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EVALUATION

of the

SAHEL REGIONAL DEMOGRAPHIC DATA COLLECTION AND ANALYSIS PROJECT (625-0927)

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ACRONYMS

AID	Agency for International Development
AID/W	Agency for International Development (Washington)
BNR	Bureau National du Recensement/National Census Bureau
BUCEN	Bureau of the Census (US)
CA	Cooperating Agency
CERPOD	Centre d'Etudes et Recherches sur la Population pour le Développement
CIDA	Canadian International Development Agency
CILSS	Permanent Inter-état Committee for Drought Control (Comité Interétat pour la Lutte Contre la Secheresse)
CRED	Center for Research and Economic Development
DDD	Demographic Data for Development
DHS	Demographic and Health Survey
EMIS	Enquetes de Mortalité Infantile au Sahel/Infant and Child Mortality in the Sahel
ENEA	Ecole Nationale de l'Economie Appliquée/School of Applied Economics (Senegal)
EXADD	Exploitation et Analyse des Données Demographique/ Processing and Analysis of Existing Demographic Data
IDRC	International Development Research Centre
ILO	International Labor Organization
INED	National Institute of Demographic Studies/Institut National des Etudes Demographiques
INSAH	Institut du Sahel/ Sahel Institute
INSD	Institut National de la Statistique et de la Demographie/ National Institute of Statistics and Demography (France)
IUSSP	International Union for the Scientific Study of Population
KAP	Knowledge, Attitudes and Practices
OCDE/OECD	Organisation de Coopération et Développement Economiques/ Organization for Cooperation and Development
ODA	Overseas Development Administration
PSD	Population/Santé/Developpement; Population Implications of Development Projects
REDSO/WCA	Regional Economic Development Services Office, West and Central Africa
RESADOC	Reseau Sahelian d'Information et de Documentation Scientifiques et Techniques
SPSS/PC	Statistical Package for Social Sciences for Personal Computers
UNESCO	United Nations Educational Social and Cultural Organization
UNFPA	United Nations Fund for Population Activities
USAID	United States Agency for International Development (Mission)
USED	Socio-economic Demographic Unit, Unité Socio-Economique et Demographique
WFS	World Fertility Survey
WHO	World Health Organization

EXECUTIVE SUMMARY

The Demographic Data Collection and Analysis Project (625-0927) is a $6.93 million AID-financed project, implemented by the Socio-economic Demographic Unit (USED) of the Sahel Institute (INSAH) based in Bamako, Mali. A six member team carried out the final evaluation of the project during December and January 1987.

During the course of the evaluation, the team visited six of the Sahelian countries participating in the project (the Gambia, Senegal, Mauritania, Niger, Burkina Faso and Mali). The team interviewed officials from the host countries and USAID's, and representatives of regional and international organizations. A U.S. based consultant met with AID/W officials and was in touch with North American project collaborators. In addition, the team spent two weeks at project headquarters in Bamako, meeting with project staff, reviewing publications, project documents and reports.

For all aspects of the evaluation - scientific, financial management, institution building - international criteria have been applied. Criticisms made of the project should be interpreted accordingly. In all areas, the team believes that the project's performance compares favorably with these standards and has been well above regional norms.

In conclusion, the team's overall evaluation of the accomplishments of USED and its collaborating institutions is very favourable. The USED staff is to be commended for succeeding in initiating and completing the major data collection and analysis subprojects delineated in the project paper. USED is to be congratulated for developing an effective system of Sahelian demographers and statisticians, and of establishing a regional network with specialists and institutions in and out of the Sahel. The team noted that USED has matured into a center capable of guiding demographic research in the Sahel and of providing an effective structure for training and technical assistance in the field. This success can be attributed in large measure to the dynamism, dedication and hard work of its Coordinator, to the competence and effectiveness of its small staff, and to the valuable assistance provided by the project liaison officer. There is no doubt that USED will continue to evolve into a regional center of excellence. The team strongly supports an AID-financed follow-on project which will emphasize the dissemination of existing data to decision-makers and the integration of demographic data into development planning.

Institution Building

The team feels that the project has more than achieved its end-of-project status to improve statistical capacity. The project has made a substantial and appropriate contribution to institutional development in the region, both at the national level and at the regional

level, through the development of a research and technical assistance capacity. This has taken place in several ways: training, (both long-term and short-term), provision of materials, and technical assistance. Project managers have commendably integrated these types of institutional strengthening assistance.

National Level. All the national institutions contacted felt that they had benefited specifically from the training and urged that the training programs be continued. Short-term seminars and workshops have been key to discussions about methodology and diffusion of appropriate analytical techniques. All countries cited examples in which the technical assistance and materials provided through the project had led to improved data analysis and production.

Technical assistance has been provided from USED to the countries in many forms: long-term (Mauritania, Niger), short-term assistance to the sub-projects (all countries), data processing services at project headquarters, as well as ad hoc assistance in special problem solving. The record of USED project in this regard has been much better than average. The USED supplied technical assistance has been well received, and having come from a regional institution has greatly facilitated its acceptability to intended recipients.

Regional Level. The development of a regional capacity at the level of the USED project has been very impressive, starting as it did from nothing at the beginning of the project. USED has a well-qualified technical staff, has continued to attract and retain well-trained staff and has taken advantage of recently returned trainees from overseas. In terms of computer technology, however, USED has not always made appropriate continued investments in staff development or in computer facilities to keep up with the data processing needs of its work.

Improved Demographic Data Base

The project has contributed substantially to relieving the backlog of unanalyzed data, and in alleviating the conditions which lead to unanalyzed data. As required by the project paper, USED carried out infant mortality studies, in two of the member countries and, as requested by AID, undertook a third study in Mali. These studies are almost complete, and should be completed by the end of the project period. Given the tremendous cost of human and financial resources required to carry out these studies, the team supports USED's plan not to repeat these studies in a second phase of the project, even though their output has been rich and varied. Instead, analysis should be terminated in the final year of the current project, and the invaluable methodological and other experience be transferred to other ongoing research activities.

In Mali, USED staff are assisting with the Demographic and Health Survey (DHS-Westinghouse) and a similar initiative is being discussed for The Gambia. The studies of health statistics got off to a late start, but seem to have significantly improved the processing and publication time in the two countries (Cape Verde and Senegal) where they have taken

place to date. Given the enormous task of improving health statistics at the national level, and the availability of other sources of financing, World Health Organization (WHO), for example, the team agrees with USED's decision to discontinue studies of health statistics.

In Senegal, Burkina and Mali, studies of the impact of development projects on population variables are underway. This orientation of the population, health and development studies (PSD) was criticized in the mid-term evaluation, which advised USED to give more attention to the impact of population on development, rather than development on population. The team notes, however, that these studies are methodological rather than substantive in nature, and the same data set is expected to provide information on both types of relationship. Given the complexity of the data collection to date and the difficulty of developing an appropriate analysis plan, the team does not recommend that these studies be continued into the next project phase, but that USED focus instead on the dissemination of their methodological findings.

In addition to the studies required by the project paper, USED has participated in a number of conjoint studies undertaken at the initiation of, and partially funded by, outside organizations. A migration study with the Organization of European Cooperation and Development (OECD), for example, produced results of high quality which were subsequently disseminated to policy makers at the highest levels. This is but one example of a number of interventions in the policy domain successfully achieved by USED. USED's achievements in this domain are particularly commendable and are viewed by the evaluation team as a very important direction for the future.

Project Administration

Overall, project administration has been very good. However, as the financial management of USED has become more complex, with different donors and diverse activities, financial management has lagged, notably because of the lack of computerized accounting. Physical facilities have been expanded and adapted as project activities have increased.

The coordinator of the USED is to be commended for progress during a very difficult political time. The staff of USED has established an excellent rapport with the project's collaborators in national research and statistical institutions. USAID missions seemed generally aware and favorable towards the project, but in consideration of frequent staff turnover, it is clear that more could and should have been done to keep USAID's informed.

Future Directions

The evaluation team strongly recommends additional AID funding for a follow-on project and supports the transformation of USED into a population research and study center. USED is clearly ready to evolve toward a second phase when their program emphasis will be put on applications of data to development planning. The future project purpose should therefore approach more closely the sector goal "to increase

understanding of social, economic and demographic characteristics of Sahelian populations by governments and planners." Emphasis for AID's funding should be accordingly placed on:

(1) dissemination of available information to decision-makers; and

(2) integration of population factors into development planning.

To this end, the evaluation team recommends that AID provide resources for the following activities: (1) research studies; (2) technical assistance; (3) training; and (4) policy development.

The team notes that the political environment relating to population issues in the Sahel has changed considerably since the beginning of the project. The team recommends that future AID assistance emphasize the role of USED in formulating population policies (including family planning) and the use of demographic data, especially their application to economic planning and their use by policy makers in decision-making.

The greater emphasis on the application of demographic data in national and sector development programs will necessitate the continuation of efforts to strengthen the analytical and planning capacity of the national institutions. Training should therefore remain a high priority in the follow-on project. Funds should be provided for limited, retrospective studies of migration and urbanization, methodological studies and historical demography. USED should continue to collaborate with outside agencies, following the DHS model in which USED plays a brokerage and technical assistance role. DHS-type studies have the practical advantages of simplicity and timeliness, and produce high quality data. DHS covers the key factors of fertility and mortality, and, to a limited degree, migration.

The collaborative arrangements must include greater financial participation by international organizations for the use of USED resources and facilities, with the aim of assisting USED to achieve financial self-sufficiency. AID's continued financial support should cover core USED costs and encourage USED to engage in revenue-generating activities in its provision of services.

The team believes that USED benefits from the political support and the good professional relationships resulting from its affiliation with the CILSS system. Having considered the possible alternatives for future institutional affiliation of USED, the team recommends that USED continue as an autonomous unit based in Bamako and affiliated with the CILSS system.

The team believes that USED should maintain autonomous resources management. The degree of autonomy and dynamic leadership which USED has enjoyed has enabled it to undertake and execute its program in an effective manner.

The evaluation has reviewed current financial and personnel practices, and recommends that, in the remainder of this project, USED put in place an automated financial management system. Each project activity, whether funded by AID or other donors, should display full sub-project costs, including all associated salaries and overheads. This improvement in its financial management process will facilitate its further growth toward financial self sustainability.

1.0 INTRODUCTION AND METHODOLOGY OF THE REPORT

1.1 Background

The project, Sahel Regional Demographic Data Collection and Analysis, was designed by AID as part of its ongoing assistance to the Sahel region. The project is executed by the Socio-Economic and Demographic Unit (USED) of the Sahel Institute (INSAH), an organ of the Permanent Interstate Committee for Drought Control in the Sahel (CILSS). From the very beginning, the project was part of a multi-donor effort, as it was proposed and adopted by CILSS and the Club du Sahel in the late 1970s. In addition to the AID-funded project activities (which are the subject of this evaluation), the United Nations Fund for Population Activities (UNFPA) has been a major donor. UNFPA has funded the post of the project coordinator throughout the life of the project. In addition, UNFPA has funded up to two other full-time staff posts of USED.

The AID-funded activities are described in AID's project paper "Sahel Regional Demographic Data Collection and Analysis" Project Number 625-0927. The overall sector goal of the project is "to increase the understanding of social, economic and demographic characteristics of Sahelian populations by governments and planners in the cooperating countries." Project identification and project paper design missions were carried out in 1977 and 1978, respectively. The project paper was revised and approved in August 1980.

The purpose of the project is:

"to build an indigeneous capacity in demographic data collection, processing, analysis, and use in individual countries in the Sahel in cooperation with the Sahel Institute of the Permanent Interstate Committee for Drought Control in the Sahel."

To carry out this purpose over the original five-year period of the project, AID made available $6.93 million of grant funding. The funding covers:

(1) institutional support for the operating cost of USED, including salaries of most staff;

(2) direct costs for national sub-projects on infant mortality, analysis of existing data collection; health statistics, and the population implications of development projects;

(3) training, including long and short-term regional and U.S.-based;

(4) technical and material support to develop national and regional statistical capability; and

(5) regional networking for the exchange of professional knowledge and experience.

The project underwent a mid-term evaluation in 1982. As a result of a very positive evaluation, the life of project was extended by over two years. No additional funding was necessary as a consequence of a

very favorable exchange rate between the dollar and franc. The project completion date is now September 30, 1988. The project is monitored by the General Development Officer in USAID/Mali, with technical back-stopping from AID headquarters in Washington and from the regional population advisors based at REDSO/WCA in Abidjan.

In addition to providing the budget for USED direct activities, the project covers costs for technical assistance provided by the Population Council, and a locally-hired project liaison officer who is attached to USAID/Mali. In addition to the AID-supported activities, USED has collaborated with other institutions providing support to demographic research, such as National Institute of Demographic Studies (INED), in France, the Rockefeller Foundation, the International Development Research Center (IDRC), in Canada, and the London School of Hygiene and Tropical Medicine.

1.2 Evaluation Methodology

This report is the result of the final evaluation which took place from December 1986 - January 1987. The evaluation team was specifically charged with examining the implementation arrangements and, given budget constraints affecting USAID programs, recommending what if any future activities should be financed by AID. As specified in the scope of work, the evaluation focused on the time period since the mid-term evaluation.

The evaluation team was headed by Sarah C. Clark, demographer by training and regional population officer of AID's Regional Economic Development Support Office for West and Central Africa (REDSO/WCA) in Abidjan. The team was comprised of Ian Pool, Professor of Sociology and Director, Population Studies Center of the University of Waikato in New Zealand; James C. Knowles, senior development economist, computer specialist and President, the Knowles Corporation, Chapel Hill, NC; A. Malick Sow, Development Economist and Counsellor, Cabinet of the Minister of Planning and Cooperation, Government of Senegal; Murl Baker, project management specialist and project development officer, REDSO/WCA; and Joyce Holfeld, regional population officer, REDSO/WCA. The team benefited greatly from the participation as an observer of Dr. Sabwa Matanda, UNFPA representative for West Africa, based in Dakar. Dr. Sabwa was able to meet with the team in Dakar, and to accompany the team on its site visit to project headquarters. Together, the team had significant experience in project evaluation. It should be noted that the standards applied to the USED project in all areas - program and financial management, scientific methodology, and institutional development - are the same as applied to U.S. and other developed country institutions.

The team conducted site visits to six of the nine CILSS member countries: Burkina Faso, Mauritania, The Gambia, Senegal, Niger and Mali. The project work in these six countries together account for about ninety percent of USED activities. In the course of the site visits, the team visited with host country collaborators, representatives of USAID and other donor agencies, and the CILSS country coordinators (see list of contacts attached as an Annex 1.1).

In order to facilitate these visits, the team was divided into sub-teams. A questionnaire was prepared to standardize the information obtained by means of interviews in the countries visited (attached as an Annex 1.2). The team also spent approximately two weeks at USED project headquarters where they interviewed project staff, USAID/Mali staff, and other officials of INSAH. A draft report was presented to, and briefings and debriefings were held with both USED and USAID before the team left the project headquarters in Bamako. The final version of the report and its translation into French were produced at REDSO/WCA headquarters in Abidjan.

1.3 Conclusions and Summary of Recommendations

In conclusion, the team's overall evaluation of the accomplishments of USED and its collaborating institutions is very favourable. The USED staff is to be commended for succeeding in initiating and completing the major data collection and analysis subprojects delineated in the project paper. USED is to be congratulated for developing an effective institution of Sahelian demographers and statisticians, and of establishing a region network with specialists and institutions in and out of the Sahel. The team noted that USED has matured into a center capable of guiding demographic research in the Sahel and of providing an effective structure for training and technical assistance in the field. This success can be attributed in large measure to the dynamism, dedication and hard work of its Coordinator, to the competence and effectiveness of its small staff, and to the valuable assistance provided by the project liaison officer. There is no doubt that USED will continue to evolve into a regional center of excellence. The team strongly supports an AID-financed follow-on project which will emphasize the dissemination of existing data to decision-makers and the integration of demographic data into development planning.

Specific recommendations are summarized as follows:

For <u>immediate</u> action, the evaluation team recommends that:

(1) the fourth Westinghouse/DDD seminar focusing on integration of demographic data into development planning be held in April and that USED funds be used to cover its costs;

(2) long-term training received by USED staff might be usefully complemented by short-term training in development economics and related fields;

(3) USED move quickly to shore up its capabilities in the use of microcomputers to integrate demographic data into development planning. Specifically, the team recommends that Cheikh Mbacke attend the National Academy of Sciences Conference in February on this subject;

(4) USED use some of its remaining project resources to improve its data processing equipment;

(5) USED not only maintain existing linkages with national institutions but also should develop relationships with other national, regional and especially international organizations playing an important role in population policy and population program development;

(6) USED collaborate with RESADOC to improve the quality of its library and documentation resources;

(7) USED develop a computerized financial system which permits the identification of full costs and sources of financing of all activities undertaken by USED;

(8) USED develop a phase-out plan for project 625-0927 based on the financial resources remaining in the project, and monitor this plan monthly during the remainder of this project;

(9) USED review its salary policies and ensure their equitable application;

10) USED keep USAID missions informed with trip reports, reporting cables, and on-site visits. The team suggests that the project's coordinator and/or liaison officer visit USAID's in the region to acquaint them with USED and to seek their advice and input into establishing program priorities;

(11) any follow-on project incorporate regular program and work plan reviews with USAID/Bamako as well as at least annual reviews with REDSO/WCA and AID/W.

In <u>future</u> actions, the team recommends that:

(12) AID provide additional funds for a follow-on project which supports the development of USED into a regional population research and study center of excellence;

(13) the future project purpose approach more closely that of AID's sector goal, i.e., "to increase the understanding of social, economic and demographic characteristics of Sahelian populations by governments and planners";

(14) project emphasis be placed on the dissemination of available information to decision-makers and on the integration of population factors into development planning;

(15) AID provide resources for research studies, technical assistance, training, and policy development;

(16) USED seek funding for other planned activities from international donors and that USED request all donor organizations to contribute appropriate activity costs including associated salaries and overhead; and

(17) USED expand and diversity its financial base and work toward future self-sufficiency.

A further elaboration of these recommendations for the future is included in section four of this report.

2.0 INSTITUTION BUILDING

The team feels that the project has more than achieved its end-of-project status to improve statistical capacity. The project has made a substantial and appropriate contribution to institutional development in the region, both at the national level and at the regional level through the development of a research and technical assistance capacity. This has taken place in several ways: through training (both long-term and short-term), through provision of materials, and through technical assistance. In any instance, these three activities are closely linked. USED has been conscientious about training national staff in the use and care of data processing equipment and has incorporated returned trainees into on-going research programs as trainers and technical advisors.

2.1 National Level

The most important contributions of the project to the development of national institutional capability have been in the area of training. The project has also furnished some equipment to national institutions. In addition, other activities of the project - such as research studies, technical assistance and networking of regional expertise - have contributed significantly to the development of national institutions.

2.1.1 Training

The project has provided both long-term and short-term training in demography and statistics and short-term training in data processing. The national institutions contacted by the evaluation team were very complimentary about the training provided through the project. In addition, formal evaluations were carried out in connection with some of the short-term training activities; and these were uniformly very positive. Some desire was expressed, however, for more on-the-job training as well as for more workshops to which the trainees would bring their own data.

Demography. Long-term training in demography and statistics has been provided to 24 Sahelians through the project at the Ecole Nationale d'Economie Appliquee (ENEA) in Dakar. The first group of 12 trainees have already completed their three-year course; a second group of 12 trainees have one more year to complete. The geographical distribution of the 24 ENEA trainees is as follows: Mali (2), Chad (5), Niger (3), Mauritania (4), Cape Verde (5), and Burkina Faso (5). In interviews carried out by members of the evaluation team, considerable satisfaction was expressed by the trainees with the quality and content of the training received. The national statistical units also were pleased with the performance of their ENEA graduates.

The project made special arrangement for the long-term training of English-speaking statisticians from the Gambia. Six students sent to Nigeria and Tanzania have successfully completed their courses in statistics.

Because Senegal and Mali were relatively well endowed with demographers and statisticians at the level of the ENEA program, four Senegalese and two Malian demographers were sent to the U.S., initially to obtain masters degrees, and subsequently, to obtain Ph.D. training in demography. One of the trainees (Cheikh Mbacke, a Senegalese from the Bureau National du Recensement (BNR)) has already completed his doctorate at the University of Pennsylvania and is currently working at USED on a six-month contract, where he is coordinating the processing and analysis of EMIS data for all countries. A second trainee (from Mali) completed his masters at Brown University and has returned to Bamako where he is working on the analysis of the EMIS-Bamako data. One Malian and one Senegalese are expected to obtain their doctorates at the end of the current academic year (one at Penn., the other Johns Hopkins), while two others (both Senegalese) are in their second year at Johns Hopkins.

The evaluation team considers that the choice of universities and trainees was appropriate. At the same time, the team would have preferred a somewhat broader disciplinary range in the long-term U.S. training provided (as called for in the mid-term evaluation). According to USED, the lack of highly qualified demographers as perceived by the national statistical agencies led them to emphasize a need for training in demography.

The project has provided short-term training to the staff of national institutions through a series of seminars and workshops held both in Bamako and elsewhere in the region. An example is the series of three workshops held for demographers and statisticians, in collaboration with the Westinghouse Demographic Data for Development (DDD) project, which provided training in the use of demographic analysis programs on microcomputers. A list of all seminars and workshops sponsored by the USED participants since the mid-term evaluation is provided in Annex 2.1.

Several of the short-term training activities provided by the project have involved systematic evaluations of alternative research methodologies. The topics addressed have included methodologies for mortality data analysis, migration data collection, and Infant and Child Mortality in the Sahel (EMIS) survey analysis and for studies of relationships between population, health and development (PSD). Senior Staff of BNR (Senegal and Niger) were complimentary of these activities and felt that the methodology-oriented workshops were extremely useful.

The evaluation team was able to interview several trainees from the three DDD workshops, and all the trainees were very positive in their evaluation of these activities. Formal evaluations were completed by the participants in these workshops, as was the case for those who participated in the series of three Planning Methods seminars carried out with UNESCO. These formal evaluations were very positive. The evaluation team recommends that similar formal evaluations be administered to trainees in all future workshops and seminars.

The evaluation team notes that no short-term training has yet been provided by the project in the area of integrating demographic data into development planning. The fourth in the series of seminars co-sponsored with Westinghouse/DDD is supposed to focus on this topic and has been scheduled for April, 1987. Because of exchange rate problems, this

seminar's costs are not yet fully covered. The evaluation team recommends that the fourth seminar be held in April, as planned, and that USED use funds from project 625-0927 and, if necessary, seek funding from other donors, to cover the remaining costs.

Data processing. The project has provided short-term training in data processing to staff of national institutions, both in Bamako and in the national institutions themselves. An example of the former is training given to national researchers who brought their data to Bamako for analysis (e.g., EMIS-Senegal and EMIS-Burkina, PSD-Senegal). Examples of the latter are a 1983 regional workshop in Dakar on the use of SPSS (the mainframe version) and a series of short training courses provided by USED computer programmers to staff of national statistical agencies when USED-provided microcomputers were installed.

Some of this short-term training has made a very significant impact in the region. The SPSS training, for example, contributed significantly to the development of computer skills among the demographers in BNR (Senegal), who today are able to produce tables from their data, using SPSS-PC, without the help of programmers. In the case of Burkina Faso, training provided to staff of the Institut National de la Statistique et de la Demographie (INSD) by USED programmers, in connection with the processing of EMIS-Burkina data, helped the Burkinabé to recognize the potential value of microcomputers in their work. Today, INSD is processing their census data on microcomputers.

2.1.2 Equipment

The equipment provided to national institutions through the project has included data processing, duplicating and printing equipment, as well as twelve vehicles provided to national institutions in connection with several studies (2 for EMIS-Burkina, 4 for EMIS-Senegal, 2 for EMIS-Mali, 1 for PSD-Burkina, 1 for PSD-Senegal, 1 for Statistiques Sanitaire-Senegal, 1 for Chad plus numerous mobylettes for EMIS-Mali and EMIS-Burkina). At least one microcomputer has been installed through the project in all the national statistical agencies (with the exception of Guinea Bissau), and office equipment has been provided in many countries.

Although the total cost of USED-provided equipment has absorbed only a small percentage of the total funds expended under the project, the equipment's impact has been great. For example, the microcomputers provided by USED to BNR (Senegal) in early 1984 were the first microcomputers installed in that organization and contributed greatly to the development of BNR's computer capability and subsequent accomplishments in data processing (e.g. a DHS survey completely processed in-country on microcomputers from start to finish in seven months). Similarly, printing equipment provided to BNR greatly facilitated the completion of Senegal's 1976 Census reports. The evaluation team was also impressed by the use made in Senegal of equipment (a vehicle and duplicating equipment) provided to the Ministry of Public Health to improve the quality and turnaround time of health statistics collected at the national level.

2.2 Regional Level

2.2.1 Human Resources Development

The evaluation team is impressed with the development of USED staff resources since the mid-term evaluation. USED's technical staff represent an appropriate disciplinary mix and possess a level of training appropriate for researchers in a regional research center of excellence (see Annex 2.2 for USED staffing). Scientific staff include three demographers, two geographers and one economist-demographer, one sociologist, and two computer scientists - most of whom have received training in France, many at the doctoral level. Two of USED's senior demographers have strong computer skills and are experienced in the multivariate analysis of demographic data. In addition, there are a resident consultant demographer (Population Council sub-contract), two associate researchers, a population historian and a social demographer (provided by the Rotary Foundation and the Rockefeller Foundation). Annex 2.3 enumerates training received by USED staff members.

The evaluation team feels that the long-term training received by USED's staff in France - particularly on the part of the non-demographers - might usefully be complemented with short-term training in development economics in the U.S., which tends to be more policy-oriented than corresponding French training. The University of Michigan (CRED) provides such training during the summer on a regular basis to francophone researchers and planners. A working knowledge of English would also be helpful to USED staff (only two USED staff members have a working knowledge of English at present) because it would provide a much broader range of opportunities for short-term training and professional contacts.

USED staff have benefited to some extent from the use of project resources to bolster their skills in certain critical areas, including multivariate analysis of demographic data, data processing and the integration of demographic data into development planning. The mid-term evaluation recommended to USED that it use some of its project resources to improve staff capabilities in the above areas in order to strengthen USED's capacity to provide technical assistance in the region.

The evaluation team feels that USED has made considerable progress in strengthening staff capabilities in the above areas. At the same time, however, it would like to have seen more participation by project staff in courses related to the use of demographic data in development planning. The team also notes that most of the staff development in data processing occurred in 1983-84, so that it is necessary to update their knowledge.

The evaluation team recommends that USED move quickly to shore up its capabilities in the use of microcomputers to integrate demographic data into development planning. Specifically, the team recommends that Cheikh Mbacke, whose English and technical skills are particularly appropriate, attend the Conference on microcomputer software for integrating population variables into development planning which will be held at the National Academy of Sciences (Washington, DC) during the second week of February. Dr. Mbacke should also extend his stay to work with staff of Westinghouse to prepare for the April seminar in Bamako.

2.2.2. Facilities

Since the mid-term evaluation, USED has significantly expanded the size of its office space (by about 50 per cent) by renting additional space in two small adjacent buildings. The quality of the additional space rented is very good and appropriate to USED's programmed development into a regional research institution of excellence.

At the same time, USED has done very little since the mid-term evaluation to improve its data processing facilities. Hard disk capacity is very limited (only two 10-megabyte Winchester disk drives are operational), and only a few small and relatively slow printers are in use. All of USED's six microcomputers are relatively slow PC/XT's, and four of the six have limited memory capacity (448k).

In the area of software, USED has most of the standard software products for microcomputers (e.g., Wordstar, dBASE III, Lotus 1-2-3). USED staff are accomplished users of Wordstar (French version) and Lotus 1-2-3 (version 1 only). They have used dBASE III for file management purposes but have not yet utilized its relational datebase capabilities (for this reason, USED staff would probably have some difficulty computerizing their accounts in the absence of outside assistance). Use of SPSS-PC by USED in its analyses of EMIS and PSD survey data has now begun, giving USED a more powerful package than SLM which they had used until recently.

The insufficiency of USED's microcomputer hardware and statistical software has been a major constraint to the timely processing of the EMIS and other surveys. Some national researchers complained to the evaluation team about the relatively poor microcomputer facilities available at USED. The evolution of USED into a regional research institution of excellence to which national researchers would be eager to bring their data for research and analysis was the main recommendation of the mid-term evaluation. USED's failure to do more to improve their data processing facilities is puzzling. The evaluation team recommends that USED use more of its remaining project resources to improve its data processing equipment. The detailed recommendations regarding equipment to purchase are contained in Annex 2.4.

The mid-term evaluation also encouraged USED, in collaboration with RESADOC, to improve the quality of its library and documentation resources. The evaluation team found little evidence of a significant improvement in the size and scope of demographic research materials available at USED. USED, however, has been successful in generating a number of useful publications in region (see Annex 2.5 for list of publications).

2.2.3 Administration and Management

Financial Management (see Annex 2.6 for Project Budget and utilization patterns). USED does not have a consolidated organizational budget which covers the financial resources from all sources. According to USAID records, USED has used about 25% of project resources (or $1.6 million) to fund research grants and about 23% (or $1.3 million) to finance a variety of training programs (long-term U.S. degree training,

long-term degree training at ENEA). USED's operational costs (i.e., salaries, travel, seminars, conferences, offices space) have absorbed approximately 33% of total project costs ($2.15 million). Technical assistance costs (including the Population Council sub-contract and the services of the USAID liaison officer) are expected to account for approximately 20% of the project's total cost. It should be noted that much of USED's operating costs have been expended in support of regional and training activities. In addition to AID project resources, USED has received: (1) research grants/contracts for about $60,000: and (3) an additional $500,000 operational support over the past three years from UNFPA. Since only about 10 percent of USED's total financial support has come from non-AID sources, the team evaluated USED and its overall program rather than attempting to evaluate only AID financed activities.

Unfortunately, information is not readily available which shows the totality of USED's operating expenses based on actual expenditures over the recent past. The information available is kept manually by donor source and according to the format agreed upon with the donor funding source. AID has provided slightly over $700,000 per annum over the past three years toward covering USED's operating costs. The general usage pattern of this support over the last three years is as follows:

Salaries and benefits	37%
Travel	09%
Seminars/conferences	18%
Printing/Publications	14%
Supplies/other costs	22%

The first project evaluation recommended that USED's financial management system be computerized. USED intended to seek assistance from the Sahel Financial Management Project to set up and train staff on the use of a computerized management system. USED also hired a computer programmer skilled in the design of such systems. Due to several factors, some of which were beyond the control of USED management, this recommendation was not carried out. Consequently, the introduction of a computerized full-cost accounting system is now a matter of considerable urgency.

The evaluation team recommends that USED develop a computerized financial management system which permits the identification of full costs and sources of financing of all activities undertaken by USED. The financial management should be linked to USED's major service functions and output. Included as part of the same system, USED should computerise the monitoring of subproject implementation in order to facilitate the execution of tasks. USED may need to utilize project funds to obtain the necessary expertise to establish a functional financial system.

Given the current problems in financial monitoring, the team recommends that USED develop a phase-out plan for project 625-0927 based on the financial resources remaining in the project and that USED and USAID monitor this plan on a monthly basis during the remainder of the project.

Human Resource Management. USED core staff consists of a group of demographers which has remained stable over much of USED's eight-year

life. The remaining staff has had a higher turnover, and normally are hired on less secure financial terms. The number of support staff for the large professional staff is considered adequate.

One of USED's strongest areas of performance is its personnel management practices, which enable the organization to utilize staff potential effectively. Position descriptions are available for nearly all positions; performance incentives (non-cash) have been used to improve productivity; and staff meetings are held on a regular basis. In general, the staff shows a good understanding of each other's responsibilities. Meetings are held monthly to discuss individual workloads and adjustments are made to keep workloads reasonably equitable. In addition to these positive incentives, non-performers are not tolerated. If a staff member fails to bring his performance up to acceptable levels within a reasonable time, he or she is dismissed.

The fact that different donor sources are financing different activities within USED has resulted in considerable differentials in compensation and benefits among staff doing esentially the same work. To maintain staff morale, USED should review its salary policies and ensure their equitable application.

Program Development. USED, as a specialized organization within INSAH, shares its governing apparatus (Reunion des Experts and Conseil des Ministres), as well as benefiting from the advice of a biennial Conference of Sahelian Demographers (from 1978 to 1984, the Conference met annually; since 1984, it has met biennially). In its advisory capacity, the Demographers Conference has probably exerted more influence over USED than any other external organization.

The procedures used by USED for establishing program development, priorities and maintaining consistent program direction have served the institution well throughout its initial phase. As the program moves toward a more applied phase, there may be a need for greater participation by USED service users in the program planning process. However, this participation should not compromise the technical soundness of the program or the organization.

Relationships with USAID Missions. Because of the rapid turnover of USAID mission staff in the Sahel, only one officer had followed the project since its early days. However, all USAID staff had received some communication on the project, although this communication was often limited to reporting cables on major project activities. Analysis of trip reports and records of project staff showed that at almost all visits to a country they paid a courtesy call on USAID staff. However, trip reports were not subsequently forwarded to the missions.

Missions reported having received publications from USED, but unless they were relevant to their country, mission staff did not exhibit particular interest in them. In some cases, they received the publications, but did not realize that they were from the AID-funded project. Training was very much appreciated, but once again there was not an appreciation of USED's role in organizing and financing the training. Missions had not followed very closely or considered very relevant the research sub-projects, with the possible exception of

EMIS-Senegal, which had been designed to address issues of interest to the bilateral health project. Certainly there is much more in the way of public relations that needs to be done with this important constituency.

In terms of funding for a follow-up project, USAID staff were generally favorable, but as to be expected, also expressed a preference for direct control over funds for bilateral activities. In the case of Senegal, for example, which has a large comprehensive bilateral population project with the U.S., the mission felt Senegal had sufficient funds and talent to cover most needs and therefore USED would not be relevant. In Niger, the mission recognized the role of the regional project and supported it as a reservoir of specialized expertise which no individual Sahelian country would need on a full time basis. It should be recognized that the project could serve to diffuse information and experience from lead countries, such as Senegal to other countries. In addition, USED's expertise could be tapped to provide technical assistance in the design and implementation of bilateral activities, as is now being done in Mali with the Integrated Family Health Project. Finally, bilateral project and local currency funds could be used to support participant travel and per diem for USED seminar workshops, etc.

The team recommends that more care be taken to keep USAID Missions informed about the project's activities. USAID Missions should receive reporting cables, trip reports and publications of general interest. Perhaps the most useful aspect, however, might be a person-to-person visit by the USED Coordinator and/or by the AID project liaison officer to acquaint USAID staff, Mission Directors and Program Officers (as well as Health Officers), with the project and to seek their advice and input in establishing program priorities. Also, the REDSO/WCA officers should be used more effectively to inform missions of what USED can do for bilateral efforts.

Relations with REDSO and AID/Washington. It was noted in the mid-term evaluation that USED's program could benefit from greater AID technical backstopping. At present, the USED coordinator meets with S&T/POP during his annual trip to the U.S. Over the past two years, there have also been several consultations with the REDSO/WCA population officers on USED program matters. While this is an improvement over the situation which existed in 1982, the technical backstopping still has not produced the desired linkages between AID-financed cooperating agencies and USED; nor has the AID/W or REDSO technical backstopping played a consistent role in USED's program implementation and development.

S&T/POP manages centrally-funded programs with U.S. organizations, which enable these organizations to provide a variety of goods and services to host country institutions in developing countries. USED needs advocates within S&T/POP who understand its program and who can encourage cooperating agencies (CA) to collaborate with and support USED. USED also needs greater ST/POP and REDSO assistance in identifying which of the numerous CAs can best provide USED assistance in terms of its program content and identified needs.

In this regard, the evaluation team recommends that any follow-on phase incorporate regular program and workplan reviews with USAID/Bamako and at least annual reviews with REDSO/WCA and AID/W. This will allow

greater technical input from AID into USED program planning and will give USED and AID an opportunity to review the resources available from cooperating agencies in the context of USED's general program. Given the limited financing being considered for the follow-on phase of USED's program, it is necessary for USED to establish relationships with AID-financed cooperating agencies. Equally important, both in terms of program effectiveness and cost efficiency, that USED is an extremely important intermediary organization for CAs desiring to work within the Sahel.

2.3 Relationships with Sahelian National Institutions

USED's primary linkages have been with the national organizations dealing with statistics, demography and population studies. But USED has also forged new linkages with other organizations potentially concerned with population activities. For example, while EXADD and EMIS were carried out with USED's traditional partners (statistical organizations), the PSD has been undertaken with the involvement of agricultural research organizations in Senegal and by the national scientific research organization in Burkina Faso. Other activities have been implemented with the National Archives in Senegal, the Faculty of Law and Economics at the University of Dakar, Family Planning Association of the Gambia, and Ministry of Health in Mali.

Given the wealth of regional institutional collaboration which USED has fostered, the evaluation team believes that it is important for USED to continue existing linkages with national institutions. Equally important, however, given the emerging program directions, USED should develop relationships with other organizations playing an important role in population policy and program development (e.g., national population units; ministries of planning, agriculture and health; private voluntary organizations; family health and social welfare organizations; national women's groups; education and communication organizations). By broadening its frame of reference and areas of interest, USED could, perhaps, increase its appeal to potential new donors as well.

2.4 Regional Linkages

2.4.1 Relationship with CILSS and INSAH

CILSS itself operates at a political level and in this regard has strong relationships and support from the highest political levels. Benefitting from this political support, USED, as a technical organization, has been able to forge strong links with national institutions.

Looking at the last restructuring of INSAH, however, the status of USED within INSAH was not clearly defined (e.g., it does not appear on INSAH's organizational chart). In the evaluation team's view, this organizational link should be determined by the future evolution of USED, notably by the role that it will be called upon to play in terms of promoting regional population research. The success of USED's future program will depend to a considerable degree on its level of autonomy within INSAH.

The degree of autonomy which USED has enjoyed, plus its commitment to its organizational objectives, has enabled USED to successfully undertake and execute program initiatives which were well appreciated by the Club du Sahel in its recent meeting (November 5-6, 1986) in Hull (Canada). The evaluation team feels that its past record is ample justification for it to maintain autonomous resource management. USED now has project status within INSAH, but should be accorded the equivalent of department status. In this structure, USED should keep the Director General fully informed about its activities through informal channels or through formal meetings with the INSAH Director General and his department heads. Management autonomy permits USED to avoid some administrative delays which are prejudicial to its service functions. Nevertheless, the Director General of INSAH could liaise with the accounts section of USED for informational purposes and for internal audit purposes. Regardless of the institutional arrangement for the future, project assistance from AID must not be used to subsidize other INSAH activities.

2.4.2 Networking Regional Expertise

One of the initial purposes of the USED project was to increase the exchange of information among individuals and institutes working on population and development questions within the Sahel. Over the life of the project, and even in the design phase which preceeded the project, USED began to establish an excellent rapport with demographers, statisticians and applied researchers in the region. This has taken place through: (1) the annual and recently biennial Demographers Conferences; (2) seminars at USED and off-site; (3) frequent visits by USED staff to national institutions; and (4) indirectly, through the common training programs funded by the project (e.g. the cohorts who pass through ENEA together). In future years, it is recommended that USED staff broaden such networks to include data users and planners, particularly those working in central planning ministries, national population commissions and sectoral ministries such as health, agriculture, and education.

2.5 Relationships with International Organizations

USED has entered into relationships of several different kinds with institutions outside the region. The first and most direct relationship is through the technical assistance to USED which is funded by the project (i.e., the contract with the Population Council). The second type of relationship, and one encouraged by the mid-term evaluation, has occurred when USED has served as a point-of-entry for technical assistance provided by international organizations, whether for the development of its own staff or for the benefit of local institutions. Lastly, USED has developed collegial relationships, based on mutual scientific and programmatic interests, with several international organizations.

2.5.1 Project-Funded Technical Assistance

The technical assistance provided to USED by the Population Council does not figure as a major concern in the scope of work of this evaluation, as it was covered in the mid-term evaluation. Briefly,

however, the Population Council's role, which was unfavorably commented on during the mid-term evaluation, has improved considerably during the interim. The present incumbent technical advisor is fully and appropriately executing his role.

2.5.2 Point-of-Entry Technical Assistance

The mid-term evaluation called for USED to serve as a point-of-entry for technical assistance from other institutions, for example, those on contract to AID/W. This was considered to be an efficient means of introducing technical assistance to several countries at one time and to reinforce the capacity of USED as a regional center. USED staff itself could benefit from some of the specialized technical assistance already under contract with AID.

There have been several instances of this form of technical assistance since the mid-term evaluation. These include notably the cooperation with the US Bureau of the Census (BUCEN) in the planning and preparation of the next round of Sahelian censuses and with DDD in the use of microcomputers in demographic analysis. In both cases, the assistance rendered has been both appropriate and of high quality. USED is now pursuing similar types of technical assistance with the IMPACT project, the Options project and with other centrally funded projects.

2.5.3 USED and the International Scientific Community

About a dozen international research organizations were represented at USED's meeting at Dakar, November 10-13, 1986. This attendance is indicative of the range of contacts forged by USED, and, equally well, the interest of the international scientific community in Sahelian social demographic research.

At an early stage USED initiated its program of cooperation, but this has accelerated since 1983. Today USED has undertaken conjoint projects with North American institutions (Westinghouse, Columbia University, University of Montreal, Rockefeller Foundation, University of Pennsylvania) and European research centers (London School of Hygiene and Tropical Medicine, Institut National d'Etudes Demographiques in Paris, University of Rome and Sapienza, in Rome). Beyond this, USED has been represented at international meetings focused on population and development - the United Nations Africa Regional Population Conference (Arusha, January 1984); the International Population Conference (Mexico City, August 1984); the General Conference of the International Union for the Scientific Study of Population (Florence, June 1985), and the special meeting of the IUSSP (Nairobi, December, 1986). The evaluation team encourages the strengthening of external relationships as this action can increase USED's acceptability and credibility as a regional center for excellence.

3.0 IMPROVEMENT OF THE DEMOGRAPHIC DATA BASE

3.1 Major Studies and Conjoint Activities

3.1.1 Overview

Background. In almost no other region of the world is the need for socio-economic and demographic data more urgent, yet almost no other region faces the constraints of the Sahel. Urgency stems from the fact that these data will play not merely a role in development planning, but that they provide sensitive indicators for demographic monitoring in the region, subject as it is to periodic and severe droughts. It is worth quoting in this context the comments of the Executive Secretary of CILSS: "The human factor is the determining issue in the Sahel."

Demographically, the Sahel represents an extreme case for all key variables, constituting high mortality and high fertility (except in the case of Cape Verde) and very significant migration (also true for Cape Verde) even in normal years, but accentuated in drought years.

The resources available to monitor and analyze demographic change have been among the most meager in the world. To gain a perspective for the evaluation a brief retrospective glance is in order. At the outbreak of the great Sahelian drought of the 70's almost no monitoring mechanisms were in place; often the only demographic data dated from the partial sample censuses of the early 60's; outside Senegal there were almost no demographers and few nationals were statisticians; and only Senegal had a fully established university. Indeed, there were few Sahelian social scientists. It was in part to address this paucity of demographic data and the consequent capacity of the policy makers in the region to take account of demographic realities that AID undertook this project.

Today the region is still severely under-privileged, but viewed against its recent past, a radical change has occurred. Every country except Chad has taken a modern national census and several have taken or are about to take a second. Not only are there Sahelian demographers, planners, etc., but some have an international standing.

The conventional tools available for data collection and analysis are not always appropriate for the Sahel, particularly where they involve long and complex processes. Moreover, monitoring is not always well served by classical techniques of analysis based on censuses and vital registration, plus, increasingly, subject-specific surveys. Yet this has been the only armory available to the Sahel until now. The methodological assessments made by USED thus play a critical role for future data collection and analysis in the region.

The accelerated improvement in the data base over the last few years is due in no small part to USED. It is now becoming a center of excellence in its field. In turn its achievements stem in no small measure from the support accorded it by the project being evaluated here.

Purposes of the project. The shorter-term objectives of the original project document are close to realization. The project was "to build indigenous capacity in demographic data collection and

analysis...". This has provided the baseline from which USED can move now to meet its longer term goal, namely: "to increase the understanding of social, economic and demographic characteristics of Sahelian populations by governments and planners in the cooperating countries." In brief, this section will evaluate the process by which the first purpose has been achieved and the second initiated.

Activities to Achieve Purposes. Much of the remainder of this chapter is a subject-by-subject review of the studies on which an improved data based has been obtained. These various studies have often taken place simultaneously, yet viewed chronologically, USED has changed the focus of its activities in the domain of demographic studies. Some degree of overlap has occurred between the various stages outlined here, but the aim is to identify the principal element.

A first phase could be characterized as one of synthesis. USED has helped various Sahelian countries draw together existing data and to analyze census results so as to provide a baseline for further applied research.

A second stage saw substantial direct involvement in data collection and analysis. USED has added to the data base available in the Sahel, but more importantly some major and pioneering methodologies have been tested and/or formulated. This today permits USED to have confidence when advising national units about mortality and migration. Emerging retrospective methodologies are demonstrably more efficient at each stage of collection and analysis than were the longitudinal methodologies originally prescribed for the sub-projects. Moreover, the various methodological studies have shown that the act of faith among demographers that longitudinal studies are inherently superior cannot be sustained when subjected to empirical tests.

In brief, the practical and indeed methodological advantages of retrospective (i.e., one-passage) surveys over repeated-passage studies can now be asserted with some degree of confidence. Because this has been determined by Sahelian demographers themselves on the basis of their own field experiences, the studies to date have an added value and they also serve to reinforce the credibility of USED in the region.

A third stage is emerging today as a principal focus for USED - the end-use of demographic data. This will be the first step in the realization of the long-term goal of the project and as such will be further discussed in section four. Suffice to stress here that the first two stages were essential pre-conditions for the emerging developments. They provided the data base by drawing on existing studies, synthesizing files and by testing methodologies.

3.1.2 Population: General Studies

A most important contribution of USED has been the Analysis of Existing Demographic Data (EXADD) subproject which in various ways synthesized different data bases and helped countries analyze their censuses. This sub-project was commented on favorably during the mid-term evaluation so that an in-depth assessment is not necessary here. It should be noted that the studies have continued and been extended to most of the member-states. In every country visited by the

team the value of EXADD was stressed by the country professionals and the thrust of their comments can be summarized here as follows:

(1) EXADD strengthened the national data base. In some cases it is probable that the intervention of USED under-wrote and perhaps insured that 1980-round censuses were analyzed and their results published in a more timely manner;

(2) EXADD has given USED a higher regional profile and has thus increased its credibility;

(3) EXADD has been a highly focused and efficient backstopping exercise in which, by a careful selection of topics, the strengthening of national institutions has been maximized;

(4) EXADD has demonstrably, although selectively contributed to an improved national level data base; and

(5) EXADD has permitted USED staff to gain an invaluable experience not only in terms of data collection and analysis, but also in terms of technical assistance, transfer skills and networking within the region. Exchanges have run from on site training to seminars.

In a related exercise, the DDD-Westinghouse training discussed in Section 2.1.1, reinforced the EXADD studies in two ways - by increasing computer skills among nationals and by introducing projection technology. The latter is an essential pre-condition for and provides the link to the next step in the USED project which is more applied analyses, particularly the integration of demographic data into planning.

Beyond the EXADD subproject USED has played a significant role in planning, sharing of information and seeking of funding for census projects in the countries. Strategies for this vary from seminars to site visits, and have covered operations running from cartography to tabluation and analysis.

A minor but potentially rather important and highly applied area of general population studies is that of demographic history. To date this has mainly involved identification and collating of archival material, in which the Senegalese National Archives have played an important role. In March 1987 a Colloquium, "Sahelian Sources of Demographic History," will take place in Dakar to encourage greater use of archival resources in demographic research (see Annex 3.1).

3.1.3 Population: Components of Growth (fertility, mortality and migration).

Under the title of specific components of growth below various survey techniques are discussed. Annex 3.2 analyzes this in terms of surveys which, although special-subject, could also in their core modules cover a few key questions relating to each of the main components of growth - fertility, mortality and migration.

Fertility. Very little has been done specifically in this domain by USED itself. Nevertheless, several studies such as the World Fertility

Survey in Senegal and Knowledge, Attitudes and Practices (KAP) and fertility studies have taken place in a number of countries. USED is collaborating with the Westinghouse-DHS study in Mali and a KAP study is under negotiation in the Gambia. These surveys cover contraceptive and health knowledge and practice. They contain a WFS-derivative fertility schedule, covering birth intervals and their components, as well as fertility determinants. Coincidentally, they also permit the analysis of infant and childhood survivorship and their determinants, an aspect to be discussed further in the section on mortality. Westinghouse carries out the surveys with funding from AID outside the USED project and provides back-stopping on key elements. The data files and the experience gained would remain in the region.

In Mali, USED is providing the technical expertise necessary for the project to the Division of Family Health, and USED is being reimbursed for the salaries involved. This would seem to be a very useful formula for the future. Moreover, the experience gained in data collection and analysis will permit them in future to provide valuable technical assistance to country projects of this genre. In The Gambia, USED supplied consultations to a project with Family Health International, Pathfinder and The Gambia Family Planning Association on a KAP study relating to adolescent fertility, a rapidly emerging policy issue particularly for Sahelian urban populations. This activity represents what might be a forerunner of highly focused policy-oriented studies.

Mortality. The most important substantive and technical contribution of USED has been in the field of infant mortality. This domain was selected both by donors and by Sahelian experts as being of critical importance. Within this field, however, the areas of maternal and infant survivorship were given special priority in USED's most important study, the Infant and Child Mortality studies in the Sahel (EMIS). Therefore, most of the following remarks relate to the aspect. Adult mortality has been directly addressed only in a conjoint study with INED (see below). Furthermore, the relationship between infant and childhood survivorship and adult mortality is an issue of both substantive and methodological importance, but has not yet been satisfactorily resolved, although the EMIS subproject has taken a step in this direction (see Appendix 3.3).

In response to the priority accorded infant and childhood mortality, the project paper called for the adaptation to the Sahel of a methodology developed by IFORD. USED executed these studies, which involved the repeated interviews of a panel of women who had given birth during a specific reference period. Two of the three studies (in Burkina and Mali) covered deliveries in urban areas at maternity and Maternal and Child Health (MCH) clinics. In Senegal, where the study was carried out in a rural area, the women were selected for the panel through a screening survey.

The data were collected through an initial contact immediately post-partum, when certain items of information were collected including several retrospective questions permitting estimation using what is termed the Brass-Macrae technique. Then a full-time team of interviewers attempted to follow up the interviewees with repeated interviews covering the health of the baby and child-rearing practices for what was

originally intended to be a duration of four to five years. As recommended by the mid-term evaluation an independent survey was added to the methodology to help estimate the coverage of births in the study, while the period of observation was truncated.

A further important element of EMIS was the referencing of determinants of mortality and fertility to the deaths and pregnancies occurring during the panel study. Because referencing could take place at each passage of the survey it permitted a more precise study of causality than would be the case from retrospective surveys, where time-referencing of events and their immediate determinants is less exact and dependent often on recall.

The advantages and disadvantages of EMIS are further discussed in Annex 3.3. Its heavy costs and practical disadvantages were commented on by the mid-term evaluation, but there are also methodological problems. The detailed studies carried out by USED on the EMIS survey data have thus served USED and the project well at a number of levels (see also Annex 3.3). In sum, they can now demonstrate empirically that:

(1) The EMIS approach is time consuming and costly, too expensive to carry out at the national level, too complex to manage and analyze and may suffer from bias resulting from loss-to-follow up (although this was not true in the Senegal EMIS).

(2) EMIS-type studies have inherent methodological constraints which only became evident on analysis, which are less well documented than are those for retrospective studies and for which (in the case of EMIS) adjustment techniques have not yet been developed.

(3) Retrospective techniques may yield estimates as accurate as those from the EMIS and with better known error properties. Moreover, retrospective studies entailing only one passage provide quicker turnaround and can also be carried out efficiently at the national level using a randomly selected sample. It is true that retrospective surveys yield far less exact time-referenced data, but with the high mortality levels in the Sahel, differentials are still so marked that this is less of a problem than it would be in a lower mortality region.

(4) EMIS may produce multipliers by which both events and determinants in retrospective studies can be adjusted, but this would need further investigation, which may not be warranted at this stage except where the study is being carried out for advanced thesis work.

(5) EMIS has produced a longitudinal cross-national comparative data set from which to examine critical questions of child survival.

(6) At a more abstract level the completion of the EMIS methodological analyses has permitted the USED staff to advocate, for methodological as well as practical reasons, the adoption of alternative retrospective strategies. They can now do this on the basis of their own experience rather than relying on overseas theoretical studies. The value of this cannot be overemphasized. Moreover, in this domain the USED associated studies may well have made a contribution which extends beyond the Sahel region - something which will reinforce USED's claim to being a regional center of excellence.

(7) Finally, but not least important, the successful execution of EMIS has provided many less tangible benefits in terms of training, experience in data collection and analysis, computer use, technical assistance, and a data base which has already been used for several graduate theses.

This critique assumes that there is a viable alternative. This is indeed available through the Demographic and Health Survey program of Westinghouse. DHS is an internationally tested methodology, which gives it the additional advantage of providing cross-national comparisons. Moreover, there is now both a practical and technical experience available for support operations.

Within the same DHS questionnaire there are questions relating, inter alia, to: (1) fertility; (2) contraceptive prevalence; (3) infant and childhood survivorship; (4) some socio-economic and health determinants of infant and childhood mortality, and fertility; and (5) an abbreviated series of questions on migration. The samples are small and national (N, Mali, = approx. 4,000). For infant and childhood mortality studies this gives an effective working sample of about 10,000-12,000 live births and perhaps 2,000 infant and childhood deaths. Turnaround will be relatively quick and efficient, and these surveys could be repeated from time to time.

There are, however, four critical questions to resolve:

(1) How to obtain data permitting the use of the Brass-Macrae estimation technique or its derivatives? USED's evaluations suggest that this is perhaps the most robust available method. A possible strategy for this is discussed in Annex 3.3;

(2) How to reference the determinants? In this case a simple step has been taken in one regard by including questions on the place of death of infants;

(3) How to estimate adult mortality? There is no ready solution to this at the moment;

(4) How to develop multipliers from the EMIS by which possibly to adjust DHS data?

Beyond DHS, mention must be made for four USED and conjoint studies which will have implications for the future of mortality studies in the Sahel. Firstly, a number of retrospective small-scale studies in the Sahel have thrown up some important sustantive hypotheses which need further investigation. They also give a time dimension which is an important analytical property.

Secondly, the London School of Hygiene and Tropical Medicine is also involved in an experimental data collection in Bamako, using the MCH clinic and the maternity data as a base. This will have widespread application, especially if and when a methodology is developed to obtain such data in conjunction with retrospective surveys.

Thirdly, in Cape Verde, USED has participated in the establishment of a health data system as required by the original project document. This project is now being undertaken in Senegal. The evaluation team has reservations about this project, although it is not a costly component. The evaluation team recognizes that some expertise exists at USED, and also that it exploits existing administrative data sources and structures. Nevertheless, it would not be desirable to consecrate significant new resources to such activities.

Finally, INED is attempting to look at the available vital registration data for Bamako, so as to permit direct computation of age-specific mortality rates. Problems abound, notably in terms of obtaining data on population at risk (denominators), but again output tables from this might well feed back into biometric tables on age patterns of mortality, which are the key to a successful study of adult mortality.

Migration. Although migration is a critical factor in the analysis of demographic trends in the Sahel, and a concern of Sahelian states, to date only two major studies on this topic have occurred. The reasons for this lack seem twofold:

(1) a decision both by donors and USED to concentrate on infant mortality considered by Sahelian countries to be a priority area in the population policy field; and

(2) a need to investigate appropriate methodologies.

Additionally, for some countries, notably Burkina Faso, detailed studies existed already.

A major study which has been of particular value was undertaken in conjunction with OECD. It looked at Senegal River Basin migrants in France and also studied their place of origin, some 90 villages. This has been a very successful study at a number of levels.

(1) It has led to policy decisions in France and in the Sahel relating to this movement;

(2) The meetings to discuss results brought together not only researchers, but also representatives of migrants, officials, unionists, etc.;

(3) It gained a very high profile for USED, including a plenary meeting of study participants with the President of Senegal.

A conjoint follow-up study supported primarily by the Rockefeller Foundation is being undertaken on a sample of villages of origin. This study is exploiting the data set by looking at the relation between migration trends and episodes of drought, a critical issue for the development of demographic monitoring procedures in the Sahel, and will also investigate the relations between fertility and migration, an issue of importance in the study of urban growth.

A pilot study in Bamako by USED has examined the diverse advantages of retrospective and longitudinal migration studies. Its results showed that both for practical and methodological reasons, retrospective surveys were to be preferred. This finding was discussed during a meeting of regional country experts at Bamako (1/15-17/85), and from this meeting a recommendation was passed favoring retrospective procedures.

Summary. Detailed data collection and analysis on components of population growth over the past four years have resulted in a major and very significant output. USED is now in a position to advocate retrospective methods of data collection and has the technical assistance capacity to support national-level applied survey research. Through these studies USED has also:

(1) improved the data base;

(2) gained experience

(3) reinforced institutional capacity, both within and between national institutions; and

(4) reached a position where it should shift its emphasis from data collection and analysis from methodological studies to technical assistance support in the applied population policy and sector programming fields.

3.1.4 Population and Development

A longer term goal of this project has been to produce more effective population policies in the Sahel region. To formulate and implement effective policies, relevant and reliable data must be available and analyzed in a usable form, a pre-condition which is only now being realized in the Sahel. Of particular importance are data on trends and projections, both of which provide the rationale for many elements of population policy formulation. For these to become really valuable, modalities must be found to integrate them into planning. There must also be the desire on the part of decision-makers to employ such studies for the purposes of problem resolution.

As a first and prior step to policy formulation, USED has rightly concentrated its efforts on data production problems and has not yet devoted significant amounts of time to applied analyses. Also, USED is just beginning to develop the necessary in-house skills in this area.

USED has, however, taken an initiative to address the relations between population and development through a Population, Health and Development research component (PSD). PSD is a social impact study initially looking at the effects of development on population variables, health, fertility, and migration. The same surveys in Senegal, Mali, and Burkina also permit the analysis of the effects of population growth and composition on development. The complexity of the relationship can be illustrated with reference to Burkina Faso. There, as in much of the Sahel, rapid population growth producing pressures on resources has led to migration. The study area is one into which migrants have moved spontaneously, but also into which they have been recruited for a rice

project. The sample strata provide for both of these effects, while an adjacent area into which there has been no migration provides a case-control through a third stratum.

Such a project is necessarily complex as it draws together both quantitative and qualitative data. It also requires the formulation of analytical frameworks, which are now available.

The project is nearing completion in Senegal; Burkina Faso is ready for its fieldwork phase; and Mali is at a preparatory stage. So far, however, some outputs have been observed:

(1) In Senegal and Burkina, the SD studies has already demonstrated the advantages of having a demographer on the team. At first in Senegal there was none, but later this was recognized as a severe lack.

(2) The studies demonstrate population development interrelations at the local level and in the rural sector, the key sector for development.

Beyond this applied research, USED has already contributed to policy formulation and implementation. For example, in January, 1986, the CILSS Council of Ministers adopted a resolution recommending that the CILSS member nations emphasize the impact of population on development planning, as outlined in the USED colloquium. "Economic Development of the CILSS Countries: Analysis and Future Prospects." As discussed earlier, migration studies of the Senegal River Basin resulted in changes in immigrant policies in France, Mali, Mauritania and Senegal. USED is now collaborating with the University of Dakar in a study of laws and customs pertaining to the status of women with the ultimate goal of influencing legislation bearing on women's rights. In addition, the Ministry of Health of Mali has asked USED to conduct a baseline health survey to provide data for planning its nationwide MCH program. It is in this direction of data application that USED is placing its major emphasis in programming future work.

3.2 Technical Assistance

3.2.1 Technical Assistance: Demographics

USED has provided technical assistance using several approaches:

(1) on site country level assistance, short-term to most of the countries and long-term to Mauritania and Niger;

(2) workshops which are problem-oriented; and

(3) short-term technical assistance by project staff to country studies brought to Bamako specifically for this purpose.

This assistance has been perhaps one of the most positive aspects of the project. Country personnel appeared virtually unanimous in their praise for USED - for the quality of the consultations, the ways in which USED staff helped them overcome blockages. At present, USED staff are well equipped to handle technical assistance in terms of standard

demographic data collection and analysis activities. It is less clear that they have yet the capacity for assistance of a broader nature (e.g., fields covering demographic-economic relationships). Assuming that they can increase their capacity for this and for exercises involving the integration of demographic data into planning for development, the mechanisms of technical assistance that they have used to date could be applied to this new area.

3.2.2 Data Processing.

Technical assistance in data processing and data processing services have been provided by the project in support of many of the studies undertaken by national institutions. In the case of the EMIS and PSD studies, for example, technical assistance was provided by USED in the form of computer programs developed and installed in the national institutions to facilitate the entry and editing of data. Data processing services were also provided at USED to national researchers in connection with their analyses of these data in Bamako.

The national institutions considered the technical assistance received to have been extremely useful, particularly in the case of data entry and editing. USED's programmers deserve considerable credit for their success in assimilating microcomputer technology introduced by the University of Pennsylvania in this area and for their success in applying it and disseminating it throughout the region.

Some of the national institutions (particularly Senegal) were less enthusiastic about the data processing services provided at USED. Some felt the software and hardware were outdated, with the result that the work took much longer than anticipated. The evaluation team concurs with this observation. On the other hand, the Malian Statistical Directorate considers that it has benefitted substantially from being able to use USED's data processing facilities, which are similar to its own.

In addition to data processing, technical assistance and services in connection with studies, USED provided technical assistance in the installation of microcomputers provided by the project to national statistical institutions. Through the Inter-sahelian technical assistance program, technical assistance was provided to the statistical directorates of Mauritania and Niger in the processing of Census data, consisting of the services of one Sahelian demographer to each country for a period of three years.

The national institutions gave high marks to the assistance provided in connection with the installation of micro computers. The horizontal assistance provided through the Inter-sahelian Technical Assistance Program was also well received. It appears to have contributed significantly to the census processing and to the institutional development of statistical agencies in both countries. One of the demographers sent initially to Niger by USED, for example, was successful in developing a UNFPA project there and is now working in that project as resident expert.

4.0 FUTURE DIRECTIONS

A turning point has been reached in the Sahel. There is a rapidly emerging interest in population policy, population and development and the integration of population data into planning. In the past there was a lack of political will to take on population issues stemming in part from conservative attitudes, but also from the belief that population policy was centered on limiting births.

Today, conditions have changed. Leaders have become more conscious of the importance of population issues. One of the indicators of this is the appearance of government family planning efforts (Mali, Senegal, Gambia, Burkina, Niger) as well as the emergence of private voluntary family planning associations throughout the Sahel. The evaluation team feels that in the future, USED could play a key and very profound catalytic role. USED is one of the rare units in the Sahel which has social demographic expertise. It now has a high level of both technical and political credibility and its network is Sahel-wide. The remainder of this section gives concrete recommendations on how AID can best invest in the further development of this valuable resource.

In developing recommendations for follow-on AID support to USED, the evaluation team referred to a document prepared by USED which discusses: (1) plans for USED's evolution into a Center for Population Studies and Research for Development (CERPOD); and (2) CERPOD's objectives and proposed program activities for the period, 1988-92. While the evaluation team supports USED's plans to evolve into a regional, population-development research center (CERPOD), it considers the proposed 5-year program to be much broader than can be supported by AID. The team strongly supports an AID-funding for several components from CERPOD's proposed program which meet the following criteria:

(1) the proposed activities address AID's priorities for the region;

(2) the proposed research studies involve limited data collection;

(3) the proposed activities are broadly consistent with USED's existing staff and institutional experience; and

(4) the proposed activities complement those of other potential donors.

The evaluation team also proposes that a limited amount of core support be provided, as well as commodity support for basic research materials and equipment to enhance CERPOD's technical assistance, training, and research capabilities. The team believes this core support will be extremely important in obtaining other donor funding.

For proposed activities outside AID's interest, the evaluation team encourages CERPOD to seek alternative funding from international donors such as The World Bank, UNFPA, ILO, the Rockefeller and Ford Foundations, and from national donors, such as the Overseas Development Administration (ODA), the International Development Research Center (IDRC), and Canadian International Development Agency (CIDA). The team also encourages USED

to obtain from such donors realistic direct and indirect program costs. This action will ultimately aid in broadening USED's financial base and, thereby, in developing its self-sufficiency. The team supports the proposed donor coordination meeting now scheduled for late April.

4.1 Recommendations for Future AID Funding

The evaluation team recommends that an AID supported follow-on project provide resources for activities in the following program areas: (1) research studies; (2) technical assistance; (3) training; and (4) policy development.

4.1.1 Future Studies

The studies to be carried out by USED in the future should:

(1) concentrate on retrospective methodologies which have been demonstrated to be more efficient and likely to produce more timely and representative data than do longitudinal analyses (see discussion in Section 3);

(2) increase USED's capacity to provide high quality technical assistance to countries;

(3) increase the capacity to integrate demographic data into planning in the region by providing data needed to implement existing methodologies or by evaluating the appropriateness of alternative methodologies from the standpoint of their applicability in the Sahel region; and

(4) involve basic data collection only where this is necessary for limited scale methodological studies, notably relating to DHS.

To the above ends, several separate sets of studies should be given priority by USED in its brokerage function with donors, in the provision of its technical assistance, in its training activities, and in its dissemination programs, as follows:

(1) DHS, which, as discussed in Section 3, permits the combined analysis of fertility and family planning, infant and child survival, and limited aspects of migration. USED should continue to cooperate with the USAID-funded Demographic and Health Survey program. USED can, as has been the case in Mali, provide technical assistance and specialized analyses;

(2) single round, retrospective migration studies, with the aim of obtaining a better understanding of the process of urbanization in the region. Limited resources from a follow-on project should be provided for this purposes; and

(3) general demographic and other surveys. The emphasis, as for DHS, must be on special-topic surveys which have, however, comparability from country to country. Frequency, timeliness and simplicity should all be emphasized so as to maximize turnaround and to provide demographic monitoring. Funds for implementing such surveys should be obtained from outside sources.

4.1.2 Technical Assistance

The stage has been reached for the integration of demographic data into planning. This would not have been feasible in the past because of lack of realiable data and because USED's mandate emphasized the more narrowly defined demographic studies. It is an appropriate moment to begin this process, however, because better data are available and because USED has completed its first round of simple demographic studies. In order to assist member countries in the application of demographic data to development problems USED's own capacity in this area must be upgraded. USED staff will have to have further training and outside groups with special skills must be utilized.

To move toward more appropriate intentions, USED should take the following steps:

(1) terminate as soon as possible and disseminate in summary form the results of the PSD studies;

(2) reinforce the move to form USED working groups on various topics;

(3) support seminars and exchanges involving demographers, planners and decision makers; and

(4) review, analyze and adapt simple integration methodologies, which have been developed and applied recently both within the region (Burkina Faso, Senegal) and elsewhere (e.g. INPLAN models, RAPID II sectoral planning applications, ILO computer-assisted training models, UN Population Division manuals for Integration of Population into Development Planning).

USED should avoid getting involved with methodologically sophisticated models of economic-demographic interaction, such as the ILO Bachue models. Instead, USED should put its emphasis on models which: (a) implement standard sectoral planning methodologies on microcomputers; (b) properly reflect budgetary and other constraints facing planners; (c) show the impact of lower fertility on the attainment of national objectives; and (d) quantify the trade-offs which planners must make in the face of rapid population growth.

4.1.3 Training

Long-term training should continue to be provided to Sahelian demographers and planners at ENEA, as was done in the past. Future training should emphasize population and development issues, possibly by changing the locus of some of the training from the College of Statistics to the College of Population and Demography, which ENEA plans to initiate in the near future. USED's ties to ENEA should be strengthened in the following ways:

(1) Staff of USED should offer training in the use of microcomputers to ENEA students. It is much more cost-effective to address the region's deficiencies in computer literacy among demographers, statisticians and planners when they are students instead

of waiting until they have started working in their respective governments. USED should provide several IBM-XT microcomputers (or the equivalent) to ENEA for instructional use, as well as such standard software as Lotus 1-2-3 and SPSS-PC. At present, ENEA's computer resources are limited to two Apple II computers, for which appropriate software does not exist.

(2) ENEA staff, particularly specialists in economics and planning, constitute a potential resource for USED in its work integrating demographic variables into planning. USED should consider holding training seminars in this field in collaboration with ENEA.

The evaluation team recommends that less emphasis be placed on long-term U.S. training in a follow-on project. In order to enrich the region's scope of expertise outside demography, the team suggests that it might be more cost-effective to send Sahelian economists and planners to the U.S. for short-term and medium-term training at institutions like the University of Michigan (e.g. summer program in development economics at CRED for French-speaking participants and one-semester program in the School of Public Health on population in development planning for English-speaking participants), which provide such training on a regular basis.

Short-term training in the form of seminars and workshops, which are welcomed by USED's collaborating national institutions, should be a high priority for a follow-on project. These activities might be focused on the following topics:

(1) the integration of demographic data into development planning;

(2) broad discussions of linkages between population and development;

(3) alternative methodologies for demographic data collection and analysis;

(4) special purpose microcomputer software (e.g., programs for making regional population projections); and

(5) multivariate analysis of the determinants of demographic variables.

4.1.4 Policy Development

Given its already strong institutional links through the Sahel, USED has a potentially significant and influential role to play in population policy dialogue. Moreover, the research data available through USED can provide a sound basis for policy decisions and program planning. As planners, USED should move toward becoming more actively involved in policy development activities. Specifically, the team recommends that in the future USED should:

(1) expand its institutional and leadership network to include a broad range of decision makers and technicians from ministries of plan, ministries of health, ministries of finance, ministries of agriculture, population organizations and parliamentarian groups;

(2) conduct workshops, seminars, and special high-level presentations geared to decision-makers to explore key policy elements, to address special policy concerns, and to present effective approaches to policy and program development;

(3) provide technical assistance and research support to investigate specific policy concerns or problems and to provide solid information for policy decision-making (similar to the recent study on laws affecting the status of women in the region); and

(4) develop targeted publications to disseminate research findings and other support materials to aid in policy decisions and program planning.

In order to achieve the above objectives effectively, the evaluation team recommends that USED develop a comprehensive strategy which identifies who will be the target audience, how they can best be reached, what messages should be transmitted, and what forum and means should be used to most effectively disseminate information. To develop this strategy, USED may want to seek a relationship with one of the various AID centrally-funded projects (IMPACT, OPTIONS, RAPID) or one of the international organizations (Club du Sahel, UNFPA) with particular interest in policy development activities.

4.2 Comments on Other Components of CERPOD's Program

Although the evaluation team recommends that any AID follow-up project be limited to the activities discussed in Section 4.1, the team would, nevertheless, like to make some comments on the other components in CERPOD's proposed 5-year plan, as well as to suggest possible alternative sources of funding for those components which have not been recommended for AID funding.

4.2.1 Methodological Research

In addition to the integration of demographic variables into planning and limited reprospective studies of migration, both of which the team recommends be funded by AID, CERPOD's proposed 5-year program includes the following components: (1) health statistics; (2) migration; and (3) other methodological research. The team does not recommend that CERPOD pursue further work in health statistics. It feels that effective work in this area would be too expensive and would produce little of value for research or policy-making. With regard to migration, as discussed above, the team proposed that AID fund limited, policy-oriented retrospective studies of migration and urbanization but does not recommend that CERPOD pursue further methodological work in the migration field. The team feels that the activities listed under "Other Methodological Research" need to be more clearly defined.

4.2.2 Action Research

CERPODs proposed 5-year program includes action-oriented research on the following topics: (1) population policy and family health; (2) population, urban growth and development of the informal sector; (3) consumption models and food self-sufficiency; and (4) markets and other

distribution channels for agricultural inputs and products. The team recommends that CERPOD attach high priority to studies linking population policy and family health. It is likely that funding could be obtained for studies of the determinants of infant and child mortality based on the EMIS and DHS surveys. With regard to the other proposed topics, the team feels that they lie somewhat outside CERPOD's areas of expertise (particularly the last two). Should funding be available for these studies, the team recommends that CERPOD utilize agricultural economists and other staff resources available at INSAH. The team also notes that CERPOD may be able to obtain funding for its proposed informal sector study from the ILO or from The World Bank.

4.2.3 Training

CERPOD's proposed 5-year program includes the following training components: (1) microcomputer training; (2) training in the use of socio-economic indicators in development planning; (3) research stipends; (4) scholarships for long-term training; and (5) staff development in demography and data processing for regional training institutions. In addition to further long-term training at ENEA, which the evaluation team recommends be funded by AID in a follow-up project, the team recommends that further microcomputer training be provided in connection with the proposed AID-funded short-term training in integrating demographic data into development planning.

The team does not see great value of any further work on the use of socio-economic indicators in development planning (other donors may, however). The team feels that the provision of research stipends for scholars to visit CERPOD is a highly desirable activity but feels that it may be more appropriately funded by other donors (e.g., IDRC, Ford, Rockefeller). The team recommends that additional long-term training, apart from that proposed for ENEA, be funded primarily by other donors (CIDA, France). In this regard, the team feels the highest priority should be accorded to the completion of doctorates by CERPOD's own senior staff (e.g. Ouaidou, Traore).

4.2.4 Information and Dissemination

CERPOD's proposed 5-year program includes the following information and dissemination components: (1) development of a data bank; (2) publications; (3) documentation; and (4) dissemination. As discussed above, the evaluation team recommends that the AID follow-up project include carefully-targeted publications, limited funds for documentation and policy-oriented seminars to disseminate research findings. The team does not support the development of a data bank at CERPOD, however, since this would duplicate similar data banks at the UN and at the ECA. CERPOD should, however, investigate ways to link up with existing data banks. It might be appropriate for USED to maintain select data items (e.g. infant mortality) as USED is already the source of such primary information for many of the UN data banks.

4.2.5 CERPOD's Proposed Organization

As noted above, the evaluation team supports USED's proposed plans to evolve into a regional research center of excellence within CILSS.

The evaluation team also supports the idea of a Scientific-Management Committee, as outlined in the proposed 5-year program. The team does not feel a formal CERPOD Donor Support Group would be necessary, however, since donors generally schedule meetings among themselves, as needed. CERPOD should, however, endeavor to expand and maintain institutional relationships with a variety of international donor agencies. The team recommends that CERPOD continue the Sahelian Demographers Conference which might usefully be expanded, to include planners and other data users.

The operating principle for CERPOD should be to provide CILSS countries with a research/teaching structure which can emphasize issues of population and development. The Scientific-Management Committee noted above is the best mechanism by which this could be achieved. It will have a direct entree because it will be chaired by the Executive Secretary of CILSS, while the Director General of INSAH will be an ex-officio member with the status of deputy chairman. The remaining members will be representatives of member-states and researchers from donor countries selected by CILSS on the basis of their competence.

In conclusion, the team: play a continuing important role for CERPOD in building selectively on the accomplishments to date of USED and establishing more firmly the capacity for the region to plan for its social and economic development taking into account population realities.

ANNEX 1.1: PERSONS CONTACTED

MALI

Direction de la Statistique et de l'Informatique,
Ministere du Plan

Balla Diallo, Directeur
Mohammed Diallo, Directeur Adjoint
Mme. Fatoumata Sidibe, Chef de la Division de la Population

CONACILSS

Mr. El Hassane Drave, Correspondant National

Institut du Sahel

Mr. Reuben Thomas, Director General
M. Alioune Camara, Coordinateur, RESADOC
Dr. Papa Syr Diagne, Coordinateur, Unite Socio-economique et de la Demographie (USED)
M. Nassour Ouaidou, Coordinateur Adjoint, USED
Dr. Babaly Thiam, Economiste/Demographe, USED
M. Baba Traore, Demographe/Statisticien, USED
Mme. Fadima Diarra, Informaticienne, USED
Mlle. Nafissatou Diop, Informaticienne, USED
Dr. Dieudonne Ouedraogo, Consultant, USED
Dr. Joel Gregory, Conseiller Technique, USED (Population Council)
Dr. Cheikh Mbacke, Demographe, USED
M. Mamadou Kani Konate, Sociologue, USED
Dr. Sally Findlay, Demographe, USED (Rockefeller Foundation)
M. Dramane Doumbia, Chef Comptable, USED
Bolize Dao, Comptable, USED
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USAID-Bamako

Mr. Eugene Chiavaroli, Mission Director
Mr. Roger Simmons, Program Officer
Mr. Zach Hahn, Design Officer
Ms. Diane Ponasik, General Development Officer
Ms. Celeste Robertson, Program Assistant
Mr. Francisco Zamora, Health Officer
Ms. Carol Hart, Project Liaison Officer, USED Project

UNDP

M. Charles H. Larsimont, Representant Resident

UNFPA

Boubacar Traore, Country Program Officer

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Direction de la Statistique, Ministere de l'Economie et des Finances

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M. Boye Abdel Kader, Professeur a la Faculte des Sciences Juridiques et Economiques

Institut Senegalais de la Recherche Agricole (ISRA)

Dr. Jaques Faye, Sociologue et Directeur du Departement Systemes
M. Oussouby Toure, Sociologue, Departement Systemes

Archives du Senegal

M. Saliou Mbaye, Directeur

CONACILSS

M. Aly Saleh Diop, Representant

UNFPA

Dr. Sabwa Matanda, Representant Adjoint
Mme. Fatoumata Sidikou, Chargee du Programme

USAID-Dakar

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Mr. Dennis Baker, Population Officer

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Baba ould Boumeiss, Chef des Service des Comptes
Moh. ould Elevatt, Administrateur
M. Abdoul Aziz Niang, Chef de Service de la Coordination Statistique et des Relations Exterieures

Direction de la Planification, Ministere de l'Economie et des Finances

M. Ndongo Lamine, Directeur

USAID-Nouakchott

Mr. George Eaton, Mission Director
Mr. Walter W. Boehm, Assistant Director
Dr. Theresa Foglebera, Anthropologist

NIGER

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Mr. Badjo Ali Gamatte, Directeur
Mr. Hassan Douda, Chef de Service
Mr. Ignegongba Keumaye, Expert de l'USED
Mr. Yacine Diallo, UNFPA Expert, Unite des Etudes Demographiques

USAID/Niamey

Mr. Peter Benedict, Director
Dana Vogel, Health and Population Officer
Dawn Liberi, Health Officer
Maurice Middleburg, Population Advisor

BURKINA FASO

CILSS

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Ministere de la Planification du Developpement Rural

M. Henri Bruno Bessin, Secretaire General
M. Lassane Dera, Directeur General, Institut National

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de la Statistique et de la Demographie (INSD)
Mme. Anne Marie Bakyono, Directrice des Ressources Humaines et de la Demographie, INSD
M. Baya Banza, Demographe, INSD
M. Dabire, Chef du Service Ressources Humaines
M. Adjma Gbangou, Chef de Service des Statistiques de l'emploi et de la formation
M. Desire Lohe Konate, Chef de Service des Statistiques Sociales

Centre National de la Recherche Scientifique et Technique (CNRST)

M. Frederick Pale, Directeur Technique du Projet PSD
Jean Baptiste Ouedraogo, Directeur, Institut de Recherche en Sciences Humaines (IRSH)
Jean Pierre Ouedraogo, Sociologue, IRSH

USAID-Ouagadougou

Mr. Richard Greene, Population Officer

THE GAMBIA

Government Office of Central Statistics

Mr. A. N'Dow, Director
Mr. Hassen Jeng, Demographer/Statistician

Family Planning Association

Mr. Burung Goree N'Diaye, Program Director

USAID (Office of the AID Representative)

Mr. Tom Mahoney, Acting AID Representative
Ms. Ida Ceesay, Program Assistant

FIELD VISIT QUESTIONNAIRE

Evaluator: _____ Person(s) Contacted: _____

Dates: _____ Title: _____

Affiliation: _____

I. General

1. How associated with Project?

   - carried out research study
   - trainee
   - participant at Annual Meeting
   - recipient of TA
   - other.

2. How was your contact established with the Project?

3. Did you (your institute) benefit from direct financial and material aid from the USED Project? If so, how? Additional needs, requests which were not addressed.

II. For TA:

1. What kind of technical assistance has been provided?

2. Who initiated?

3. Who exactly provided TA (staff of USED, Sahelian consultants, international consultants)?

4. In your opinion, was it timely and of high quality?

5. What is your overall assessment of the technical assistance?

6. Has anyone from USED ever asked you to evaluate TA received?

7. Future TA needs.

III. For Training:

1. In general, have the training opportunities been worthwhile?

2. To what extent have you participated?

3. In general, have the opportunities been adequately publicized?

4. Did participants seem to be chosen fairly?

5. Did there seem to be a fair regional representation?

ANNEX 2.1: Seminars and Workshops Sponsored by the Project Since the Mid-term Evaluation

DDD Seminar-1 (Bamako, 3/26-4/4/84)
Purpose: Provide training in use of DDD demographic analysis package (MCPDA) for microcomputers
Participants: 2 each (1 statistician, 1 demographer) from 7 Sahelian countries
Co-sponsor: Westinghouse/DDD and BuCen
Cost: $35,000

SPSS Seminar (Dakar, 4/3 -4/22/83)
Purpose: Provide training in use of SPSS (mainframe version)
Participants: 2 each from 6 Sahelian countries
Co-sponsor: BNR (Senegal)
Cost: $65,250

EMIS Analysis Seminar (Bamako, 8/20-8/25/84)
Purpose: Discuss approaches to analysis of EMIS data
Participants: 21 researchers (international and Sahelian)
Co-sponsor: IDRC (Canada)
Cost: $30,700 (of which $20,400 provided by IDRC)

OECD Migration Study Colloquium (Dakar, 2/27-3/1/84)
Purpose: Review results of study on migrants from Senegal River Valley residing in France
Participants: 83 (mostly Sahelian and French participants)
Co-sponsor: OECD Development Center
Cost: $71,500

Migration Methodology Seminar (Bamako, 1/15-1/17/85)
Purpose: Review data collected in methodological study designed to test relative efficacy of longitudinal versus cross-section data on migration
Participants: 20 researchers (6 of whom European)
Co-sponsor: None
Cost: $34,250

PSD Seminar (Bamako, 2/19-2/22/85)
Purpose: Discuss appropriate methodologies for PSD studies
Participants: 30 researchers (9 of whom international)
Co-sponsor: IDRC (Canada)
Cost: $23,650 (of which $15,400 provided by IDRC)

DDD Seminar-2 (Bamako, 3/18-3/29/85)
Purpose: Provide further training on DDD demographic package: begin country studies (population projections)
Participants: 15 participants (2 each from 6 countries, 3 from Mali)
Co-sponsor: Westinghouse/DDD
Cost: $20,000

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Census Coordination Seminar (Bamako, 9/23-9/28/85)
Purpose: Exchange information between Sahelian participants on experience gained in 80's round of consuses: coordinate questionnaires and other aspects of 90's round.
Participants: 24 statisticians and demographers (including 5 international experts)
Co-sponsor: None
Cost: $26,700

Mortality Analysis Seminar (Bamako, 2/17-3/20/86)
Purpose: Review available methodologies for analysis of mortality data
Participants: 28 researchers from 10 francophone African countries plus 10 international and Sahelian instructors
Co-sponsor: IUSSP
Cost: $3,000

DDD Seminar-3 (Bamako, 10/13-10/25/86)
Purpose: Provide further training on DDD demographic package and on Lotus 1-2-3; continue work on country studies
Participants: 15 (same composition as DDD Seminar-2)
Co-sponsor: Westinghouse/DDD
Cost: $42,000 (of which $5,000 provided by DDD)

National Health Statistics Seminar (Cape Verde, 7/23-7/27/84)
Purpose: Review vital registration forms and sensitize officials concerning the potential value of data collected
Participants: 19 "agents de service" plus several experts
Co-sponsor: None
Cost: $4,500

Purpose: Colloquium on Economic Development in CILSS Countries (Dakar, 11/21-11/23/85)
Participants: 123 (mostly Sahelian)
Co-sponsor: ECA (Addis Ababa)
Cost: $36,400

Planning Methods Course-1 (Bamako, 8/3-8/31/84)
Purpose: Provide training in planning methods
Participants: 29 planners from 8 Sahelian countries
Co-sponsor: UNDP (via UNESCO)
Cost: $34,500

Planning Methods Course-2 (Bamako, 8/5-8/31/85)
Purpose: Provide training in planning methods
Participants: 28 planners from 8 Sahelian countries
Co-sponsor: UNDP (via UNESCO)
Cost: $26,300

Planning Methods Course-3 (Bamako, 8/15-9/20/85)
Purpose: Provide training in planning methods
Participants: 27 planners from 9 Sahelian countries
Co-sponsor: UNDP (via UNESCO)
Cost: $8,682

LONG-TERM MANPOWER RESOURCES

Position	Present Incumbent	Nationality	Degrees Held	Date of Engagement	Previous Professional Experience (Years)	Funding 1/ Source	Major Responsibilities within USED
Coordinator* 2/	P.S. Diagne	Senegalese	Doc. 3eme cycle (Geography)	11/79	16	3	Program direction
Deputy* 2/ Coordinator	N.G. Ouaidou	Chadian	DEA (Demography)	12/79	12	1	Program implementation Supervise technical analysis
Population* 2/ Policy/ Demographer	B. Thiam	Malian	Doc. 3eme Cycle (Demography)	6/79		3	Population policy advisor EXADD (Coastal Sahel)/ migration
Demographer/ * 2/ Statistician	B. Traore	Malian	DEA (Demography)	1/81	10	2	Supervise data collection/ analysis Monitor EMIS & EXADD studies
Demographer 2/	C. Mbacke	Senegalese	Ph.D.(Demography)	11/86	5	1	Methodology studies
Sociologist 2/	M.K. Konate	Malian	DEA (Sociology)	4/86	4	2	DHS research assistant
Economist 3/	B. Cisse	Mauritanian	DEA (Planning)		7+	4	Supervisor reg. planning project Supervisor PSD seminars Economic advisor
Computer 2/ Analyst/ Programmer	D.F. Diarra	Malian	DEA (Stat./Math) Ingenieur (Computers)	1/84	7	1	Data processing/ programming supervisor
Researcher Pop/Rural Dev. Studies	D. Ouedraogo	Burkinabe	Doc. d'Etat (Geography)	4/86	12	1	PSD Mali-BF rural socio-economic studies
Computer Analyst/ Programmer	N. Diop	Malian	Ingenieur (Computers)	7/85	6	1	Data processing/ programming Management systems dev.
Financial 2/ Management Specialist	D. Doumbia	Malian	Brevet Sup.	1/81	14	1	Financial management supervisor General admin. officer
Accountant	B. Dao	Malian	Brevet Tech.	9/83		1	Accounting
Technical 2/ Advisor (Pop Council)	J.W. Gregory	American	Ph.D.(Demography)	6/86	16	1	Technical advisor to the USED coordinator and PSD research methodology
Associate Researcher (Historian)	D. Cordell	American	Ph.D. (History)	6/86		6	Archives research supervisor

LONG-TERM MANPOWER RESOURCES (Continued)

Position	Present Incumbent	Nationality	Degrees Held	Date of Engagement	Previous Professional Experience (Years)	Funding 1/ Source	Major Responsibilities within USED
Associate Researcher (Demographer) Rockefeller Foundation	S. Findley	American	Ph.D. (Sociology)	9/86	10	6	Migration data analysis
Project Liaison Officer	C. Hart	American	M.A.	10/85		1	Project monitoring and reporting AID Procurement and administration
Health 4/	Vacant					5	

* Indicates positions required to be filled as Condition Precedent.

1/ Code for funding sources
- 1 - USAID - 625-0927 Demographic Data
- 2 - USAID - 625-0969 Demography/Health Surveys
- 3 - UNFPA/CEA - Core Grant
- 4 - UNDP - Regional Economic Planning
- 5 - WHO - Financing
- 6 - Other

2/ Positions anticipated in original Project Paper.
3/ Position vacant since 31/12/86. Not expected to be filled.
4/ Position vacant since 1982. Not expected to be filled.

ANNEX 2.3

FORMATIONS SUIVIES PAR LE PERSONNEL DE L'USED

Bolizé DAO Comptable

Bamako Journées d'étude sur le contrôle interne organisées par l'association des comptables maliens
1 semaine fin 83

Bamako Journées d'étude présentation des documents comptables à soumettre aux conseils d'administrations
1 semaine Avril 84

Bamako Séminaire Planificication et Budgétisation des projets de développement organisé par le Projet Régional de Gestion Financière dans le Sahel (PRGFS)
21/5 - 1/6/84

Bamako Séminaire sur la comptabilité organisé par PRGFS
2 semaines 85

U.S.A. Séminaire francophone en management et développement organisé par l'université de Pittsburg
1/6 - 13/8/86

Mme DIARRA Fadima DIARRA Informaticienne

U.S.A. Etude de logiciels IBM-PC à l'université de Pensylvannie
2/4 - 24/4/83

Dakar Participation au séminaire sur l'utilisation du logiciel SPSS
29/4 - 25/5/83

Dakar Stage de formation sur l'architecture des micro-ordinateurs à la Direction du Traitement Automatisé de l'information (DTAI)
11/2 - 3/3/83

DIOP Nafissatou Informaticienne

Dakar Participation au séminaire sur l'utilisation du logiciel SPSS
29/4 - 25/5/83

Dakar Stage de formation sur l'architecture des micro-ordinateurs à la Direction du Traitement Automatisé de l'information (DTAI)
11/2 - 3/3/83

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Bamako Séminaire Planificication et Budgétisation des projets de développement organisé par le Projet Régional de Gestion Financière dans le Sahel (PRGFS)
21/5 - 1/6/84

U.S.A. Stage de formacion aux logiciels du Bureau du Recensement Américain adaptés à la micro-informatique par la société Westinghouse
5/7 - 20/7/84

Dramane DOUMBIA Comptable

Bamako Séminaire Planificication et Budgétisation des projets de développement organisé par le Projet Régional de Gestion Financière dans le Sahel (PRGFS)
21/5 - 1/6/84

U.S.A. Séminaire francophone en management du développement de l'université de Pittsburg
8/6 - 13/8/84

Bamako Séminaire sur la comptabilité organisé par PRGFS
2 semaines 85

Bamako Séminaire sur l'informatisation de la comptabilité organisé par PRGFS
2 semaines 86

Canada Séminaire intégré de management pour les cadres étrangers à l'ENAP du Quebec
6/6 - 13/6/86

Nassour G. OUAIDOU Démographe

Yaoundé Séminaire de recyclage des démographes africains francophones
6 - 31/7/81

Paris Cours de démographie approfondie
7/5 - 18/6/84

Bamako Encadrement et participation aux 3 séminaires sur l'utilisation de la micro-informatique dans le traitement des données socio-économiques
26/3 - 4/4/84, 18 - 29/3/85 et 13 - 24/10/86

Bamako Participation et encadrement du 3ième séminaire de recyclage des démographes africains francophones
17/2 - 21/3/86

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Mme SIBADOU Mariam TOURE : Chef du secrétariat

Paris : Stage de formation au traitement de textes sur matériel WANG
18 - 20/4/84, 27/4/84 et 2-4/5/84

Bamako : Formation au traitement de textes WORDSTAR sur IBM-PC
20 - 31/5/85

Babaly THIAM : Conseiller en politique de population

Bamako : Séminaire sur l'utilisation de la micro-informatique dans le traitement de données socio-économiques
26/3 - 4/4/84, 18 - 29/3/85 et 13 - 24/10/86

Accra : Séminaire régional de démographie organisé par la Commission Economique des Nations Unies pour l'Afrique
Juillet 85

Bamako : Séminaire de recyclage des démographes africains d'expression française (UIESP)
17/2 - 21/3/86

Baba TRAORE : Démographe

Bordeaux : Stage de recyclage des démographes africains
4 semaines Novembre 82

Dakar : Séminaire sur l'utilisation du logicel SPSS
29/4 - 26/5/83

Paris : Séminaire d'initiation à l'analyse des données
1 - 17/9/83

Bamako : 1er séminaire sur l'utilisation des micro-ordinateurs dans le traitement des données socio-économiques
26/3 - 4/4/84

Paris : Cours de démographie approfondie
Mai - juin 84

Bamako : 2ième séminaire sur l'utilisation des micro-ordinateurs dans le traitement des données socio-économiques
18 - 29/3/85

Bamako : Séminaire sur l'analyse de la mortalité en Afrique (recyclage des démographes africains) - (Baba fut en même temps participant et animateur)
17/2 - 21/3/86

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ANNEX 2.4: Recommendations on the Procurement of Additional Microcomputer Equipment

The evaluation team recommends that USED consider purchasing at least two of Compaq's new Deskpro 386's (a state of the art micro--not to be confused with Compaq's popular portables--with about ten times the processing speed of an IBM PC/XT). The Deskpro 386's which USED acquires should be equipped with a minimum of 4 megabytes of main memory (RAM), with Compaq's internally-mounted 130 megabyte hard disk (which is about 5 times faster than the XT's), and with 80287 coprocessors (or with 80387 coprocessors, should they become available prior to the procurement). These micros are fully IBM-PC compatible in terms of software (i.e., USED can use its existing software) and disk media (i.e., floppy diskettes have the usual IBM format). At least two should be purchased to provide redundancy for diagnostic purposes, should one of them break down. Each system, fully configured, should cost about $8000.00 in the U.S. (European procurement is not recommended because of the expected price differential). Because of the fact that these machines are based on very advanced microprocessors (as discussed below), there may be some delay in obtaining export permits.

The Deskpro 386 is one of the first of a new generation of 32-bit microcomputers which provides minicomputer capabilities and performance at microcomputer prices. IBM is expected to bring out a similar computer this year. Although the full capabilities of the Deskpro 386 (and of the other microcomputers based on the Intel 80386 chip) will not be fully exploited, through the development of appropriate software, for several years, the price/performance ratio of these machines with existing software make them suitable for an operation like USED's even now. The reason is that much of USED's work involves processing large sequential files, using statistical software, such as SPSS. The main constraints on throughput for such work are: (1) the speed of sequential disk read/write operations; and (2) the speed of math operations (e.g., addition, multiplication).

The Compaq Deskpro 386 addresses these needs by providing the fastest IBM-compatible processing speed on the market, as well as one of the fastest Winchester hard disk drives currently available. The large memory capacity of the Deskpro 386 permits the user to transfer data files (e.g., SPSS workfiles) from the hard disk to a virtual disk (i.e., RAM disk), the size of which is limited only by the amount of main memory installed in the system.

Main memory is getting so cheap (the price of the newer 1-megabit chips is falling rapidly; at their current price of $25, a megabyte of main memory costs only about $200). Since there is no reason to expect the downward trend in main memory prices to abate--and since new microcomputers like the Deskpro 386 can use

virtually unlimited amounts of main memory (ten megabyte expansion cards are already on the market)--we are rapidly approaching a situation in which workfiles of practically any size can be stored in a microcomputer's main memory. The large-capacity hard disk (or Bernouilli Box) would, in this case, be used only for storing master files. Using SPSS and working with data files which are stored completely in main memory, the Deskpro 386 should provide performance comparable to that obtained with popular minicomputers (e.g., the DEC VAX 11/780).

In addition to obtaining at least two state-of-the-art microcomputers, USED should add to its hard disk capacity. At least four of its six microcomputers--and ideally all--should be equipped with a minimum of 20-megabyte hard disks. The Plus Development Hardcard, which is mounted completely inside the system unit and which therefore permits use of both existing floppy disk drives, is the recommended product (its unit cost is about $700 in the U.S.). In addition to procuring additional hard disk drives, USED should equip all of its microcomputers with 8087 math coprocessors (approximate unit cost: $100). The additional hard disk capacity and math coprocessors should be installed prior to the April seminar on integrating demographic data into development planning, since recently developed planning software--such as that to be shown at the upcoming NAS conference--is designed for use on machines which are so-equipped.

For use in backing up the Deskpro's hard disks (and for archiving data sets) USED should consider obtaining 20+20 Bernouilli Boxes--mass storage devices which use removable 20-megabyte cartridges. In addition to being fast, reliable back-up devices, Bernouilli Boxes facilitate the transfer of data between microcomputers and can serve, in their own right, as relatively high-speed mass storage devices. Bernouilli boxes, made by the IOMEGA Corporation, are an almost ideal form of mass storage for microcomputer installations in which a large number of users share several microcomputers because data sets may be transferred freely from one machine to another. The downside of Bernouilli boxes is that they are not as fast as the faster hard disk drives currently on the market (their access speed is roughly comparable to the Winchesters drives distributed with the IBM-XT), they are dust-sensitive (filters need to be changed regularly and drive heads cleaned), and they are relatively expensive (about $2500 per two-drive unit, with 20-megabtye cartridges costing about $60 each). One of the older 10+10 units was installed in INSAH's Research Division three years ago and has been functioning since.

One of the weakest links in USED's current data processing facilities is its printers--a limited number of 80-column IBM Graphics Printers. These should be augmented as soon as possible by at least two high-speed, heavy duty dot matrix printers. The Okidata Pacemark printer would be an excellent choice. It is an industrial work-horse of a printer, with a speed of 350 characters per second. It is designed for use with minicomputers and is capable of producing large volumes of output (SPSS

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tables), as well as high-quality documents (in its slower, near letter-quality mode). The cost of the Okidata Pacemark 2470 is approximately $2000 per unit. Two were installed three years ago at RESADOC and have been functioning without any service or maintenance ever since (one of the printers' logic boards was damaged recently, however, when RESADOC staff plugged it into a 220-volt outlet).

RESADOC's IBM graphics printers will need to be replaced before long. I suggest that they be replaced with newer, faster, wide-carriage models which are suitable for word-processing and other RESADOC microcomputer applications. The Epson LQ-1000 and the Okidata 293 printers would be appropriate choices at this point in time since they are inexpensive, reasonably fast and can produce near letter-quality documents, if desired.

USED should be able to handle all of its statistical analysis work with two Deskpro 386 microcomputers (or at least the bulk of it), since in terms of performance they are the equivalent of about 15-20 micros of the PC/XT vintage. The older PC/XT's can then be used for word processing, accounting and project management, Lotus spreadsheet work, planning models and specialized demographic software (e.g., DDD, INPLAN, RAPID).

With the heavy emphasis to be given to dissemination in the proposed follow-on project, USED may want to consider the possibility of acquiring suitable hardware and software for desk-top publishing. A low-cost laser printer would be necessary (Hewlett Packard's Laserjet is an excellent model, at a cost of about $3,500), as well as a color plotter (again, my preference is for those made by HP, such as the 7475A 6-pen color plotter, which costs about $1,200). The Xerox Ventura Publisher software is regarded as the best among the IBM-PC page-formatting products and is compatible with HP's Laserjet printer. Also, on the dissemination side, USED may want to develop the capacity to prepare and present computer-assisted "slide-shows," using software such as PC Story Board. Although the hardware is expensive (video screen projectors) and a bit difficult to transport around the Sahel, the potential impact on policy-makers may be worth the cost and trouble. Presumably the IMPACT project would be a good source of advice on appropriate hardware and software, as well as of technical assistance, relating to the use of microcomputers for dissemination purposes.

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The cost of implementing the above recommendations, in two phases, is estimated to be as follows:

Phase 1 Procurement (to be installed prior to April, 1987)

5 20-megabyte HardCards @ $700	$3,500
5 8087 math coprocessors @$100	500
2 Okidata Pacemark 2470 Printers @ $2000	4,000
Spare parts and supplies (diskettes, ribbons)	500
Air Freight (rough estimate)	1,000
Subtotal	$9,500

Phase 2 Procurement (follow-on project)

2 Compaq Deskpro 386 with 4 megabytes of main memory, 130 megabyte hard disk drive, and math co-processor @ $8,000	$16,000
2 Sola (or Topaz) UPS units (480 watts, 220-v/50 Hz.) @ $2000	4,000
4 Dot-matrix printers @ $1000	4,000
2 20+20 Bernouilli Boxes @ $2,500	5,000
1 HP Laserjet Printer @ $3500	3,500
1 HP 7475A Color Plotter @ $1200	1,200
Software (desk-top publishing, updates, etc.)	3,000
Spare Parts and Supplies	3,500
Air Freight (rough estimate)	3,000
Subtotal	$43,200

USED may want to consider requesting Westinghouse to procure the first phase hardware, the idea being that they could test it and bring it with them when they come out for the seminar in April.

ANNEX 2.5

PUBLICATIONS DE L'USED

Il existe actuellement à l'USED plusieurs types de publications. D'abord, il y a la série **Etudes et travaux de l'USED.** Récemment l'USED a lancé un bulletin trimestriel d'information, **PopSahel.** Des publications occasionnelles hors série sont également préparées et assez largement diffusées. De plus, dans le cadre de l'EXADD, l'USED a participé aux publications démographiques des institutions nationales dans plusieurs de pays du CILSS. Et finalement, l'USED a un projet de publications de vulgarisation et d'éducation dans une nouvelle série qui s'appelera **Population et développement au Sahel.**

Ces activités sont dirigées par un Comité des publications. La direction technique de ces publications est assurée actuellement par Alioune DIONGUE. Les autres membres du Comité sont Papa Syr DIAGNE, Nassour OUAIDOU, Joel GREGORY, Carol HART, Cheick MBACKE, et Dieudonné OUEDRAOGO.

** **Etudes et Travaux de l'USED** sont des publications à caractère scientifique, et visent à présenter, sous la forme de livre, les résultats des recherches menées entièrement à l'USED ou conjointement avec des institutions nationales, ou encore en collaboration avec des chercheurs sahéliens.

Cinq numéros ont déjà paru dans la série:

1. **Situation démographique des états membres du CILSS**, par Nassour G. OUAIDOU, 1984, 113 pages.
2. **Bilan du développement économique des pays du CILSS et perspectives**, 1985, 180 pages (publié en collaboration avec la Commission Economique pour l'Afrique [Addis Abeba]).*
3. **Population et éducation: le cas du Sénégal**, par Mody NIANG, 1985, 73 pages.
4. **Les problèmes actuels du nomadisme sahélien: le cas de la Mauritanie**, par Abdel Wedoud OULD CHEIKH, 1986, 115 pages.
5. **Les actes du séminaire sur le plan d'analyse des enquêtes EMIS**, 1986, 249 pages (publié en collaboration avec le Centre de recherches pour le développement international [Ottawa]).

*Cette publication existe également en version anglaise.

Trois autres numéros sont actuellement sous presse:

6. **Les actes du séminaire sur la population-santé-et-développement** (publié en collaboration avec le Centre de recherches pour le développement international [Ottawa]), cette publication devrait sortir dans le premier trimestre de 1987.
7. **Répertoire des sources pour l'étude de l'histoire démographique des pays du Sahel**, par Saliou MBAYE, (plusieurs tomes), prévu pour janvier 1987.
8. **Une société pastorale en mutation sous l'effet des politiques de développement: les Peul du Ferlo du début du siècle à nos jours**, par Oussouby TOURE, c. 135 pages.

Le comité de publications étudie actuellement trois autres dossiers en vue d'une publication éventuelle:

-Les actes du séminaire sur les méthodologies pour l'étude des migrations sahéliennes.
-Les actes du séminaire régionale sur les prochains recensements sahéliens;
-Les tomes deux ("méthodologie") des trois EMIS: Burkina, Mali, Sénégal.

** **PopSahel**, le bulletin trimestriel d'information, en est à son premier numéro. Le deuxième est prévu pour février 1987. Il est distribué dans la sous-région et aux institutions ailleurs qui oeuvrent sur la population et le développement en Afrique.

** L'USED a préparé, en collaboration avec d'autres institutions deux publications hors série:

-**Les migrations internationales sud-nord. Une étude de cas: les migrants maliens, mauritaniens et sénégalais de la Vallée du Fleuve Sénégal en France**, par Julien CONDE et Pap Syr DIAGNE, avec la collaboration de Nassour G. OUAIDOU et A. KADER, Paris, 1986, 154 pages.
-**Population, santé et nutrition au Sahel: études sur le bien-être de certaines communautés de l'Afrique de l'ouest**, sous la direction de Allan G. HILL, Yolande JEMAL et Adam THIAM, Londres et Bamako, 1985, 430 pages.

** Enfin, il existe cinq manuels préparés dans le cadre du programme "Planification socio-économique pour la région du Sahel" (PSRS). Ces publications ont été réalisées conjointement avec l'UNESCO.

1. **Méthodes de planification des ressources humaines dans les pays du Sahel**, Louis BOHNER, 111 pages.
2. **Manuel d'élaboration et d'utilisation des indicateurs socio-économiques dans la planification**, Birane CISSE, 62 pages.
3. **Techniques de planification**, Moustapha KASSE, 170 pages.
4. **Manuel d'évaluation de projet**, Abdoul Malick SOW, 66 pages.
5. **Méthodes de planification: travaux pratiques**, Pierre FALLOURD, Moustapha KASSE, et Abdoul Malick SOW, pagination diverse.

** Publications nationales dans le cadre de l'EXADD

Burkina:
- **Fichier des villages revisé no 1**, "Population par groupe d'âges: sexe masculin et sexe féminin"
- **Fichier des villages revisé no 2**, "Lieu de naissance des résidents et activité des hommes",
- **Fichier des villages revisé no 3**, "Scolarisation et alphabétisation, activité des chefs de ménage"
- **Fichier des villages revisé no 4**, "Célibataires par sexe, alphabétisation et activité des chefs de concessions sexe masculin"
- **Séminaire national: Accroissement de la population et développement au Burkina Faso, avril 1983**

Cap Vert, **Recenseamento geral da população e habitação-1980:**
- "Io: População global"
- "IIo: Estructura da população"
- "IIIo: população activa"
- "IVo: habitação"
- "Vo: Recenseamento geral da população-1970: população global e structura da população"
- "VIo: analise dos resultados".

Gambie:
- **Population and Housing Census 1983: Provisional Report**

Mali, **Analyse du Recensement de 1976:**
-"Tome II: Rapport administratif et technique"
-"Tome III: Caractéristiques démographiques"
-"Tome IV: Fréquentation scolaire et niveau d'instruction"
-"Tome V: Activité économique"
-"Tome VI: Perspectives de la population résidente du Mali de 1977 à 2007"
-"Tome VII: Etudes spéciales".

Mauritanie:
-"Recensement général de la population: Données essentielles"
-**Documents et études no 2:** "Quelques aspects de l'enseignement Fondamental en Mauritanie"
-**Documents et études no 3:** "Exploration des fiches de consultations du Centre Mère-Enfant de la Sebkha"

Niger:
-**Recensement général de la population:**
"Résultats définitifs: données brutes, ensemble du Niger"
"Résultats définitifs: données brutes, Département de Niamey"
"Résultats définitifs: Département de Diffa"
"Résultats définitifs: Département d'Agadez"
"Rapport méthodologique"
"Résultats définitifs: rapport d'analyse".
-**Notes et Etudes Démographiques, no 1,** "Estimations de quelques paramètres démographiques et projections de la population du Niger de 1977 à l'an 2000"

Sénégal: **Recensement général de la population d'avril 1976:**
-"Resultats définitifs, données corrigées, Région du...
...Cap Vert"
...Casamance"
...Fleuve"
...Louga"
...Sénégal Oriental"
...Sine-Saloum"
...Thiès"

** **Population et développement au Sahel**, présentée sous une forme simple et claire, sera une série de vulgarisation déstinée aux non-spécialistes. Elle comptera, dans un premier temps, quatre publications, préparées en collaboration avec le Population Reference Bureau (Washington, D.C.):

-**La situation démographique au Sahel;**
-**Les migrations et l'urbanisation;**
-**La santé et la mortalité aux jeunes âges;**
-**Les déterminants proches de la fécondité.**

Table I: PROJECT BUDGET AND UTILIZATION PATTERN

PP Budget ($000)	
Technical Assistance	656
Salaries/Differentials	1,704
Training	839
Travel	224
Seminars	185
Publications	192
Equipment/Supplies	242
Other Costs	952
Inflation/Contingency	1,938
Project Totals	6,932
Sahel Contributions	
Salaries	411
Other Costs	172
UNFPA	
Consultants	340
Salaries	1,000

Revised PP Budget ($000)		Accrued Expenditures 31/12/86
Technical Assistance	1,206	740
Training	1,480	1,163
Commodities	71	76
USED Support	2,147	2,033
Senegal EMIS/PSD	651	576
Burkina Faso EXADD/EMIS	393	311
Mali EXADD/EMIS	171	164
Gambia EXADD	67	46
Mauritania EXADD	44	31
Niger EXADD/Seminars	103	43
Cape Verde EXADD/EMIS	58	42
Migration	100	100
Chad EXADD	50	50
Sub-totals	6,541	5,375
Unearmarked	391	391
	Unexpended Earmarks -	1,166
	6,932 Funds Remaining - as of 12/31/86	1,557

ANNEXE 3

QUELQUES ASPECTS METHODOLOGIQUES

3.1 L'Histoire Démographique

A première vue l'histoire démographique ne semblerait avoir aucune place au sein d'une unité de recherche sur les problèmes d'aujourd'hui et de l'avenir. Mais en réalité, l'histoire démographique peut contribuer directement à une meilleure connaissance des tendences et des structures actuelles.

De telles études font quatre contributions-clés:

(1) Jusqu'à maintenant les observations des changements géographiques au Sahel ont nécessairement mis l'accent sur les aspects physiques plutôt qu'humains et des observations long terme se basent principalement sur les études géologiques, géomorphologiques etc.. A partir de ces observations physiques quelques constats ont été faits et surtout concernant le rôle joué par l'accroissement de la population dans la détérioration de l'environment jusqu'à nos jours de l'homme. L'histoire démographique jouera un rôle très significatif, surtout si elle est "populationnelle" plutôt que démographique (dans un sens assez limité) et si les études se font non seulement à l'échelle nationale mais aussi régionale ou bien locale.

(2) Ces études servent aussi a renforcer les archives nationales, non seulement sur le plan de la collecte des documents mais aussi sur celui des études qui sont liées.

(3) Pour des pays nouvellement indépendants, il reste toujours le problème que leur "histoire" publiée est basée sur des études écrites principalement par des anciens colonisateurs qui avaient une optique particulière et qui mettaient l'accent sur l'histoire de la colonisation elle-même et ses implications pour les plus grands enjeux de l'Europe-même. Un rôle très significatif pour l'histoire démographique consiste à redresser ce biais. Parce que la démographie est concernée par toute la population; elle étudie non seulement les anciens gouverneurs ou les relations entre le Quai d'Orsay et le Whitehall, mais à partir de ses reconstructions quantitatives (et qualitatives) on s'intéresse au peuple tout en entier.

Bref, l'histoire démographique aide au développement d'une identité nationale.

(4) La dernière mais non la moins importante de la contribution de l'histoire démogrpahique est dans le domaine de la méthodologie.

Cette contribution a deux origines:

a) A partir des données historiques on a des observations "longitudinales" à long terme;

b) Dans les archives on trouve une gamme immense des sources de données. Le chercheur doit formuler ou adopter des stratégies d'estimation ou de calcul qui sont très innovatrices et qui parfois lui permettent le développement des techniques applicables aux sources actuelles. C'est pour toutes ces raisons que la mission d'évaluation appuie la mise en voie des études en histoire démographique. Disons qu'il y a peut-être un principe fondamental à la base de cet appui: les derniers membres d'une génération vivront au delà de 90 ans et l'effectif, la compostition et le comportement de cette génération influenceront beaucoup les générations suivantes. Dans les pays, comme la Norvège, où on a des données fiables de l'état civil, on peut étudier directement le factuer de génération. Pour le Sahel il foudra "reconstruire" ces générations à partir des sources diverses. Enfin,

et dans le même ordre d'idée la plupart des archives ne sont pas en deça du début du siècle; le temps couvert par ces archives est inférieur à la durée vécue par des sahèliens les plus vieux.

3.2. Le Rôle des Enquêtes: Quelques Stratégies

Effectivement le chercheur dispose de deux stratègies d'enquête:

- longitudinale;
- rétrospective

Chacune de ces stratégies n'a une valeur que dans le cadre d'un contexte statistique élargi. Pour les pays qui n'ont pas un système fiable d'état civil ce contexte est constitué principalement des recensements nationaux. Ceux-ci permettent tous les 10 ans un inventaire démographique; ils permettent aussi d'avoir une base de sondage pour toutes les enquêtes entre deux recensements; enfin ils constituent également les sources principales pour les estimations indirectes des taux classiques à partir des techniques dites 'non conventionnelles". Plus on a de recensements - toutes chose égales par ailleurs- plus on peut faire des estimations fiables et les plus diverses sont les possibilités d'estimation (par exemple avec deux recensements on peut employer des méthodes de "survie").

Entre deux recensements on peut réaliser des enquêtes spéciales qui donnent plus de détail que les recensements dans le but de surveillance démographique. Pour ceci le croix de la méthodologie dépend principalement de l'objectif de l'enquête. La taille de l'échantillon, à son tour, doit dépendre des besoins statistiques, qui s'expriment dans les erreurs de sondage. Pour ce dernier problème on peut formuler des stratégies pour réduire l'importance des erreurs.

La prochaine annexe discute de celles-ci sur la base des analyses de la survie infantile et juvénile. Sur le plan idéologique et depuis longtemps le démographe a cru que des enquêtes longitudinales sont plus fiables que les techniques rétrospectives. Mais on n'a presque jamais donné concrètement une justification de cette croyance. Entre

parenthèses, il faut dire que l'USED, elle-même, a beaucoup contribué à la démographie sur le plan international par ses études dans ce domaine. En prenant le cas de l'EMIS la prochaine annexe va discuter des avantages et des inconvenients techniques des enquêtes rétrospectives et longitudinales. Il suffit de signaler ici en avance de cette annexe bien qu'on accepte que les enquêtes longitudinales aient beaucoup de valeur, surtout pour des études des interrelations, on a démontré qu'il y a des problèmes non seulement sur le plan pratique mais aussi sur le plan technique. De toutes les façons, même si l'on accepte pour le moment qu'une enquête rétrospective peut être moins approfondie et moins fiable qu'une enquête longitudinale, l s avantages pratiques des enquêtes rétrospectives nous poussent à les accepter comme la méthodologie préférée pour les années entre des recensements. Ce n'est que la vue de la mission d'évaluation. Plus significatif c'est le fait que des chercheurs de l'USED et ensuite une réunion des statisticiens sahéliens ont adopté ce point de vue à partir de leurs expériences.

Cependant, l'acceptation de cette notion ne constitue pas une mise en oeuvre d'une stratégie de recherche. Il faut expliciter davantage certains aspects de cette méthodologie.

a) Elle n'est pas complexe ni sur le plan de la collecte ni pour l'analyse.

b) Elle est peut-être, moins coûteuse, mais selon certains critères ce ne serait pas justifié. Effectivement les frais varient selon la taille de sondage, l'objectif de l'enquête et la rigueur de la collecte de l'analyse.

c) On peut réaliser des enquêtes rétrospectives à l'échelle nationale.

d) On peut les répeter après courtes années (disons tous les 3 à 5 ans). Ceci permet la surveillance du changement démographique, un objectif très important pour le Sahel.

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Au Sahel l'EDS est un exemple très valable d'une telle méthodologie. On a déjà une méthodologie internationale standardisée; et on peut faire des comparaisons internationales. On a l'expérience sahélienne (au Mali et au Sénégal); ces enquêtes s'adressent au sujet plus critique pour le Sahel...la survie infantile et juvénile...mais aussi on trouve dan le questionnaire des questions concernant la fécondité, le planning familial, la nuptialité et un peu la migration.

D'autres enquêtes pourraient permettre la collecte et l'analyse des divers sujets. Mais pour les rendre plus efficaces pour la suveillance et pour l'analyse démographique il faut considérer une stratégie très simple:

- Formuler un module, assez court mais qui contient un noyeau recommandé pour toutes les enquêtes, sur n'importe quel sujet.

- Ce module comprendrait quelques questions du type recensement sur la migration, la fécondité et la survie infantile et juvénile, et quelques variables principales constituant des "déterminants" du comportement démogrpahique.

- En comparant ces résultats à travers une période quelconque, on aurait accès à une forme de surveillance, imparfaite bien sûr, mais répetée avec une fréquence assez élevée. En effet, le Sénégal a déjà mis sur pied cette stratégie.

Il reste une insuffisance principale - la carence des données sur la mortalité des adultes. La prochaine annexe adresse ce problème.

3.3. La Survie Infantile et Juvénile: Deux Méthodes Comparées

Les études de genre EMIS ont certains avantages par comparaison avec des enquêtes rétrospectives. Bref l'EMIS se base sur un sondage assez grand (N=10,000 ou plus de mères).

De plus, on peut dater exactement les évenements (exemple: les naissances et les décès) et aussi les déterminantes de la fertilité, de la fécondité et de la mortalité infantile et juvénile parce qu'ils ont été déjà fixés pendant le déroulement de chaque passage. Surtout l'information qui y est saisie, en combinaison avec la taille de sondage, permet les estimations de taux de la mortalité infantile et juvénile.

Néamoins, les EMIS ont des inconvenients techniques, tel que:

-la représentativité de l'échantillon à trois niveaux,

-il ne représente pas tout le pays (mais ceci n'est qu'un problème pratique);

-il n'est pas représentatif de toutes les femmes qui habitent la zone d'enquête et qui mettent au monde un enfant pendant la période de référence (exemple: il y a des accouchements des citadines de Bobo-Dioulasso dans les villages de leurs mères; ou en dehors des hôpitaux et des maternités);

-il y a un biais (peut-être une forme de troncation) parmi les femmes en âge de procréer;

-la déperdition;

-des erreurs statistiques qui viennent d'être cernées dans le travail de l'IFORD et la recherche de l'USED surtout dans les ouvrages approfondis de M. Mbacke. Effectivement, on y a identifié des erreurs dont l'existance n'a pas été connue avant l'entreprise des enquêtes EMIS;

-des difficultés relatives à l'analyse qui est trop complexe

-sans un composant rétrospectif "les estimations des taux sont moins exactes que celles en provenance des études rétrospectives.

Depuis les années 60 quelques enquêtes retrospectives sur l survie infantile et juvenile ont été entreprises dans le Sahel. La mission connait déjà trois, dont celles de HARRINGTON au Burkina et au Niger, et de HILL au Mali et probablement il en existe d'autres.

Les études mentionnées ci-dessous, ont été réalisées sur un échantillon qui n'est ni aléatoire ni de grande taille. Mais elles ont mis en évidence, quelques points importants:

a) Au plan pratique, c'est possible à réaliser de telles enquêtes;

b) A partir de ces enquêtes, on peut obtenir des résultats intéressants d'une base assez limitée;

c) Les taux calculés sur la base de ces études, bien qu'ils ne soient pas de taux classiques, sont robustes et les erreurs de sondage sont assez faibles. Le dernier facteur est basé sur une raison particulière: sur un sondage de 1,000 femmes vous aurez au moins 2,000 à 3,000 enfants nés-vivants, et entre 200 et 400 morts. En même temps si on met l'accent sur la survie plutôt que la mortalité il y en aura 1,600 à 2,600 survivants.

d) On peut étudier davantage les variations de survie selon diverses caractéristiques ou socio-économiques, ou socio-culturelles ou géographiques, ou des aspects sanitaires. Bien sûr ces études sont moins exactes "du point de vue de références temporelles) et moins approfondies que pour des enquêtes longitudinales. Néanmoins étant donné que les variations sahéliennes de survie sont encore assez fortes, le manque des références exactes n'est pas actuellement un problème grave.

e) Enfin on peut prendre des générations de mères et on peut étudier les variations de survie entre les générations, soit pour le taux de survie globale, soit pour les taux selon, l'âge ou le décès de l'enfant. Ceci permet une analyse des changements temporels.

Etant donné cette histoire des enquêtes sahéliennes le moment est venu d'exploiter davantage la mise en oeuvre des enquêtes du même genre, soit de l'EDS, soit de celles de n'importe quel but, qui ont inclus quelques questions-clés. L'avantage de l'EDS réside dans le fait qu'elle a déjà une histoire des intervalles intergénésiques plus ou moins approfondie et celle-ci est très utile pour des analyses temporelles et pour étudier les déterminantes.

Mais il reste encore deux inconvenients majeurs:

a) A partir de ces sondages on ne peut pas faire des estimations indirectes et robustes des taux classiques de mortalité infantile. Selon le travail de l'IFORD et de Monsieur MBACKE c'est la technique qui s'appelle "nouvelle" qui se base sur la méthode Brass-Macrae qui est la meilleure technique d'estimation. Mais la taille d'échantillon d'une enquête du type EDS est trop petite pour permettre des estimations ayant des niveaux de confiance satisfaisants.

Pour essayer d'améliorer ce problème on peut suggérer une stratégie assez simple. En suivant les enquêtes de l'EMF on pourrait réaliser deux passages.

Le premier serait consacré à un recensement conventionnel des ménages sur un échantillon assez grand, et y incluant quelques questions nécessaires à calculer les taux Brass-Macrae.

Pour faire une épreuve de cette stratégie l'USED pourrait faire une requête ponctuelle, liée, peut-être à l'EDS du Mali, mais pour une seule zone de sondage dans une seule région.

Le deuxième serait le passage conventionnel de l'EDS.

b) L'autre problème concerne comment on peut dater exactement tel et tel déterminant dans une enquête rétrospective. Ce problème n'a jamais été résolu. En même temps l'USED- même a commencé à chercher

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une solution relative à un des déterminants le plus significatif c'est-à-dire le lieu de résidence d'un enfant au moment de son décès.

Pour terminer, de l'avis de la mission, ce seront des initiatives de ce genre qui permettront à l'USED de renforcer son statut comme un centre d'excellence sous régional.