compiling procedure is done by the Ministry each year without apparent reference to the lagged responses implicit in previous yearly lists.

3. There is a certain inflation in projecting needs such that twenty trained technicians are demanded in hopes of actually getting ten.

4. Stated needs for A and B level personnel always far exceed the total capacities of the respective Nigerien training institutions to produce graduates whereas the government's financial capacity to employ these graduates is below the current output of these same institutions.

5. The Ministry of Planning's annual request for statements of personnel needs by Ministry or the Ministry of Rural Development's listing of necessary personnel training needs for the academic year are based on effective demand for new employees.

6. Finally, stated needs by Ministry for personnel training are expressed in terms of training categories rather than by desired skills.

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Table 7.5

List of Human Resource Training Needs for Ministry of Rural Development Agencies: 1981-1982

Ministry Agencies	Civil Service Grade A1	A2	A3	B1	B2	C1	Total by Agency
Agriculture	10	6	-	8	12	25	61
Livestock	10	-	-	-	20	40	70
Water and Forestry	3	5	-	10	-	-	18
Rural Engineering	11	15	22	36	32	-	116
ONAHA	4	5	5	20	6	20	60
UNCC	4	3	-	20	-	-	27
IPDR	-	11	-	-	4	-	15
INRAN	45	15	-	27	24	24	135
Total by Civil Service Grade	87	60	27	121	98	109	502

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Estimations of Personnel Needs and the Reforms at IPDR an ECE

The evaluation report for the First World Bank Education Project[5] contains estimations of the needs for training of civil service grades A, B, C and D personnel for the Ministry of Rural Development. These estimations served as the basis for determining the scope of institutional expansion at the IPDR at Kolo and the structure and size of the ECE, which will eventually be sited at Kolo. They are reproduced here for two reasons:

1. These estimations constitute a synthesis of previous human resource studies done by various agencies[6];

2. The estimations in themselves carry considerable weight in that they will condition the outputs of B and C level personnel supposedly for Ministry service in the coming five to ten years, irrespective of the effective demand for these graduates.

Tables 7.6 and 7.7 present, respectively, the estimated human resource needs in the Agriculture and Livestock Services of the Ministry of Rural Development. Table 7.8 indicates the World Bank estimate of annual training needs for the Ministry in the civil service grades B1 and C1.

As with the previous human resource estimate from the Ministry, the parameters used and the base for the estimate itself are vague. It is not evident that Directorates or Offices of the Ministry projected needs as a function of clearly defined and attainable objectives, both technical and financial.

Tables 7.6 and 7.7 show an estimate of the structural ratios for the Ministry's human resource requirements in agriculture (1984) and livestock (1983).

Agriculture		Livestock	
Grade B:	Grade A = 3.32:1	Grade B:	Grade A = 2.12:1
Grade C:	Grade B = 2.03:1	Grade C:	Grade B = 1.41:1
Grade C:	Grade A = 6.74:1	Grade C:	Grade A = 2.99:1

The above projected structure for personnel needed to implement national objectives in agricultural is much too

narrow, particularly as concerns the Livestock Service and Grade D employees of the Ministry, who represent the major direct liaison with farmers and farm families.

Table 7.6

Estimated Needs for Agricultural Service Personnel: 1975-1984

Civil Service Grade	Needs in 1984	Personnel in Service in 1975	Net Training Needs for the Period 1975-1984
A1	81	14	67
A2	160	20	140
B1	---	---	---
B2	800	83	717
C	1,620	179	1,441

Source: Sector assessment team estimates

Table 7.7

Estimated Needs for Livestock Service Personnel: 1975-1984

Civil Service Grade	Needs in 1984	Personnel in Service in 1975	Net Training Needs for the Period 1975-1984
A1	55	21	34
A2	58	5	53
B1	77	11	66
B2	162	101	61
C1	336	101	235
D	311	211	100

Source: Sector assessment team estimates

Table 7.8

Estimated Annual Training Needs for Grade B and C Personnel in the Ministry of Rural Development

	Agriculture 1975-1984 at IPDR		Livestock 1975-1984 at ECE	
	B1	C1	B1	C1
Annual Training Need	70	140	25	50
Estimated Deficit without Reform Program at IPDR and ECE	70	65	25	35
Estimated Deficit with Reform Program at IPDR and ECE	20	40	0	0

Source: Sector assessment team estimates

In addition to the Ministry of Rural Development, the National Institute for Agronomic Research (INRAN), which is formally under the Ministry of Higher Education and Research, is an employer of rural development personnel. In 1981, INRAN had a reported staff comlement of 75 persons (33 A, 17 B, 17 C, and 8 D level people) and provisional auxiliary staff of 475. In the same year, however, the director of INRAN stated that the actual number of auxiliary workers at INRAN headquarters and at the field stations was about 750. In addition to expatriate personnel.

At the beginning of 1981, INRAN conducted an evaluation of its personnel needs through the year 1990. This evaluation yielded a total need of 759 staff - not counting any auxiliary staff - or an expected need for ten times the 1981 staff in ten years. If similar growth in the auxiliary staff was also anticipated, INRAN would have a staff of over 8,000 persons by 1990 - which is clearly beyond the bounds of any expected economic growth path for the Nigerien economy.

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Estimation of Personnel Needs by Normative Methods

In 1976, the Ministry of Rural Development completed a study of personnel needs based on normative estimates of staff needed to implement the objectives of agricultural development in Niger as it was then planned. This study[7] took into consideration four levels of human resource needs: the base field level, the development project management level, the regional services level, and the headquarters level. It included the Ministry Services of Agriculture, Water and Forests, Rural Engineering, Agronomic Research, and UNCC. The Livestock Service was not included because planning for the ECE was supposed to cover this estimation need.

This study included in its evaluation of the base field level personnel the needs of the irrigated perimeters, the productivity projects and the "residual sector." The total areas of cultivation in each category served as the basis for the calculation of personnel needs. Table 7.9 shows that, under this calculation of personnel needs, the majority of the B2 and C1 level personnel would be absorbed at the level of field operations.

The principal interest of this particular study is that it shows the personnel needs in direct relationship to the professional responsibilities to be assumed in implementing the development planning in effect at the time. It contains a number of organization tables which illustrate, particularly for the central services of the Ministry, the roles that the different personnel levels will be called upon to play.

The major problem with this type of human resource analysis is that it proceeds on the implicit assumption that the roles illustrated for the various personnel will continue unchanged into the future and should form the basis for long-term planning. Unfortunately, in most projects, this rigidity of role assignment ignores the personnel elasticity of decentralized agricultural development.

In a similar human resource analysis, performed by a UNESCO team, a ratio of five field level personnel for each person at the central level was used and the needs were then broken down into the traditional civil service grades. The results of that analysis are shown in Table 7.8 below.

Table 7.9

Number of Personnel Required According to Viallet's Study

Personnel	Basic Staff	Project Management	Regional Services	UNCC	Agri-culture	Water & Forests	Rural Engin-eering	INRAN	Totals
A1	--	55	14	3	9	7	8	15	111
A2	20	255	49	7	11	8	11	19	380
B1	150	70	14	4	8	49	67	63	425
B2	1,490	20	--	3	--	168	--	23	1,704
C1	1,240	--	--	--	--	182	105	89	1,616
Totals	2,900	400	77	17	28	414	191	209	4,236

Source: Viallet, Ministry of Rural Development, 1976.

This particular report then projected the calculated need for agricultural personnel against the expected output of the various training programs in Niger for the period 1979-1988. On this basis, the report deter- mined that there would be a surplus of approximately 400 trained persons at the A and B grade levels and a deficit of 1,600 at the C level. These surpluses/deficits were determined on functional grounds, not financial ones; however, this analysis did not include the needs at the project level and, neglected the basic D level field personnel.

Evaluation of Personnel Training Needs Starting from the Village Level

The FED (Fond Européen du Développement) study,[8] which is the most recent and complete analysis available at present in Niger, starts from a different basis of evaluation. The principle underlying this analysis is that human resource needs for the various governmental agencies should flow from the need to satisfy the demand for farmer training and other services at the village level. Needs for training of government personnel are structured for each agency by estimation of the human resources needed by that agency to fulfill its stated tasks at the village level. The result is said to be the minimum level of personnel recruitment needed for reasonable functioning of the agency in question through 1990.

The parameters taken into consideration in determining personnel needs were:

1. The number of farms in Niger (approximately 500,000);
2. The number of villages (approximately 10,000);
3. The number of cooperatives (approximately 1,400);
4. The number of irrigated perimeters (30 in total);
5. The number of districts (218), administrative posts (24), arrondissements (35) and departments (7);
6. The number of development projects broken down by supervising agency of the government;
7. The needs of the central services of the Ministry of Rural Development and its affiliated agencies;
8. The staff needs at the national training institutions;
9. The retraining needs for middle level personnel already employed;
10. The needs for personnel in agricultural marketing and processing agencies of government.

7.2.3.4 Costs and Financing of Agricultural Education: FED Study Conclusions

In studying the efficiency of the outputs of the agricultural education systems in relation to its costs, one

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is forced to rely upon budgetary and cost estimates provided by the various training institutions. Table 7.11 presents an order of magnitude estimate of these budgetary costs. The reader is warned in advance, however, that these figures may be quite unreliable compared with the "real" financial costs of the system, particularly as regards the costs of amortization of infrastructures at the various institutions (i.e. buildings, equipment, vehicles). This is so principally because the Government of Niger makes no explicit calculation of amortization on its capital stock in its budgetary process. As a result, amortization costs presented here are those estimated by the FED team in an attempt to show the approximate "real" financial costs of the agricultural education system to the country.

For purposes of estimating amortization capital stock, the FED team used a depreciation period of twelve years for all categories which in itself is

Table 7.10

Number of Personnel Needed, 1979-1988

Cadres	A1	A2	B	C
Agriculture	38	95	309	1,060
Animal Health	50	--	192	900
Animal Production	2	7	35	175
Water & Forests	6	10	51	177
Rural Engineering	12	11	62	105
INRAN	15	19	85	89
IPDR	8	14	19	5
UNCC	2	11	40	180
Total	133	167	793	2,691

Source: UNESCO, 1978

unrealistic since all types of capital stock do not depreciate at the same rates. The sources of information indicated after Table 7.11 also provided the information included on the extent of external aid funding at each institution. Finally, the CFJAs were not included in the analysis because none of them are functioning at full capacity and it is the stated intention of government to phase them out as soon as is practicable.

The reference years in Table 7.11 were chosen as a function of available information, i.e. the budget projections of the various institutions. However, given the heavy involvement of external donor agencies in these institutions, it is highly likely that the costs recorded in the table are underestimations of the real financial costs of operating and maintaining the institutions in question. If anything, therefore, the per student costs to be presented in this section should be taken as the very minimum costs per student per year.

If one compares these per student costs for the personnel being trained for the salaried employment sector - i.e. employment by the Ministry of Rural Development and its affiliated agencies - one finds that it costs approximately 2.8 times as much per year to train a Nigerien candidate to the B or C grade level as to the D grade level. For A grade personnel, in-country training at the University costs approximately twice as much as in-country training at the B and C grade levels, and 5.6 times as much as training at the D grade level. Uniform presentations on the costs for external university training are simply unavailable.

When one compares the relative costs of formal education for government employment versus direct training of farm couples at the CPTs and CPRs, the contrast is even more pronounced. The cost of one year's training for a university student in Niger in agricultural sciences is the equivalent of the cost of training approximately eighteen farm couples at the CPTs and/or CPRs for one year.

The comparison of costs at the B and C grade levels with direct farm couple training shows approximately a 1:9 ratio between the annual cost of agent training and annual cost of farm couple training. At the D grade level, many of the agents trained currently have approximately the same job responsibilities in extension work as those envisioned for the model farm couples exiting from the CPT training program. The major difference, of course, is that agents enter immediately into the government civil service and farm couples are expected to provide their services on an informal, non-salaried basis in the villages.

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Table 7.11

Training Costs per Student Per Year

Training Institutions and Reference Year		Operating Budget	Amortization Costs $1=385 CFA
ESAE (7)	(1981)	74,000 (1) $192,200	62,000 (1) $161,000
IPDR (7)	(1985)	300,000 (2) $779,200	500,000 (2) $1,298,200
ECE (7)	(1987)	140,000 (3) $363,600	260,000 (3) $675,300
ESEM	(1981)	10,000 (4) $25,000	5,000 (*) $13,000
CPT/CPR Niamey (7)	(1981)	7,000 (5) $18,200	3,000 (5) $7,800
CPT/CPR Zinder (7)	(1981)	4,500 (6) $11,700	1,500 (6) $3,900

Training Institution and Reference Year (con't)		Total Costs	Number of Students	Cost per Student per Year
ESAE (7)	(1981)	136,000 $353,200	37	3,670 $9,500
IPDR (7)	(1985)	800,000 $2,077,900	450	1,770 $4,600
ECE (7)	(1987)	400,000 $1,038,900	220	1,820 $4,700
ESEM	(1981)	15,000 $39,000	23	650 $1,700
CPT/CPR Niamey (7)		10,000 (5) $2,600	40	250 $650
CPT/CPR Zinder(7)		6,000 (6) $15,600	40	150 $400

(*) Estimation
(1) Information given by the Director of ESAE
(2) Information given by the Project Chief, PNUD/FAO NER 77/003
(3) Budget projections for ECE 1982-1987
(4) Information given by the Director of ESEM
(5) Information given by Niamey Productivity Project
(6) Information given by the Zinder 3M Project
(7) Institutions supported by the assistance projects

The training costs for an agent, however, are three times those of training the farm couple, without any consideration of the career costs to government of maintaining that agent in the civil service or the prior cumulative costs for that trainee in primary and secondary schools.

To be sure, in reviewing these calculations, the reader should note that the per student costs for training at their recent high levels are partially a function of underutilization of present facilities and faculties. In other words, the Nigerien agricultural education system is probably overbuilt at present and the marginal costs of adding more students to the rolls, should an effective demand for their services exist, are almost certainly rather low. Declining marginal costs of education would, of course, have the effect of lowering average cost per student.

In considering recurrent costs, for the Ministry of Rural Development and its affiliated agencies, the base budget year adopted in the FED study was 1979/1980. In that year, the personnel actually employed by the Ministry were as follows: 126 persons in the A grade; 356 persons in the B grade; 440 in the C grade; 402 in the D grade; and 1,431 auxiliary workers of all types. The FED projection of the structure of the Ministry in budget year 1989/1990 is based on the following assumptions:

1. In 1989/1990 the relative shares of personnel in the four civil service grades as percentages of total permanent Ministry employment are expected to change as follows:

Figure 7.2

FED Projections of Employees

Grade	% of Employees in Grade in 1979/1980	% of Employees in Grade in 1989/1990
A	9.5	10.6
B	26.9	24.0
C	33.2	41.9
D	30.4	23.5

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These changes are a function of changing job responsibilities in the Ministry, upgrading or replacement of D grade personnel with C grade people, etc.

2. The proportion of auxiliary workers to personnel in the four civil service grades will drop slightly from 1980 to 1990 such that the ratio of auxiliary to total graded personnel will be 1:1 by 1990.

3. The proportion of specialized administrative personnel in Ministry will remain at the minimal relative level of 1980, with more administrative responsibilities being decentralized and given to technical agents in the field and/or auxiliary workers.

4. Average salaries for the various civil service grades were calculated on the basis of average tenure in grade of six to seven years per employee.

5. The final assumption concerns the ratio between total personnel costs and total operating costs to support those personnel. In recent years, this ratio has been increasing with the effect that personnel employed by the Ministry have experienced a relative decline in the funds available to support them in their jobs. The FED analysis assumes that this decline will be effectively reversed by 1990 and that personnel costs and operating costs in the ministry budget are in a 1:1 ratio.

Under these various assumptions, Table 7.12 shows that the Ministry of Rural Development's budget will be four times as large in 1989/1990 budget year as it was in 1979/1980 budget year at constant 1981 prices. This growth path implies an average 30 percent per year increase in constant CFA francs in the Ministry of Rural Development's budget over the period 1980 to 1990.

7.2.3.5 <u>FED Study Personnel Projections</u>

The FED personnel projections cover the following branches of the government's structure: Agriculture, Livestock, Water and Forestry, Rural Engineering and ONAHA, UNCC, Animation, and, in summary fashion, INRAN. With regard to INRAN, the FED team found it impossible, with the available information, to establish personnel needs on the basis of operational parameters as was done for the other agencies. Therefore, the personnel projection for INRAN was done on the basis of ratios of research personnel in the

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Table 7.12

The Projected Budget of the Ministry of Rural Development in 1989/1990 Fiscal Year under the FED Assumptions

(One US dollar = 385 CFA francs)

Categories	Number of Cadres in 1980	Probable Number in 1990	Average Annual Cost per Unit (FCFA)	Annual Cost by Category (FCFA)	Total (FCFA)
Cadres A	126	419	1,320,000	553,080,000	
Cadres B	356	953	860,000	819,580,000	
Cadres C	440	1,663	610,000	1,014,430,000	
Cadres D	402	953	460,000	429,180,000	
Subtotal A	1,324	3,968	---	2,816,270,000	
Auxiliaries	1,431	3,968	270,000	1,071,360,000	
Subtotal B				3,887,660,000	3,887,630,000
Cost of Operations in 1990 (= Subtotal B)					3,887,630,000
Total MDR Budget in 1990					7,775,260,000

Source: The FED Study,

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various civil service grades to the total complement of personnel in equivalent grades in the rest of the government's agricultural structure, i.e. personnel in the ministry, ONAHA and UNCC. The ratios used were as follows:

INRAN A grade personnel needs =	0.25 x Total Personnel Needs of the ministry, ONAHA, and UNCC for A grade personnel.
INRAN B grade personnel needs =	0.10 x Total Personnel Needs of these agencies for B grade personnel.
INRAN C grade personnel needs =	0.02 x Total Personnel Needs of these agencies for C grade personnel.
INRAN D grade personnel needs =	0.01 x Total Personnel Needs of these agencies for D grade personnel

The complete FED personnel projections are shown in Tables 7.13 to 7.18 below and these projections are aggregated in Table 7.19. In reviewing these projections, the reader should be cognizant of the following points:

1. Annual training needs for agricultural personnel are projected for each year in the period 1981 to 1990.

2. To arrive at these projected annual training needs, the FED team used a series of weighting coefficients

   to account for expected atrition from personnel already in place in the Ministry and its affiliated agencies. In this regard, it is anticipated that attrition losses will be more important in grade D personnel than in grade A personnel. This is so because grade A personnel in Niger are relatively young and little loss to retirement is anticipated over the period of the FED projections;

3. The entire study is a needs analysis and should not be confused with a human resource analysis more properly based on balancing of the effective demand for agricultural sector personnel with the effective surplus of such personnel from all sources.

If one accepts the assumptions of the FED projection as the minimum level of personnel staffing necessary to execute the government's objectives in the agricultural sector, then one ends up with a staffing pattern for the Ministry of Rural Development and its affiliated agencies - except Animation and INRAN - as shown in Table 7.20. The structure

Table 7.13

Personnel Needs in the Agriculture Service

	A	B	C	D
o Extension agents per C cadres (50%) and D cadres (50%) at the rate of 20 villages, or 1,000 enterprises per extension agent			250	250
o 10,000 trained couples in 5 years in 100 CPT/CPRs in 20 locations each; each CPT/CPR is led by one C cadre and one D cadre			100	100
o 1 sector chief (C cadre) per district			218	
o 1 B cadre and 1 C cadre in each arrondissement		35	35	
o 2 A cadres, 4 B cadres and 4 C cadres in each department	14	28	28	
o 6 A cadres, 20 B cadres and 40 C cadres in each main office	6	20	40	
o Office of Training, and Office of Studies and Programs	4	9	18	
o 15 projects with each 2 A cadres, 2 B cadres and 6 C cadres 30	30	90		
o IPDR Kolo; Teachers, Assistant Teachers	16	2	1	
o ESAE: Teachers, Assistant Teachers	3	1		
o Training of midlevel cadres	1	1		
Total Agriculture	74	126	780	350

Source:

Table 7.14

Personnel Needs in the Livestock Service

	A	B	C	D
o Extension agents per C cadres (50%) and D cadres (50%) at the rate of 20 villages, or 1,000 enterprises per extension agent			250	250
o 1 sector chief (C cadre) per district			218	218
o 2 B cadres and 1 C cadre in each arrondissement		70	35	
o 3 A cadres, 6 B cadres and 6 C cadres in each department	21	42	42	
o 8 A cadres, 20 B cadres and 40 C cadres in each main office	8	20	40	
o Office of Training, and Office of Studies and Programs	3	8	16	
o 8 projects with each 2 A cadres, 2 B cadres and 6 C cadres	16	16	48	
o ECE: Teachers, Assistant Teachers	10	2	2	
o Clinic, laboratories, pharmacy, slaughterhouse, industrial animals	15	15	30	
o ESAE: Teachers, Assistant Teachers	3	1		
o Training of midlevel cadres	1	1		
Total Livestock	77	175	681	468

Source:

Table 7.15

Personnel Needs in the Water and Forestry Service

	A	B	C	D
o 1 B cadre, 2 C cadres and 2 D cdres per administrative post		24	48	48
o 1 B cadre and 2 C cadres and 2 D cadres in each arrondissement		35	70	70
o 2 A cadres, 4 B cadres and 4 C cadres in each department	14	28	28	
o 7 A cadres, 18 B cadres and 36 C cadres in each main office	7	18	36	
o Office of Training, and Office of Studies and Programs	3	8	16	
o 6 projects with each 2 A cadres, 2 B cadres and 6 C cadres	12	12	36	
IPDR Kolo: Teachers, Assistant Teachers	8	2	1	
o ESAE: Teachers, Assistant Teachers	3	1		
o Training of midlevel cadres	1	1		
Total Water and Forests	48	129	235	118

Source:

Personnel Needs at ONAHA and Rural Engineering

	A	B	C	D
(a) ONAHA				
o Extension agents per C cadres (50%) and D cadres (50%) at the rate of 200 farms with irrigation per extension agent			50	50
o 1 B cadre, 2 C cadres per average-sized irrigation system		20	40	
o 1 A cadre and 3 B cadres and 6 C cadres per large irrigation system	10	30	60	70
o 6 ONAHA Regional Offices	12	24	24	
o ONAHA General Office	4	8	16	
(b) Rural Engineering				
o 1 B cadre and 1 C cadre in each arrondissement		35	35	
o 2 A cadres, 4 B cadres and 4 C cadres in each department	14	28	28	
o 6 A cadres, 15 B cadres and 30 C cadres in each main office	6	15	30	
o Office of Training, and Office of Studies and Programs	3	8	16	
o Projects (covered by needs of the irrigation system such as ONAHA)		p.	m.	
IPDR Kolo: Teachers, Assistant Teachers	8	2	1	
o ESAE: Teachers, Assistant Teachers	3	1		
o Training of midlevel cadres	1	1		
Total ONAHA and Rural Engineering	61	172	300	50

Source:

Table 7.17

Personnel Needs of UNCC

	A	B	C	D
o 1 sector chief (C cadre) and 1 D cadre per district, equivalent to one agent for about three cooperatives			218	218
o 1 B cadre, 1 C cadre in each arrondissement		35	35	
o 2 A cadres and 2 B cadres and 4 C cadres in each department	14	14	28	
o 8 A cadres and 8 B cadres at the central level	8	8		
o 5 projects each with 2 A cadres, 2 B cadres and 6 C cadres	10	10	30	
o IPDR Kolo: Teachers	7			
o CNFC Kolo: Teachers	2	1		
o ESAE: Teachers	2			
o Training of midlevel cadres	1	1		
o Marketing and processing of agricultural products	5	10	10	
Total UNCC	49	79	321	218

Source:

Table 7.18

Personnel Needs for the Community Service

	A	B	C	D
o 1 sector chief and 1 D cadre per district,			218	218
o 1 B cadre, 1 C cadre in each arrondissement		35	35	
o 1 A cadre and 2 B cadres in each department	7	14		
o 5 A cadres and 5 B cadres at the central level	5	5		
o CFCA: Teachers	3			
Total Community Service	15	54	253	218

Source:

Personnel Demand and Annual Training Outputs

	A Cadres			B Cadres			C Cadres			D Cadres			Total		
	Nd	Cu	Df	Nd	Cu	Df	Nd	Cu	Df	Nd	Cu	Df	Nd	Cu	Df
Agriculture	74	68	6	126	135	(9)	780	173	607	350	74	276	1,330	450	880
Livestock	77	31	46	175	136	39	681	135	546	468	222	246	1,401	524	877
Water & Forests	48	8	40	129	49	80	235	83	152	118	61	57	530	201	329
ONAHA & Rural Engineering	61	21	40	172	31	141	300	43	257	50	53	(3)	583	148	435
UNCC	49	2	47	79	25	54	321	7	314	218	7	211	667	41	626
INRAN	77	33	44	68	17	51	46	17	29	12	8	4	203	75	128
Subtotal	386	163	223	749	393	356	2,363	458	1,905	1,216	425	791	4,714	1,439	3,275
Community Service	15	3	12	54	26	28	253	86	167	218	31	187	540	146	394
Total	401	166	235	803	419	384	2,616	544	2,072	1,434	456	978	5,254	1,585	3,669
Coefficients of Compensation			1,04			1,09			1,09			1,14		0	1,10
Corrected Total			244			419			2,258			1,115			4,036
Rate of Training (10 yr. period)			25			42			226			112			405

Nd: Needs; Cu: Current; Df: Deficit; Numbers in parentheses; Surplus

Table 7.20

Projected Personnel Structure of Ministry of Rural Development and Affiliated Agencies in 1990

Location of Agents of the Ministry	Agri-culture	Livestock	Water and Forestry	ONAHA Rural Engineer-ing	UNCC	Total	Total %
Base level personnel (villages, dis-tricts, arron-dissements, CPT/ CPRs, irrigated perimeters)	988	1,041	295	330	506	3,160	70%
Development Projects	150	80	60	p.m.	50	340	8%
Departmental and Central Services	167	200	158	236	72	833	18%
Miscellaneous other persons (schools, train-ing, marketing, processing)	25	80	17	17	39	178	4%
Total	1,330	1,401	530	583	667	4,511	100%

Source:

has 78 percent of all staff assigned at the level of the development projects and supposedly in direct contact with farm families; the remaining 22 percent would be regional and central staff personnel or other specialized staff in training institutions, agro-industrial activities, and marketing.

7.2.3.6 Ministry of Rural Development Employment Capacity, Training Excesses, and Economic Realities in Niger

In this concluding sub-chapter on agricultural education costs and the employment capacity of the Ministry, the attempt is made to evaluate the FED human resource analysis and proposed Ministry structure against the macro-economic projections for the Nigerien economy presented in an earlier section of this report. In doing so, it is necessary to preface the following analysis by the observation that the FED analysis has many elements which recommend it as a good starting-point for devising a more effective governmental structure for facilitating agricultural sector productivity and growth. There is considerable sympathy for the needs proposal as relates to improving the quantitative and qualitative relationships between farmers and the lowest level of government extension workers. Furthermore, the FED analysis is probably correct in postulating that this strengthening of the base of the government pyramid could be accomplished, in part, at the the expense of deferring the training of large numbers of additional upper level personnel for desk jobs in departmental and central offices. And, finally, it is abundantly clear that better direct training of farmers in a whole range of agricultural and related skills is critically needed if productivity is ever going to increase per person and per hectare in the future.

Unfortunately, in this instance, as with so many other development attempts and plans in Niger, there is the major problem of the financial resources gap between what should be done in an ideal sense to accomplish the development objectives of the Nigerien society and the means that society and particularly the government, has at its disposal to accomplish these objectives. In an era of stagnating economies and declining real incomes - both governmental and per capita - it is extremely difficult to attribute much lasting credibility to any proposal that advocates quadrupling ministry employment rolls in ten years based on an average annual growth rate in budgetary availability of 25 percent. It is necessary, therefore, to reassess the situation in light of economic realities.

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Our analysis of the human resource situation, therefore, starts from the base that effective demand for agricultural employees is predicated in any economy, not on hypothetical needs, but on the ability of that economy to pay for these employees' services on a permanent basis. Furthermore, in the case of Niger, our analysis compares two rather different approaches to the structuring of government services in servicing the rural sector. The two approaches are exemplified by the FED needs analysis and the actual structure of the existing services of the Ministry of Rural Development. The former approach advocates addressing rural service needs from the bottom up whereas the government's approach, despite all the talk about desire for a bottom-up approach, exemplifies a rigid top down structure.

Tables 7.21 through 7.24 lay out in detail the results of our manpower analysis, as tied to several alternative structures in ministry personnel and two alternative growth paths for the economy - and consequently for ministry budgetary availabilities. In Table 7.25, Models I and II represent the fullest possible implementation of the FED human resource needs model under the constraints imposed by our most optimistic and most likely budgetary projections for the ministry. Models III and IV represent the fullest possible implementation of the FED model under the same budgetary projections but with a deliberate decision to spend 70 percent of the available budgetary resources of the ministry on personnel costs, rather than the 50 percent projected by FED. Finally, Models V and VI represent simple extrapolations of the 1983 actual ministry personnel structure and budgetary expenditures under the same two growth paths projected for budgetary availability through 1990.

The results of these models for effective demand for agricultural personnel are then compared in Table 7.24 with the projected outputs of the various training institutions in an attempt to determine how many of the graduates being produced by these institutions could realistically expected to be employed by the government through 1990.

Our conclusions are as follows:

1. For A grade personnel, every model tested results in large surpluses of graduates; in excess of any possible effective demand for their services by government. These surpluses range from 236 extra graduates by 1990 under Model V, which is the one most favorable to their employment, to a surplus of 310 persons, under Model II, which is the least favorable to them.

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2. For B grade personnel, every model tested also results in large surpluses of graduates. In these cases, the surpluses range from 160 persons under Model V to 474 persons under Model II.

3. For C grade personnel, every model tested again results in truly massive surpluses of graduates. From 411 graduates under Model III to 815 persons under Model VI.

4. Finally, for D grade personnel, the most favorable Model III actually predicts a deficit for this category of 233 persons against a surplus of 141 persons predicted by both Models II and VI. Unfortunately, in the case of these D grade persons, the deficits and surpluses are more a function of a severe underestimation by FED of the people in the country actually being trained to assume current D grade personnel functions - i.e. all on-the-job training programs in the ministry and all trainees at the CPTs and CPRs are omitted from the availability totals - and, therefore, these figures probably do not reflect any real imbalances in effective demand by government and supplies in the economy.

Depending upon one's philosophical stance, i.e. as optimist or pessimist - the clear surplus of agricultural graduates being produced in Niger can be seen as a boon to the private sector and to those external donor activities needing additional personnel for nongovernment positions or as an absolute deadweight loss to the economy. Whichever stance is adopted, however, it is abundantly evident that, if the outputs of the various training institutions materialize as projected through 1990 and the actual growth path of the economy approximates any of the paths we have estimated, very substantial extra-budgetary resources will have to be available to allow an effective demand for all agricultural graduates to materialize. Table 7.24 estimates the volume of these budgetary resources ex-Ministry of Rural Development based upon actual average salaries paid to government employees in grades A to D at the Ministry in constant 1983 CFA francs - and US dollars at the current exchange rate of approximately US $1.00 = 385 CFA francs.

With regard to personnel needs of the central services, the FED analysis admits to difficulties in determining the exact composition of skills needed within each section of each service because of the current reorganization which is proceeding within the ministry. Therefore, the estimation of personnel needs is based on ratios as follows: the

Table 7.21

Projected Availability of Government Revenues for the Ministry of Rural Development: 1984-1990

Projection	1984	1985	1986	1987	1988	1989	1990
Most Optimistic Projection[a]	2,682	2,682	2,682	2,736	2,791	2,874	2,960
High Projection[b]	2,438	2,438	2,438	2,487	2,537	2,613	2,691
Most Likely Projection[b]	2,316	2,200	2,156	2,113	2,113	2,113	2,156
Low Projection[b]	2,194	1,975	1,876	1,876	1,876	1,914	1,952

[a]Projection assumes the same economic growth path as the high projection plus an additional 10 percent real increase in the MDR budget due to budgetary reallocations.

[b]Projections based on national government revenue projections in Table 1, and a constant share of budget for MDR at the 1983 level.

ource: Sector assessment team estimates

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Table 7.. 22

Projectied Aggregate Availability of Agricultural Graduates by Civil Service Grade: 1984-1990[a]

Civil Service Grade	1984	1985	1986	1987	1988	1989	1990
	(Number of projected agricultural graduates by grade)						
A	30	58	34	50	50	50	50
B	70	85	85	85	85	85	85
C	150	150	150	150	150	150	150
D	65	65	65	65	65	65	65
Total Graduates	315	358	334	350	350	350	350

[a]Numbers of projected agricultural graduates from Nigerien training institutions and external training programs cululated from Table 9.18.

Source: Sector assessment team estimates

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Table 7.23

Projected Personnel Structure of the Ministry of Rural Development: 1984-1990

1. Model I: Full assumptions of the FED Personnel model with MDR effective demand for employees based upon the most optimistic budgetary projection in Table 9.23.

Civil Service Grade	1984	1985	1986	1987	1988	1989	1990
A	74	74	74	75	77	79	81
B	271	271	271	276	282	290	299
C	668	668	668	682	696	716	738
D	507	507	507	516	527	543	559
Auxiliary Workers	1,520	11,520	1,520	1,549	1,582	1,628	1,677
Total Ministry Personnel	3,040	3,040	3,040	3,098	3,164	3,256	3,354

Source: Sector assessment team estimates

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Table 7.23

Projected Personnel Structure of the

Ministry of Rural Development: 1984-1990

1. Model II: Full assumptions of the FED Personnel model with MDR effective demand for employees based upon the most likely budgetary projection in Table 9.23.

Civil Service Grade	1984	1985	1986	1987	1988	1989	1990
	(Number of personnel positions by gade)						
A	64	60	59	58	58	58	59
B	234	222	218	213	213	213	218
C	577	548	537	527	527	527	537
D	437	415	407	399	399	399	407
Auxiliary Workers	1,312	1,245	1,221	1,197	1,197	1,197	1,221
Total Ministry Personnel	2,624	2,490	2,442	2,394	2,394	2,394	2,442

Source: Sector assessment team estimates

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Table 7. 23

Projected Personnel Structure of the

Ministry of Rural Development: 1984-1990

1. Model III: Assumptions of the FED model with the exception that budget share for personnel costs will be 70 percent of total availability with MDR effective demand for employees based upon the most optimistic budgetary projection in Table 9.23.

Civil Service Grade	1984	1985	1986	1987	1988	1989	1990
	(Number of personnel positions by gade)						
A	103	103	103	105	107	110	114
B	379	379	379	387	395	407	419
C	936	936	936	955	974	1,003	1,033
D	709	709	709	724	738	760	783
Auxiliary Workers	2,127	2,127	2,127	2,171	2,214	2,280	2,349
Total Ministry Personnel	4,254	4,254	4,254	4,342	4,428	4,560	4,698

Source: Sector assessment team estimates

Table 7.23

Projected Personnel Structure of the

Ministry of Rural Development: 1984-1990

1. Model IV: Assumptions of the FED model with the exception that budget share for personnel costs will be 70 percent of total availability with MDR effective demand for employees based upon the most likely budgetary projection in Table 9.23.

Civil Service Grade	1984	1985	1986	1987	1988	1989	1990
	(Number of personnel positions by gade)						
A	89	85	83	81	81	81	83
B	328	311	305	299	299	299	305
C	808	768	753	738	738	738	753
D	613	582	570	559	559	559	570
Auxiliary Workers	1,638	1,746	1,711	1,677	1,677	1,677	1,711
Total Ministry Personnel	3,676	3,492	3,422	3,354	3,354	3,354	3,422

Source: Sector assessment team estimates

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Table 7.23

Projected Personnel Structure of the Ministry of Rural Development: 1984-1990

1. Model V: Assumes that the actual 1983 personnel structure of the MDR is preserved through 1990 with respect to percentages of personnel in each grade with actual 1983 budget share for personnel remaining constant at 71.4 percent of the total availability and with MDR effective demend for employees based upon the most optimistic budgetary projection in Table 9.23.

Civil Service Grade	1984	1985	1986	1987	1988	1989	1990
	(Number of personnel positions by gade)						
A	217	217	217	220	225	232	239
B	513	513	513	523	534	550	566
C	626	626	626	638	651	671	691
D	509	509	509	520	530	546	562
Auxiliary Workers	1,820	1,820	1,820	1,857	1,894	1,951	2,009
Total Ministry Personnel	3,685	3,685	3,685	3,758	3,834	3,950	4,067

Source: Sector assessment team estimates

Table 7.23

Projected Personnel Structure of the

Ministry of Rural Development: 1984-1990

1. Model VI: Assumes that the actual 1983 personnel structure of the MDR is preserved through 1990 with respect to percentages of personnel in each grade with actual 1983 budget share for personnel remaining constant at 71.4 percent of the total availability and with MDR effective demend for employees based upon the most likely budgetary projection in Table 9.23.

Civil Service Grade	1984	1985	1986	1987	1988	1989	1990
	(Number of personnel positions by gade)						
A	187	178	174	171	171	171	174
B	443	421	412	404	404	404	412
C	540	513	503	493	493	493	503
D	440	418	409	401	401	401	409
Auxiliary Workers	1,572	1,493	1,463	1,434	1,434	1,434	1,463
Total Ministry Personnel	3,182	3,023	2,961	2,903	2,903	2,903	2,961

Source: Sector assessment team estimates

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Table 7-24

Projected GON Demand for Agricultural Graduates, Expected Cumulative Availability of Graduates, and Status of Employment: 1984-1990

1. Model I: Employment possibilities based on Model I, Table 9.24 and projected agricultural graduate availability in Table 9.22.

Civil Service Grades	1984			1985 to 1987			1988 to 1990		
	Demand for Graduates	Cumulative Availability of Graduates	Surplus or Deficit[a]	D	C	S	D	C	S
A	3	30	27	10	169	159	15	309	249
B	22	70	48	71	303	232	92	487	395
C	53	150	97	175	547	372	228	822	594
D	61	65	4	193	199	6	256	221	(35)
Total of Graded Positions	139	315	176	449	1,218	769	591	1,839	1,248

[a]Deficits are shown in ( ). Surpluses are underlined.

Source:

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Table 7.24

Projected GON Demand for Agricultural Graduates, Expected Cumulative Availability of Graduates and Status of Employment: 1984-1990

1. Model II: Employment possibilities based on Model II, Table 9.24 and projected agricultur. graduate availability in Table 9.22.

Civil Service Grades	1984			1985 to 1987			1988 to 1990		
	D	C	S[a]	D	C	S	D	C	S
A	3	30	27	2	169	167	7	317	310
B	19	70	51	31	306	275	56	530	474
C	46	150	104	79	554	475	137	925	788
D	52	65	13	110	209	99	153	294	141
Total of Graded Positions	120	315	195	222	1,238	1,016	353	2,066	1,713

[a]Deficits are shown in ( ). Surpluses are underlined.

Source:

Table 7.24

Projected GON Demand for Agricultural Graduates, Expected Cumulative Availability of Graduates, and Status of Employment: 1984-1990

1. Model III: Employment possibilities based on Model III, Table 9.24 and projected agricultural graduate availability in Table 9.22.

Civil Service Grades	1984			1985 to 1987			1988 to 1990		
	D	C	S[a]	D	C	S	D	C	S
A	3	30	26	14	168	154	21	304	283
B	30	70	40	99	295	196	131	451	320
C	75	150	75	245	525	280	319	730	411
D	85	65	(20)	270	175	(95)	333	100	(233)
Total of Graded Positions	194	315	121	628	1,163	535	804	1,585	781

[a]Deficits are shown in ( ). Surpluses are underlined.

Source:

Table 7.24

Projected GON Demand for Agricultural Graduates, Expected Cumulative Availability of Graduates and Status of Employment: 1984-1990

1. Model IV: Employment possibilities based on Model IV, Table 9.24 and projected agricultural graduate availability in Table 9.22.

Civil Service Grades	1984			1985 to 1987			1988 to 1990		
	D	C	S[a]	D	C	S	D	C	S
A	4	30	26	1	160	159	11	311	300
B	26	70	44	44	270	226	78	534	456
C	65	150	85	110	465	355	189	816	627
D	74	65	(9)	186	195	9	222	204	(18)
Total of Graded Positions	169	315	146	341	1,090	749	500	1,865	1,365

[a]Deficits are shown in ( ). Surpluses are underlined.

Source:

Table 7.24

Projected GON Demand for Agricultural Graduates, Expected Cumulative Availability of Graduates and Status of Employment: 1984-1990

1. Model V: Employment possibilities based on Model V, Table 9.24 and projected agricultural graduate availability in Table 9.22.

Civil Service Grades	1984			1985 to 1987			1988 to 1990		
	D	C	S[a]	D	C	S	D	C	S
A	9	30	21	30	163	133	47	283	236
B	41	70	29	134	284	150	175	335	160
C	50	150	100	163	550	387	214	837	623
D	61	65	4	195	199	4	239	199	(40)
Total of Graded Positions	161	315	154	522	1,196	647	675	1,654	979

[a]Deficits are shown in ( ). Surpluses are underlined.

Source:

Table 7.24

Projected GON Demand for Agricultural Graduates, Expected Cumulative Availability of Gradu and Status of Employment: 1984-1990

1. Model VI: Employment possibilities based on Model V, Table 9.24 and projected agricultural graduate availability in Table 9.22.

Civil Service Grades	1984			1985 to 1987			1988 to 1990		
	D	C	S[a]	D	C	S	D	C	S
A	8	30	22	5	164	159	24	309	285
B	35	70	35	60	290	230	105	485	380
C	43	150	107	73	557	484	119	934	815
D	53	65	12	108	207	99	153	294	141
Total of Graded Positions	139	315	176	246	1,218	972	401	2,022	1,621

[a]Deficits are shown in ( ). Surpluses are underlined.

Source:

Table 7.25

Estimated extra-budgetary resources needed in the Nigerien economy in 1990(?) to absorb all projected outputs of the agricultural graduates not employable by the Ministry of Rural Development

Civil Service Grade	Estimated Range in Surplus Graduates	Extra Budetary Resources and Need to Employ Surplus Graduates at Ministry Salaries in Constant 1983 Prices	
	Number of People	In Millions of CFA Francs	In Thousands of US Dollars
A	236 - 310	325 - 427	844 - 1,109
B	160 - 474	143 - 425	372 - 1,103
C	411 - 815	262 - 518	679 - 1,347
D	0 - 141	0 - 39	0 - 103
Total for All Graduates	---	730 - 1,409	1,895 - 3,662

Source: Sector assessment team estimates

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positions of Director and Deputy Director of each technical service are projected as A grade personnel; section personnel in the B grade are projected at 2.5 times the number of A grade personnel; and C grade personnel are projected at twice the number of B personnel.

The number of projects - and their present staffing patterns - varies greatly between the various Directions and agencies of the ministry. The FED team found it very difficult to project personnel needs at this level through 1990 from the available information in the Ministry. This difficulty with lack of information was compounded by the different approaches taken by individual projects to staffing, the differing degrees to which the projects were integrated into the government structure, and the fact that some projects have been operating for quite an extended period, whereas others are just coming on stream. The FED projection, therefore, is rather simplistic at this level, with personnel needs for each project being projected as an average complement of 2A grade people, 2B grade people, and 6C grade people per project.

7.2.3.7 Critique of the FED Manpower Projection

The FED projection is, by far, the most complete projection of agricultural manpower needs analysis done to date in Niger. As such, it will be used in the balance of this chapter as the basis for evaluation of how well the outputs of the various training institutions in Niger match up with the "minimal personnel needs" in the agricultural sector through 1990. However, one should not overlook the deficiencies of this projection even while using it. These deficiencies would seem to be the following:

1. The breakdown of human resource needs in the projection is by user agencies and civil service grades, not by functional agricultural skills categories. While this type of personnel categorization may be of appeal to government bureaucrats, it is not very enlightening to someone wishing to determine, for example, how many Nigerien graduates there must be in the next ten years in agronomy to meet the national need - or in range management, credit program management.

2. The projections made in the sub-category of the development projects seem scarcely creditable, even in a quantitative sense, given that most of the

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development activities now taking place in the agricultural sector are being conducted under the aegis of these projects. Assignment of uniform quotas of staff to each of these projects regardless of its existing program, geographic scope, and other similar factors is clearly an inadequate response to a very significant need for personnel planning.

3. By categorizing personnel needs by user agency and civil grade, the projection does not deal specifically with the need for training of project managers and agricultural managerial personnel at all levels, which is one of the pressing needs expressed by both government and donor agencies.

4. As with all the other human resources assessments, this projection makes no reference whatsoever to the possibility that many responsibilities and activities currently assumed by government in the agricultural sector might be more efficiently handled by private sector personnel. Since there is no provision for this possibility in strategic personnel planning, despite vague references to the need to devolve current government services to the private sector in the future, there are no projections of the needs of the agricultural economy ex-government for trained agricultural skills. This is so even though there is now clear evidence that the majority of agricultural produce marketing is in private hands and an increasing portion of agricultural input supply is also being handled through nongovernmental channels.

5. Finally, there is little consideration of alternative growth paths for expansion in personnel requirements keyed to growth and effective demand in the general economy or the agricultural sector in particular. This leaves one with the feeling that somehow government employment tolls are to be expanded indefinitely without reference to the fiscal capacity of government to pay for these employees or the opportunity costs of doing so, in light of alternative investment possibilities.

7.2.4 Matching Agricultural Personnel Needs with Training Outputs

In the subchapter above (sections 7.1.3 to 7.1.8) the structure of agricultural education in Niger was discussed in some detail. Moreover, preceding sections of this subchapter have presented the various attempts at

human resources analysis, concluding with the FED study of 1981. This subsection will address how well the outputs of the various agricultural institutions match up with the best existing projections of agricultural personnel needs and the viability of the agencies employing these agricultural graduates.

If one accepts the FED study of 1981 as the best agricultural human resources analysis currently available in Niger, then the key question of this subchapter is: Can the training institutions of Niger, as presently constituted, produce the necessary agricultural personnel in sufficient numbers and quality to meet the estimated personnel needs? The ability of the system to actually pay additional employees is dealt with under the Costs and Finances section.

Responses to this question, in the first instance, are a function of matching output numbers with needs through 1990. Table 7.26 below shows the projected outputs of the Nigerien agricultural institutions and various foreign training courses in the civil service grades A, B, C and D. In this table, gross outputs are modified slightly to account for probable attrition levels for graduates. The coefficients for these attrition estimates are those formulated by the FED team.

For B and C grade personnel, the output projections are based on the stated objectives of the World Bank's First Education Project since virtually all personnel at these grades are produced at the IPDR and ECE schools. The small additional numbers of personnel at the B grade, not trained at these schools, will be trained externally under various donor-supported training programs. Most of these external programs are linked in one way or another with the estimated personnel needs of the existing or planned development projects.

Projecting outputs of grade A personnel at the moment cannot be accomplished with the same degree of precision. Recent events have clouded the local picture with respect to the number of Nigerien students who will be enrolled at the University School of Agronomy and Livestock. Moreover, it has been extremely difficult to project the numbers and types of external training grants which might be available in the medium term to Nigerien candidates since most of these grants are tied to development project needs - and the future status of many development projects at the moment is anthing but clear. Finally, it is very evident that advanced studies in agricultural fields are regarded by

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Table 7 26

Annual Training Outputs and Supply of Graduates Projected for Year 1990

Categories and Training Institutions	Annual Outputs of Training Programs 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total Graduates 1981-90	Personnel on Board in 1990	Personnel Potentially Available in 1990	Projected Net Availability of Graduates in 1990
Grade A: ESAE and Foreign Training Schools	37	29	14	30	58	34	50	50	50	50	402	163	565	0.96 x 565 = 542
Grade B:														
o IPDR	40	—	40	40	50	50	50	50	50	50				0.92 x 1,143
o ECE	23	—	20	25	25	25	25	25	25	25				
o Foreign Training Schools	18	18	11	5	10	10	10	10	10	10	750	393	1,143	= 1,052
Grade C:														
o IPDR	74	100	100	100	100	100	100	100	100	100				0.92 x 1,882
o ECE	25	50	50	50	50	50	50	50	50	50	1,424	458	1,882	= 1,731
Grade D:														
o ESEM	23	25	25	25	25	25	25	25	25	25				0.88 x 1,120
o CNFC	40+	40+	40+	40	40	40	40	40	40	40				
o CFJA Maradou	47	?	?	?	?	?	?	?	?	?	695	425	1,120	= 986

Source:

available in the medium-term to Nigerien candidates since most of these grants are tied to development project needs - and the future status of many development projects at the moment is anything but clear. Finally, it is very evident that advanced studies in agricultural fields are regarded by many Nigerien university students as less desirable than studies in liberal arts, law and economics. Unless the government, through manipulation of student scholarships or other means, actively redirects candidates into these fields, enrollments will remain low and the quality of the entrants will be less than the best available.

Figure 7.3 presents the complete picture of how well outputs the stated needs by the year 1990, where needs is defined by the 1981 FED analysis. From this figure, the following observations can be made:

1. The deficit in projected personnel at the D grade level by 1990 is about 200 persons;
2. For C grade personnel, the deficit is about 600 persons;
3. For B grade personnel, if one assumes a minimal number of postings of such people at the arrondissement and departmental levels, there is a projected surplus of over 300 persons by 1990;
4. And, at the A grade level, the projected surplus is in excess of 150 persons.

In addition, it should be mentioned that these projections do not include the outputs from the CPT/CPR and CFJA programs. By 1990, it is projected that there will be about 1,000 people in the rural areas trained in various manual skills (e.g. repairing animal drawn equipment, making hand implements) or an average of four trained graduates per district in Niger. At the CPT and CPRs, the training levels are projected at about 12,000 and 15,000 couples, respectively, by 1990 for an average of more than one couple from each program in each village in Niger. These "graduates" are expected to replace, on an informal and nonsalaried basis, many of the functions currently assigned to the government's D grade personnel, particularly in extension work with farmers.

Given the above, it would appear that the following conclusions can be drawn about the quantitative aspects of the agricultural human resources situation in Niger:

1. If one makes the assumption that there is a considerable overlap in present training and future roles between the formal D grade personnel of the Ministry and those couples being trained

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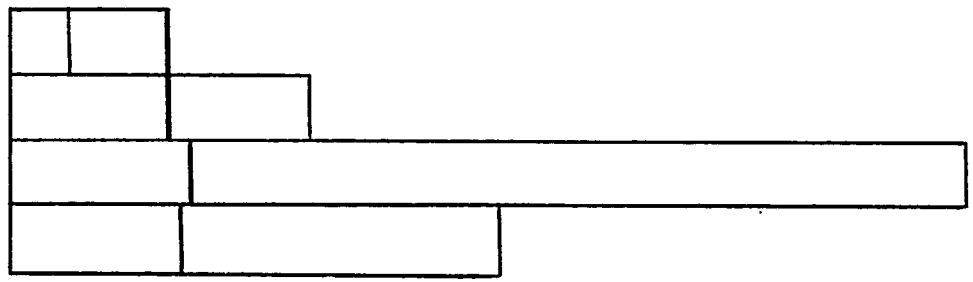
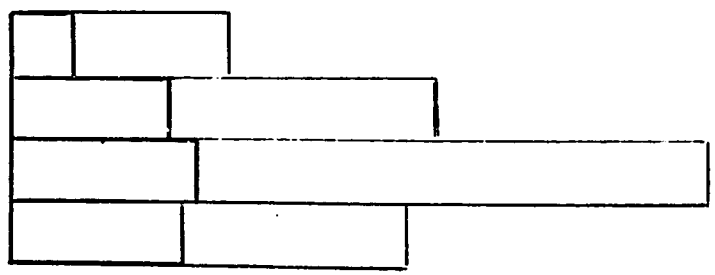
Figure 7.3

Demand and Supply of Agricultural Personnel in 1990

Personnel Employed in 1990		Demand for Agricultural Personnel in 1990	Personnel to Be Employed in 1990	
A	163		386	A
B	393		749	B
C	458		2,363	C
D	425		1,216	D



Personnel Available in 1980		Supply of Agricultural Personnel in 1990	Personnel Available in 1990	
A	163		542	A
B	393		1,052	B
C	458		1,731	C
D	425		986	D



Personnel Status

A	+156
B	+303
C	-632
D	-230

Source:

at the CPTs and CPRs, then the human resource deficit at this level is probably not of any great consequence. It is possible, in fact, that the most effective extension roles in the future will be filled by the graduate couples of the CPTs and CPRs, who are not government employees, but who live in the villages and better placed to promote technically and economically viable agricultural innovations. Moreover, to the extent that additional D grade personnel are needed for specific tasks in the ministry, e.g. livestock market monitors, they will probably be trained through ad hoc, short term intra-ministerial training courses, combined with on-the-job instruction, rather than in formal training institutions per se.

2. With respect to B and C grade personnel, it is clear that the outcome of the efforts already underway at Kolo at the IPDR and the ECE is the key to future surpluses and deficits in personnel needs. Furthermore, it would appear that the question of satisfying demands at these levels of the civil service is largely a matter of proper allocation of student candidates to career tracks during their years at the two Kolo institutions and, possibly, a redefinition of some present C grade personnel slots in the ministry and its agencies so as to require upgraded skills from B grade personnel in the future. Finally, given the relatively small class sizes and low faculty/student ratios at the IPDR and the ECE, it would seem that additional students could be added to class rolls without the addition of any new facilities and at great benefit to the internal economic efficiencies of these schools - i.e. the <u>marginal</u> cost of an additional student, particularly at the C level, would appear to be very low and the addition of such a student would certainly lower <u>average</u> per student cost as well. All this, of course, is continent upon the government's effective demand for employees, not "needs" per se.

3. The situation at the A grade level is much more complicated for two reasons: the uncertainty surrounding future patterns of agricultural education at the university level and the deficiencies in the FED human resources projections, as a consequence of very poor local

human resources planning. With regard to the first reason, one must face up to the lack of current information. Although the FED projection is probably the "best" estimate of outputs at this level through 1990, it is clearly just that, an estimate. Unless there is much more coordination between donor agencies and the Government of Niger in the future, with respect to external scholarships, the human resources needs of the various projects, and other similar issues, the system for producing A grade personnel will always be plagued by its present poor planning. In our view, this situation is particularly critical in two areas of expertise: agricultural research and upper-level managerial skills in project planning, implementation and evaluation. Without sufficient numbers of well-trained Nigerien personnel in these areas, Niger cannot hope to achieve even modest growth in the agricultural sector in the future for three principal reasons:

A. All the "cheap" gains in productivity in the agricultural sector have probably already been attained, e.g. crop expansion on to marginal lands by extensive cultivation methods, livestock productivity increases from animal health campaigns;

B. In an era of difficult economic circumstances, the allocation of available resources between competing ends becomes much more complicated. More sophistication is demanded in analysis and decision-making, not to mention that gross errors in judgement become much more costly;

C. The expatriate pool of expertise available to Niger is clearly limited in quantity and highly diverse as to quality, and extremely costly in nominal terms and as related to its marginal benefit per capita.

For these reasons, the "projected" surplus of A grade personnel by 1990 as related to "needs", if it actually comes about, is not viewed as a great problem in and of itself. The real employment problem for the future must be defined in terms of qualitative aspects such as the abilities of the Nigerien graduates to perform their assigned tasks in the agricultural economy and the appropriateness of the skills mix being generated to the real effective demand for employees in the rural areas.

7.3 Conclusions and Recommendations

7.3.1 The training of qualified researchers and research technicians has been seriously overlooked within the formal higher education structure; consequently there is a very weak base for credible agricultural research at all levels. At present neither the formal agricultural institutions nor the GON is addressing this need. Research capacity beginning with INRAN needs to be funded and developed so as to create indigenous research capability.

7.3.2 There are appropriate agricultural education institutions in place, but the quality of the curriculum and teacher training needs to be improved. Emphasis should be placed on upgrading the quality of teaching staff and the technical curricula.

7.3.3 The supply of trained personnel will soon exceed the effective demand. Donors should consider absorbing some of the excess personnel through project staff positions.

7.3.4 The public sector work force is comparatively young and will be in place until retirement. With this slow rate of turnover and stagnated sector growth, donors should focus on in-service training programs of personnel to provide needed skills amongst current staff.

7.3.5 The GON should move from training geared solely to the government service and expand the orientation of existing programs to train in agricultural skills needed by the private sector.

7.3.6 Public and private sector projections of demand for skilled personnel in the agriculture sector should be calculated. The current practice of needs assessment, given the restricted absorptive capacity of the government and the nascent private sector distorts accurate projections of future personnel requirements.

7.3.7 Cost efficient and effective use of mass media, particularly radio and visual aids should supplement current government policies of extension services. The costly practice of extension agent to farmer technology transfer can be greatly enhanced through mass media presentation.

7.3.8 CPT effectiveness and cost-efficiency could be improved if CPTs were located closer to the villages they serve and eventually were placed in villages.

FOOTNOTES

[1] IBRD, Niger Agricultural Sector Memorandum, Report No. 3198-NIR, Washington, D.C., February 27, 1981, p. 1.

[2] The provincial divisions of Niger are called departments.

[3] The divisions of a department are called arrondissements.

[4] This listing of needs includes those of INRAN, the national agricultural research institution, even though INRAN is technically under the tutelage of the Ministry of Higher Education and Research.

[5] IBRD, Education Project Evaluation, Report No. 3047, Washington, D.C., May 1981.

[6] Reports synthesized in the IBRD document are:

a. PNUD/FAO, Projet cadre pour la réform et l'extension de l'IPDR, November 1977.

b. UNESCO, Niger, analyse et développement de l'éducation, May 1978.

c. OIT, Dynamique de l'emploi dans un système sahélian, le Niger, 1978.

d. MDR, Etat des besoins de mise en formation des cadres, 1978-1983.

e. FAO, Formation des cadres du Service de l'Elevage, Rome, 1979.

f. MDR, Projets en cours d'exécution et investissements prévus par le service de l'élevage, 1979-1983.

[7] Viallet, Méthode de l'établissement des besoins en cadres, Niamey, undated, circa 1976.

[8] FED, Etude sur les besoins en formation.

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10.0 Vocational and Technical Education

10.1 Status

This section examines vocational and technical e tion and training through institutes and training cer inside the formal schooling system, as well as outs it. It includes programs managed by both the publ private sector, although private training initia the exception in Niger.

Vocational education is defined here a zed program of learning, either in school or in uca- tional institution designed to prepare sk s for industry, monetary agriculture, commerce niprofes- sional service. Besides full-time cour ol, voca- tional education may include guided a r appren- tices and courses to upgrade employe greater proficiency in their skills. Techr ion refers to planned sequences of classroom an experiences, usually at the upper secondary c tiary levels, designed to prepare skilled te For the purpose of this assessment, training and in preparation for monetary agriculture, manage ng and nonformal health education will be t eparate sections.

An overview of vo hnical education and training in Niger reve c institutions, 12 offering formal trair s and four organizing non- formal training cen dition, one finds the tradi- tional technical t che transitional sector, and the in-house tra zed by a small number of larger industrial comp e is also a poorly identified private sector kills such as typing, bookkeeping, and home eco aught.

In roximately 2,277 students were attend- ing form in Niger, and 427 were studying abroad.

10. onditions of Employment

Niger, like many other countries, is experiencing severe economic difficulties, due in part to the world recession and, in particular, to the sharp drop in uranium prices on the world markets, resulting in a reduction of the national revenue and a slowing down of the expansion of a nascent industrial sector. The net result is that both the public and the modern private and semiprivate industrial sectors have fewer jobs to offer and, in some

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9.0 Management Education and Development

9.1 Introduction

9.1.1 Sector Overview

The incidence and level of management education and training in Niger is not reflective of the country's needs in this area. The focus of government policies--short and long term--in all sectors calls for the accelerated definition, preparation and execution of development projects. The current Five-Year Development Plan (1979-1983), as well as its intermediate successor (currently being finalized), calls for the priority execution of a series of major public and private sector programs in rural and industrial development, education, health, trade and commerce. However, the current level of personnel to manage this development in both the public or private sectors is inadequate.

One measure of the need can be seen in the fact that more than 50 percent of personnel engaged in the planning and administration of education and training programs are expatriates. The situation is similar in other sectors.

In addition to the government of Niger's (GON) basic public sector development activities, both the government and donor policies place a high priority on the development and expansion of the private sector. Not only has the GON passed legislation favoring the establishment of new private businesses such as tax incentives, relocation support, and the establishment of institutional support at the national level, but it has also begun to take measures to remove some of the disincentives to private commerce such as controlled markets and price supports. However, the availability of Nigerien managers, at all levels, is extremely limited. There are very few opportunities for developing managerial skills and capabilities, either formal training or acquired experience.

In the public sector, the large majority of mid-level and many of the senior level GON managers are either graduates of the Ecole Nationale d'Administration (l'ENA) or the University of Niamey. A number have also received graduate training abroad at a variety of foreign universities and institutions of higher education. In the private sector there are very few facilities or opportunities for the training of individual entrepreneurs. In fact, private sector entrepreneurs are for the most part illiterate. The inevitable corollary of this situation is

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that a large number of key posts in the public sector are filled by expatriate experts at high cost to the government in addition to the dependence upon foreign resources that this engenders. Similarly, the vacuum created by the shortage of qualified and skilled Nigerien entrepreneurs in the private sector has been filled by non-Nigerien entrepreneurs and investors--to the degree permitted by government.

A number of efforts to alleviate these major development constraints have been made with some success. The government consistently sends a moderate number of persons abroad each year on study grants or scholarships. Most of these fellowships are awarded for study in technical disciplines such as agronomy, medicine, education, engineering, rural development, and mining. Some attention is given the sciences and humanities, including French and English language training, however, very few overseas fellowships are awarded in the field of management, business administration or related areas. This year, of 1,231 overseas fellowships, only 32 are in management-related fields of study.

The GON has also revised the l'ENA curriculum to include a few more courses on management related subjects. However, this has proven to be inadequate as has the number of graduates that the school can turn out each year.

The dearth of trained or experienced managers to work on bilateral development projects has led some donors to add project management training components to their development projects in various sectors. This has become almost standard for USAID.

Similarly, the UNDP supports two ILO-administered programs which provide for the up-grading of skills in the Nigerien Civil Service (Fonction Publique) and in parastatal mixed economy companies (Societes d'Economie Mixtes--SEM). Both of these programs include provisions for the creation of permanent, institutional entities which will create and expand indigenous management training capabilities. A number of other donors, including the World Bank, are presently studying ways and means to respond to the need for greater numbers of qualified and skilled personnel in the public sector.

In the private sector, management development programs are provided either internally by a small number of companies, such as the BRND, through the GON Chamber of Commerce, the Office de Petit et Moyen Entreprise Nigerien --OPEN (Bureau of Small and Medium Size Businesses) or by

ENA in the context of the "Nigerization" program. These efforts and their results are examined in detail below.

9.1.2. Goals and Strategies

The government is categorique in the last Five-Year Plan concerning intentions to improve the quality as well as the quantity of its management resources in both the public and private sectors. In addition, the Zinder Declaration[1] calls for the immediate implementation of a series of reform measures with priority being given interalia to:

(a) the training of qualified middle level personnel destined for productive sectors such as rural development, mines and industries, small and medium-size businesses;

(b) training of upper level technicians who will bring about the Nigerization of personnel in all sectors;

(c) establishment of a schedule for the Nigerization of specific positions in conjunction with all private and semi-private firms; and

(d) transformation of the advanced level of the National Administration School (ENA) into an institution of applied proficiency courses which offers practical training to civil service employees.

Private sector management development activities by the UNDP/ILO program continues apace, having been extended into a third phase in 1982--which should end with the establishment of a permanent management training center or institute. The government-run Chamber of Commerce is expanding its staff and program as is the Office for the Development of Small and Middle-sized Businesses (OPEN).

9.1.3. Public Sector Management Development

There is no management training institutions or school in Niger, nor are any comprehensive management training courses given at the University of Niamey or other institution in the country.[2] Public sector management development is carried out through the following institutions and programs:

9.1.3.1. The National School of Administration (ENA)

L'ENA (Ecole National d'Administration) was established in 1960 and its role is to provide initial and further training for Nigerien civil servants. It operates under the aegis of the Ministry of Civil Service and Labor (Ministere de la Fonction Publique et du Travail) and, under some very specific circumstances, trains a few candidates each year for posts in the private sector.

Three levels of instruction--primary, secondary and higher (college)--are given; the latter course of instruction, of three years duration after the baccalaureate, leads to the awarding of a college-level diploma. The majority of trained mid-level GON civil servants are ENA graduates, as are a number of senior level staff including the Minister of Sports, Youth and Culture, all the deputy prefets in the country's seven administrative districts (the seven prefets are all senior military officers on detached service), and a number of Secretary Generals and Directors in various ministries.

There is a far greater demand for ENA graduates than the prestigious institution can supply. Acceptance and graduation from ENA is practically a guarantee of a life-long career in the Civil Service or private business. In fact, persons who have been trained at ENA and subsequently acquire government experience are so sought after by private enterprise that the government now insists that persons educated at ENA at government expense (1) spend a certain amount of time in government service, and (2) that companies interested in hiring new ENA graduates reimburse the government for the cost of their studies.

The steady growth of ENA higher or college level enrollments and graduates can be seen in the following table.

Table 9.1

College Level Enrollments and Graduates

	New Enrollments	Graduates
1980	64	21
1981	68	54
1982	49	64
1983	50	53

The drop in enrollments in 1982-83 and subsequently the number of graduates in 1983 is a reflection of a deliberate ENA decision to limit annual enrollments at the high level to a maximum of 50, this being the optimum number that the school's physical facilities and teaching staff can adequately provide for. ENA higher level classes are limited to a maximum of 20 students. Any larger number, it has been found, leads to qualitative degradation of the courses offered.

However, higher level graduates are by no means ENA's largest quantitative contribution to the public sector. Both the primary and mid-level courses (two and three years, respectively) provide a steady flow of civil servants for government ministries. For example, of the 632 ENA students graduated by all levels in 1977/1978[3], 90 (14.2 percent) were high level; 390 (61.7 percent) medium level; and 152 (24.1 percent) were at the primary level. During this period, the general pass level was 70.3 percent.

In terms of specialization, the medium-level is the most important. Annual courses are given in (a) general administration, (b) financial services, (c) work and social security, and (d) taxation and government property. Other courses at the mid-level are given every two years: (a) juridical services, (b) business accounting, (c) customs and public corporation; secretarial and some specialized elective courses are available upon request.

Primary level specialization courses are (a) agents for the administration and juridical services, (b) bookkeeping and (c) typing.

At the higher, or college level, on the other hand, courses are limited to general and public administration with a strong focus on law. In a small special section aimed at emphasizing management training, some attention is given to accounting, financial/budget planning, marketing and production methods. More specialized training for senior officials must be carried out at the University of Niamey or foreign universities.

9.1.3.2 Ministère de la Fonction Publique

The Fonction Publique (MFP) is the GON agency responsible for the management of human resources in the public sector.[4] As of March 28, 1983, there were some 27,210 employees, of whom 15,215 were civil servants, and the remainder auxiliary personnel. MFP activities cover the entire spectrum of personnel management including planning, recruiting, classification, placement, records maintenance, supervision and training.

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Another path or "track" for advancing to a more senior government position is available to Fonction Publique employees. Each has the right, usually after three years of satisfactory service, to request training for a higher level post, even if he does not have the normal academic prerequisites for such training. Access to such training is through an annual competitive examination (concourse professionel) open to all qualified Fonction Publique staff members. The advantages of this "indirect" training and promotion track are held to be that:

(a) all competent personnel have the opportunity for professional advancement;
(b) the weight of purely academic qualifications is reduced;
(c) genuine continuous training is facilitated; and
(d) it makes it possible to train civil servants for some posts for which there would otherwise not be sufficient candidates.

As indicated earlier, the majority of mid-level trained Nigerien civil servants receive their formal education at the ENA. However, further training of both senior and subaltern administrative staff is carried out in several ways:

(a) MFP internal programs (short, mid and long term);
(b) scholarships for training abroad (short and long term), from the GON or donor assistance projects;
(c) special courses at l'ENA (mid and long term)

9.1.3.3. MFP Internal Training Programs (Programme de Perfectionnement des Agents de l'Etat) are open to all civil servants both at the national and regional levels. They are intended to improve, through a series of intensive, short and mid-term seminars, staff skills in the areas of legislation, administration and management.

The courses are presented, depending on their subject matter, by senior MFP civil servants, ENA professors and/or UN technical assistance personnel or other outside experts. Begun in 1980, the program has achieved the following results in 1981-82 (April 1981/April 1982):

Number of Seminars Held 13

Subjects Covered:

1. General management (organization, responsibilities)
2. Personnel management (procedures, regulations, MFP organization)
3. Financial management (budget, local regulations)
4. GON administrative organization
5. Typing

Number of Participants 243

(Senior, mid level and support staff, according to subject relevance)

Training Locus

1. Niamey	4. Maradi
2. Tahoua	5. Zinder
3. Agadez	6. Diffa

The 1982/83 program was based upon the requests and perceived needs received from some twenty directorates in various ministries and the experience acquired in the preceding year's program. The subjects covered by category of recipient staff were as follows:

Senior Staff

Management responsibilities:
supervision, personnel, finance

Management techniques/tools:
communications, conduct of meetings, ADP (Automatic Data Processing), organizational development (O/D) techniques.

Midlevel Staff

Organizational development/administrative procedures:
structure, administration, communications, accounting, inventory control.

Supervisory Staff

Role of management in development:
regional and local administration.

Training Staff

The organization of internal training programs.

Number of Participants 218

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9.1.3.4. Study Grants/Scholarships

A number of mid-term (one year) and long term (two years or more) scholarships) are awarded to MFP staff members for specialized studies in Niger and/or abroad and are charged to its budget in the same way as this process operates in other GON ministries. Unfortunately, as noted earlier, very few of these scholarships are in the areas of business/public administration or management.

Currently there are some 2,403 Nigeriens studying on full scholarships, including 1,231 in other countries.[23] However, only 32 Nigerien are studying management or public administration (all outside Niger)[24]; compared to English 73 (14 outside Niger, French/English 36 (University of Niamey), French/History/Geography 95 (University of Niamey).

This situation is the more remarkable in that the GON scholarship program is based upon requests submitted by the various ministries. After these requests have been reviewed and consolidated by the Ministries of Planning and Higher Education, priorities are set and scholarships are allotted by the national commission on scholarships (Commission Nationale d'Orientation et Attribution de Bourse). Priority and urgent scholarship needs which cannot be covered by GON financial resources are often met through bilateral assistance projects as described below.

9.1.3.5. Bilateral/Donor Community Support

The role of bilateral assistance projects and international donor community support in management education and development is substantial. In addition to the GON scholarship program described above, a considerable number of scholarships are awarded under bilateral programs[5]. The USAID has adopted a policy of including a training component in each bilateral project undertaken with the GON. This training can take the form of either short term incountry or third country training (TCT), short term or long term training overseas (USA), or participation in regional seminars.

Project-specific and pre-project training is usually technical in nature and is derived from the perceived needs of specific projects. There are also regional seminars arranged by USAID and the PanAfrican Institute for Development which are area-specific as well. A number of regional seminars (Ouagadougou, Upper Volta, November 1982; and Bamako, Mali, May-June 1983) have been devoted exclusively to various aspects of project management.

In order to generally increase knowledge of management techniques and skills, the USAID and the Sahel

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Manpower Development Program instituted a policy in 1982 requiring that each long term training participant in the United States, no matter what his or her field of study, take four semester hours of management-specific courses before completing their U.S. training.

Similarly, other bilateral donors are contributing to increasing the general pool and level of managerial skills in Niger. For example, a number of ENA scholarships are fully supported in this way. Entering 1980-82 bilateral student scholarships were report in June 1983 to be as follows:

Training Level	Higher	Secondary	Primary
Donor			
Canada	10		
West Germany	3	13	
Belgium	15		
European Economic Community	5	4	3

In addition, one ENA participant is enrolled in long term project management training in the United States and another five are following a variety of management courses in France.

The upgrading of skills in ongoing management development is carried out on a dual front by the international donor community. Most of the management development courses given each year by the MFP, as reported above, are organized, prepared and presented by ILO technical advisers who have been carrying out a UNDP-funded management development program since 1980. A parallel but administratively unrelated program for upgrading the skills of senior managers in the parastatal sector is carried out through a series of management seminars by a second UNDP-supported ILO team of management experts. This program is described in detail below under private sector activities.

A national training center for cooperatives is being supported by USAID as part of its Agricultural Development Support Program. This project, which will train managers of cooperatives (presidents, board members, etc.) beings with a 12-month course. Nine months of training are followed by three months practical apprenticeship for trainers in 1984. Following this phase, training cycles of two weeks duration will be held for an estimated 240 persons per year beginning in 1984-85.

The FAO also launched an informal staff development training course in management skills for personnel of the Ministries of Planning and Rural Development in 1980. Using

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three training modules: project monitoring, departmental rural development and project evaluation; the pilot program was introduced in two departments, Tahoua which covered 11 projects and Zinder which covered four projects). The training consisted of:

- an opening seminar of 8-10 days;
- several weeks of supervised work activities; and
- a closing seminar of 8-10 days.

There have been some 75 participants in the programs to date. (See costs section for per capita costs.)

9.1.4. Private Sector Management Development

Management education and development in the private sector is carried out through a number of programs and mechanisms including the direct and indirect intervention of government institutions, the international donor community, and some initiatives of the private sector itself.

9.1.4.1 GON Interventions

A. Chamber of Commerce.

The Chamber of Commerce (COC) is an organ of the GON and functions as an integral part of the Ministry of Commerce and Transport.[6] It is directed and staffed by GON officials and composed of representatives of trade unions, employers associations and small and middle size enterprises (SME). The COC is involved in all sectors of the Nigerien economy and its activities involve both public and private sector enterprises. The full title of the COC, in fact, is Chambre de Commerce d'Agriculture, d'Industrie, d'Artisanat du Niger. A number of vital services are provided by the COC including maintenance of the commercial register. All private and semi-private businesses, including small vendors, must be licensed by the COC and listed in the Register (Registre de Commerce) before they can legally do business. As of this writing, there are 50,000 inscriptions in the register, excluding street vendors. Some 150 companies are classified as "large" or "medium".

In addition to exercising control over the establishment and tenure of business in Niger, the COC organizes development activities in various sectors of the economy--ranging from agriculture to health--serves as a focal point for domestic and international commercial exchanges, receives and assists foreign trade delegations, involves all sectors of Nigerien commercial activity in regional and international trade affairs and, above all, serves as a commercial communications conduit.

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The COC publishes a weekly newsletter (bulletin de la Chambre de Commerce d'Agriculture, d'Industrie et d'Artisanat du Niger) which provides news and official legal proclamations, legislative developments, commercial regulations, want ads, government and private announcements and references to materials covering nearly every aspect of Nigerien commercial activities and neighboring countries.

The COC also sponsors several business discussion conferences, study trips, trade visits and management training seminars each year. The COC management seminars are either (1) totally discreet, and deal with specific subjects such as business accounting and pricing policies; or (2) jointly conducted with such partners as OPEN, the Office of Small Business Enterprise (Office de Promotion de Entreprise Nigerienne) and CAMPC, the African Mauritian Staff Development Center (Centre Africain Mauritien de Perfectionnement des Cadres) located in Abidjan, Ivory Coast.

The COC also works in close collaboration with the UNDP/ILO program for training management staff through the Provision of Assistance to Mixed Economy (Parastatal) Corporations (Formation de Cadres a la Gestion par Assistance aux Societes d'Economie Mixte et aux Offices du Niger) as described below.

B. OPEN

The Office of Small Business Enterprise, OPEN, is an official government agency specifically established in 1978 (presently under the aegis of the Ministry of Mines and Industry) to stimulate and develop small and medium size business in the private sector and to be its advocate and spokesman vis a vis the public and the government.

OPEN has a staff of 30[7] professional and semi-professionals. Its principal operational activities since its founding are:

- Research, market/feasibility studies;
- Business development for entrepreneurs (including financing and loan grants); and
- Information and training.

In addition to the above, OPEN has developed a "walk-in" service through which any entrepreneur may request immediate assistance on almost any problem ranging from personnel identification, recruitment and training to marketing advice and import-export regulations.

Feasibility and market studies throughout the country are carried out almost routinely at the requests of the government or of interested entrepreneurs, as are project dossiers which are subsequently submitted to possible sources of financing or are funded by loan grants through a revolving fund administered by OPEN. The organization also undertakes study trips at home and abroad and participates in various international trade fairs and meetings as it seeks to widen the horizons of Nigerien small businessmen.

OPEN training programs are basically informal and ad hoc, being geared to respond to a variety of needs as they are identified or arise. The organization conducts regular sensitizing meetings for potential and actual SME participants in various parts of the country--sometimes in concert with the Chamber of commerce. Similarly, it conducts a number of subject specific seminars each year (accounting, managing a small business, etc.), often with the assistance of such partners as the conseil de l'entente and the CAMPC. Both of these organizations, headquartered in Abidjan, Ivory Coast, provide instructors as well as training materials.

On a different level, short term study trips and seminars are especially arranged for senior staff and top SME managers as well on a variety of subjects. Similarly, OPEN's own staff capabilities are being developed in short term seminars. During 1982 they participated in three meetings in Niger on:

- o preparation of an investment portfolio;
- o general accounting; and
- o inventory control;

and in three seminars in Benin, Senegal and France on:

- o the market study;
- o SME's and banking; and
- o development of SME technical advisers.

9.1.4.2. Nigerization--Internal/External Training

Internal Training

As mentioned in the overview of the management education subsector, the number of expatriate experts and managers in Niger poses a serious problem. At some levels--senior and middle--they considerably outnumber the Nigeriens, leading to the institution of a plan to Nigerienize the economy in 1980. The staffing breakdown of salaried personnel in Niger is shown in Table 9.2:

Table 9.2

Salaried Government Personnel in Niger

Staff Level	Nigeriens	African/-non-Nigeriens	Expatriates	Total
Senior	268	42	716	1,026
Mid Professional	550	169	1,064	1,783
Administrative I	8,161	618	101	8,880
Administrative II	3,610	403	892	4,905
Auxiliary	17,200	2,464	---	19,664
Total	29,789	3,696	2,773	36,258

One effect of the Nigerien policy/goal of reducing its dependence upon expatriate technical assistance and other skilled personnel (usually referred to as the "Nigerization" program) has been to stimulate and motivate private sector enterprises to undertake--and to pay for--the training and development of Nigerien staff. For example, the Nigerien Association of Banks has its own training program for improving the skills of its members' staff. Similar programs are conducted by individual banks and other private sector organizations.

While most of these internal programs are for midlevel and subaltern staff, they have important implications for the future since this staff, in principle will be among future experienced and senior staff.

An even more direct effect of "Nigerization" is the program under the aegis of the MFP Directorate of professional Training (Direction de Formation Professionnel) requiring each private sector enterprise with expatriate staff to submit a plan for its Nigerization. In an embryonic stage, at present, the MFP program will require each company to list all positions currently filled by expatriates, and the company's plan and time table for replacing them with Nigeriens. Companies are now willing to pay for upgrading the skills of subaltern staff overseas, while others are anticipating future needs and requesting

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that ENA students be assigned to them upon graduation. Several students presently studying at ENA are under full scholarships paid for by private or semi-private companies (SEM) who will employ them upon graduation. In 1980 and 1982 this program had produced some positive results, although its recent decline is principally due to current economic constraints.

Table 9.3

ENA Graduates Trained for Private Sector

Category	1980	1982	1983
Higher	6	5	1
Midlevel	53	15	1
Primary	12	6	1
Total	70	26	1

External Training

The education and training of managerial staff for the private sector is an area of almost complete overlap with government/public sector activities.

Fifty percent of the costs for skills upgrading described under OPEN activities above is paid for by the public sector. Similarly, the few scholarships awarded for advanced training in management techniques and business related skills for the private sector (as described below under the section on needs) are supported 100 percent by the public sector. The conclusion one is forced to draw is that little if any external management training is being carried out by the private sector.

9.1.4.3. Bilateral/International Donor Community Activities

As indicated earlier, a number of bilateral projects, particularly those involving support of students at l'ENA, are contributing to the increase of managerial personnel in Niger. A number of these will inevitably have an impact upon the private sector, including those of USAID such as U.S. training in public administration. Many of these participants will eventually reach the private sector.

However, the most immediate and important activity in this area is the UNDP supported ILO program to improve management development through assistance of the parapublic corporations known as Societes d'Economie Mixte (SEM), and other government sponsored entrepreneurial authorities (les Offices du Niger). Phase III, the UNDP/ILO Project, began in January 1982 and will end in December 1984.

There are some 40 SEM/Offices in Niger that completely dominate all sectors of the nation's economy. These parastatal organizations range from AIR Niger, the national airline, to oil exploration and uranium mining. All are government controlled (usually 90 percent ownership) although nominally semi-autonomous with individual boards of directors. Each SEM/Office operates under the aegis of a GON ministry and each SEM general director is a defacto technical adviser to the Ministry in question.

Over the past decade, the project's interventions have been wide ranging in scope and precisely detailed in their application. The project has been led and administered by a team of ILO management experts, supplemented for varying periods of time by Nigerien counterparts, with considerable success. The project includes discreet program activities for:

- o organizational development studies;
- o immediate (spot) organizational development interventions;
- o internal SEM personnel training;
- o inter-group SEM training;
- o individual long/short term training;
- o research/studies; and
- o establishment of a management sciences library.

Project achievements at the end of Phase II include:

- o completion of some 32 organizational development (O/D) studies covering all the SEM/Offices in the program at the time;

- o execution of numerous immediate or spot O/D interventions;

- o preparation of some 200 analyses, studies, reports and memoranda;

- conduct of some 31 long and short term inter-group SEM/Office seminars attended by more than 475 senior and midlevel management staff;

- conduct of a number of internal management development seminars designed in response to enterprise specific problems;

- completion of training of a number of individual managers in response to specific problems/needs; and

- the award of 18 UNDP scholarships for short/long term university or management development studies.

These positive results, unfortunately, do not include two of the goals of the project: (a) creation of an indigenous senior and midlevel management training capability; and (b) establishment of a permanent Management Education and Development Center. These subjects are dealt with in the following sections (on needs, constraints, plans and recommendations.

9.1.5 Access and Equity

In both the public and private sectors access to management education is principally limited by the factors of widespread illiteracy (92 percent of overall population) limited number of institutions or other available training opportunities and a population which is ninety percent rural. There are no current data available showing the division of male and female enrollment at the ENA. However, in 1983, 18 of the 53 ENA graduates (33%) were female. The government work force of 27,210 is approximately 14.5 percent female and has been roughly the same for the past several years.

Females represent 14 percent of all civil servants, 11 percent of senior managers (cadres supérieurs), 15 percent midlevel and 15 percent of general staff (agents d'exécution) staff. Of all nonprofessional support staff (auxiliares) females represent 14 percent; a further 14 percent of all auxiliary personnel who work in commercial enterprises are women.

In the private sector no data on male/female representation is available, However, it is generally accepted that women represent less than 15 percent of the global salaried work force and less than .5 percent of private sector midlevel and senior managers.

Resource allocations for management development activities are shown in the following table.

Table 9.4 MFP Staffing by Department

MFP Staffing by Department		
Department	Number	% Ed Sector Employees
1. Niamey	13,888	31
2. Dosso	2,074	54
3. Tahoua	2,989	52
4. Maradi	2,729	50
5. Agadez	1,209	40
6. Zinder	3,535	54
7. Diffa	1,156	44

9.2 Needs

9.2.1 Administration and Supervision

A principal need in management education in the public sector is administration and supervision by the MFP in conformance with its own rules and regulations. Unfortunately, a number of circumstances hinder the proper functioning of the system. In the case of promotions, for example, to midlevel and senior positions, merit boards are supposed to review and pass on eligible candidates. However, since the positions usually have not been defined or properly classified, the system cannot function. Instead, most MFP employees are simply left in place for long periods of time and receive in-grade step increases periodically with no promotion board review. Similarly, the competitive examinations path to career development, which allows qualified civil servants to undertake further studies at the ENA in order to accede to a higher position, functions improperly because there is no room at ENA to accommodate successful applicants.

Public sector staff development is also managed by MFP (with UNDP/ILO support in some instances).

It is handicapped by limited resources and the sheer size of the population to be trained (over 5,000 civil servants) which results in a bottleneck through which only a small number of government employees can pass. What is clearly needed is the establishment of a rational and systematic plan, including an inventory of types and degree of training needed, to ensure that all or most MFP personnel are included in successive training cycles on a planned/scheduled basis.

Similarly, the ENA higher level student population has reached the maximum size the institution can handle. An expansion study should be made a) to determine if present administrative resources could be reorganized for greater productivity, b) to measure the parameters and requirements for the planned phased growth of the institution to meet the current and future needs of the present inelastic demand for entry;[8] and c) to explore alternative actions.

In the private sector most management training is ad hoc and reacts to only the most urgent demands rather than fulfilling a carefully planned agenda or program. There is a clear need for a master plan to reach larger and larger numbers of private sector managers in both the SEM and the PME. There is also an urgent need to make provisions to replace the ILO technical advisers who currently manage most of the SEM O/D and staff development.

9.3 Plans

9.3.1 Public Sector

A number of projects for the improvement of management educational and development have been put forward, particularly in the public sector where problems, and their possible solution, are discerned more easily and also because the government can exercise complete and immediate control. Some of the major plans for this area which are presented here have been principally compiled by various study missions, consolidated by the EEC/FED and published as a unified document under the imprimature of the Ministry of Planning.[9] Others were contained in the Zinder Declaration.

a) A Fonction Publique study commission is asked to examine the functioning and operation of its agency including promotions policy, professional and hierarchical relationships, information/communications channels and procedures, personnel evaluation standards and procedures, career development plans and career tracking for civil servants.

b) Organization Development (O/D) Studies for each ministry will be carried out to determine precise roles and functions, personnel needs for fulfilling functions, internal/external structural relations and ways and means of increasing efficiency.

c) ENA programs shall be upgraded from basic studies to professional level training in order to respond to the needs of both the public and private sectors for managerial staff as called for by the Zinder Declaration.

d) An automatic data process (ADP) system shall be developed in two phases (2-3 years). First, needs will be determined, then needed materials developed and the system installed.

e) In civil service staff development planning, each job description will be analyzed to determine most appropriate training needed. Personnel development seminars will be implemented as already called for, and a series of additional seminars on management and human relations will be developed.

9.3.2 Private Sector

a) The Chamber of Commerce intends to expand its program, reorganize and increase its staff by adding a fulltime director of seminars, training and operations.

b) The Zinder Declaration calls for preparation of a plan for the Nigerization of specific positions in all private and semi-private enterprises.

OPEN is planning to launch several new projects, including the following:

a) - Construction, promotion and rental at cost of individual work areas in a "crafts park" (as in "industrial park") for artisans and craftsmen. The terrain has been acquired and further development awaits necessary additional funding.

b) - A flying squad of five itinerant experts is being put in place to respond to "emergency" or rapid spot requests for immediate assistance by any PME in most operational areas.

c) - A further innovative private sector project is to put into place another special OPEN team which will select some 20 PME for in-depth O/D analysis of problems, and perspectives. A development plan will be prepared for each and the team will closely monitor their development in the next several years.

d) The organizations' plans also call for the establishment of branch offices in the interior given the high demand for its services.

e) Publication of an OPEN periodical promoting PME development and events is also envisaged for the near future.

9.4 Analysis - Costs and Financial

The current ENA annual budget is CFA 358,860,000, of which CFA 270,000,000 is provided by the government of Niger. An additional CFA 42,427,000 is provided by private and parastatal companies for the training of students who will take up employment in these sectors. Foreign donors provided an additional CFA 6,100,000 with the remainder of the budget derived from miscellaneous sources. A substantial percentage of ENA's annual expenditures are not reflected in these figures, however, and these are borne by a variety of international aid donors who provide trainers and other experts for ENA's staff. The costs of this assistance are not known.

Internal student scholarships constituted 43 percent of ENA's annual expenditures in 1983, while salaries for instructors and other staff constituted an additional 36 percent. Since 1977, the percentage of the budget allocated to scholarships has declined from 48 percent, while the percentage allocated to salaries has increased from 30 percent. These shifts may reflect recent reductions in the level of ENA enrollments.

The per student cost of training a higher level ENA graduate over the course of the three year curriculum has been estimated at CFA 7,000,000 per year. This cost is borne by the government of Niger if the student is to join the civil service; if the student is to enter the private sector half the cost is borne by the prospective employer. The cost of ENA training is nearly twice as high as the cost of training either at the University of Niamey (CFA 390,000/year) or at other African universities (CFA 420,000/year) because of the low student/staff ratio that is maintained at EVA and because of the allowances that are paid to senior personnel. The cost of training for mid and lower level managers is considerably less (CFA 200,000 - 300,000/year).

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Costs in other training programs are extremely difficult to establish because budgetary data are generally not available, and funds are commonly obtained from multiple internal and external sources, including the government of Niger, foreign aid donors, and private and parastatal enterprises. An inventory of current management training opportunities in Niger and abroad, together with an analysis of the costs of competing programs, is an essential prerequisite to the rationalization of government policies in this area.

9.4.2 Major Issues

Government scholarship policies overwhelmingly favor technical and scientific disciplines, humanities and modern languages over management education and training. This maintains dependence upon expatriate technical assistance in public and private sectors and hampers the Nigerization program.

Inadequate scholarship planning stems from the division of responsibilities between the Ministry of Higher Education, the Ministry of Planning, the Ministry of National Education, the University of Niamey, and various international aid donors.

The government recognizes the need for expanding private sector management capabilities, but resources are not being made available. The Zinder Declaration called this a priority area, but shortly afterwards the OPEN budget was first frozen and is now in decline.

A policy decision must be taken with reference to Nigerization and supported by resources needed to continue and extend OPEN and UNDP/ILO programs in the private and semi-private sector.

9.4.3 Internal Efficiency

The management education system in both the public and private sectors is being used to capacity and its output is in great demand. Given the high cost of training in the public sector, particularly at ENA, and the ability of its graduates to assume managerial/supervisory posts in a reasonable period of time after entering the work force, it would appear that the relatively low teacher-student ratio of public sector institutes could be raised somewhat.

In the private sector both the OPEN and the UNDP/ILO SEM training programs appear to be well organized and managed. The latter's costs are high because of the obligatory reliance upon expatriate technical assistance in the absence of trained and skilled Nigerien counterparts. The lack of incentives (social status) has handicapped efforts to train Nigeriens as management trainers. In the case of OPEN, they have mounted a number of innovative and successful management training programs with only very limited financial and personnel resources and their graduates are also much in demand.

ENA facilities are inadequate. The school library was constructed for a student body of 70. Last year over 730 students were enrolled. Unfortunately there is no possibility of enlarging the present premises. Study materials are also in short supply (books, calculators, projectors, etc.). It is estimated that a minimum of CFA 20,000,000 is needed to upgrade ENA facilities.

9.4.4 External Efficiency

Given the fact that the public sector management education system is presently operating at full or above full capacity there seems to be no real possibility for it to meet projected growth needs (estimated at 3.5% in the public sector and at 8% on the private sector work force).[10]

The implications of this situation are that public sector development will continue to have a shortfall of skilled managerial and supervisory personnel. An increase in ENA enrollment, even if the premises were adequate to accommodate them, with the concomitant increase in the number of teachers, given the present teacher/student ratio, would be prohibitive as indicated in the Costs/Finances section. The only realistic solution is adoption of a number of measures (see Recommendations below) to increase ENA efficiency and productivity.

The situation in the private sector is more positive. Far less developed than the public sector, its current growth is proceeding relatively rapidly in view of its embryonic state. The system is operating very efficiently in terms of delivery of services. Demands and needs are being met in a fairly efficient manner at present. Indeed, despite a declining budget and with no increase in staff, OPEN was able to respond to 113 requests for assistance in the 1981-82 period (43 of which came from the interior) as compared to 91 in 1980-81 (23 from the interior). However,

as indicated earlier, there are serious reservations about the private sector's ability to continue to cope given projected growth rates and its limited resources which can be expected to dwindle rapidly if the UNDP/ILO program inputs are not continued or replaced.

9.5 Constraints

a) ENA is unable to meet current or projected demands for additional skilled managers because of a frozen budget, limited staff and inadequate facilities.

b) The MFP staff development program (Perfectionnement des Cadres) is unable to meet demands made upon it because of handicaps similar to those of ENA.

c) In the private sector, OPEN activities are limited by budgetary limitations insufficient personnel and wholly inadequate facilities.

d) The UNDP/ILO project is the only major senior midlevel management education, O/D and staff development program in the private and semi-private sector. It will terminate at the end of 1984. There are no Nigerien counterparts to replace U.N. personnel.

e) The training of Nigerien career trainers has not been possible because no possibilities for career development, advancement for Nigerien civil servants exist under the present civil service rating classification system. Thus there is little motivation to be a management expert/trainer.

f) Present scholarship attribution policy is also a major constraint to management education in Niger. Focus over the past decade and at present is almost exclusively on training in technical fields (agronomy, forestry, engineering). Very few scholarships are given in management or public administration.

9.6 Recommendations

All recommendations must, of course, be tempered by the attendant cost implications. The recommendations made here are intended to remedy the serious lack of a coherent, efficient management education and development system. From a financial standpoint the first effort must be to increase the efficiency and productivity of existing institutions and organisms. Funding for new initiatives should be sought from external assistance sources.

Recommendation 1: Revise the ENA higher level curriculum

A more appropriate studies program should be developed for higher level ENA students. A revised curriculum should take into account the various skills needed by administrators in the many sectors involved in Nigerien development. Technical assistance should be provided in curriculum design, development of teaching materials and training of management trainers. These materials should emphasize management skills for both the public and private sectors.

Recommendation 2: Revise University of Niamey programs to include public administration

Establish a program of business administration to supplement current courses in political science, law and economics. Such a program would also contribute to developing understanding of the role of management skills. The program should help institutionalize the concept of management development and prepare numbers of university level Nigeriens for senior and midlevel managerial responsibilities in the public and private sectors.

Recommendation 3: Establish a Unified Scholarships Office

The present policy of dividing the management of scholarships between the Ministries of Plan and Higher Education is awkward and inefficient. Scholarships should be placed under the authority of a single GON entity which would be responsible for human resources planning including programming of staff needs in the public and private sectors. Preparation of a scholarships yearbook as a planning tool, maintenance of detailed inventories of regional and overseas training institutions and their capabilities, and maintenance of an inventory of available scholarships are also recommended.

Recommendation 4: Utilize Regional Resources

There are a number of excellent management education institutions and programs available in several West African countries.[26] These should be utilized for training Nigeriens on both a short and long term basis as well as for the training of trainers during and after the development of an indigenous Nigerien capability.

Recommendation 5: Establish a Management Training Institute

The foundation of a management center has been thoroughly studied by ILO. It would replace the country's only senior management training program when the UNDP/ILO project ends in December 1984. Such an undertaking would further help to institutionalize management training in Niger and provide numbers of qualified managers at different levels for the public and private sectors.

It is recommended that the center not be attached to either ENA or the University of Niamey but be semi-autonomous, perhaps under the aegis of the Chamber of Commerce, to allow it greater flexibility, particularly in working with the private sector.

Recommendation 6: Permanent Training of Trainers

In order to insure the ongoing growth and development of the management center it is necessary that a corps of skilled trainers be developed. This project should include both long term training of O/D analysts and other management specialists (regionally and overseas) as well as the periodic updating of the trainers' skills as the field of management continues to evolve and develop.

Recommendation 7: Establish Management Civil Service Grade

Government positions are classified by grade according to Fonction Publique regulations. Currently there is no classification for management trainers. In order to make the career of management development specialist attractive, a change in existing regulations must be made. This will help to institutionalize management training in Niger, by creating the possibility of a civil service career in the field.

Recommendation 8: Expand OPEN, Chamber of Commerce

The most efficient and innovative programs in private sector entrepreneurial development are those mounted and supervised by the government-funded OPEN. Given the success of their operations it is strongly recommended that they be extended through the provision of additional technical assistance and other support from external sources. Similarly, the Chamber of Commerce is the next best instrument for private sector development and its programs need to be expanded through support from external sources.

FOOTNOTES

[1] March 31, 1982

[2] The Lycée Technique Dan Kassawa, a secondary technical school at Maradi, gives courses in commercial, administration and management studies. However, they only lead to the "Bac".

[3] Latest date for which complete statistics could be obtained.

[4] Representing 40 percent of all salaried workers in Niger in 1983.

[5] See Chapter 5.0 Higher Education in Niger.

[6] Formerly the Ministere des Affaires Economiques du Commerce et de l'Industrie.

[7] OPEN has 10 staff members presently undergoing additional training (four at ENA, four at the University of Niamey, and one each at universities in Lome and Marseille) and has been assisted by 11 international and bilateral expatriate technical advisers (six ILO, three Germany, two France).

[8] As of December 1980. Source: EEC Report, Besoins en Formation, 1981.

[9] In 1983 only 50 out of 310 students who successfully passed the entrance examinations were admitted to ENA's higher level, making an overall shortfall of 260. GON ministries requested 120 places and only received 50 for a shortfall of 70; 39 MFP employees passed the concours professionnel examination qualifying them for further ENA training. However, only 10 were admitted.

[10] Cinq Etudes sur les Besoins in Formation au Niger, Vol. E, February 1983.

10.0 LITERACY/ADULT EDUCATION

10.1 Status

Nonformal adult education in Niger refers to the range of educational activities for adults outside the formal school system. In view of Niger's plans for the institution of a National Development Society infrastructure as the vehicle for achieving self-sufficiency and increased economic productivity, this section will emphasize efforts currently being made to educate the rural population through the Development Society structure.

To date, the major programming for adult education in Niger has been carried out by the National Literacy and Adult Education Office (DAFP), which is discussed in depth in subsections of this sector report. The Ministry of Rural Development, the Ministry of Plan, the Ministry of Youth, Sports and Culture, and the Ministry of Information are also responsible for various adult education activities.

Particular attention will be given to the general approach to community development education called "animation" which refers to methods used for the promotion of popular participation in community and national development activities. Educational efforts through radio and television are also discussed.

Changing perceptions of adult education are reflected in the historical evolution of the nonformal education structure. Shortly after independence, the Community Development Education Office (CDE) was established in the Division of Rural Development of the Ministry of Rural Economy to implement the institution of rural cooperatives. In 1964, a general commission for "Human Promotion", which became the Ministry of Human Promotion in 1968, was constituted and the Community Development, Literacy, and Radio Club Offices were placed under its administration. The expanded role for the CDE Office was to organize and inform the population, and promote popular participation in development activities including agriculture, livestock, health, literacy, and the cooperatives.

When the Ministry of Human Promotion became the Ministry of Plan in 1975, the CDE remained, but other offices directly concerned with adult education were moved to the Ministries of Education and Information.

Today there are a number of different offices concerned with specific aspects of community education. The CDE office in the Ministry of Plan promotes activities directly related to rural development. In the Ministry of Youth, Sports, and Culture, created in 1975, community youth educators are trained to promote recreational and cultural activities through the samariyas (youth organizations). The National Women's Promotion Office created in 1981, which also supervises the activities of the Nigerien Women's Association (AFN) is also in this Ministry.

The National Union of Credit and Cooperatives (UNCC) was created in 1962. Its original focus was on the creation of structures capable of producing agricultural commodities for cash and export purposes. It provided credit for agricultural inputs, and marketed resulting produce. In 1967, the credit section was separated from UNCC control and the National Agricultural Credit Bank CNCA) was formed. At this time, UNCC changed its approach to one aimed at promoting collective village action through the village mutual group (GMV). Cooperatives were formed when five to ten villages decided to collaborate and market their produce together. Local cooperative associations (ALC) developed where the market was sufficiently large for a cooperative union, composed of five to ten cooperatives. Today there are approximately 1,064 cooperatives, and 10,196 GMVs. Efforts are being made to extend cooperatives to the pastoral zone and there are now 25 nomadic cooperative organizations (GVC).

Since the Five Year Plan 1979-1983, UNCC has been charged with putting in place the cooperative structures, which, together with the samariyas, constitute the basis for the development society structure.

The role of radio in adult education began shortly after independence, in 1963, when Niger became the first country to broadcast in national languages. Televised elementary education followed. After three years, however television was determined to be disruptive and ineffective as an alternative to classroom teaching and classroom broadcasting was discontinued. Today television is restricted to 12 hours per week of general information with some educational content.

In contrast is radio broadcasts 123 hours a week. The rural news program, Chroniques Rurales is one of the government's most effective means of rural information dissemination. Programing on agriculture, animal husbandry, pisciculture, conservation, forestry, and health dominates.

The Radio Club Association in the Ministry of Plan solicites village feedback and discussion in conjunction with the government effort on educational radio programing.

Non-governmental organizations are active in nonformal education. Most of the 24 NGOs in Niger belong to the Groupment des Aides Privées (GAP), a Ministry of Rural Development. The largest NGOs, in terms of budget, are Church World Services (international, Protestant), Misereor (German, Catholic), the local Catholic Mission and Caritas (international, Catholic), Lutheran World Relief, the Sudan Interior Mission (Protestant, international), Oxfam and US Care. Over 220 Peace Corps volunteers, along with French, Dutch and German volunteers also train adults in nutrition, rice field irrigation, conservation, literacy, crafts, industrial mechanics, cooperatives, well maintenance and vegetable gardening.

In conjunction with these efforts Niger has extensive programs in adult literacy. UNESCO[1] estimates the aggregate adult literacy rate in Niger is approximately 5.5 percent. The literacy rate for women is estimated at 0.5 percent compared to 11.1 percent for men. Accurate figures for literacy rates have not been determined especially for populations who have attended Koranic schools[2] or who are literate in local languages, including Tifinar or Ajami (Zarma and Hausa written in Arabic script). In addition, no statistics exist for determining literacy rates by region or rural versus urban centers.

In an effort to address the need for literacy training, a selective literacy campaign was launched after independence to establish traditional literacy centers. Literacy education was conducted in French and within the centers employed primary school teachers as adult literacy instructors.

In 1965 with UNESCO assistance and the establishment of DAFP in Niamey, the Government of Niger (GON) began a program of adult literacy training in five national languages: Hausa, Zarma, Kanuri, Fulfulde and Tamasheq. (Three other languages, Arabic, Tubu, and Gurmance, are spoken by less than two percent[3] of the population and literacy activities currently do not include these languages.)

New literacy programs, begun in 1967-68, experimented with forms of functional literacy training more closely related to ongoing rural development activities using specific skill oriented training methods. These programs were first developed in the Maradi and Zinder regions. Here

the UNCC attempted to establish multifunctional, locally-managed rural farm cooperatives under the premise that local populations could not assume full responsibility for cooperative marketing, credit and supply activities if a significant number of village people were not literate. Thus, the DAFP developed methods for training cooperative members simultaneously in literacy skills and cooperative management.

While experimenting with functional literacy projects, DAFP continued its small scale traditional literacy activities. Following the drought (1969-1974), a number of "productivity" projects were launched in the major rural areas of the country to help Niger attain self-sufficiency in food production. These productivity projects, however, did not adopt the same "functional literacy" and cooperative management approach of earlier integrated rural development programs. Instead, more emphasis was placed on the distribution of agricultural inputs and extension activities and less emphasis was given to developing self-managing rural organizations. Over 220 Peace Corps volunteers, along with Dutch and German volunteers also train adults in nutrition, rice field irrigation, conservation, literacy, crafts, industrial mechanics, cooperatives, well maintenance and vegetable gardening.

Nonetheless, the GON decided that cooperative forms of economic development were the keystone of its rural development strategy and that widespread literacy was essential. The Three-Year Plan (1976-1978) called for a program of "mass literacy" to make 30 percent of the nation's population literate. To support this effort, the GON, with aid from the Swiss Cooperation and the World Council of Churches, created the National Training Center for Literacy Agents (CFCA).

Today adult literacy activities are widespread throughout Niger. In urban areas there are traditional (French) literacy training activities directly supervised by the DAFP and conducted in conjunction with maternal and child care centers, women's centers, and industry/business organizations where technical or professional training is taking place.[4] Literacy centers in rural areas use national languages for literacy training. Continuing education centers (CEP) organized by UNCC; post-literacy centers created with the assistance of the DAFP, literacy centers attached to technical or rural promotion centers (CPT or CPR) and young farmer training centers (CFJA) also use national languages for literacy instruction.

Literacy through television programming has existed since 1980. In addition, there are local and regional newspapers printed in national languages; and the weekly news magazine, Sahel Hebdo, includes two pages in one of these five languages each week.

The decision in 1979 to create a National Commission for the Establishment of the Development Society, has meant a major reorientation and redefinition of the approach to adult education in Niger.

10.1.2. Goals and Strategies

The goals of the Development Society are to promote active, voluntary participation in national development and to provide the population with a means for self-reliant development. The Development Society plan, currently being implemented, will use media (radio, television, and newspapers) in nine languages as one mode of information diffusion. All organizations and individuals working on village development such as UNCC, the DAFP, the Agricultural Service, health agents, the various CDE Offices, and the Radio Club, will also promote the Development Society (DS) plan. Traditional methods of communication through markets, mosques, around water places, and other traditional meeting places such as the "arbre a palabre" (the meeting tree), are to be exploited as support mechanisms for the development society. Individuals such as marabouts (koranic teachers), traditional messengers, artisans, and peddlers, are to be incorporated into the DS as well.

Consciousness-raising will be carried out regarding civil order, food self-sufficiency and the importance of economic independence through the establishment of a development society structure and fundamental techniques of management and production, commercialization, and agricultural credit are to be introduced at the village level.

A new approach to adult education is called for, requiring administrators and technical agents to become facilitators rather than authors of development initiatives. They will provide public services and technical assistance through the DS structure.

The goal of the CDE Office is to contract newly organized village development councils (CVD) throughout Niger to discuss the development society in relation to a wide range of subjects including national unity, collective work, and social and economic problems specific to individual villages. Fifty CVDs per county are to be reached the first year.

The Community Youth Educators (CYE) through the Ministry of Youth, Sports and Culture encourage and promote social and economic activities through strengthening of the traditional samariya structures and maximizing the productivity of their members whether through individual or collective efforts.

UNCC aims to establish self-managing cooperatives sponsored by the National Cooperative Union (UNC) which will be established through the development of strong cooperative structures from the grass roots level. The goal is to have one local cooperative union (LUC) per canton, which includes all the GMVs, a sub-regional cooperative union (USRC) regrouping all UNCs at the county level, and a regional cooperative union (URC,) including all the USRCs in the region. The UNC will be the national organization of all the URCs.

To achieve its goal the GON will be providing a new emphasis on training of UNCC field agents to provide more effective support for the development of multi-purpose self-managing cooperative structures through continuing education, functional literacy and cooperative management training. Cooperative officials and village cooperative members are to be trained as well.

With regard to literacy, the GON has three general goals:

1. to create national demand for literacy in local languages;
2. to make literacy training functional; and
3. to transform DAFP into a technical service which responds to various groups needing literacy materials and training. (DAFP presently functions as the direct administrator of literacy programs.)

The DAFP is planning to open 580 new literacy centers over the next two years; 123 in either CPTs, CPRs or CFJAs and 80 in professional and business enterprises. Two hundred post literacy centers (FEP) are to be added to the 258 already said to exist.

To achieve these goals, the DAFP is encouraging the development of national languages through the public school system and through their adoption as working languages of government organizations. Concrete measures are proposed in the GON Intermediary Plan (PIC), to produce official documents in local languages and to make literacy in a national language a prerequisite for employment in middle

and top level administrative positions whether public or private, and to require the study of at least one national language in the formal school structure. The DAFP is also moving towards more active participation in activity and project planning to provide appropriate research and materials development, teacher training and technical support for development of literacy activities.

In response to the objectives of the proposed Development Society, DAFP would like to change its traditional role of teaching literacy for its own sake, and move toward strengthening its ability to respond to requests for newly organized village development councils, youth groups, and cooperatives which will undertake future responsibility for administration and financing of literacy activities.

10.1.3. Structure

Development Society

The Development Society is composed of elected representatives from the village, canton, county, regional and national levels. The village level organization, called the village development council (CVD), is composed of the samariya, village cooperative, and members of other village social or professional organizations.

No more than fifty percent of the CVD members can be from the samariya or cooperative. The head of the CVD is the village chief.

The samariya, although defined as a youth organization, may have members from ages 12 to 45. Youth in Niger play a very different role from their western counterparts and assume much greater responsibility in the overall economic scheme. They become young adults with family and important responsibilities in economic activities at a very early age. The samariyas have long been a traditional means of educating the young to prepare them for their role in community life. Thus, the membership includes all people directly involved in organizing and orienting these young adults.

At the next level is the Local Development Council (CLD) which is made up of representatives from the various CVDs in the canton with the canton chief as its head. The Sub-Regional Development Council presided over by the subprefect is chosen from representatives of CLDs and the

CRD, with the Prefect as head, and is made up of members from the CSRDs. The National Council for the Development Society will consist of seven representatives from each CRD, and one from each national office of social-professional organizations, as well as officials chosen by the government.

The existing regional technical councils which meet every trimester with the prefect or subprefect (COTEDEP, COTEAR) to coordinate work of the technical services, will be incorporated into the administrative structure, becoming technical offices.

The role of the development councils at all levels is distinct from that of the various government or village authorities concerned with legal and fiscal administration. The councils are responsible for all social, cultural, security and economic development activities. Technical services are to be at the disposition of the development councils.

The Division of Community Development Education in the Ministry of Plan has 15 central staff in four offices: Administration and Materials, Audio-Visual Activities, and Training and Research. There are approximately 269 paid field staff throughout the country, 196 administrators and 73 field agents. Of these, 190 are men and 79 are women. In each region there is a regional coordinator for CDE, an assistant, and a woman in charge of urban CDE activities. At the county level there is a CDE county chief, two assistants and a number of field agents. In many villages there are village CDE volunteers.

Ministry of Youth, Sports, and Culture

The Ministry of Youth, Sports, and Culture coordinates nonformal education efforts through the Division of Youth and Popular Education, charged with overall program planning for CYEs. The Ministry CYE activities are administered in each region by a Youth Inspector who supervises two or three CYE agents. The National Women's Promotion Office (PF), also in this Ministry, has a staff of seven women who are organized to respond to programming needs evident from baseline studies completed by other ministries involved in development projects. The PF also coordinates fund-raising for AFN activities.

UNCC

The UNCC in the Ministry of Rural Development has five divisions: Production, Cooperative Services, Finance, General Administration, and Supplies. At the regional levels, there are regional and county administrators and cooperative field agents responsible for working directly with village and canton cooperative structures. The functions of UNCC are: cooperative member education, training of field agent trainers, commercialization of cooperative production, supply of inputs and animal traction equipment, rural artisan production of agricultural implements, productivity project management, cotton production, and CNCA loan disbursement and recovery activities.

In 1978, cooperatives and GMVs were given legal status and guidelines to prepare members to assume greater managerial responsibility. The guidelines include: voluntary membership, one vote for each member; equality of voting rights; democratic elections; delegates' unique rights in cooperative operations; rationally based interest rates, not to exceed official rates; rational distribution of surplus to members; and establishment of funds for continuing education of members and the general public.

DAFP

The DAFP has a central staff of 84 in Niamey which includes six offices: Administration and Personnel, Pedagogy and Research, Staff Training, Evaluation and Planning, and Production and Printing. In each of the seven regions of Niger there exists a DAFP regional office. Each office has a literacy inspector: twenty of the thirty-five subregions also have literacy inspectors. There are currently 969 literacy centers; of these, 120 are at CPTs, 60 of which are women's centers. The remainder are classified as regular centers, with the exception of three which are associated with SFJAs. No data are available on the number of women's centers existing outside the CPT/Rs, however, indications are that most women's literacy activities are in French and located in urban areas. Many of these are promoted by missionary groups or the AFN.

There are currently 19 Literacy Inspectors, 124 Assistant Literacy Inspectors, 40 Instructor Supervisors and 885 Instructors attached to the National Literacy Service. Not included in these figures are individuals involved in literate villagers' activities such as the village libraries and "newspaper" production.

CFCA

The CFCA is responsible for preservice and inservice training of literacy service staff who will become Literacy Inspectors and Assistants. To become an Assistant Literacy Officer (category B1), three years of training are required for those students just completing the BEPC level and one year for those category C who have had practical field experience. Literacy Inspectors (category A) attend a two-year program at University of Niamey's Literacy Department of the School of Education, begun in 1980. A special program also exists at the university for training primary school teachers who give courses in maternal languages at experimental schools.[5]

The CFCA currently has four professional administrative staff; there are 18 faculty members, ten of whom are permanent.

In the 1981-82 school year, 118 students attended the CFCA, 97 attended the program for Assistant Literacy Inspectors (four were Togolese), seven students graduated from the School of Education at the University of Niamey with the title Literacy Inspector and 14 trainees from various other countries were financed by UNESCO. Twelve of the current CFCA students are scheduled to become primary school teachers.

INDRAP

The National Institution for Documentation, Research and Pedagogy (INDRAP) is a semi-autonomous educational research institute traditionally involved in the development of primary and secondary school curricula and textbook selection; there is informal collaboration with the DAFP in teacher training and materials development (see Primary Education Section for further discussion of INDRAP).

ORTN

To support development activities, the National Radio and Television Office (ORTN) has a Program Advisory Council, made up of representatives of each Ministry and key social and professional organizations, such as the AFN, National Samariya Committee, and the Veteran's Association. This council meets twice a year to suggest program content. The Board of Directors of ORTN then decides what programs will actually be produced based on these suggestions. Across the country there are 438 ORTN employees working in the seven regions with Niamey having the only television station.

Each region has its own equipment and studio and is required to produce a certain number of programs a year.

The Radio Club Association includes 40 local radio clubs. The 40 Hausa and Zerma speaking volunteer radio club agents interview villages and tape discussions around rural development themes treated on the radio. The Radio Club Association has two hours a week of radio time for programming these local debates.

GAP is the mechanism for structuring NGO activities. It submits projects for financing which are: (a) proposed by the local population, (b) approved by local government authorities, (c) reviewed by relevant ministries, (d) sent to the national GAP representative to member organizations at monthly meetings.

10.1.4. Programs

Adult Education activities are supported in large part through the productivity projects financed by USAID, the World Bank, the FED, German Technical Assistance (GTZ), UNDP, the Canadian International Development Agency (ACDI) and the Swiss Cooperation.

In the Ministry of Youth, Sports and Culture, the Promotion Feminine presently has a UNICEF project for the Training of Young Women at the Oumarou Ganda Cultural Center where women learn sewing, knitting and home economics.

UNCC has strong support from DANIDA financing through the International Labor Organization (ILO). This Danish organization provides pedagogical materials and support for the CINECAR which travels throughout the country showing slides and filmstrips related to cooperative management training. In Maradi, with Norwegian financing through the ILO, cereal bank management training is taking place.

ORTN responds to many requests from government or private agencies wishing to use radio or television as part of its program. ORTN provides nonexpendable equipment and technicians for production, while the project or activity organizers are expected to provide specialists for content, and expendable materials such as tapes and film.

The DAFP activities are presently supported in large part by the Swiss Technical Cooperation, USAID, the FED, the World Council of Churches, and the Church World Service. These organizations provide staff, material, financial and logistical support for literacy operations.

10.1.5. External Efficiency

There is no program of higher education for adult educators with the exception of the Literacy Department of the School of Higher Education at the University of Niamey. Category A and B level administrators must be trained abroad.

Villagers trained by UNCC, CDE, CYE agents or the television and radio club may become volunteers responsible for continuing educational activity at the village level. Otherwise, participants in adult educational activities are expected to apply new knowledge through active participation in the realization of development society goals.

The post literacy centers have some activities for newly trained villagers including printing a village news sheet, maintaining a library, and managing a literacy training center. These post literacy centers are gradually being transformed into independently managed centers for continuing adult education called FEPs. the FEP works toward village development goals through production of technical resources to support village social and economic activities; and promotion of cultural activities such as theater, dance, radio and television clubs.

10.1.6. Internal Efficiency

Most mid-level and field CDE and UNCC staff are trained at the Practical Institute for Rural Development (IPDR) at Kolo.[6] Many higher level CDE administrators have received training at the National Community Development Education School (ENEA) in Dakar, the Pan-African Institute for Development in Ouagadougou, or the Institute for Higher Studies in Social and Economic Development (IEDS) in France. Until recently, CDE mid- and field level staff were also trained at the West African Center for Social and Economic Development (CESEAO) in Upper Volta and IPD Cameroon. These trainees are recruited either after the BEPC or three years professional experience.

The National Training Institute for Youth, Sports, and Culture (INJS) was opened in 1979. The first class of CYE agents, 22 men and two women, graduated this year. The CYE section of the school presently has one full-time Nigerien teacher, one Senegalese contractor, two German contractors and a variety of part-time teachers, who are either University or high school teachers, or civil servants. Before the creation of this institute, many staff were trained abroad in the same schools of community development education mentioned above.

At the television station, there are only four electrical engineers and they assume key administrative positions, one being the National Director. Most mid- and top level managers for the ORTN were trained either in France, at the University of Dakar, or the University of Lome. Some are sent to the United States, Canada, Germany or other western countries, depending on available scholarships. Before the opening of the Training Institute for Information Technicians (CFTI), ORTN employees received on-the-job training.

Literacy instructors are trained for fifteen days by the regional literacy officers. These regional literacy officers and their assistants are either Literacy Training Center graduates of former primary school teachers who have received either some training at the National Literacy Center or more recently have spent one year in the formal literacy training program. The projected needs of the Five Year Plan for literacy agents were as following: 24 A level officers, 92 B level officers, 30 C level and two D level. Actual people trained were: 23 A level, 100 B level, 21 C level, and two D level. Teachers at the National Literacy Center are generally holders of masters degrees or the equivalent, and seven are expatriates.

The Literacy Service Evaluation Office, with technical and material support from USAID, is designing a participatory evaluation system to establish a uniform method for assessing the impact of the literacy program and the efficiency of literacy agents. Literacy students, staff, and field agents are in the process of being trained in evaluation methods. The office is also assisting Literacy Training Center personnel to develop a system of evaluating the quality of training the Center provides and its impact on the national literacy program.

Materials for literacy training are developed by the National Literacy Center with the participation of various technical services and rural development projects. Brochures and texts exist in national languages and French for an array of subjects including agriculture, health, commercial activities, cooperatives, and oral traditions. Regional literacy centers and villages produce national languages newsletters. Three print shops are located in Tillabery, Zinder, and Niamey. Students at the National Literacy Training Center are often involved in the development of new texts as an integral part of their training.

In addition to the national newspaper which publishes articles in five languages, there are 12 regional papers printed at regional literacy centers, 50 village news sheets, a calendar printed in five national languages, and 136 village libraries.

10.1.7. Access and Equity

In 1982, there were 16,179 adults enrolled in literacy training centers across the country. Most of the participants are male and from rural areas, although some participate in French literacy classes given at business or professional organizations. Most women's literacy classes are found in urban centers and are in French.

The majority of Niger's population speaks Hausa and most centers give instruction in this language with Zarma being the second most widely studied language. Tamasheq, Kanuri, and Fulfulde centers are few in proportion to their populations.

The AFN has a voluntary representative in most villages throughout Niger to encourage women's activities.

10.1.8. Administration and Supervision

At the village level, literacy activities are supervised by the Village Literacy Committee which has from three to seven members who organize and supervise literacy classes and instructors. S/he is paid either by the Regional Literacy Office or a project. Where post-literacy centers exist, the village is responsible for remuneration of the instructor.

There are instructor/controllers chosen to supervise three to four instructors in a given area. These controllers are also teachers and are paid by the Literacy Office.

At the county level (arrondissement), Regional Literacy Officers or Assistants organize the yearly program, inform the population, and supervise the instructors.

The COTEAR (County Technical Committee) made up of the subprefect (county administrative director), the representatives of technical services, and traditional chiefs, coordinate the actions of the literacy service and the other technical agencies.

At the Department level, the Regional Literacy Officer organizes the program for the whole department, including training and some pedagogical materials production. He also supervises all the literacy activities for his region. The COTEDEP is the Regional Technical Committee made up of the Prefect and the heads of regional technical agencies. This committee determines and coordinates development activities including literacy.

The National Literacy Office in Niamey is responsible for supervisory visits to the field. A supervisory office has recently been established at the National Literacy Office. This office will establish a system for monitoring and follow-up of literacy activities, when it becomes fully operational.

10.1.9. Costs and Financing

The Ministry of National Education provided .0149 percent of its budget for literacy in the Five Year Plan. The latest expenditure figures show that 36.7 percent of that was actually allocated by the GON. Funds for literacy and other adult education activities also come indirectly from the Ministry of Rural Development budget in connection with productivity projects and to provide salaries for UNCC or agricultural agents doing literacy training. The PIC states that 33.9 percent of existing literacy centers are donor-financed.

The cost of establishing new literacy centers is CFA 104,320 and CFA 134,320 for a CPT or CPR. This includes an instructor's salary of CFA 7,000 per month for six months, which takes into account a planned increase over the present salary of CFA 5,000 per month. If the instructor is also employed by the rural development service s/he receives additional recompense for literacy training.

The Swiss Evaluation of 1981 estimates the cost of producing one literate adult at CFA 231,000.

The ORTN has a budget of 900 million CFA, 80 percent of which is government and 20 percent revenues from advertising and program services. The Radio Club Association only received 15 million CFA a year.

10.2 Plans

The Ministry of Plan, in conjunction with the EEC, has developed a national plan to reorient rural development

activities toward achievement of the goals of the Development Society. In Five Studies on Training (EEC, February 1983), a system to establish an integrated approach to direct villager training and support of village development activities is proposed. There is strong emphasis on the integration of literacy training. Multidisciplinary development training teams will be constituted and a national fund for the implementation of village initiated projects is planned. The various rural development agency field staffs will be retrained in methods of nonformal adult education to provide them with skills necessary to promote village organization, planning, management, implementation and evaluation of their own project initiatives. The role of technical services will be reoriented to one of responsiveness to villager requests for assistance.

The plan proposes that literacy training be rapid, rigorous and functionally integrated with practical and technical training. The plan suggests employing the methods used successfully in Niger between 1967-74, documented in the book Alphabetisation et Gestion des Groupements Villageois en Afrique Sahelienne by G. Belloncle, P. Easton, P. Ilboudo, and P. Sene.

The first year the project will have 18 training teams: two for each region, two for ONAHA projects, and two for other activities. Each team will work with volunteer villages during five phases:

Phase I - Analysis

In this phase a series of meetings are held with villagers to analyze constraints, and determine solutions for achieving village development.

Phase II - Programming

New meetings are held to establish measurable objectives and outline a calendar of actions for villagers and technical services and to determine what materials and resources are necessary for program implementation.

During this phase a contract is negotiated between villagers and technical services stating the responsibilities of each toward achievement of stated objectives. At this time, villagers assign tasks, i.e., who will participate in technical training and literacy, who will be responsible for administration, or provision of materials and infrastructure.

Phase III - Implementation

This is the period of theoretical and practical training to meet village objectives in agriculture, livestock raising, cooperative methods, literacy, health, nutrition and hygiene.

Phase IV - Evaluation

Results of the first three phases are discussed and analyzed between the villagers and training teams to determine success and failures, and to plan modifications accordingly for the next year.

Phase V - Followup

The villagers and training team plan a new program to strengthen the previous year's activities through training and refinement of support structures.

The Village Initiated Project Fund and a Training Unit will be attached to the National Commission for the Establishment of the Development Society. The fund will make 100 million CFA available the first year and increase progressively until 300 million CFA are available each year for locally initiated projects. The Training Unit will initiate and follow-up village training activities. It will collaborate directly with the Ministry of Youth, Sports and Culture to provide pedagogical support for trainers at the Training Institute for Community Youth Educators (INJS) and for trainees during their practical field experience.

The Training Unit will also be responsible for recruiting and training young people from rural areas who have at least a junior high school education, for one year. They will then go back to their regions and work with the village projects, eventually to be paid directly by them.

Another MOP/EEC proposal is to increase the capacity of the INJS to train both men and women CYE agents to 60 per year, and to adapt their training to the needs of the development society. Increasing CYE agents is considered essential to fulfilling development society goals as the samariya through which they work is the strongest and oldest existing organizational structure at the village level and the mainstay of the development society.

The World Council of Churches is financing a two-part Women's Education Project to complete a baseline study and

needs analysis for women's literacy, and establish literacy centers throughout the country based on the results.

CILSS Italian assistance to the Keita Valley integrated rural development project will open 100 new literacy centers in the Tahoua Department this year.

USAID plans an innovative functional literacy effort in Fulfulde and Tamasheq as part of the Niger Range and Livestock Project in the Tahoua Department for nomadic herd-people, in addition to continuing its support to DAFP in the area of evaluation methodology and construction of the extension of the National Literacy Training Center.

The Swiss have a new five-year program which will continue providing technical assistance and logistical support to the DAFP and to the CFCA.

The World Bank will finance a project in Tillabery through the National Office for Irrigated Agriculture (OHANA). This is a functional literacy project directed toward developing cooperative management skills for irrigated agricultural production. Two systems of literacy training are to be elaborated which will specifically respond to needs of both illiterates and those who already read and write in Arabic characters (Ajami).

CREAA, the Regional Council for Adult Education in Africa, has decided to build its regional higher education center for literacy training in Niamey.

There is a plan to move training of CDE agents form IPDR/Kolo to the CFCA, at the same time detaching CFCA from the direct supervision of the DAFP.

USAID, through its Agricultural Production Support project, is financing the construction of a National Center for Cooperative Training to train 40 UNCC field agents per year for four years and provide two-week courses for elected cooperative officials in cooperative organization, leadership and management.

Peace Corps plans to expand its Crafts Development project under the Ministry of Youth, Sports and Culture by recruiting four new volunteers to teach women sewing, knitting, embroidery, crochet, macrame, tie-dying, batik, doll-making and tailoring. Efforts are also being made to find volunteers with background in fund-raising and small business development to teach women to market their new skills.

PF is seeking financing or gardening, small animal raising, and child care project requests from the Niamey, Maradi, and Tahoua regions.

At the OCDE Division of the Ministry of Plan, there is interest in implementing two women's projects: Bingou salt production in Gaya and a nomad settlement project in Filingue.

10.3 Analysis

10.3.1. Constraints

The major constraint to adult literacy education is the government emphasis on delivery, which is not balanced by promotion of popular demand.

Related to the promotion of demand for literacy training is the current unclear status of national languages. Until action is taken on the Zinder Declaration, recommendations regarding the legal status of national languages, the literacy training effort remains subject to skepticism regarding its purpose and application.

A low level of literacy, in turn, hampers the efforts of adults in self-management of rural development projects and cooperative activities.

Decentralizing development activities will require a new approach to technical service delivery. At present, the number of adequately and appropriately trained people able to provide development education and functional literacy training is insufficient to implement a decentralized delivery system.

Another constraint is the lack of coordination among the various development organizations, both government and private. The MOP/EEC plan to use a multidisciplinary team is a step toward alleviating this problem. Nonetheless, technical agencies themselves must be reoriented to establish complementary systems responsive to the needs of rural populations.

10.3.2. Issues

10.3.2.1. External Efficiency

Training alone cannot resolve the social and economic problems of the rural adult population. Complementary action is necessary to remove constraints impeding rural

development efforts. These constraints include the insufficient and irregular supply of inputs, lack of access to credits, inappropriate government pricing policies, inadequate marketing techniques, lack of physical infrastructures, poor village organization, and inadequate health care delivery.

The impact of adult education efforts in general, as with literacy, are difficult to measure. What actually becomes of new literates who are able to read, write, and calculate in maternal languages is unclear. The question was repeatedly asked, but there has been no extensive systematic study to obtain evidence for any of the variety of responses received. Some insist that literates are the most active participants in social and economic development of their villages. Others claim literates soon revert to illiteracy.

Literacy for literacy's sake, although it may have some positive effects, is not an efficient way to promote rural economic development. There is no apparent relationship between the ability to read and write in a maternal language and increased opportunity for employment or improved social condition. This is reflected in the high attrition rate at literacy centers, the low percentage of literacy students who become literate, and a distinct preference for literacy in French.

Successful attempts have been made in the area of functional literacy[7] for cooperative members who were highly motivated to learn to read and write to assume full responsibility in their posts as president, secretary, or treasurer. They were trained during six intensive one-week sessions, using content and methods directly related to the practical execution of their cooperative member roles. However, these efforts were not followed up with the translation of necessary documents into local languages; nor were government officials assigned to work with villagers literate in the local language. In large part, this situation is typical. A UNCC agent teaching literacy in Hausa at Founkoye still uses loan agreements, accounting procedures and other materials written in French.

When various rural development technical assistance agencies were asked why they did not employ more local language literates, they indicated that literates were not necessarily villagers' choices as representatives. Nor are literates necessarily the most qualified people for given jobs. This observation is a valid one. Good managerial or technical skills are not necessarily functions of literacy, which again raises the question: why literacy?

The death of literature and documentation in national languages is a recognized impediment to the practical use of newly acquired literacy skills. Although village libraries and printing presses exist at post-literacy centers, their potential has not been exploited. Libraries are small and their materials are read by most in a very short time, and new materials are added infrequently.

The village newspapers produced by literate villagers are of no interest to illiterates and of fleeting interest to those who produce the paper; circulation outside the village is small. Regional newspapers such as JINE KOY YAN printed in Tillabery and especially GANGAA from Niamey have more extensive popularity. They include articles on community development activities and educational material in health, nutrition, and hygiene.

FEPs, for the most part, do not yet exist as planned. Villagers have been unable to establish self-managed and self-financed income generating activities at a level necessary to maximize the need, or facilitate the delivery of, the kinds of services that such a village organization could provide.

There are some indications that literacy training in conjunction with agricultural education at CPTs and CPRs may increase small farmer access to technical inputs and marketing channels, thereby increasing their productivity.[8]

Radio and television programs reach 85 percent of the Nigerien population and 75 percent are in national languages. An evaluation of the impact of radio and television was attempted in 1981 by three experts from Radio France International. However, inappropriate survey techniques resulted in interviewees' refusal to respond to the team's inquiries. ORTN regularly solicits user input through transcription and analysis of the radio club tape recordings of the rural population reacting to its programming. Indications are that the radio and television have a strong potential for rural development education than any other single method of nonformal education.

10.3.2.2. Internal Efficiency

Training of adult educators in Niger emphasizes technical skills delivery and neglects the teaching of process centered approaches to adult learning. Community education agents (CDEOCYE) arrive in the field with little practical experience and, hence, are unable to confront the

concrete problems of rural villagers. They lack the ability necessary to help villagers analyze problems, set project objectives, evaluate and determine constraints or establish implementation plans.

CDE agents become little more than messengers of planned project interventions as opposed to catalyzers of village action. Evidence suggests that many of the UNCC field agents compete for control of cooperative activities, preventing cooperative self-management.

The attrition rate at literacy centers is extremely high. Of those who initially enroll, it is estimated that, at most, half are still enrolled by the end of the literacy campaign, and many of those have not attended classes regularly. One of the main reasons for attrition is seasonal rural migration to find work in neighboring countries. A related problem is simple lack of interest and motivation as there is no perceived benefit for acquiring literacy skills (see External Efficiency). The literacy trainees able to write at the end of a campaign make up less than seven percent[9] of those who are tested, or an average of one or two adults per center. An analysis of methodology and curriculum content provides some explanation. Teaching methods are often repetitive and do not consider variations in learning rates related to prior experiences or training.[10] Some of the materials used have not been changed for many years and there is a dearth of instruction materials adapted to local interests and needs. There appears to be a great need for booklets on cooperative management, agriculture, health and rural development.

Instructor training is inconsistent, some teachers receiving as few as three days training in literacy education techniques. Instructors do not show up regularly for classes and their use of authoritarian teaching approaches has also been cited as responsible for poor internal efficiency. This is less true for those instructors who were once literacy trainees themselves, but common among those who are former primary school teachers.

Although the capacity exists for producing written materials in national languages, the three production centers at Niamey, Zinder, and Tillabery are not fully operational, owing to technical problems. A related problem is the need for common orthography for each national languages; the National Literacy Service is making an effort to redress this situation.

Literacy Inspector and Assistant Inspector training has improved significantly since the institution of the National Center for Literacy Training. The increased demands for training at the center exceed its current capacity; however, if the Regional School for Literacy Training is built, it will absorb some of this demand.

The CFCA program is relatively new and may be overly ambitious considering that most students enter with only a junior high school education. The staff is aware that the material presented is often too sophisticated and excessive for adequate coverage during the training program, which is thought by many to be too short. Attention is being given to the institution of practical versus theoretical training.

The Literacy Department of the Teachers' College at the University of Niamey lacks adequately qualified staff for teaching courses in literacy and rural development subject areas. Students are obliged to take most of the same courses as future primary school teachers and inspectors. This program does not meet the requirements for training higher level literacy agents.

Literacy teaching through television is still in the experimental stages, though it has a great deal of potential. The first phase showed that classes were too short (seven minutes) and viewers did not really pay attention to content, but rather came and went during programs, which were designed for spectators rather than participants. New programming is planned which will increase the time of each language program, and train field agents to prepare villagers for the television shows and produce follow-up activities. Materials for preparation of these televised training programs are inadequate, however. There is to be a seminar on literacy training through the television this year to attempt to resolve some of these problems.

Radio and television, despite their enormous potential, have yet to be fully exploited. At the Program Advisory Council meetings of the ORTN, few suggestions regarding programming are made. The ORTN finds itself obliged to propose program content. Coordination between agencies involved in adult education and the ORTN is unsystematic and weak, and has even resulted in inappropriate and untimely programming. The Radio Club Association suffers from lack of resources and its placement in the Ministry of Plan rather than the Ministry of Information.

The ORTN emphasizes radio over television as radio programming is less expensive, radios are inexpensive and portable, and radio reception covers a larger area. However, the television station (see Annex 2 for television diffusion zones), although currently producing 12 hours of programs a week, has the capacity to produce 100 hours. Given equal time, the impact of the television image is far superior to radio listening for educational purposes.

MOP/EEC study notes that the training potential of the Volunteer Corps is not sufficiently utilized. More often than not, the volunteer is placed because there is no qualified Nigerien to fill the position; therefore, volunteer time is spent on execution of an activity and there is usually no counterpart to be trained. Volunteers also often lack materials, or training in adult education methods necessary to transfer their skills most effectively.

10.3.2.3 Access and Equity

Hausa and Zarma speaking groups have more access to literacy education proportional to their percentages of the population than do the Kanuri, Tuareg or Peuhl. One reason for this lies in the difficulty of recruiting Literacy Inspector candidates from these latter language groups, although the CFCA is making efforts to improve this situation, particularly vis-a-vis the Tuareg and Fulfulde. Establishing a system of training adapted to their nomadic lifestyles is a major undertaking. The USAID Niger Range and Livestock Project is making headway in this area through the design of a literacy program organized around market places and time schedules which fit the living patterns of these mobile populations.

With the exception of CPTs and CPRs and some urban programs, there is very little participation of women in literacy activities. Reasons range from overwork with food production, homemaking, and child-raising, to men's refusal to allow women to participate in educational activities, to the lack of women instructors.

Where women do participate there are indications that attendance is less regular than in men's classes, and learning rates are lower. This may be attributed to the presence of children which are a continual distraction for all participants and to the lack of perceived benefits from literacy for women.

Problems also exist where old and young attend classes together, as it is insulting and humiliating to an older

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person, whose experience and wisdom is highly esteemed and respected, to be in the same learning situation as the young, particularly if performance is not equal.

Another problem related to attendance and popularity of literacy classes is the way in which the idea of literacy is first introduced. The Community Education Office, responsible for introducing project activities and recruiting people for the CPTs and CPRs, for example, underplays the importance of literacy as an integral part of the project, thus minimizing participants' perception of literacy benefits.

Generally, women's access to educational services is small. In many cases this access is prevented by traditional Islamic codes requiring that women teach other women. There are far fewer women community workers than men. Only two women graduated from INJS this year as community youth agents. UNCC has only two women cooperative agents.

Of those existing women educators, few work in rural areas. Therefore, most women's educational activities take place in urban youth or cultural centers, or PMIs where women are taught sewing, knitting, other crafts, and nutrition education.

Women would participate in the organization and management of activities were they to have access to information, training, and credit. This has been demonstrated by the success of women's gardening projects which have received NGO financing in the Tara and Dosso regions. The Niamey Department Development Project financed by USAID has made major progress integrating women into the development process by hiring and training women field agents, and introducing women specific activities such as improved wood stoves and grain mills.

The placement of the National Women's Promotion Office in the Ministry of Youth, Sports and Culture is an indication of an underlying attitude regarding women's status in Niger. The AFN, with an elected representative in each village, has a great deal of potential for promoting women's participation, but lacks a broad based organizational structure through which activities can be started.

10.3.2.4 Administration

A coordinated systematic approach to adult education planning does not exist in Niger. Technical services and

donor projects have their own programs and approaches, often duplicative, sometimes conflicting.

The distance between central administrative offices and the target population is great, and supervisory and feedback mechanisms are not sufficient to assure that plans are appropriate and implementation effective.

There is a high absence of motivation on the part of trainees and supervisors. The literacy program is an example which can be generalized. Organization of literacy activities begins late and campaigns to encourage popular participation are carried out in a hasty, routine manner, often without the collaboration of the rural development agencies. No time is allowed for popular debate on the subject of literacy. Villagers are simply instructed to create a literacy committee and build a hut for classes if they are interested in instruction.

Once begun, classes may be irregular, materials insufficient and lamps and kerosene unavailable. Village literacy committees may exist in name only and instructors lack controller supervision.

There does seem to be improvement in the quality of Literacy Inspectors and Assistant Inspectors since the opening of the CFCA, but better logistical support for more frequent and longer supervisory visits is necessary.

An important issue raised by the Swiss Evaluation of Literacy Training in Niger, is the presence of the DAFP in the Ministry of Education which has children as its primary target group, not the adult population.

Generally, coordination through COTEAR and COTEDEP between the various technical services involved in adult education is not always achieved, partly because of the transitory nature of government administrators.

10.3.2.5. Costs and Financing

The cost of training an adult literate, though high, is not much greater than producing a literate child through the primary system (see Economic Analysis). However, there is no evidence to show that adult literacy education is an efficient investment for overall socio-economic improvement.

The GON wants literacy and educational activities to become the responsibility of the villages in accordance with development society goals. Preliminary efforts toward the

institution of village managed centers have been attempted through the FEPs with little success. Villagers are unwilling to pay for their own instructors and FEPs have not succeeded in generating income through cooperative efforts as planned.

12.4 Conclusions

The lack of a comprehensive adult education strategy for planning and implementation of programs affects all sectors in this chapter. Niger is attempting to implement a complex structure of service delivery soliciting information, assistance, and participation from all social levels but continues to work through a highly centralized, albeit ministerially scattered bureaucracy. Evaluation of ongoing programs and the ministerial consolidation of programatic responsibility would assist the GON in determining an appropriate implementation plan for the Development Society. The remaining issue which involves policy in formal and non-formal education is the use of indigenous languages. Within the adult education sector the GON should determine the functional status of indigenous languages and articulate a consistent policy towards the use and promotion of these languages.

10.5. Recommendations

Recommendations 1: Develop comprehensive strategy for planning and implementing adult education programs.

A coherent, all inclusive strategy for planning and implementing adult education programs which will provide practical skills necessary for villagers to effectively initiate and manage their own programs must be adopted. The MOP/EEC Study makes specific proposals for establishment of multidisciplinary training teams, a fund for village initiated projects, and a central training unit to be attached to the National Commission for the Establishment of the Development Society. These measures should be implemented as soon as possible. When establishing multidisciplinary teams, a careful review of the functions and effectiveness of various technical service extension agents should be made in view of eliminating those services whose roles are superfluous or ineffective.

Recommendation 2: Evaluate all training programs for rural development managers and extension agents.

It is important to evaluate all the training programs for rural development managers and extension agents to

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assure that content, method, length, and approach are relevant to the requirements of the particular job profile. The MOP/EEC plan also gives guidelines for achieving this, as well as proposing an in-service training project to reorient mid-level managers and extension agents towards the uses of facilitative rather than directive approaches in adult education. These actions will improve adult education efforts at all levels.

Recommendation 3: Consolidate or coordinate all adult education activities through a coordinating committee or single ministry.

The government should reopen discussions regarding the division of technical services which participate in rural development activities among different Ministries. The work of the Adult Literacy Community Education Office and the National Women's Promotion Office is integrally related to that of other rural development services which fall under the supervision of the Ministry of Rural Development. Coordination between these offices is essential either through the creation of an active coordinating committee, or consolidation of all rural development adult education related technical services under one Ministry.

Recommendation 4: Strengthen use of radio/TV technology for adult eduction.

Strong emphasis should be given to maximizing the use of radio, radio clubs, and television for adult education on these media reach 85 percent of the population. To exploit television's full potential, major investments in financial and technical resources are necessary. The ORTN is making preliminary efforts to wean itself from state financing through film production and commercialization of programming. Considering the potential impact of television education, the ORTN should be encouraged to develop cost efficient methods of production.

The radio clubs, through organization and financing, could have enormous potential for promoting participation in development activities as well.

Recommendation 5: Apply a core-group functional literacy model to village literacy campaigns.

The functional literacy model documented by G. Belloncle and P. Easton, et al[11] which promotes rapid assimilation of cooperative techniques through literacy for four or five key villagers, should be systematically applied

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in relation to rural development efforts. Villagers must become literate and learn methods of bookkeeping and stock control to allow them to take over total responsibility for managing loans for production, marketing and reinvestment of cooperative resources.

Recommendation 6: Conduct an impact evaluation of adult literacy programs.

An extensive study should be undertaken to learn what effect, if any, literacy training has on the lives of adults. It would be valuable to know the effect of the transfer of technical skills through literacy training. For example, does a literate person have greater access to a wider variety of information? If so, how does s/he use this information? How do literates use their skills, if they do at all? The results of such a study would be invaluable for the planning of future literacy activities.

Recommendation 7: Promote maternal language materials production

To promote materials production, DAFP should examine ways of maximizing the capacity of the three regional printing centers at Tillabery, Niamey and Zinder. The World Bank will soon be finanacing a major effort for textbook production in national languages for primary schools through INDRAP.[12] There is potential for decentralizing this activity while strengthening regional capacity.

Recommendation 8: Give specific functional status to indigenous national languages.

Precise legal status must be given to the national languages if national language literacy training is to be taken seriously. They must become the working languages of government organizations as the Plan Interimaire de Consolidation 1984-85 (PIC) suggests. Official documents should be translated into national languages, and reading and writing at least one local language should be a prerequisite for employment in middle and top level managerial positions, whether public or private. The study of at least one national language should be required in the formal school structure. The future of national languages and the conservation of the tradition and culture they guard depend on the government's willingness to promote their official use.

Recommendation 9: Promote further linguistic development of indigenous national languages.

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Equally important is the promotion of transcription of oral history, folklore, and songs, and the writing and production of novels, texts, and technical materials in national languages. Many institutions such as the Institute for Humanistic Studies (IRSH), the Center for Linguistic and Historical Studies of Oral Traditions (CELTHO), the University of Niamey, and the National Institution for Documentation, Research, and Pedagogy (INDRAP), and the National Literacy Office are involved in various aspects of materials production. Through more coordination and combining of resources, they could be more efficient. For example, CELTHO has a library of recordings of oral tradition and historical materials that have not been exploited. They are of direct interest to the National Literacy Office for production and distribution of literacy training and post literacy materials. The eventual promotion of these production activities through private enterprises should be encouraged.

Recommendation 10: Support village-level permanent education centers.

At the village level, the concept of the permanent education center (FEP) should gain more meaning with the transfer of responsibility to villagers through the development society and support projects. Financing should be made available not only for core literate group collective efforts, but individual efforts as well.

The most important investments to promote increased adult literacy must come through the rural development agencies' efforts to increase production and decentralize control. Through actualization of the plans for the development society, villagers will demand, and pay for, literacy training.

Recommendation 11: Strengthen curriculum development within DAFP.

DAFP should emphasize curriculum development and use of nonformal adult education methods to improve literacy instructor training. It should be remembered that learners are adults with a wide range of experience, creativity, and reflective capacity. As long as illiteracy is equated with ignorance in the rural development and adult education system, potential learners will be suspicious of the formally educated literate minority. Instructors must be equipped to respond to the interest and needs of their compatriots. Fifteen days of training is hardly sufficient to prepare them for the effective transfer of literacy

skills. Adult education techniques should be introduced, developed, and adapted with literacy instructors' participation. Their training should conform to the same principles and techniques which will be used at the village level. They should learn to become facilitators of the educational process as opposed to traditional teachers.

With the institution of the MOP/EEC proposed multidisciplinary training team, the development of adapted teaching materials and curricula should be possible. The literacy trainer could work with a supervisor to choose and plan curricula around the results of discussions with villagers during the process of determining training needs.

Recommendation 12: Institutionalize participatory evaluation system.

Current efforts of the DAFP in the design and implementation of a participatory evaluation system are essential for improving the quality of training at all levels. DAFP should consider what kinds of technical and logistical support will be necessary to institutionalize these systems of evaluation and applied research. Increased quality for existing centers will have a greater long term effect on literacy rates on Niger than emphasis on quantity, which has not proven to be a successful strategy over the past 20 years.

FOOTNOTES

1 UNESCO Statistical Digest, 1981.

2 See Section 3 for a discussion of Koranic schools.

3 UNESCO, "Travaux Preparatoires a un Programmed Regional d'Elimination de l'Analphebetisme", p. 9, 6-10 April, 1983.

4 See other sections--Vocational Education and Management for details.

5 See Primary Education Section.

6 See Agricultural Education for indepth treatment of Kolo.

7 Belloncle, G. and Easton, P. Alphabetisation et Gestion des Groupements Villageois en Afrique Sahelienne.

8 See Section on Agricultural Education.

9 Swiss Evaluation.

10 Belloncle, G. Proposition pour une methode d'Alphabetisation liée à la Gestion des Amenagements Hydroagricole du Fleuve Niger. Avril 1983.

11 Alphabetisation et Gestion des Groupements Villageois en Afrique Sahelienne.

12 See Primary Education Section.

11.0 Health Education

11.1 Status

It is estimated that 40 percent of Niger's population have access to health care. Life expectancy is 42 years and the infant mortality ranges from 162 to 200 per 1,000 births. Possibly 60 percent of total deaths occur in children under five. The predominant causes are malaria, measles, and diarrhea, combined with malnutrition. Bacterial and viral infections such as tuberculosis, meningitis, and hepatitis are also major causes of mortality. Schistosomiasis, a parasitic disease, is common along the river and in irrigated areas. Venereal infections are frequent in older age groups.

Rural areas, which make up 90 percent of Niger, have more severe illness problems due to a less adequate and accessible health care system, the drought's impact on nutrition, limited water supplies, and problems in environmental sanitation.

Health education is supposed to be a major concern of all health personnel. The present emphasis on education is through mother and child care centers (PMIs), the primary health care system and environmental sanitation efforts. The regional productivity projects provide health education through the rural technical and rural promotion centers (CPTs, CPRs). Radio and television devote substantial time to health matters.

11.1.1. Overview

Niger's policy and performance in the health sector are impressive in comparison to other West African Sahel countries. In 1964, with financing from USAID and technical collaboration from WHO, the Government of Niger (GON) prepared a Ten-Year Perspective on the Development of Health Services (1964-73) which underlined the need to reform the health sector, giving emphasis to rural public health, preventative and curative care, and health education, especially mother and child care, nutrition, and village hygiene, and training of Nigerien health workers. At this time, the GON emphasized development of village health care auxiliary training which had first been introduced by the French in 1959. These village health teams (VHTs) consisted of a *secouriste* (first aid worker) and a *matrone* (retrained midwife). In 1974, with a change in government, there was a renewed effort to decentralize health care,

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emphasizing preventative practices, strengthening infrastructures, supplying more medicines and logistical support, training health personnel and VHTs, and integrating appropriate traditional practices into the modern health sector.

USAID's Rural Health Improvement Project (RHIP) was designed to assist the GON to achieve its Three Year Plan 1976-78 objectives of strengthening the health system and expanding its coverage, training 1,500 village health teams and retraining 13,500 existing health workers, in addition to strengthening personnel and logistical support services required for the success of the VHTs.

The Five Year Plan, 1979-83, objectives were to continue expanding and improving the health infrastructure, to intensify efforts in training and staff development at all levels, and to reorganize the health services to provide increased and optimal delivery. Priority emphasis was placed on:

Maternal and child protection
Hygiene and sanitation
Nutrition
Medical supplies and distribution
Rationalization of health delivery services
Improved distribution of health personnel
Intensification of training efforts.

At the end of 1982, the GON had achieved 88 percent of its objectives regarding the number of existing VHTs and 92.5 percent regarding dispensaries. Personnel training fell far behind established goals; only 17 percent of registered nurses, 26 percent of doctors, 31 percent of social workers, 39 percent of practical nurses and 58 percent of midwives estimated as necessary to meet the objectives. At 79 and 92 percent respectively, assistant social workers and pharmacists' goals were much closer to being met; the goal for dentists was completely met (See Table 11.1).

11.1.2. Goals and Strategies

The Ministry of Public Health and Social Affairs (MSP/AS) has proposed in the Interim Program of Consolidation 1984-85 (PIC) to substantially improve the health status of the total population by the year 2000 through preventative, educative, and curative actions. Particular emphasis will be placed on: training of health

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Table 11.1

PERSONNEL OBJECTIVES AND REALIZATIONS - FIVE YEAR PLAN (1979-1983) NIGERIENS AND EXPATRIATES

CORPS	SITUATION 1978	SITUATION prévision	SITUATION 1982	%	RATIO 1978	RATIO Objectives	RATIO 1982	Difference
Doctors	118	194	138	26	50,000	30,000	42,353	-56
Pharmacists	10	23	22	92	523,960	240,000	265,000	-1
Dentists	9	12	12	100	582,187	500,550	487,050	0
I.D.E.	345	728	493	39	15,187	8,250	11,855	-235
S.F.	83	288	204	58	8,336	2,852	4,011	-84
I.C.	735	1,530	873	17	7,129	3,911	6,695	-657
A. Sociaux	16	48	26	31	327,475	125,138	224,796	-22
A.A. Sociaux	65	160	140	79	80,609	37,541	41,748	-20
Lab Technicians	28	-	71	-	187,129	69,844	82,320	-

staff, improving existing infrastructures, the importance of education and prevention for popular application of good health practices, the integration of the health care system into the development society structure to solicit voluntary participation in all health efforts, and improving health training. A major effort will be made to expand the health system to provide coverage taking into account regional disparities.

The objective of the PMIs is to increase prenatal and nutritional consultations by 20 percent. The immunization coverage of 50 percent of the population is to increase to 70 percent. Objectives regarding the fight against disease are:

Diarrhea:

To increase oral rehydration therapy for children under five to 46 percent in 1985.

To reduce mortality from diarrhea from 18 percent to 13 percent.

Malaria:

To reach 46 percent of pregnant women, and children under five with malaria prophylactics.

To reduce the mortality rate to 10 percent.

Strategies for attaining these objectives include training more health workers and improving health curricula, and prioritizing popular consciousness-raising and educational activities. There will be more training and retraining of femmes relais (community health liaisons), an increase in home visits, more literacy training at social centers and PMIs, programming for home economics and civics education, and promotion of increased participation in food preparation demonstrations.

Social actions related to health education to be undertaken are: creation of a venereal disease treatment and education center, the extension of health and nutrition education through women's centers into neighborhoods and villages; the introduction of physical, social and family education into educational programs; increased training of mid-level social action agents at the National School of Public Health (ENSP); and a study to determine possibilities for higher education, extension of social action education to VHTs, and creation of social action centers in all regions.

The GON would also like to improve hygiene and sanitation programs through training of agents and promotion of private enterprise. For nutrition there will be more emphasis on staff training, popular education, strengthening of the Interministerial Nutrition Committee, and development of easy access to children's weaning foods for Nigerien mothers.

The government is also making efforts to incorporate traditional medicine into the health system through establishment of an office for research, and training traditional healers.

The GON wants to motivate the population to begin actively participating in the maintenance and financing of health care services. It recognizes the weakness of its health education office and intends to design and implement a health education program to promote a national health education campaign.

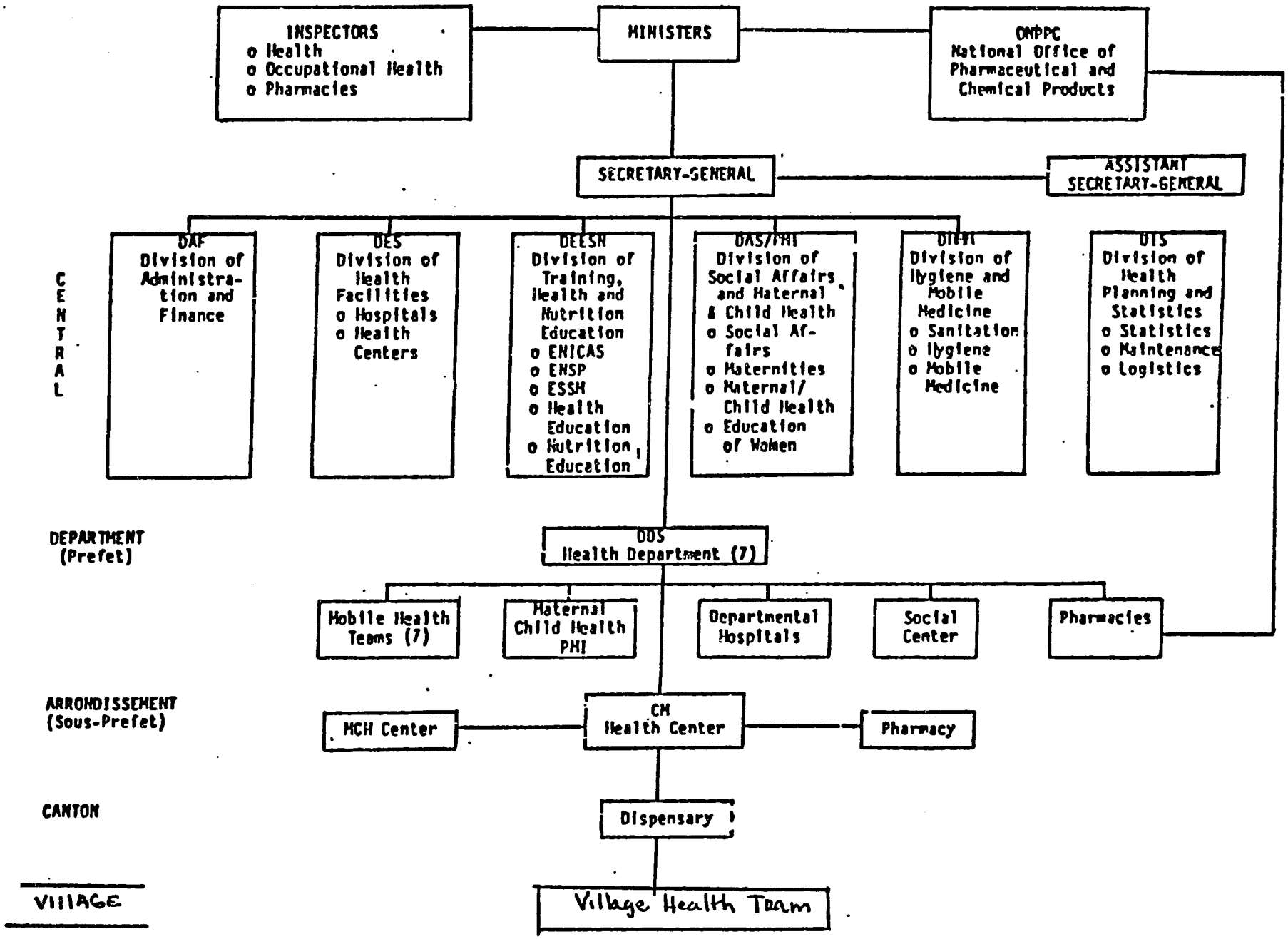
11.1.3. Structure

Chart 11.1 shows the Ministry of Public Health and Social Affairs structure. At the national level, the Division of Training, Health, and Nutrition Education (DEESN), Division of Social Affairs and Maternal Child Health (DAS/PMI) and the Division of Hygiene and Mobile Medicine (DHMM) are primarily responsible for health education activities.

There are two national hospitals, one in Niamey and one in Zinder, three private hospitals and five regional hospitals: Agadez, Diffa, Dosso, Maradi, and Tahoua. There are seven health departments, 38 medical centers, one per arrondissement and commun, 24 medical posts, 205 rural dispensaries, 20 PMIs and six mobile health teams.

The Health Department (DDS) in each of the seven regions oversees the mobile health team, PMIs, and the medical center (CM). The mobile health teams are responsible for immunization campaigns, control of potable water supplies, and sanitation. The CMs are located in the most populous towns of the arrondissements to train village health teams; they are directed by a state licensed nurse, assisted by two to three certified nurses, several laborers, and one or more drivers.

ORGANIGRAM OF THE
MINISTRY OF PUBLIC HEALTH
AND SOCIAL AFFAIRS



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Most preventative health activities are carried out at the PMIs. These centers work with pregnant and nursing women, providing prenatal care and infant and young child nutrition education. PMIs are either autonomous or connected to maternities or dispensaries. They are staffed by nurses, state midwives, and social workers. The PMI staff provide daily talks on chosen subjects related to mother and child health. They also provide pre- and postnatal exams, nutrition follow-up and education (food preparation demonstrations), as well as curative pediatric care. PMIs provide sewing, knitting, and literacy training. The PMI staff is responsible for training village matrones.

At the canton level, the dispensaries or rural health posts are staffed by one certified nurse; and at the village level, health care is dispensed by the VHT.

The 3,533 existing VHTs are supposed to have two secouristes and two matrones. Many villages, however, have only one secouriste and one matrone. The secouristes are male and provide simple basic medical care with a small medical kit of essential drugs. They also provide health and sanitation education. The matrones are traditional midwives trained in recognition and referral of high risk pregnancies, clean delivery, and postpartum surveillance of the mother. Matrones also have a basic kit for deliveries. Matrones and secouristes share infant care duties. Supplies for both secouristes and matrones are replenished by the periodic (planned monthly) visit of the certified nurse from the dispensary, or purchased at the Pharmacies Populaires. Fees are charged for the service of both the secouriste and the matrone who purchase drugs and supplies.

VHTs are organized and administered by village health committees which include secretary/treasurers to oversee financial transactions. In nomadic areas, free health services are provided where available. Community development agents (Ministry of Plan) also provide health education in conjunction with productivity projects.[1]

11.1.4 Programs

The discussion of health programs is divided into three categories: national training institutions, health education through radio and television, and donor programs.

11.1.4.1 Training Institutes

The MSP/AS Division of Training, Health, and Nutrition Education is responsible for training and retraining of all paramedical personnel and social assistants, and shares with the Ministry of Higher Education and Research the responsibility for the School of Medicine Studies at the University of Niamey.[2]

The National School of Public Health (ENSP) was created in 1965 with the assistance of WHO, FAC, FED, and UNDP.[3] It trains (Level B/C) state nurses, professional midwives, and since 1979, laboratory technicians. The program of study was recently modified to reflect the needs of rural areas. More attention is now given to public health administration, health education (including teaching and supervision methods) and mother and child care.

Created in 1974, the National School of Certified Nurses and Social Assistants (ENICAS) trains certified nurses, assistant social workers, community development education monitors, and, since 1979, hygiene/sanitation agents (Level D). In 1981, the training of nurses was changed from one to two years. ENICAS has also recently raised its entrance requirements to ten years of formal schooling (BEPC) to improve the quality of trainees.

Once they have graduated, certified nurses spend at least one year at a health center under the direct supervision of a state nurse. After this training, they become responsible for rural dispensaries. Usually a certified nurse is the only person in a group of villages to have received medical training, and s/he may be responsible for the health care of a population of 10,000 people.

11.1.4.2 Health Education Through Radio and Television

There is frequent radio and television programming on health to inform and educate the population. The radio has a health program once a week in each local language. The radio clubs also hold discussions about health problems.[4]

La Voie de al Sante (The Voice of Health) is a weekly radio program for health personnel to update them on the latest health news. Magazine de la Femme (Women's Magazine) is presented on both television and radio. Produced by the National Women's Association (AFN) in collaboration with the Director of the Division of PMIs in the Ministry, this show teaches maternal and child care, nutrition and hygiene. Radio programs are in local languages.

11.1.4.3 Donor Programs

The major donors for health education are USAID, UNICEF, FED (Fonds européen de développement) and FAC (French agency). There are also over 30 government and private agencies supporting the health sector. Following are descriptions of some of the donor programs.

Africare has worked with the GON since 1976 to plan and implement a country wide public health care delivery system, including the organization of village health teams, and administration of local health care centers. In Diffa, Africare has contributed to construction, material and equipment, vehicles, development of educational materials and seminars, and recruitment and training of technical personnel in addition to training VHTs. Africare gives technical assistance to ENICAS and is developing nutrition and health programs around its vegetable garden projects in Dosso.

Misereor and Niger Catholic Mission supply technical assistance (six expatriate physicians) who are stationed in Agadez, Diffa and Maradi, and are integrated into government medical staff. They train or retrain matrones and secouristes. These groups also support several dispensaries throughout the country.

CARITAS (Catholic Relief Services) provides medical equipment and supplies to government health centers,and sponsors a nutrition center in Niamey and women's training centers in Tera, Doutchi, and Tahoua.

CWS (Church World Services) has been involved in VHT training in Zinder. SIM (Sudan Interior Mission) runs a hospital in Galmi and is starting a preventative health program there.

In March 1983, U.S. Peace Corps had 24 health and nutrition volunteers, of whom 15 were nutrition educators, seven laboratory technicians, and two nurses working in Niger. Nutrition volunteers serve at the village level, working with Nigerien nurses and mothers in infant and prenatal nutrition, hygiene, disease prevention, and the rehabilitation of malnourished children. Volunteers with more specialized skills work on hospital staffs in Zinder, Tahoua, and Agadez and dispensaries and maternities throughout the country, training Nigerien counterparts or replacing someone who has been sent out of the country for formal training.

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Additional examples of donor financing for health education include:

- o GTZ (German Technical Assistance) technical assistance for sanitation education in Tahoua and Zinder.
- o UNDP's two sanitation engineers in Zinder who build latrines and teach sanitation and hygiene in rural and urban areas.
- o UNICEF's mopeds provided to sanitation agents in the town of Maradi to demonstrate septic tank and latrine building techniques.
- o USAID's Integrated Livestock Production project in the Tahoua Region with a health and nutrition component to expand primary health care delivery through identification and training of health auxiliaries within herder associations, construction of two dispensaries, training of health care personnel in the pastoral zone, and strengthening of immunization programs for herder families.

11.1.5 External Efficiency

There is an undersupply of qualified health workers to respond to the national demand. Existing personnel are overworked as a result, and most of their time is spent responding to immediate needs for curative services rather than on preventative educational activities.

The goals of the Five Year Plan were to attain a certain ratio of health workers to population. In a 1981 personnel needs analysis, the GON MSP/AS decided to reject population as a basis for determining personnel needs, and concentrate on filling positions at existing and planned infrastructures. The results are reflected in Table 13.2, Projections through 1990. This table shows that Niger cannot meet most of its projected needs for personnel training. In addition, the majority of Grade A positions are filled by expatriates.

Following is a discussion of the external efficiency of specific health programs.

11.1.5.1 Village Health Teams

The amount of health education actually carried out by the VHTs is difficult to assess. The services provided by

Table 11.2
DISTRIBUTION OF VILLAGE HEALTH AGENTS

SITUATION IN 1978

REGIONS	NUMBER OF VILLAGES	POPULATION IN 1978	NUMBER V.H.A.	NUMBER VILLAGES	VILLAGES COVERED	NUMBER OF HABITANTS PAR VHA	PLANNED VILLAGE COVERAG
Agadez	161	133,200	32	88	29%	1,500	-
Diffa	557	169,800	71	152	13%	1,120	-
Dosso	1,292	709,400	209	549	16%	1,290	-
Maradi	1,945	971,200	392	1,171	18%	830	-
Niamey	1,334	1,210,800	403	987	28%	1,230	-
Tahoua	957	1,015,400	206	682	22%	1,490	-
Zinder	2,391	1,030,800	183	392	9%	2,630	-
Total	8,837	5,239,600	1,496	4,021	19.3%	1,303	4,00

SITUATION IN 1992

REGIONS	POPULATION IN 1982	NUMBER VILLAGES	NUMBER V.H.A.	VILLAGES COVERED	NUMBER OF HABITANTS PAR VHA	VILLAGE IN 1982
Agadez	166,900	88	142	54%	1,175	16
Diffa	102,600	188	506	38%	161	55
Dosso	780,000	658	2,069	51%	377	1,29
Maradi	1,086,800	672	2,519	31%	431	1,14
Niamey	1,378,300	743	2,268	50%	608	1,50
Tahoua	1,103,400	422	1,242	38%	888	1,09
Zinder	1,146,700	762	1,445	25%	794	3,01
Total	5,844,700	3,533	10,190	36%	*574	9,76

*National Average 1(1,303 in 1978 -574 in 1982). VHA = Village Health Agent

the secouriste are rudimentary and more often than not, the secouriste is a village pharmacist, rather than a health care agent. Normally, both secouristes and matrones are responsible for nutrition education; however, matrones, PMI personnel, or Peace Corps Volunteers are most active in providing this service.

A two-year evaluation of the impact of VHTs, which ended in 1977, showed that the teams, with support from rural dispensaries, contributed substantially to the reduction of illness in rural populations. Evidence suggests that villages with secouristes and matrones are more health conscious and have improved sanitary conditions. Nigerien health administrators claim that there has been a decrease in the mortality rate as a direct result of the VHTs intervention.

11.1.5.2 Mother and Child Care Centers (PMIs)

Overall, participation in/and quality of PMI activities is improving. In 1981, 36 percent more pregnant women visited PMIs than in 1978. The average number of consultations per women is now over two and, generally, more women begin coming to the PMIs before the third month of pregnancy. There has also been progress in discovering high risk pregnancies earlier. Between 1978 and 1982, there was an increase of 14 percent in the number of nursing babies treated. Increased educational efforts to encourage disease prevention, vaccinations, early problem detection, and improved nutrition were also evident.

11.1.5.3 Sanitation/Hygiene Activities

Once graduated, sanitation or hygiene agents go to work for the Mobile Health Clinics, town sanitation departments, or the regional health centers. Hygiene/sanitation agents rarely work in rural areas. Many agents find they have little to do as there is either no established program, or few available resources to carry out activities. Motivated agents may be prevented from activity through lack of interest on the part of local administrators.

11.1.6 Internal Efficiency

The internal efficiency of the health system is discussed in terms of the various delivery programs considering the training and curriculum provided to personnel and their subsequent performance on the job, and health education through the media.

11.1.6.1 Village Health Teams

The secouriste receives ten days intensive training in personal and village hygiene, nutrition education, mother and child care, and the treatment of common illnesses. Matrones also receive at least ten days training in hygiene, nutrition education, maternal and child care, clean deliveries, some family planning, and hygiene education. The latter are chosen from traditional village midwives and are, consequently, older women. They sometimes have difficulty retaining new information.

Quality of delivery is directly related to the choice of village health workers, and villagers do not always follow given criteria due to insufficient information or for political reasons.

The training guides for secouristes and matrones are, for the most part, very thorough and fully adapted to the needs of village health workers. However, child spacing in matrone training only receives an hour of instruction time which is insufficient. Each guide devotes a chapter to the importance and methods of health education in the village.

Clearly, the VHTs need more supervision than they currently receive. The nurses and professional midwives from dispensaries are programmed to visit each VHT once a month; while in practice, they may only see village matrones and secouristes four times a year due to personnel shortages and lack of logistical support. A nurse may be the only person providing health services at a dispensary, so that when s/he makes supervisory visits, it is necessary to close the health facility.

The absence of frequent supervisory visits often results in discouragement on the part of the VHTs, and hence, lowers their motivation to provide health education services. It also means that health kits are frequently depleted of most needed supplies.

The number of secouristes who abandon their posts is as high as 15 percent for reasons that include: lack of remuneration, rural migration, lack of popular support, involvement in embezzlement, and lack of supplies, or inadequate training, including functional literacy training.

Although the government is planning to expand the VHT program, a major obstacle to this expansion is the lack of sufficient middle and low level health staff to train new village health agents.

11.1.6.2 Mother and Child Care Centers (PMI)

PMI educational talks are the first scheduled activity each morning at the centers, given while women are waiting for individual consultation. Flannel boards are sometimes used in the presentation of visual aids. When babies weigh in below normal, the mother and child stay at the PMI to attend food preparation demonstrations.

There is a noticeable lack of interest on the part of most mothers who are obliged to sit through educational presentations in order to receive PMI services. Visual aids are often pictures unrecognizable to PMI clients, due to their complexity or irrelevance to the local environment.

Nutrition demonstrations are more effective, though, as women observe the actual process of preparing weaning foods. However, when asked whether they applied improved nutritional practices at home, most women replied in the negative, saying they had no time, or it was too expensive to buy necessary ingredients.

11.1.6.3 Sanitation/Hygiene Activities

ENICAS has improved its program for the training of Hygiene/sanitation agents by adding a year and improving the curriculum to include more practical experience and use of technologies adapted to local resources and conditions. ENICAS has also begun to emphasize the importance of educational activities, as many of the earlier graduates came to be viewed as community police rather than hygiene and sanitation promotion agents.

11.1.6.4 Health Education through the Media

Health education is given great importance by the National Radio and Television Station (ORTN). Health and nutrition information is often published in local language newspapers, but this is only through irregular and scattered efforts of a few concerned individuals.

11.1.7. Access and Equity

Nationally, there is one doctor for every 36,252 people, one midwife for every 3,989 women of child-bearing age, one state nurse for 12,727 people and one certified nurse for 6,488 people. There is now one village health agent for every 574 people. Distribution of these personnel may be found in Tables 11.3 through 11.6 with comparisons for the number of village health workers and the number of dispensaries between 1979 and 1982.

The distribution of key health personnel between rural and urban areas is shown in Table 13.7. Almost half of the key public health personnel are located in urban areas, including all of the doctors.

Most PMIs are found in urban areas. In 1979 FNUAP (United Nations Population Activities) determined that 12 percent of the population had access to PMI services.

11.1.8 Administration and Supervision

As a result of understaffing, it is difficult to adequately supervise health agents who are directly responsible for working with the rural population.

In addition, coordination between the health ministry and other agencies involved in rural development education, including the National Television and Radio Station, has been minimal.

11.2. Plans

The GON will concentrate on reinforcing existing health structures and will expand only to cover those areas where there are clear disparities in access to health care. In the PIC draft, the GON proposes construction of a National Center for Health Development and a second nurse training school, the National Nursing School of Maradi. The recruitment requirements for the existing low and middle level health schools (ENICAS and ENSP) will be raised.

USAID, through the RHIP, which has been extended until 1985, will be supporting the development of a health/management information system at the MSP/AS through technical assistance of a health planning expert and two computer specialists, one for statistics and epidemiology, and the other for nutrition epidemiology. There will be continued health personnel development and training, giving emphasis to training for sanitation agents, auto mechanics

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Table 11.3

DISTRIBUTION OF SECOURISTS AND MATRONES

REGIONS	ARRONDISEMENTS	NUMBER SECOURISTES	NUMBER MATRONES	VILLAGES
Agadez	Agadez	54	6	56
	Arlit	21	16	20
	Bilma	26	15	11
	3	101	37	87
Diffa	Diffa	106	125	78
	N'Guigmi	60	51	42
	Maine Soroa	103	53	68
	3	269	229	188
Dosso	Dosso	160	150	186
	Loga	131	125	117
	Gaya	193	175	145
	Doutchi	220	253	137
	Boboye	159	154	118
	5	863	857	565
Maradi	Maradi	16	16	10
	Aguie	152	180	92
	Dakoro	267	275	137
	Guidan Roumadji	168	200	90
	Madarounfa	176	301	134
	Mayahi	197	217	115
	Tessaoua	153	190	94
	7	1,129	1,379	672
Niamey	Tera	235	148	111
	Say	151	138	99
	Ouallam	204	168	145
	Filingue	142	115	167
	Tillabery	107	86	22
	Kollo	185	182	123
	6	1,024	837	727

(Table 11.3 continued)

REGIONS	ARRONDISEMENTS	NUMBER SECOURISTES	NUMBER MATRONES	VILLAGES
Tahoua	Tahoua	56	89	48
	Keita	104	130	68
	Illela	81	130	83
	Madaoua	105	147	74
	Tchintabaraden	30	26	28
	Bouza	58	113	61
	Konni	66	114	84
	7	500	749	446
Zinder	Zinder	53	24	17
	Matameye	86	86	75
	Mirriah	170	132	122
	Magaria	134	118	139
	Tanout	117	94	81
	Goure	139	116	95
	6	679	570	529
Total	37	4,565	4,658	3,214

SUPPLEMENT

REGIONS	ARRONDISEMENTS	NUMBER SECOURISTES	NUMBER MATRONES	VILLAGES
Agadez	166,900	119	45	88
Diffa	182,600	269	29	188
Dosso	780,000	1,031	1,038	658
Maradi	1,081,800	1,190	1,433	672
Niamey	1,378,300	1,225	1,049	743
Tahoua	1,103,400	520	722	422
Zinder	1,146,700	786	655	762
Total 7	5,844,700	5,140	5,171	3,533

TABLE 11 .4

DISPENSARIES

REGION	POPULATION		DISPENSARIES			RATIO POPULATION/DISPENSARI		
	1978	1982	1978	PLAN OBJECTIVE	1982	1978	PLAN OBJECTIVE	1982
Agadez	132,200	166,900	16	20	20	8,263	-	8,345
Diffa	169,800	182,600	14	18	14	12,129	-	13,043
Maradi	971,200	1,086,800	26	49	44	37,354	-	24,700
Dosso	704,900	780,000	28	39	36	25,175	-	21,667
Niamey	1,210,800	1,378,300	52	68	77	23,285	-	17,900
Tahoua	1,015,400	1,103,400	32	51	41	35,543	-	26,912
Zinder	1,030,800	1,146,700	29	51	41	35,545	-	27,968
Total	5,239,600	5,844,700	197	296	273	26,297	19,100	21,409

TABLE 11.5

HOSPITAL AND MEDICAL CENTER BEDS

DEPARTMENTS	POPULATION 1982	BEDS/ HOSPITALS	BEDS/ M.C.	TOTAL BEDS	RATIO BEDS/POPULATION
Agadez	166,900	74	156	230	1 bed/725 people
Diffa	182,600	90	77	167	1 bed/1,093 people
Dosso	730,000	140	110	250	1 bed/2,920 people
Maradi	1,086,800	298	173	471	1 bed/2,307 people
Niamey	1,378,300	802	198	1,000	1 bed/1,378 people
Tahoua	1,103,400	183	299	482	1 bed/2,289 people
Zinder	1,146,700	393	88	481	1 bed/2,384 people
Total	5,844,700	1,980	1,101	3,081	1 bed/1,897 people

Source: Rapport annuel d'activites du MSP/AS 1981.

TABLE 11.6

DISTRIBUTION OF KEY PUBLIC SECTOR HEALTH PERSONNEL

FOR RURAL AND URBAN AREAS

CATEGORY	NIGERIENS	EXPATRIATES	TOTAL	URBAN	RURAL	PERCENT URBAN
Doctors	64	93	157	157	0	100%
Midwives	190	-	190	157	99	48%
State Nurses	456	14	470	91	234	50%
Certified Nurses	922	-	922	339	583	35%
Total	1,632	107	1,739	823	916	47%

TABLE 11.7

PROJECTION OF HEALTH PERSONNEL NEEDS FULFILLMENT - 1990

PERSONNEL GRADES ABDC HEALTH	1981 NIG*	1981 EXP**	1981 TOTAL	ANTICI-PATED GRAD-UATES END'83	TOTAL END 83 NIG + EXP	POSSIBLE GRADUATES END 1990	LIKELY TOTAL GRADES 1990 (4+5)	TOTAL OPTIMUM NEEDS 1990	BALANCE
Grade A - Health									
Doctors	37	83	120	52	172	272	444	428	+ 16
Pharmacists	15	2	17	11	28	35	63	93	- 30
Dentists	4	8	12	3	15	14	29	37	- 8
Sanitary Engineers	0	3	3	0	3	10	13	15	- 2
Other Grade A	12	4	21	26	46	84	130	463	- 333
Total Grade A	66	100	273	92	264	415	679	1,036	- 357
Grades B/C Health									
State Nurses	430	14	444	110	554	385	939	250	- 311
Midwives	171	1	172	70	242	245	487	470	- 17
Sanitation Technicians	1	0	1	13	14	46	60	125	- 65
Admin. Assistants	10	0	10	4	14	14	28	35	- 7
Other Grades B/C	80	30	110	65	175	228	403	429	- 26
Total Grades B/C	692	45	737	262	999	918	1,917	2,309	- 392
Grade D Health									
Certified Nurses	783	0	783	220	1,003	770	1,773	2,610	- 837
Sanitation Agent	17	0	17	30	47	105	152	226	- 74
Secretaries	48	0	48	6	54	21	75	343	- 268
Total Grade D	848	0	848	256	1,104	896	2,000	3,179	-1,179
TOTAL HEALTH GRADES -1,928	1,606	145	1,753		610	2,367	2,229	4,595	6,524

*NIG = Nigeriens
**EXP = Expatriates

and medical equipment maintenance specialists. More infrastructure support will be given for improved transport and equipment maintenance systems.

In February 1983, World Bank representatives from the Population, Health and Nutrition Department completed a mission to help the GON identify and begin preparation of a project for Bank financing in 1985. The first step will be the financing of a Niger Health Project Preparation Facility (PPF) in the MSP/AS. IDA (International Development Assistance) will then furnish technical and financial assistance for health interventions at the request of the GON through the PPF. The projects will include strengthening the planning capacity of the MSP/AS, increased training of health staff, and support for PMI activities. The projects will have health education components. Particular attention will be given to preventative education and vaccination campaigns on malaria, diarrhea, measles, polio, tetanus, whooping cough, diphtheria, and tuberculosis. There will be an important emphasis placed on nutrition activities and a national nutrition campaign through radio, television and newspapers. The Bank will also support small gardening projects as a means for increasing income and improving nutrition. The project will associate NGOs such as Africare, and the National Women's Association (AFN) for supervision and follow-up.

There will also be an effort to begin population activities through the construction of a National Center for Research on the Family to help the GON define its policies regarding population. PMI efforts toward family planning education will be supported.

The Ministry of Plan/EEC has proposed a study of all health training efforts as part of the Five Studies in Training recommendations. This study would examine content, length, and methods of health training to adapt training to professional needs.

11.3. Analysis

11.3.1. Constraints

The major constraint to the provision of health education is an overall attitude among the health community which underrates the importance of preventative health care. This results in the government's failure to articulate a national policy or program of health education.

In addition, coordination between the health ministry and other agencies involved in rural development education, including the National Television and Radio Station, has been minimal.

Lack of qualified health personnel is a further constraint to the health system resulting in overwork and understaffing of health facilities. This, in turn, promotes curative attention to immediate health problems rather than preventative care. Understaffing also makes it difficult to give adequate supervision to the health agents who are directly responsible for the health of the rural population.

11.3.2. Issues

The major issues identified in the health system are discussed in five categories: external efficiency, internal efficiency, access and equity, administration and supervision, and costs and financing.

11.3.2.1 External Efficiency

The major external efficiency issue is the undersupply of qualified health workers to meet national needs (see Table 11.2). Further, the majority of Grade A positions are held by expatriates. Thus, government must determine how it can provide sufficient Nigerien health workers to meet the national demand. Government plans to create a National Center for Health Development and a National Nursing School of Maradi as well as increase recruitment for other health schools. These efforts will increase the supply of health workers in several areas of need; however, the need for Nigerien doctors and dentists to replace expatriates must still be addressed.

11.3.2.2 Internal Efficiency

Although the quality and adequacy of existing buildings and classrooms are good and the curriculum is well developed, the application of the curriculum is a problem. It is generally agreed that there is not enough emphasis on practical training, field work, or appropriate methods of adult education. The lack of practical experience may result from financial constraints, but there is a real problem of overall disinterest and underemphasis on the importance of health education among administrators and trainers. This general malaise regarding health education carries over into the health delivery system, which remains weak in preventative care.

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A number of health personnel contacted believe that increased availability of audio-visual materials, including films, tape recorders, slides and pictures, for training schools and health centers would improve health education efforts. Although audio-visual materials are useful, their efficacity depends on their appropriateness. There is a need for careful research to develop adapted educational materials. Books and texts at ENICAS and ENSP are often gifts from abroad, and are mostly of western orientation, which renders them nearly useless.

The practical training which exists in hospitals and health centers is often ineffective, resulting from too many trainees and too few trained personnel having the time or qualifications to do adequate on-the-job training. Once employed in the field, supervision and material support are often inadequate, and health workers are unable to do their job properly.

There is also a relatively high attrition rate for young women health students who are required to leave school as a result of pregnancy.

Health Education Through the Media

Although health education is given great importance by the National Radio and Television Station (ORTN), indications are that the MSP/AS does not exploit the radio or television to its full potential with extensive health coverage. Motivation for health education efforts appears weak, demonstrated by the origination of some health programming from the ORTN rather than MSP/AS. The ORTN has also been known to pay for nurse participation in radio or television programs when the responsibility should have been that of MSP/AS.

There appears to be little systematic coordination between the MSP/AS and ORTN regarding health education efforts, nor is there a single person at the Ministry officially responsible for promoting health education efforts through the media.

Although health and nutrition information is often published in the local language newspapers (See Adult Education), this is only through the scattered and irregular efforts of a few concerned and motivated individuals.

11.3.2.3 Access and Equity

The availability of health services is unequally distributed. As Tables 11.3 thro: ' 11.6 show, health coverage is concentrated in urban areas. Zinder, Maradi, and Tahoua have higher than average ratios of population per dispensary. Part of the reason for this is that dispensaries planned in these regions were not built, whereas, in other regions such as Diffa, Agadez, Dosso and Niamey, dispensaries were built with donor assistance, even though they were not planned. The village health agent coverage for Diffa, Dosso, and Maradi is relatively good, while that of Niamey, Zinder, Tahoua and Agadez is well below the national average.

Health coverage for nomads presents specific problems due to their mobility. Nomadic men may visit dispensaries on market days, but most women and children rarely come to markets so they have little access to institutional medical care. The Mobile Clinics which try delivering vaccination programs to nomads have little success finding their camps. The primary health care system is slow to attract herders because of their constant movement and distance from health facilities. Increased education activities are needed to encourage the nomadic population to seek out medical services, particularly preventative services.

Health education and prevention activities are overwhelmingly directed at the female population, which is understandable, considering the high rate of infant mortality and the women's role in child raising.

11.3.2.4 Administration and Supervision

There is a need for coordination of health education and health delivery programs at the national level. There is also a great need for supervisory support for health workers in the field.

11.3.3 Conclusions

Five major conclusions result from the review of the health system.

Conclusion 1: Raising of popular consciousness about healthful practices and health services is essential. This can only be done through a nationally coordinated effort. A number of measures are proposed in the Maradi Debate report, and many of these have been integrated into the MSP/AS PIC for 1984-85.

The recommendations propose that all public and private agencies emphasize health education, and that it be accorded high priority in the development society structure; it also suggests that the media be used more extensively to reinforce health education activities. Stronger integration of health education and prevention into the formal school curricula, as well as rural development nonformal education efforts must be systematized, and a specific plan of action needs to be developed. The assumption that health education is a matter of routine has been shown to be ineffective; therefore, there should be individuals in ministries and at regional and local levels specifically charged with health education and preventative health care activities.

Health education is not necessarily a matter of resources, but rather a function of attitude. Cost-effective measures can be undertaken to change attitudes about health and encourage preventative practices. These measures include radio diffusion of health messages using popular music or specific health information; festivals and fairs designed to distribute information on health themes as well as produce income for other health education activities; and government financed signs/billboards in local languages promoting preventative health care.

Conclusion 2: The administration and supervision of health education and health delivery programs at the national level needs to be restructured to provide for better coordination among government agencies and between MSP/AS and donor agencies. This restructuring could be achieved with little or no additional cost and result in more effective application of available resources.

The GON Round Table discussions, to be held in December to coordinate donor interventions, should be considered as an important vehicle for determining the most effective means of donor participation in the GON's proposed health education program.

Conclusion 3: Training programs for health workers need to be revised so that workers can take a greater role in health education.

The Maradi Debate recommended an increase in health education and preventive training curricula for intermediate and middle level health personnel. The students themselves should be used as health educators as part of their curricula. At ENCAS, in the Sanitation Agent Training Division, initial efforts have been made in this regard.

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Under the direction of the head of the Division, second year sanitation students performed a detailed study of a rural village. They identified existing illnesses and their causes in view of planning a health education campaign and undertaking measures to improve health and sanitation in the area with the participation of the villagers. This kind of activity has the dual effect of teaching health students, and improving the awareness and health of rural populations. Similar projects should be encouraged and supported.

Secouriste training should include literacy training for better management of the village health service. This training would give the secouriste access to health information published by local language newspapers and allow him to contribute to those publications.

Increased efforts for family planning education are needed at all levels. More training in health schools should be devoted to raising awareness about the implications of population growth.

Relatively inexpensive visual aids could be produced locally. Slide shows based on local success stories have proven very effective in other countries. Periodic photographs can be taken of a malnourished child, tracing its progress through the nutrition process until s/he is once again healthy. These can then be used as instructional aids for mothers. Health students should be taught to develop this kind of visual aid as a part of their training. Donors could contribute technical assistance in audio-visual techniques, and supply resources necessary for the local development of audio-visual aids.

Conclusion 4: Adequate supervision and material support for existing health programs should take priority over expansion of programs.

Conclusion 5: Nutrition education could be more effective through increased support of women's agricultural production projects and other women's income generating activities. Lack of disposable income is an obstacle to good nutrition and health practices which require expenditures for food supplements, medicine, and visits to local health centers. Support for income generating activities and more emphasis on the training of women in business management techniques would increase cash available to permit greater women's participation in health activities. In addition, integrating nutrition education with agricultural production will facilitate the application of improved nutritional practices.

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11.3.4 Recommendations

(Intro.)

Recommendation 1: The Ministry of Public Health and Social Affairs should establish a liaison office with the Office of National Radio and Television to improve health education efforts through the media.

Recommendation 2: A national policy on and program of health education needs to be established.

Recommendation 3: Health worker training programs should be revised to incorporate a greater emphasis on community education and preventive medical practices. This may mean that programs will be longer and more costly, but the increased skills of the health workers should make it worth the effort. Adequate supervision and follow-up would be necessary to see if practices in the field do change as a result of training program revisions.

Recommendation 4: Literacy training should be part of the health workers training program if the individual is not literate. In order for the worker to use health education materials most effectively, the individual should be literate.

Recommendation 5: Increase supervision and material support for existing programs to an adequate level before expanding programs.

Recommendation 6: Health education programs should be linked with agricultural education programs, particularly in regard to nutritional education and support of women's agricultural production activities.

FOOTNOTES

[1] See Adult Education section.

[2] See Higher Education for University of Niamey.

[3] See Vocational Education for more information on ENSP.

[4] The external efficiency of community development educators is discussed in Adult Education.

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