

# **Capturing the Results of 30 Years of AFGRAD Training:**

## **Evidence of Change in Individuals and Institutions Across Africa**

**Final Evaluation Report**

**December, 1995**

**USAID Project No. 698-0455**

*Submitted to:*

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## ACRONYMS

AAAA	AFGRAD/ATLAS Alumni Association
AAI	African-American Institute
AAUA	Association des Anciens Universitaires Americains
ABEL	Advancing Basic Education & Literary
CIDA	Canadian International Aid Agency
ACI	Alliance Cooperative International-International Cooperative Union
AEA	Atomic Energy Association
AFGRAD	African Graduate Fellowship Project
ATLAS	African Training for Leadership and Advanced Skills
AUA	Association des Anciens Universitaires Americains (American Alumni Association)
BA	Bachelor's of Art
B/HIV	Heptatis B/Human Immunodeficiency Virus
BEEP	Basic Education Expansion Project
CDAN	Consultants Diplomes d'Amérique du Nord
CGS	Council of Graduate Schools
CIDA	Canadian International Development Agency
CMDT	Companie Malienne de Textiles
CPSP	Country Program Strategy Plan
CSIR	Council for Scientific and Industrial Research
DEA	Diplome des Etudes Approfondies
DLT	Development Leadership Training Program
DNAE	National Direction of Economic Affairs
DNE	National Livestock Directorate
EC	European Community
ECOWAS	Economic Community of West African States
ENA	Ecole Nationale d'Administration

ENS	Ecole Normale Supérieure-Teacher Training School
ENSup	National Teachers Training School
ESSTIM	Ecole Supérieure des Sciences Techniques d'Informatique et de Management
FAO	Food and Agriculture Organization
FED	Fonds Européen de Développement
GIE	Groupement d'Intérêt Économique
GOM	Government of Mali
GMAT	Graduate Management Aptitude Test
GRE	Graduate Record Exam
HND	Higher National Diploma
HRDA	Human Resource Development for Africa
IEC	Development Information, Education, and Communication
IIE	Institute for International Education
IMATEP	Institut Malgache des Techniques de Planification
IMF	International Monetary Fund
IPGP (CAPES)	Institut de Productivité et de Gestion Prévisionnelle (Institute for Productivity and Management Planning)
ISFRA	Institut Supérieur de Formation et de Recherche Appliquées
LCV	Central Veterinary Laboratory
LSAT	Law School Aptitude Test
MA	Master's of Arts
MBA	Master's in Business Administration
MPA	Master's of Public Administration
MSI	Management Systems International
MVPM	Master's in Veterinary Preventive Medicine
NGOs	Non-government organizations
NIESBUD	National Institute of Entrepreneurship and Business Development
OMBEVI	Office Malien de Bétail et de Viande (Malian Office of Cattle and Meat)
OND	Ordinary National Diploma

ODIK	Operation du Developpement Integre de Karta
PC	Peace Corps
PCV	Peace Corps Volunteer
PhD	Doctor of Philosophy
PM	Prime Minister
POSTOF	Postdoctoral Study and Research
SNED	National Development Studies Company
TLD	Training and Leadership Development
TOEFL	Test of English as a Foreign Language
UC	University of California
USC	University of Southern California
UDB	Ugandan Development Bank
U.K.	United Kingdom
UNESCO	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations International Children's Education Fund
U.S.	United States
U.S.A.	United States of America
USAID	U.S. Agency for International Development
USIS	U.S. Information Service
USSR	Union of Soviet Socialist Republics
UST	University of Science and Technology at Kumasi

**Capturing the Results of 30 Years of AFGRAD Training:  
Evidence of Change in Individuals and Institutions Across Africa**

**EXECUTIVE SUMMARY**

Management Systems International (MSI) was subcontracted by the African-American Institute (AAI) to conduct an impact evaluation of the African Graduate Fellowship Project (AFGRAD), a project funded by the U.S. Agency for International Development (USAID) and, in its early years, by other donors. AAI has administered the project for USAID since 1963. Partners in the project include African governments, which nominate the candidates and where possible pay for their transportation, and U.S. graduate and professional schools, which provide tuition scholarships. The U.S. schools' participation is coordinated by the Executive Committee of Graduate Deans (Deans' Committee), an active standing committee of the Council of Graduate Schools (CGS). This committee has historically been committed to higher education for Africans and plays a key role in recommending qualified candidates for fellowship awards. The efforts of the Deans' Committee have helped to sustain the project since its inception. During its three phases (AFGRAD I, II and III), almost 3,000 scholarships have been awarded to citizens from 45 African countries.

The purpose of the AFGRAD project is to provide high-caliber university education to Africans who will assume critical positions in universities, governmental and parastatal institutions, and the private sector, through which they can contribute to the development of their countries. AFGRAD alumni are expected to exert a positive influence on the institutions which employ them and to transfer their technical capabilities to others so that the benefits of AFGRAD training will be further multiplied. USAID's goals in supporting the project are to :

- # meet the needs of participating African countries for highly-trained nationals capable of contributing to economic and social development;
- # train future leaders for specific positions in the public, academic and private sectors considered essential for development; and
- # enhance the professional, technical and administrative capacity of host country institutions by providing university and postgraduate training to selected individuals.

This evaluation focuses on the effect of the U.S. academic training provided under AFGRAD on the alumni's professional development and on their respective sponsoring institutions. The conclusions of this study specifically address the appropriateness of AFGRAD training to alumni's professional and institutional goals, the application and utilization of the new knowledge and skills acquired from AFGRAD training in alumni's jobs, and the impact alumni have had as a result of their training experience on their work units, organizations and communities, as well as on overall African development.

Designed as a follow-up to an earlier study conducted by AAI in 1983, this evaluation provides new and more comprehensive information on alumni's career trends and training utilization patterns. Building on the research design employed in the 1983 follow-up study, MSI's methodological approach combines qualitative evaluation techniques, used during a field component, with the

collection of comprehensive quantitative survey data over an 18-month period. A structured questionnaire was designed to address ten key research questions, and was developed in collaboration with AAI staff and Field Representatives, the Deans' Committee, and staff of USAID's Africa Bureau. Using current information on alumni's location, 1,634 questionnaires were distributed in 42 countries. AAI Field Representatives, MSI staff and USAID Training Officers, among others, helped distribute and collect the written questionnaires and organize the field visits. A total of 617 questionnaires were collected and analyzed for this report, representing a response rate of 38 percent. Evaluation specialists consider this an excellent response rate for a study of this kind.

While the written questionnaire was intended to be an objective and descriptive tool for measuring patterns and trends in selected aspects of the AFGRAD training experience, the field interview component was subjective and exploratory in interpreting these trends and patterns. The field work included site visits to four AFGRAD countries: Ghana, Madagascar, Mali and Uganda. Through a combination of focus groups, individual interviews, sector case studies and tracer studies, the field studies sought to corroborate, with anecdotal data, information obtained from the questionnaires and to explore selected issues in more depth.

## MAJOR CONCLUSIONS

### *Characteristics of Alumni and Their Programs*

- # Alumni's program completion and repatriation rates are exemplary, since over 90 percent of all alumni completed their training objectives and more than 80 percent returned to Africa after their programs to resume their professional careers.
- # Training under AFGRAD has been largely targeted at the graduate level (master's degrees and PhDs), with smaller numbers of undergraduate and postgraduate awards.
- # Fields of study vary across countries and over time, but include major concentrations in education, agriculture and animal science, engineering, economics and business administration, and health. All areas are vital to African capacity building.
- # The great majority of AFGRAD alumni was sponsored by educational and governmental institutions, with smaller numbers from private business and other non-governmental entities.

### *Career Trends*

- # Change and development have been the hallmark of AFGRAD alumni. A majority of alumni have made multiple job changes since their training, mostly reflecting promotions to positions of increased responsibility and authority. This upward professional mobility is a major contributing factor to capacity building in their respective countries.
- # The majority of alumni continue to contribute to the education sector, particularly higher education. While the percentage of alumni in the government sector has been

declining over the years, the number of alumni working in the private sector and in other non-governmental entities has increased dramatically. This represents an Africa-wide trend away from public sector employment.

- # AFGRAD alumni are increasingly carrying out more policy-making and management duties in their jobs, which corresponds to the increase in their responsibility and professional growth since their training. This constitutes a significant contribution to African leadership.
- # Despite a high rate of job change, especially in cases involving a shift in occupation or employment sector, most alumni continue to work in the professional field in which they specialized under AFGRAD. This indicates a strong alumni commitment to capacity building in the sector they come from.

### ***AFGRAD Impact on Professional Development***

- # Most alumni felt that their AFGRAD experience had a very positive effect on their career and professional development since their return.
- # AFGRAD training has contributed significantly to alumni's enhanced capabilities at both a personal and professional level. Increased self-confidence, a broadened outlook, increased self-reliance, and more flexibility were important changes in attitude experienced by many alumni. The most prominent changes in workstyle involved improved problem-solving skills, better organizational and management skills, and greater team work.
- # Most alumni received a salary increase within one year after their return from training -- attributed by many to their AFGRAD experience. Yet, many alumni do not feel adequately compensated for their increased qualifications, due largely to a lack of resources in their respective organizations.
- # The recognition of alumni's training was a problem for alumni in some francophone countries where U.S. degrees are not accorded the same status as French degrees. This problem resulted in lower salaries and positions of lesser influence, particularly for alumni in the government and education sectors.

### ***Leadership Development***

- # As a result of their enhanced professional skills and expertise, many AFGRAD alumni have moved into key leadership positions in their respective countries. AFGRAD alumni include prime ministers, ambassadors, representatives to international organizations, government ministers, university registrars and department heads, and teachers and researchers. Many alumni also hold executive positions in professional and civic organizations, and many have demonstrated leadership as owners or directors of successful private enterprises. The impact of this "leader promotion" function is crucial to the overall success of the training effort.

### ***AFGRAD Impact at the Organizational Level***

- # AFGRAD training was judged very appropriate to alumni's jobs and organizational needs in terms of its applicability to local conditions and its continuing relevance to alumni's job assignments. Despite frequent job changes for many alumni, training relevance levels remain high.
- # Alumni have undertaken new initiatives in their jobs as a result of their training, including program and policy development, workshop design and implementation, administrative changes, and use of new techniques or methods. Examples of these types of new initiatives were provided in the field interviews.
- # Alumni supervisors and colleagues are receptive to the new ideas introduced by AFGRAD alumni in the workplace. Alumni continue to face severe workplace constraints resulting from limited resources, which prevent them from fully applying their newly acquired knowledge and skills. These declines in institutional infrastructure and resources are a major factor in Africa today.
- # Despite some constraints, alumni are actively applying their knowledge and skills in carrying out their jobs. Skills highlighted as most valuable include research and analytical skills, management and planning skills, and specific technical skills.

### ***AFGRAD Impact on Institutional and Sector Development***

- # The greatest impact of the project on institutional development is found in the education sector. AFGRAD alumni have helped to change the way that students are taught throughout Africa even though they may not be the majority at any single institution.
- # Many examples were provided in the field studies of contributions by individual AFGRAD alumni to institutional and sectoral development. For example, alumni in different countries have introduced American financial analysis techniques and computer technology to completely revamp financial management systems in support of structural adjustment programs.

### ***Private Sector Development***

- # Over time, AFGRAD alumni have increasingly moved out of the education and government sectors into the private sector. This trend corresponds to the downsizing of government in most African countries and economic reforms which are encouraging private sector expansion. The contribution of new leaders and trained professionals to the private sector is an increasing and positive trend.

## *AFGRAD Alumni Contribute to Sustainability*

- # Many AFGRAD alumni are actively sharing their knowledge and skills from training, and are introducing changes and innovations in their respective jobs. The spread effect from alumni working in the education sector is clearly one of AFGRAD's greatest contributions: alumni are revising university teaching systems, developing curricula and new courses, and are advising and guiding students every day. Tens of thousands of students are benefitting from the expertise of AFGRAD alumni. Several generations have benefitted from their expertise already and will continue to do so.
  
- # Alumni are also actively engaged in research and publication activities, which serve to disseminate their ideas among a wider audience. Alumni maintain active networks in their professional fields, largely through membership in professional associations, as well as through community-based organizations. This factor contributes to the spread of innovation on the continent.
  
- # Many alumni also maintain ties with AFGRAD through professional and social contact with fellow AFGRAD alumni, or with others trained in the United States. This contact serves to reinforce the knowledge and skills they acquired and promotes dialogue on important research and education issues.

## *Participation of Women in AFGRAD*

- # The number of females sponsored by AFGRAD has grown significantly over the life of the project to the present level of 25 percent of the total alumni population for Phase III. Since the largest proportion of female alumni was sponsored under the most recent AFGRAD Phase, female alumni have not been back at work long enough to report as much professional growth and promotion into leadership roles as their male counterparts. This is expected to change over time as they seek and obtain more recognition.
  
- # Women in Africa sometimes face more constraints and impediments in their careers and are consequently somewhat less satisfied with their careers than men. While women reported lower satisfaction with their salary levels and career advancement than men, the differences were not as large as might have been anticipated given constraints at lower levels in the education systems which impede women's access to education.

**Despite major resource constraints all over Africa, AFGRAD alumni are making a difference in key African institutions, both public and private.** They are introducing new techniques and skills, training others and introducing changes and innovations in their jobs, which has contributed to the growth and development of their respective organizations and institutions. Their positive attitudes towards their learning experiences in AFGRAD carry over into the ways they approach their growing responsibilities and form an important source of leadership as their institutions struggle to survive and grow.

## PROJECT IDENTIFICATION DATA SHEET

1. Country: Africa-wide
2. Project Title: African Graduate Fellowship Project
3. Project Number: 698-0455
4. Project Dates:
  - a. First Project Agreement: 3/63
  - b. Final Obligation Date: FY -- (planned/actual) 9/30/96
  - c. Current Project Assistance Completion Date: 9/30/96
5. Project Funding: (amounts obligated to date in dollars or dollar equivalents from the following sources)
  - a. A.I.D. Bilateral Funding (grant and/or loan): \$105,480,253
  - b. Other Major Donors/US Universities: \$20,000,000
  - c. Total Funding: \$125,480,253
  - d. Host Country Counterpart Funds: Round-trip travel and/or salary of participants
6. Mode of Implementation: (host country or AID direct contractor - include name of contractor)  
Direct contract with African American Institute
7. Project Designers: (organizational names of those involved in the design of the project, e.g., the Government of Sri Lanka, USAID/Sri Lanka, and the International Science and Technology Institute (ISTI).  
African American Institute, Council of Graduate Schools, and USAID Africa Bureau
8. Responsible Mission Officials: (for the life of the project)  
Theodore Clarke, Paul Knepp, Norman Green, Judy Shampain, Paul Struharik
9. Previous Evaluation(s): Evaluation of AFGRAD III, Creative Associates, 1988; Evaluation of AFGRAD I & II, Jasperdine Kobes, 1984

## **I. THE AFGRAD PROJECT: AN OVERVIEW**

### **A. A Brief History and Description of the AFGRAD Project**

In 1963, in response to Africa's need for highly-trained professionals to play leadership roles in the continent's newly-independent governments, the U.S. Agency for International Development (USAID) initiated the African Graduate Fellowship Project (AFGRAD). In partnership with the African-American Institute (AAI), American graduate and professional schools, and African governments, USAID sponsored this effort as a means of training future African leaders, as well as accelerating economic and social development throughout Africa. The project provides fellowships to qualified Africans for undergraduate, graduate, and postgraduate training on university campuses in the United States.

Historically, AAI and American graduate and professional schools, represented by the Council of Graduate Schools (CGS), have shared a commitment to meet Africa's pressing needs for higher education for its citizens. Through the efforts of one of its presidents, CGS established the Executive Committee of Graduate Deans (Deans' Committee), which has been instrumental in sustaining the project and helping to meet the goals of AFGRAD since its inception.

AFGRAD's primary purpose has been to contribute to meeting human resource development needs in Africa by providing high-caliber university training to qualified Africans in public and private entities considered essential for development. Upon their completion of training, the Fellows are expected to exert a positive influence on their organizations, as well as transfer their skills to others so that the benefits of AFGRAD training will be further multiplied.

The USAID contract for administration of AFGRAD in 1968 describes the intent of the project:

*It is the intent of the program that students will be selected primarily in terms of the most urgent needs for manpower for the balanced and integrated economic and social development of the Cooperating Countries and this program will be coordinated with other United States programs in Africa. The graduate students, upon obtaining degrees, will provide a source of trained Africans, particularly at the junior and middle administrative and academic levels, to instruct and lead in the development of their countries and in strengthening the civil service, research institutions and universities as approved by the Cooperating Countries.<sup>1</sup>*

The project also emphasizes training for the private sector which is becoming increasingly important -- both for its role in economic and social development and as an expanding source of employment for AFGRAD alumni.

The project's administration is facilitated by the close working relationship among the four partners, each of which has a specific responsibility: AAI coordinates and administers the project on behalf of USAID. In addition to its U.S.-based staff, AAI maintains a network of local Field Representatives who reside in 22 African countries and help to manage the AFGRAD project. The participating

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<sup>1</sup> United States Agency for International Development, Contract No. AID/afr-538, Task Order No. 4, 1968, p.2.

African governments nominate qualified candidates and, where possible, pay for their transportation expenses. Through their embassies, they also maintain contact with the students during training. Member institutions of CGS contribute tuition scholarships and other types of support, including advisement and academic counseling. The Deans' Committee, which meets formally with AAI twice a year, helps select and place the recipients, ensuring that high academic standards are maintained in the nomination process. Members of the Deans' Committee, together with AAI staff, travel to Africa to discuss human resource development needs with government officials and to interview and help select prospective students. USAID covers the project's management costs and the students' monthly stipends.

## **B. Relationship of AFGRAD Training to USAID Training Strategies**

Since its inception when AFGRAD was defined as an Africa-wide project under the strategic planning of USAID's Africa Bureau, the project's approaches to training strategies and country program planning have evolved in relation to the human resource needs of individual USAID missions. As a regional program, AFGRAD serves a role in those country programs with long-term goals, as well as in countries that require short-term capacity-building in critical sectors of nation-building. In general, mission guidelines for the AFGRAD program have been presented in broad terms to address key development priorities. While some missions still maintain training strategies for their individual programs, more of these are being integrated into the mission's Country Program Strategic Plan (CPSP), in which training activities are seen as a means to achieve strategic objectives and specific results.

At the project level, individual training strategies lay out objectives usually defined in terms of training targets. While some USAID projects carefully articulate the capacity-building objectives to which long-term training is expected to contribute, others simply allocate resources to key training areas without clearly identifying the institutions or national capacities to be served. In addition to the varying mission approaches to defining training objectives, different sets of objectives have existed in each country over the time frame covered by the AFGRAD project. Thus, it would be difficult to link a set of returned participants to a particular set of objectives for an individual country program in a way that would show a clearly articulated, planned impact. Since alumni are selected from major sectors of importance to each country, a higher degree of impact can be inferred than might be apparent from planning documents.

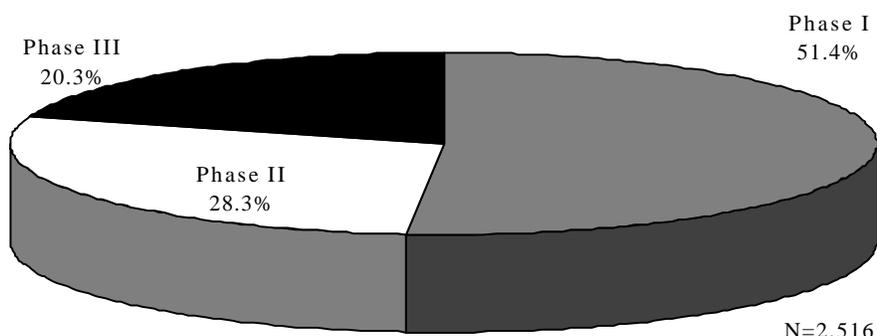
Despite the absence of a systematic strategy linking AFGRAD training objectives to country programs in some USAID missions, a significant number of AFGRAD returnees play important roles as change agents in their respective countries. As newer regional training projects (Human Resource Development for Africa [HRDA) and African Training for Leadership and Advanced Skills [ATLAS)) are being implemented, more attention is being paid to linking individual training objectives to either institutional or country capacity-building needs. The current programming approach in the Africa Bureau, as well as more recent agency-wide emphasis on "Managing for Results" in program impact reporting should facilitate future efforts to document training impact more clearly than has been possible in previous USAID training activities, including the AFGRAD project. The re-engineering "results" orientation will increase deliberate targeting of training strategies in support of USAID objectives.

## C. Scope of the AFGRAD Training Project

### 1. Characteristics of AFGRAD Alumni

# **Training Targets.** More than 2,500 Africans, representing 45 countries, have been sponsored for training since 1963 during the project's three phases (AFGRAD I, II and III). Of these, 2,516 Africans have completed their AFGRAD programs as of September 1992. Chart 1 below reflects the distribution of AFGRAD alumni over the life of the project (*See Table I.1, Annex 8*). Accordingly, more than half of all alumni (51.4 percent) were sponsored during AFGRAD I (1963-1976), followed by 28.3 percent under AFGRAD II (1977-1984), and 20.3 percent under AFGRAD III (1985-1992).

**Chart 1**  
**Number of AFGRAD Alumni by Project Phase**



# **Male/Female Ratio.** Although the number of female alumni is only 14.1 percent of the total alumni population as shown in Chart 2 below, there has been a marked increase in the

percentage of female students trained under the project over time.

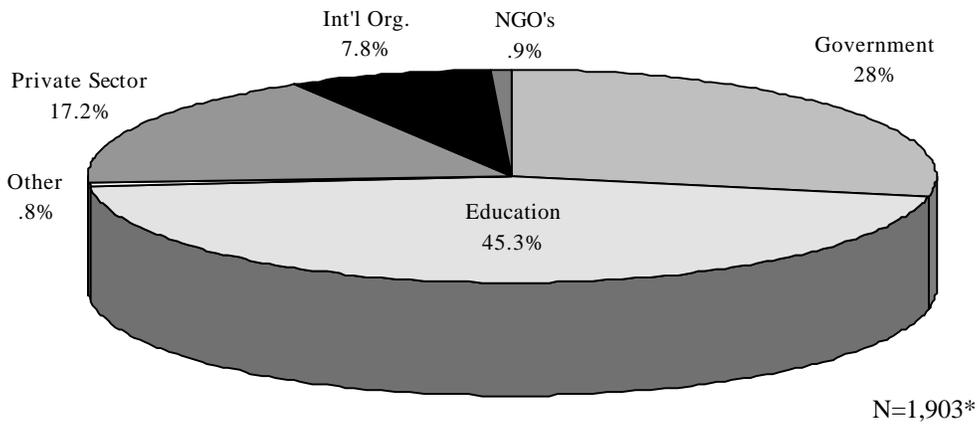
This trend is reflected in Chart 3 below, which shows that females constituted 24.5 percent of the alumni population under AFGRAD III. This trend can be expected to continue given the priority placed on this by USAID and the ATLAS project.

**Chart 2**  
**Total Alumni by Gender**

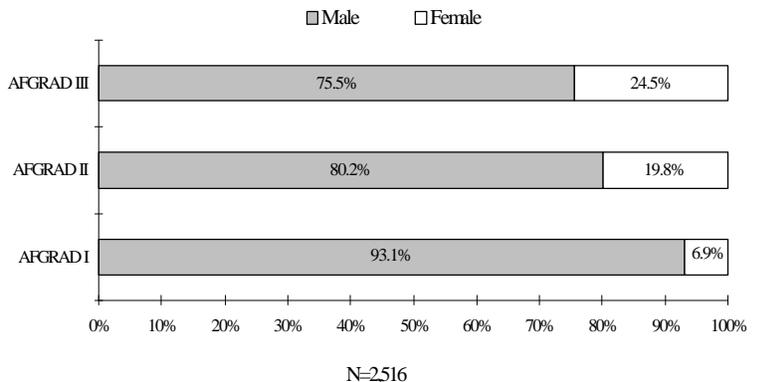
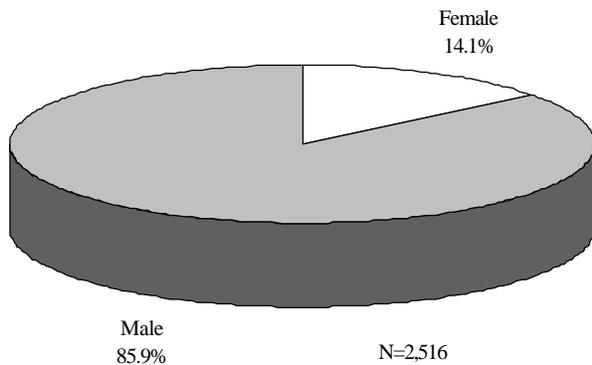
## Gender Breakdown by AFGRAD Phase

**Chart 3**

# **Sector of Employment.** Consistent with the intent of the project to strengthen the civil service, research institutions and universities in participating countries, the majority of candidates under AFGRAD are nominated by educational and government entities. (See Table I.3, Annex 8) As shown in the following chart, candidates have been recruited in smaller numbers from international organizations, non-governmental organizations, and from the private sector. The evaluation data will show further below (see Section III - Alumni Career Patterns), however, that an increasing number of alumni are working in the private sector and in other non-governmental agencies (e.g., international organizations, donor projects, NGO's).



**Chart 4  
Alumni's Sponsoring Employment Sector**



\*source: AAI Files, March 21, 1995

## 2. Type of Training

# **Training Objective.** Almost all of the awards made under AFGRAD have been for degree programs, of which the majority have been master's degrees (59.1 percent) and doctorates (31.5 percent). Bachelor's degrees represent 6.5 percent of the awards. In addition, 2.9 percent of the awards have involved non-degree programs for postdoctoral study and research (POSTAF). The number of total AFGRAD awards is greater than the number of alumni since approximately 100 alumni received two awards, either for successive degrees or at other times in their careers.

**Chart 5**  
**Number of Total Awards Completed by Training Objective**

BA/S		MA/S		PHD		POSTAF		TOTAL	
#	%	#	%	#	%	#	%	#	%
190	6.5	1735	59.1	924	31.5	85	2.9	2934	100

# **Major Field of Study.** The fields of study undertaken by AFGRAD alumni represent a wide array of specializations (*See Table I.4, Annex 8*). When grouped by major discipline, the largest proportions of alumni are concentrated in the following fields of study, all major sectors for African development: agriculture and animal science, business administration and economics, engineering, education and health.

**Chart 6**  
**Major FOS Breakdown on Total and Sample Alumni Population**

Field of Study	Total Alumni %	Sample Alumni %
Ag/Animal Science	12.4	14.3
Engineering	15.4	14.2
Economics	14.9	11.7
Education	9.1	12.0
Business	11.3	13.3
Health	6.5	6.0
Biology	7.2	9.0

<b>Other</b>	23.2	19.1
<b>TOTAL</b>	100	100

### **3. Alumni Program Completion and Repatriation Rates**

Most of the AFGRAD Fellows achieved their degree training objectives (92 percent), and the great majority returned to their home countries after completing their AFGRAD programs, including those who stayed on for follow-on training (i.e., practical training or other study programs). The total repatriation rate over the life of the project for those who successfully completed their programs is 88.1 percent. **Given the political and economic instability in a large number of countries, this rate is considered excellent by knowledgeable human resource development analysts.**

The non-return rate (11.9 percent) involves alumni in a small number of countries, including Uganda and Ghana. Since these two countries were among the study team's site visits, this issue is discussed further in Section III: Re-Entry Status.

**Chart 7**  
**Alumni Program Completion and Repatriation Rates**

REPATRIATION DATA	TOTAL	ALUMNI
	#	%
<b>RETURNED HOME</b>	1619	64%
<b>Stayed in U.S. for PRACTICAL TRAINING</b>	398	16%
<b>Went to Other Country for PRACTICAL TRAINING</b>	3	0%
<b>Stayed in U.S. for Further STUDY</b>	207	8%
<b>Went to a Foreign Country for STUDY</b>	21	1%
<b>Stayed in U.S. for ANOTHER REASON (employment)</b>	176	7%
<b>Went to a Foreign Country for ANOTHER REASON</b>	39	2%
<b>Unknown</b>	53	2%
<b>Total Alumni</b>	2516	100.0%

## II. METHODOLOGY: EVALUATING PROGRAM IMPACT

### A. Objectives of the Study

The purpose of this evaluation is to analyze the impact of the AFGRAD training program on development in participating countries through an examination of the effect of training on AFGRAD alumni's capabilities and performance, as well as the contributions made by AFGRAD alumni to their communities. The success of AFGRAD participants and the impact on their communities will be used to indicate the benefits of higher education on African development in general and, specifically, the benefits to organizations and individuals. As agents for change, AFGRAD alumni reflect the impact of the project and its influence on capacity building in African institutions.

### B. Focus Areas for Research

The principal areas of research to be addressed in this study were derived from a review of project objectives, research topics suggested by the study's main users, and an examination of previous impact evaluation work. The following foci of analysis thus provided the basis for developing the study's methodology and identifying the key research questions (*See Annex 1 for complete scope of work*):

- # USAID priorities in human resource development over the course of the AFGRAD project, as reflected in the relevant cooperative agreements between AAI and USAID;
- # Broad policy themes of leadership, institution-building, development of the private sector and increased women's participation, which have been an integral part of USAID's support for training programs in Africa over the past 25 years;
- # Relationship between USAID mission program strategies and training offered under AFGRAD in selected countries with emphasis on findings which influence long-term planning;
- # Career patterns of AFGRAD alumni over the life of the project in terms of career development and changes in employment sector, occupational categories, and field of specialization;
- # Trends in the African job market reflected by alumni's career patterns, especially in terms of the relationship between the training offered and subsequent utilization patterns;
- # Contributions of AFGRAD training to alumni's career and professional development (i.e., promotion patterns, enhanced capabilities, innovative behavior and productivity, and leadership development), with special attention given to the impact of degree equivalency policies in the home country;
- # Contribution of training to institution building in terms of the enhanced capabilities and improved performance at alumni's work unit and sector levels; and

- # AFGRAD's "multiplier effect" in terms of the dissemination of the knowledge and skills from training through alumni's networking and outreach activities.

Based on the foregoing areas of research, the following ten research questions were collaboratively articulated, which guided the survey instrument design and field interview guidelines:

- 1. What are the major characteristics of AFGRAD alumni and their training programs?** AAI's AFGRAD alumni database provided statistics on all alumni by the following variables: gender, repatriation rates, country, field of study, training objective, employment sector, and occupational category. This data was the basis for a descriptive summary of the total alumni population which also served to validate the written survey sample.
- 2. What is the relationship between USAID training priorities and AFGRAD training?** AAI/USAID Cooperative Agreements and mission strategy statements were reviewed in selected countries in order to document how AFGRAD training has contributed to mission program objectives.
- 3. What have been the major trends in alumni career patterns over the course of the project?** Key indicators for this examination of career trends included the incidence and frequency of shifts in alumni's institutional affiliations, movement between employment sectors (education sector, government service, the private sector, etc.), and changes in occupations and professional fields.
- 4. What impact has the AFGRAD training experience had on alumni's professional development?** The study examined individual alumni's career advancement, as well as the direct benefits of the AFGRAD training experience to their professional capabilities and job performance. The key indicators were promotion patterns, salary increase, enhanced capabilities, improved job performance and leadership roles.
- 5. What impact have AFGRAD alumni had on their organizational work units?** The benefits of AFGRAD training to alumni's organizations were examined in terms of the individuals' contributions to improved organizational performance. Key indicators used included the appropriateness of training to alumni's job and organizational needs (e.g., relevance and applicability), institutional constraints to training utilization, and alumni's innovative behavior (e.g., use of new technology; new initiatives such as project development and research; and improved procedures, programs or services).
- 6. What impact have AFGRAD alumni had on institutional and/or sector development?** In addition to alumni's contributions to organizational development identified in research question #5, the study examined the contributions of a critical mass of alumni to improved institutional performance and capacity in selected sectors (e.g., higher education).
- 7. How has AFGRAD training contributed to leadership development?** This question was treated by identifying the number of alumni in positions of influence and authority in key development institutions or productive private enterprise. The study examined how the

AFGRAD experience has helped alumni move into leadership positions and how they are using leadership skills in their professional and civic activities.

8. **How has AFGRAD training contributed to private sector development?** In addition to examining the number of alumni working in and in support of the private sector, alumni's contributions to the private sector were examined in terms of their leadership and innovative behavior.
9. **How has AFGRAD training addressed gender considerations?** The number of women trained and their fields of study were identified and their respective leadership roles examined. The study also reviewed changes in organizational recruitment patterns over time.
10. **Are AFGRAD alumni effective change agents?** The study examined the extent to which alumni are producing spread or multiplier effects in terms of the changes resulting from training that they have made in their jobs, organizations, institutions, sectors or personal lives. The evaluation also examined the diffusion of alumni's training through their networking behavior, informal and formal training, and research and publication activities.

## C. The Research Design

### 1. Approach and Methods

The study began with a review of AAI files, computer databases, and other relevant documentation, as well as a review of interview and report data from a previous AFGRAD follow-up study carried out in 1983. Information derived from these activities, coupled with interviews with AAI and USAID staff and discussions with the Deans' Committee, formed the basis for the research design. The study's approach and research methods combined qualitative evaluation techniques with the collection of comprehensive quantitative data from 42 AFGRAD countries over an 18-month period. A detailed questionnaire was developed and sent to AFGRAD participants who had completed their programs by September 1992, **and** for whom addresses were available and to whom questionnaires could be delivered. To corroborate and illustrate the survey data, a series of focus-group and individual interviews was conducted in four selected countries: Ghana, Madagascar, Mali and Uganda. While the written questionnaire was intended to be an objective and descriptive tool for measuring patterns and trends in selected aspects of the AFGRAD training experience, the field component was subjective and exploratory in interpreting these trends and patterns. It was felt that reliance on questionnaires alone would not do justice to the actual results in evidence. Resources limited the number of countries to be visited.

*While the written questionnaire was intended to be an objective and descriptive tool for measuring patterns and trends in selected aspects of the AFGRAD training experience, the field component was subjective and exploratory in interpreting these trends and patterns.*

The research design was pre-tested in Tanzania and Togo and revised accordingly prior to its implementation. AAI Field Representatives, USAID training staff, other U.S. government representatives, and MSI staff played a key role in the data collection activities (i.e., distribution and retrieval of questionnaires), as well as in the organization of the field studies.

### 2. The Written Questionnaire

The written questionnaire was developed in relation to the format and content of the alumni questionnaire used in the 1983 AFGRAD follow-up study. Where there was overlap between the questionnaires, efforts were made to retain similarly-constructed questions to facilitate eventual data comparison between the two studies (*see Annex 2 for a copy of the questionnaire*). The major research areas covered by the written questionnaire include:

- # Alumni's job history and career development;
- # Training utilization and innovative behavior in alumni's work environment;
- # Alumni's professional development and networking activities; and
- # Training dissemination (i.e., "multiplier effect") among alumni's colleagues, subordinates and students within their respective employing organizations.

The AFGRAD/ATLAS Dean's Committee vetted the questionnaire and its contents reflect their suggestions. In order to comprehensively address the evaluation's key research questions listed above, the data collected from the written questionnaire were complemented by data derived from qualitative methods (oral interviews, focus groups, case studies) used during the field studies.

### **3. The Field Studies**

# **Site Selection.** The purpose of the field studies was to explore the research questions not addressed through the written questionnaire, to corroborate the written survey data, and to examine some of the issues raised in the written survey in more depth. After a review of basic alumni data, four AFGRAD countries (Ghana, Madagascar, Mali and Uganda) were selected for the field interviews, based on the availability of opportunities in these countries to maximize research results. These included the following criteria:

- # Number and accessibility of alumni,
- # Presence of an AAI Field Representative or USAID Training Officer,
- # Position of alumni in selected organizations and/or sectors, and
- # Extent of USAID's program activity and focus on human resource development in each country.

The field component was based on issue-oriented qualitative assessments through a combination of focus group sessions and individual interviews, alumni tracer studies, and case studies of selected sectors.

# **Focus Groups and Individual Interviews.** Focus groups were used to provide a deeper understanding of alumni perceptions and attitudes regarding the impact of their AFGRAD training experience. The size of the focus groups was limited (five to seven alumni), discussion lasted no more than two hours, and the groups' composition was oriented around discrete characteristics of that country's AFGRAD population (e.g., field of study, type of degree, employment sector, occupational category, gender, etc.).

Through careful moderation, discussion was narrowly focused on different topics which were probed for deeper insights into issues, problems, and cultural contexts. One of two major themes was covered in each focus group: (1) the impact of AFGRAD training on the alumni's professional development, or (2) the alumni's contributions to their organizational or institutional development. Topics covered in the focus groups were linked to the key research questions and included the following:

- # Networking/Sectoral Development
- # U.S. Training Applicability and Utilization
- # Private Sector Development
- # AFGRAD Training and Leadership Development
- # U.S. Training and Behavioral and Attitudinal Change
- # Relationship of AFGRAD Training to African Development Problems

*Part of the field interviews included focus groups which were used to provide a deeper understanding of alumni perceptions and attitudes regarding the impact of their AFGRAD training experience.*

Individual interviews were also conducted with alumni who could not participate in the focus groups. In addition, other key informants were interviewed for their views on the contributions of AFGRAD alumni, including supervisors of work units which contained clusters of alumni and/or others trained overseas, key leaders in selected fields, and USAID training office personnel.

# ***Selected Case Studies.*** Several case studies were carried out to examine the contributions of AFGRAD alumni to institutional and sector development. The case studies employed open-ended interviews and focus groups with AFGRAD alumni, as well as key informant interviews to provide differing views on selected issues from various structural perspectives (i.e., within the professional community, the organizational unit, or the individual sector). In addition to examining alumni working in the private sector, case studies were conducted on the higher education sector in Ghana, the financial sector in Uganda, and the livestock sector in Mali. (*See Case Studies, Annex 3*)

# ***Alumni Tracer Studies.*** The last part of the field visit involved tracer studies of individuals representing the following AFGRAD experiences: females, an alumni leader, private sector representatives, and alumni who did not complete their AFGRAD programs. The tracer studies consisted of "life history" oral interviews with selected alumni, which were utilized to assess the perceived impact of AFGRAD training on his or her life. Through a session of guided questions, the informant related the sequence of events, persons, and opportunities which brought him or her to the present time. (*See Tracer Studies, Annex 4*)

A list of individuals interviewed during the field visits appears in Annex 5.

## **D. The Survey Sample**

### **1. Sample Selection**

The sample for the written survey was drawn from the total number of AFGRAD alumni over the life of the project who had completed their programs by September 1992 (N=2,516 alumni). The selection of the sample was further defined by the availability of information on alumni's location and job status. Based on alumni data in the September 1991 AAI Alumni Directory, which had been updated just prior to this evaluation, reliable information on location and job status was found for 1,741 alumni in 45 participating countries. Because of the political situation in Sudan, Somalia and Zaire at the time of the study, it was not possible to distribute questionnaires to 107 AFGRAD alumni in these three countries; however, questionnaires were sent to participants from those areas who now live in other countries.

Questionnaires were distributed and collected in each of the remaining 42 AFGRAD countries through a combination of direct mailing and delivery by AAI Field Representatives, MSI staff and/or U.S. government contacts. Chart 8 below reflects the number of questionnaires distributed in relation to the total alumni population, and the number of questionnaires returned. Accordingly, 1,634 questionnaires were distributed, of which 617 were returned and analyzed for this report, which reflects a 38 percent response rate.

**Chart 8 - Sample Size and Response Rate**

<b>NUMBER OF TOTAL AFGRAD ALUMNI</b>	<b>NUMBER OF QUESTIONNAIRES SENT</b>	<b>NUMBER OF QUESTIONNAIRES RECEIVED</b>	<b>SURVEY RESPONSE RATE</b>
2,516	1,634	617	38.0%

## **2. Sample Representativeness**

While the survey sample represents 38 percent of those alumni surveyed (i.e., 1,634), it represents 25 percent of the total AFGRAD alumni population who had completed their AFGRAD training by September 1992. In order to determine how representative this sample is of the total alumni population, a comparative analysis was undertaken on selected characteristics of alumni and their training programs. These included alumni's employment sector, training objective, field of study, gender and age distribution, and project phase. Indeed, the results of this exercise (*See Annex 7, Sample Representativeness on Selected Variables*) validate the survey sample, which suggests that the survey findings generally reflect the experiences of AFGRAD alumni.

### III. ALUMNI CAREER PATTERNS

In this and subsequent sections of the report, the discussion is based on the study's findings from both the written survey and field interviews. Quantitative findings (expressed in percentages) are supported by statistical tables presented in Annex 8. Findings from the field interviews are presented by country where relevant to illustrate and reinforce the issues addressed in the following sections of the report.

AFGRAD alumni were asked about several stages of their professional careers. They reported on their positions before AFGRAD training, their first job after training was completed, and their current job. Thus, the study provides a profile over time of alumni's employment status and career patterns. In the following discussion, these stages will be referred to as prior job, first job and current job. Selected survey findings were examined further by several variables to determine if there were any patterns or other insights among particular sub-groups of the alumni population. The variables analyzed include alumni's gender, training objective, field of study, and employment sector. A time series analysis was also undertaken to determine any differences in the survey sample based on alumni groupings by project phase, which reflects the length of time since their return from training.

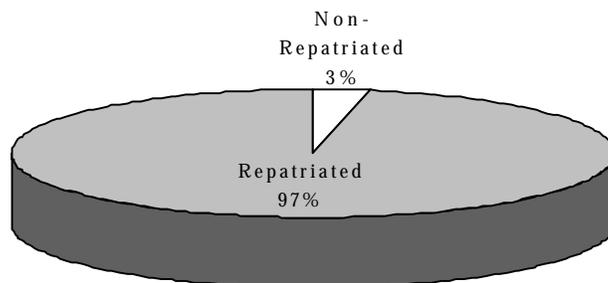
#### The Survey Findings

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##### A. Re-Entry and Repatriation

As reflected in the chart below, **most of the sample respondents (92 percent) returned home** after completing their AFGRAD-sponsored training. Of these, a notable number (15 percent) had follow-on practical training which generally lasted for less than six months, and a smaller number (six percent) continued other study programs. Some alumni stayed in the U.S. or went to other countries for work assignments or other reasons (seven percent), and only three percent had not returned to their home countries at the time of this evaluation. (See Tables II.1 - II.3, Annex 8)

**Chart 9 - Sample Alumni's Repatriation Status**



While most respondents reported completing their training objectives, six percent reportedly dropped out because of personal problems, difficulties with their schools, inappropriate placements, or acceptance of a job. (See Table II.4, Annex 8)

More than a third of returning alumni returned to the same positions they had before training, and most of the other returning alumni resumed a full-time job within one year of their return. (Only one respondent was unemployed at the time of the survey.) Over half of the sample also reported that their first job upon return was the position for which they had been nominated before leaving for training, which reflects positively on the AFGRAD program's selection and planning process. Further analysis shows that the higher the degree received, the more likely the first job was the one for which alumni were nominated before leaving for training. This is most probably due to the fact that most Ph.D. recipients and POSTAF Fellows were slotted to government-sponsored university and teaching jobs, which was less likely for recipients of lower degrees. (See Tables II.5 - II.7, Annex 8)

**B. Alumni's Job Mobility**

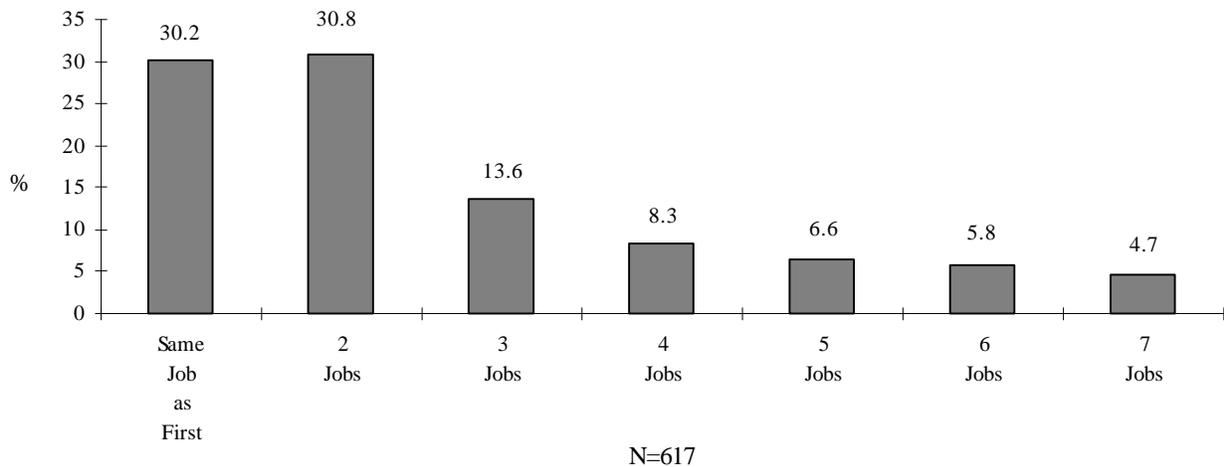
**1. Frequency of Job Change**

The survey findings indicate that AFGRAD alumni have made some marked shifts in employment over time. As reflected in the chart below, AFGRAD alumni appear to have a high job mobility rate. Accordingly, 70 percent have held at least two jobs since their training (i.e., first and current jobs), 39 percent have held at least three jobs, 26 percent have held at least four different jobs, and 17 percent have held five or more jobs since their return from AFGRAD training. While almost one third of the sample (30 percent) is still in the first job they assumed upon their return, only 12 percent are in the same positions they held prior to training. It should be noted that many of the reported job changes were within the same institution or agency. (See Table II.8, Annex 8)

**Chart 10 - Frequency of Job Change  
Number of Jobs Held Since Return**

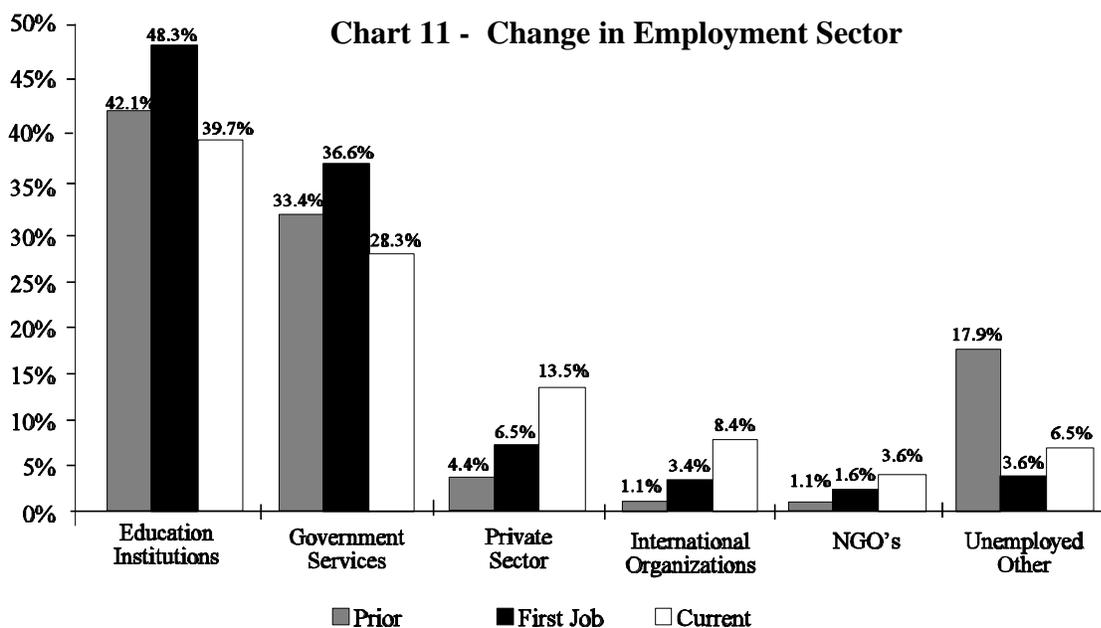
**2. Change in Employment Sector**

The survey findings provide some very interesting data about changes in alumni's employment sector over time. Prior to AFGRAD training, educational institutions accounted for the largest proportion of AFGRAD Fellows (42 percent), followed by government agencies (33 percent). The private sector sponsored four percent of alumni, while international organizations/donor programs and NGOs provided a total of just two percent. Another 18 percent of the respondents reported being



unemployed or other status at the time of the nomination, which can be explained by the number of students receiving AFGRAD awards. As seen in Chart 11 below, all sectors saw a fairly proportionate increase in the number of alumni employed in their first job upon return, as the previously unemployed found jobs. Only four percent of the sample reported being not employed or other status (i.e., not returned).

Data on alumni's current jobs, however, show the most significant movement among sectors over time. While education and government still employ the majority of AFGRAD alumni, the proportions of alumni in these sectors has decreased over time in contrast to an increase in numbers in the private sector and other non-governmental agencies. The public sector experienced the largest percentage decrease from prior to current job, with a 15 percent reduction in share of employment. The private sector positions account for 14 percent of respondents' current jobs -- a 207 percent increase. (*See Table II.9, Annex 8*) Alumni employment in both international organizations/donor programs and NGOs has also increased dramatically. This trend reflects some of the changes in the economies of Africa which are discussed further in Section IV, D. (Private Sector Development).



N=617

An analysis of employment sector by field of study in alumni's prior job indicates that the government sector emphasized training in agriculture, business administration and health; whereas, the education sector claimed the largest share of alumni who studied education. Engineering and business administration were the most frequently chosen fields of study for alumni who had been employed in the private sector. The largest field of concentration sponsored by NGOs was health. (*See Table II.10, Annex 8*)

The data on alumni's current employment sectors by field of study suggest that alumni studying economics moved into the government and private sector in larger numbers. (*See Table II.10-II.11, Annex 8*)

Analysis of job changes by degree received shows that the highest degrees, PhD and POSTAF, dominate the education sector -- both before and after AFGRAD training, and alumni with master's and bachelor's degrees have greater representation in government positions. This is logical since universities typically prefer PhDs as entry requirements for professionals. Since the private sector does not require specific degrees for entry, the numbers of bachelor's and master's alumni moving to these jobs are about twice as high as for the higher degrees. (See Tables II.12-II.13, Annex 8)

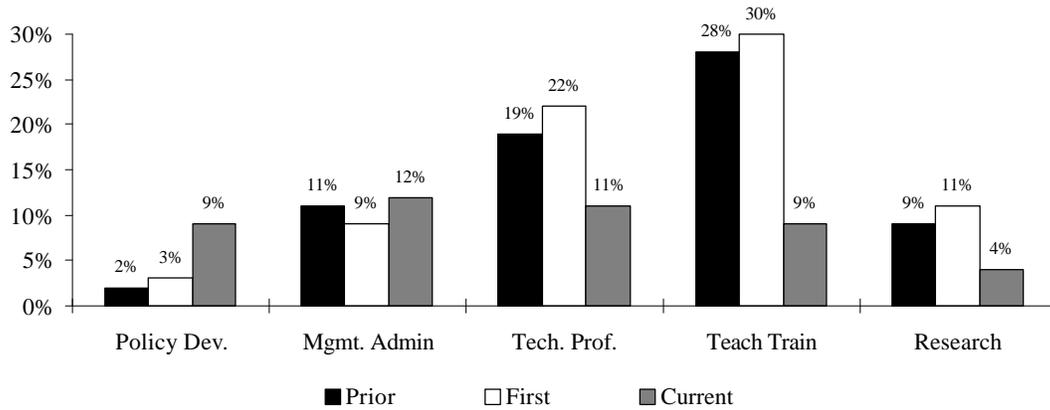
*Since the private sector does not require specific degrees for entry, the numbers of bachelor's and master's alumni moving to these jobs are about twice as high as for the higher degrees.*

The data also suggests that alumni who studied economics and business administration were more likely to change jobs, compared to alumni in the fields of agriculture/animal science, engineering, and education. Of the seven major fields of study, health alumni were the least mobile and most likely to stay in their jobs. (See Table II.14, Annex 8)

### **3. Change in Occupational Duties**

As stated in the Project Paper, the target audience to be trained under AFGRAD primarily focused on the junior and middle administrative and academic levels who were designated to "instruct and lead in the development of their countries and in strengthening the civil service, research institutions and universities." An analysis of alumni's occupational responsibilities in their jobs at the time of their nomination for training indicates that alumni had more teaching and technical occupational responsibilities than management or policy making duties. Chart 12 below reflects a shift in these job concentrations after training, however, with an increase in management and policy making responsibilities and a corresponding decrease in teaching, research and technical applications. This analysis was based on the percentage of time alumni reportedly spent on these respective tasks in their jobs prior to training, compared to their first and current jobs. (Table II-15, Annex 8)

**Chart 12 - Occupational Change**



Despite the apparent decrease in teaching, training and research activities over time, large numbers of alumni reported their involvement in secondary employment involving these activities since their training programs. Indeed over half of all respondents (55 percent) indicated at least one part-time teaching or research job, and almost once third (29 percent) indicated a consulting job in their technical specialization. Most of this secondary employment activity involves the education sector (38 percent), but a notable proportion of alumni reported part-time jobs with international organizations or donor projects (25 percent) and, to a lesser degree, with government and private business (15 percent respectively). (See Table II-16, Annex 8)

Although less than half the sample are reportedly in positions requiring staff supervision (both before and after training), there appears to be a slight increase in the number of alumni in supervisory positions over time. The data indicate an even more dramatic increase in alumni's supervisory responsibilities in terms of the number of employees supervised. Accordingly, the average number of staff supervised before training increased from 65 to a current average of 162 employees. The median number of employees supervised has risen between prior and current jobs from 11 to 20, further verifying this trend. (See Table II-17, Annex 8)

**4. Change in Field of Specialization**

The training that AFGRAD alumni received was clearly linked to the jobs that they undertook after training was completed. Only 12 percent of respondents reported that their first jobs upon return from training were not related to their field of study. Most of these explained that there were no appropriate job openings at the time of their return. Although the data suggest that this relationship weakens as alumni change positions, still a majority of alumni (77 percent) who changed jobs at least once reported working in jobs related to their field of specialization. It appears that larger proportions of alumni in the agricultural sciences, education, economics and business administration, and engineering fields were in training-related jobs, compared to alumni in health and the social sciences (e.g., public administration, urban planning, political science, anthropology and psychology). The data also suggest that the higher the degree received, the more likely the alumni's first job was in the field trained. (See Tables II 18-20, Annex 8)

## The Field Interviews

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**Ghana.** Of 214 AFGRAD alumni in Ghana, 124 (58 percent) were known to be in the country at the time of the evaluation. While it was beyond the scope of this impact evaluation to assess the causes of this substantial "brain drain," this issue was continually raised in the focus group discussions. In Ghana, the overriding reason for non-return is economic. While conditions have improved, the consensus among those interviewed is that the temptation for Ghanaians to remain abroad is still strong, particularly in some professional areas where jobs are available abroad and scarce at home, and the remuneration is five to ten times greater abroad. The demand for higher education, in both the public and private sectors, continues to outpace the supply of advanced degree opportunities either within the Ghana university system or available by means of external donor scholarships. Moreover, AFGRAD clearly had major impact in Ghana, especially in the university system, despite the fact that the return rate was less than planned. Some of the non-returnees are in influential positions abroad where they have ample opportunity to apply newly acquired skills and ideas - e.g. in the World Bank; UNDP; FAO; regional technical organizations, such as the International Fertilizer Development Center in Lomé, the International Livestock Center in Addis Ababa, the Preferential Trade Area for Eastern & Southern Africa in Lusaka; and in American universities as professors of African Studies. AFGRAD alumni in positions such as these are likely to be contributing to African development as much as, if not more than, they would had they returned directly home.

Among those Ghanaian alumni accounted for, there appears to be very little shifting in employment sectors, occupations and fields. There has been the expected degree of upward mobility - for example, a teacher has taken on administrative duties as a department head or faculty dean, or an engineer has risen to operations manager. For the most part, however, the graduate engineers are applying their engineering training in their work and teachers are back home teaching in their respective fields. Several alumni have retired and entered private business in Ghana or joined consulting firms. Even in these cases, they tend to continue in the areas of specialty in which they were trained.

**Uganda.** From 1971 until 1986, Uganda suffered drastically from political and economic instability, which had a direct impact on the AFGRAD project. Accordingly, approximately one-half of some 111 Ugandans who were sponsored by AFGRAD were reported to be in Uganda at the time of the site visit. For the most part, however, AFGRAD participants from Makerere University have returned to resume teaching careers in their respective faculties, and those from the Central Bank have returned to responsible positions in the bank. In contrast to the questionnaire data which shows that the majority of alumni in the sample changed jobs after AFGRAD training, the field study data from Uganda reveals surprisingly little movement within sectors, occupations and fields among Ugandan alumni contacted. Instability in the country may have contributed to less opportunities for employment mobility.

**Madagascar.** Despite the contract stipulation in Madagascar that returnees be placed immediately in their former jobs, a large number came back to find that jobs were not available. They therefore had to seek employment on their own. In several cases, other returnees helped them find employment within their organizations. **It must be noted that the lag time in finding employment among AFGRAD returnees is much shorter than for the average foreign-trained student.** It was not

possible to compare AFGRAD performance pre- and post-training because in Madagascar the majority of alumni began their U.S. training immediately following university study. As there were no "previous jobs" with which to compare performance, our field study concentrated on comparing the work performance of U.S. and non-U.S. alumni.

*More and more alumni are getting involved in the private sector and recognize this move as an evolution of their exposure to the entrepreneurship spirit in the U.S.*

**Mali.** In contrast to the experiences in Ghana and Uganda, most alumni from Mali returned home to resume their professional careers. More and more alumni in Mali are becoming involved in the private sector and recognize this move as an evolution of their exposure to the

entrepreneurship spirit in the U.S. Several interviewees are now business owners and several others expressed their desire to follow suit.

## IV. SELECTED IMPACTS OF AFGRAD TRAINING

### A. Alumni Professional Development

The impact of AFGRAD training on alumni's professional development is reflected, in part, by the contributions of training to alumni's career advancement. This can be seen in terms of training-related salary increases and promotions, including an appropriate recognition of the training by the employing agency, alumni's own perceptions regarding the effects of their training experience on their careers, and their overall satisfaction with their career development. Alumni's enhanced skills and capabilities as a result of training and the application of these enhanced capabilities in leadership roles are additional indicators of the effects of training on professional development. The following discussion of related survey findings will demonstrate that AFGRAD training has indeed been a major factor in the professional and leadership development of many AFGRAD alumni.

#### 1. Career Advancement

##### The Survey Findings

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**1.1 Promotion Patterns and Salary Increase.** Two thirds of the alumni sample (66 percent) reported receiving an increase in pay or benefits during the first year of employment after completing their AFGRAD study. **Of these, the great majority (80 percent) attribute the salary increase to their AFGRAD program.** Across fields of study, there were some notable variations with regard to increases. While those studying engineering, business administration and economics were more likely to receive increases (all above 72 percent), alumni in the fields of education, health, and agriculture reported lower incidences of salary increases (61 percent, 57 percent and 52 percent respectively).

Further analysis shows that women are less likely than men to receive a pay increase (i.e., 56 percent of females reported an increase compared to 67 percent of males). This difference corresponds to the fields of study in which females were represented the most: health, education and agriculture which tend to have somewhat lower salaries. An analysis of salary increase by degree objective reveals that a majority of alumni (67 percent) of graduate programs (master's and PhD) received an increase in salary, compared to less than half of undergraduate alumni (53 percent). (*See Tables III.1-III.3, Annex 8*)

**1.2 Training Recognition and Degree Equivalency Issues.** Alumni were asked whether they felt adequately compensated for their work in relation to others in their country with similar qualifications. This question was intended to reflect the recognition of alumni's increased qualifications and capabilities, in terms of promotion or salary levels, as well as professional prestige. Overall, a slight majority felt adequately compensated (59 percent). Further analysis reveals that fewer women felt adequately compensated (53 percent) compared to men (60 percent). With regard to employment sector, alumni working for international organizations and the private sector are reportedly more satisfied with their compensation levels (81 percent and 69 percent respectively) than alumni in government service (61 percent), educational institutions with the exception of secondary education (57 percent), and NGOs (44 percent). (*See Tables III.4-III.5, Annex 8*)

Reasons given for not being adequately compensated involved the lack of funds within employing institutions to pay competitive salaries and the fact that salary levels are not based on qualifications such as education or credentials, but on other factors such as seniority or personal characteristics. In addition, some alumni reported difficulties in having their U.S. degrees recognized at the same level as similar degrees from other countries. Indeed, survey findings reveal that 17 percent of the sample reported experiencing degree equivalency problems. This issue is virtually confined to francophone countries, where U.S. academic degrees are sometimes not considered equal to those from the French system. However, there are notable differences within this region. More than 75 percent of the alumni in the Central African Republic, Burkina Faso and Benin reported difficulties in having their degree recognized. In these countries, an American master's degree was not perceived to be equivalent to a French master's degree. By comparison, only about one third of the respondents in other francophone countries, such as Togo and Senegal, have experienced this problem. The data suggest that this is more of a problem for alumni in government service (28 percent) than in other employment sectors. Alumni in the private sector and NGOs reported the least incidence of difficulty. (See Tables III.6-III.7, Annex 8)

**1.3 Effect of AFGRAD Training on Career Development.** Sample alumni were asked to assess the extent to which their AFGRAD training experience has had a positive effect on their career development. **The overwhelming majority (87 percent) responded that it had a very positive effect.** Only two percent of the sample felt that the effect of their training was "neither positive nor negative," and no one reported any negative effects. This finding is particularly important in light of the difficulties encountered by some alumni in francophone countries in having their degrees fully recognized by their institutions.

While the data is quite uniform across the major fields of study, examination of gender and sectoral breakdowns reveals some slight differences. For example, a smaller proportion of women reported a very positive effect from their AFGRAD training (81 percent), compared to the response by men (88 percent). This apparent discrepancy between males and females is similar to that reported on women's lower salary levels and perception of their compensation levels, which is very likely a reflection of the difficulties experienced by African women in the workplace. This issue is discussed further in Section VI of the report.

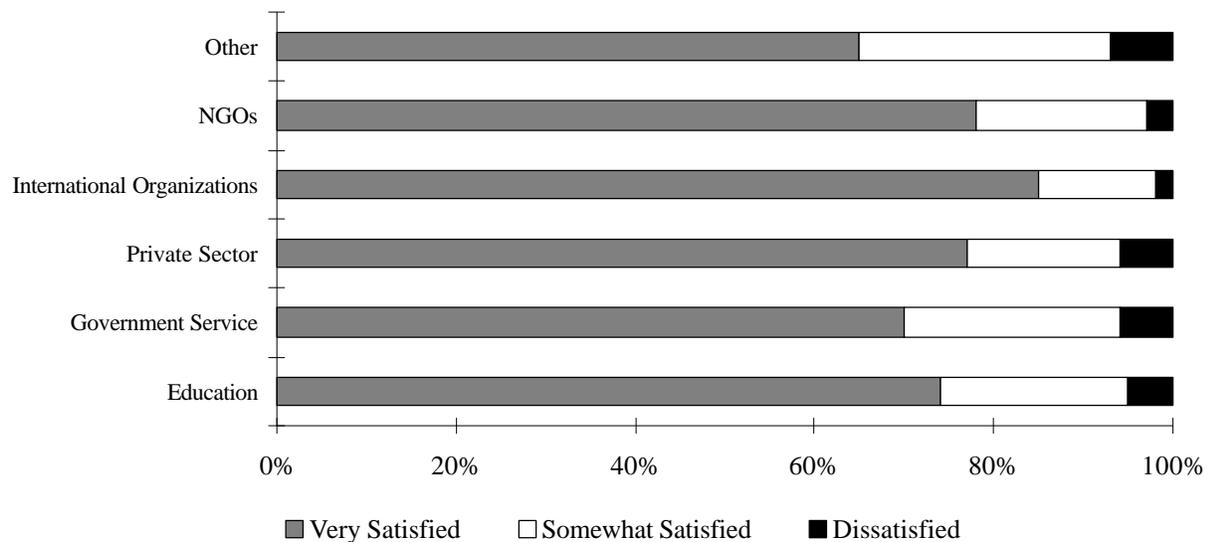
The data on employment sectors of alumni who changed jobs reveal more noticeable differences regarding the effect of AFGRAD on alumni's career development in certain sectors. Those employed in NGOs, for example, reported lower levels than the other sectors: i.e., 71 percent very positive compared to more than 80 percent in other sectors. This discrepancy may be attributable to lower salary levels and the less prestigious role that NGOs play in many African countries. In contrast, **almost all of the alumni (96 percent) currently working in international organizations or donor projects indicated that AFGRAD has had a very positive effect on their careers.**

This factor was also examined by the type of degree received. While a high percentage of all degree-holders reported very positive ratings, recipients of bachelors' degrees, PhDs and POSTAF Fellows reported a more positive effect than alumni in master's degree programs. Further analysis over time indicates that a slightly higher percentage of the alumni who have been back home the longest (i.e., those sponsored under AFGRAD I) reported a very positive effect than those more recently returned. (See Tables III.8 - III.11, Annex 8)

**1.4 Satisfaction with Career Development.** Most sample alumni are satisfied with their career and professional development (94 percent somewhat to very satisfied). The competitive and technical edge given by AFGRAD seems to have lasted throughout the alumni's careers. Further analysis of satisfaction levels by gender, employment sector, and time lapsed since training reveals notable differences within these respective groupings. For example, women reported lower satisfaction levels than men (i.e., 62 percent very satisfied compared to 74 percent for men).

Alumni working in international organizations reported the highest satisfaction levels, while those in government service reported generally lower levels. The most common reason given for career dissatisfaction was the lack of opportunities to put into practice newly acquired skills.

**Chart 13 - Career Satisfaction by Sector**



Probably the most revealing data on career satisfaction comes from an analysis of satisfaction levels over time. **Those alumni who returned the earliest and have been working the longest (sponsored under AFGRAD I) reported the highest career satisfaction rates. The youngest batch of alumni, with the least amount of experience, reported the lowest career satisfaction rates.** This analysis suggests a slight increase in satisfaction levels over time. (See Tables III.12-14, Annex 8)

## The Field Interviews

**Uganda.** Nearly all alumni contacted indicated that their AFGRAD experience clearly enhanced their career advancement. However, many stressed that successful performance on the job after training was an essential element in advancement -- the degree itself, while in most cases essential, was not the sole determining factor.

**Mali.** Everyone was positive about their AFGRAD training experience. Yet, the impact of AFGRAD on personal careers has varied among alumni in Mali. Some noted that they had acquired new skills that allowed them either to advance more quickly in their fields or to move into fields with better opportunities for promotion. Several of the alumni's careers moved very fast within their organizations. **They reported that their promotions were, in part, attributable to the skills and efficiency that they acquired through AFGRAD.**

A minority of the interviewees, while reporting increased analytical skills and efficiency, have not experienced significant career growth. They noted that, in Mali, promotions are often not contingent on job performance, but rather on personal and other subjective factors. The few involved in the teaching profession noted their frustration with the lack of degree equivalence and the fact that, despite the recognition of their abilities, they are not accorded the same status as their peers.

**Ghana.** Career advancement among AFGRAD alumni contacted in the study has been at a steady rate. Alumni generally agreed that the acquisition of a higher degree, coupled with the new skills and knowledge acquired during training, does contribute substantially to career advancement. In the higher education sector, advanced degrees are, of course, essential for advancement but not sufficient in themselves. The evaluators were surprised at the number of experienced AFGRAD alumni who have been serving at the Lecturer level for as long as ten to 20 years without promotions. The lack of career advancement, along with low salaries and small budgets for research, does not contribute to the best morale. In fact, university faculty were recently on strike prior to the team visit to protest low pay at the intermediate and senior ranks. The slow promotion rate was attributed primarily to the difficulty in achieving acceptable publication in professional journals, which is essential for advancement.

**Madagascar.** While the lack of U.S. diploma equivalency was cited as an issue, especially in the higher education sector, no one expressed regret at having studied in the United States compared to France. On the contrary, each expressed satisfaction with the high quality of the AFGRAD training. In Madagascar, the perception of the value of U.S. training has changed for the better over the years. While at one time it was not considered an honor to be sent to the United States for study, returnees have distinguished themselves in their fields, and now U.S. study is much sought after. AFGRAD returnees, specifically, are seen as more practical and well-rounded professionals.

There is a widely-held perception among the interviewees in Madagascar that MBA degrees are more valuable or useful than other training fields, especially in marketing the degree and personal

**Three quotes from Malian master's degree recipients:**

*"For me, I'd have to say that AFGRAD made a huge difference in my advancement."*

*"My AFGRAD experience provided me with many more concrete skills than I had before. Later in my career I was able to get a position as a consultant. This progress was definitely due to the new possibilities offered by my U.S. education."*

*"It is interesting to note that even among my colleagues who have a higher education than me, I'll hear the phrase "to do something à l'Américain" meaning being very practical, useful, "cutting to the chase" (there was group affirmation of this observation). The recognition of the American orientation is there and when I hear this I feel proud to have a U.S. education."*

profitability; however, the evaluation team found it difficult to gather concrete evidence to support this perception.

Interviewees were uniformly asked to specify whether the high-quality performance of U.S.- trained alumni was due to their personalities and natural abilities or to their U.S. training. Most respondents said that while both factors play an important role, **the AFGRAD project should be recognized for its success in selecting the kinds of people who could indeed make a difference when they returned to Madagascar.** The discussion with this group suggested that AFGRAD investments in human resource development in Madagascar are well-placed.

## 2. Alumni's Enhanced Capabilities

### The Survey Findings

**2.1 Changes in Attitude.** One of the impacts of the AFGRAD project is the positive effect it has had on the personal values and attitudes of the participants through their study in the United States. Through both questionnaires and the on-site interviews, alumni stated that the program has contributed to a number of personal changes in attitudes or values. Two of the most important changes reported on by a majority of sample alumni (81 percent each) include increased self-confidence and a broadened outlook as a result of their AFGRAD experience. About two thirds of the sample also stated that they were more open to different views (66 percent) and more self-reliant (62 percent). More than half also claimed to be more flexible (54 percent) as a result of the experience. Very few alumni reported experiencing no change at all, suggesting that virtually all participants experienced some positive personal changes from AFGRAD. (*Table III.15*)

Further analysis by field of study suggested that increased self-confidence was particularly high among engineering and health alumni, while biology/animal science and education alumni reported that their outlook was broadened in greater numbers than other participants. "More flexibility" was notably higher among economics and education alumni. Overall, engineering alumni showed the highest rates of personal changes. Interestingly, rates varied only slightly by degree program, which seems to indicate that the experience of studying in the United States in any type of long-term program was enough to encourage new personal values. Respondents who completed successive master's and PhD degrees (and thus were in the U.S. for the longest time) reported the highest rates in four of the five categories. Bachelor's degree participants showed the highest percentage in the category "more open to different views." (*Tables III.16-17, Annex 8*)

**2.2 Changes in Work Skills.** Participants were similarly asked to comment on any changes in their work skills as a result of their AFGRAD training. In general, alumni cited fewer workstyle than personal changes. However, more than half the sample reported experiencing a positive change in their problem-solving skills (62 percent), followed by better organized (58 percent), better management skills (56 percent), and greater team work (55 percent). More than one third also reported changes in their ability to delegate responsibility (40 percent). Alumni in business administration seemed to report more changes in their management skills, including team work and better organization, whereas engineering alumni seemed to experience more change in their problem-solving and time management skills. Changes in work skills for alumni of business administration programs can be understood in relation to the emphasis in MBA programs on team-building,

management and group skills. An analysis of differences among degree levels suggests that undergraduate alumni experienced greater improvements in their management skills, and PhDs indicated greater improvements in their problem-solving skills. (See Tables III.18-20, Annex 8)

## The Field Interviews

**Uganda.** In Uganda, virtually all alumni surveyed point to significantly enhanced capabilities in their work as a result of the AFGRAD experience. The selection process appears to have been excellent in this regard. For the most part, highly motivated, serious-minded and bright candidates were selected who knew what they wanted to study and how they intended to apply their new ideas and skills upon return. The U.S. emphasis on flexibility, frequent progress testing, the semester and coursework systems, encouragement to question and pursue one's own ideas, and the more practical hands-on approach to problem solving appeal to Ugandans. Nearly all alumni, as well as supervisors and other senior officials interviewed during the study, referred to such qualities of the U.S. higher education system as relevant and appropriate to meet the country's developmental needs. The U.S. higher education system provided them with an analytical framework and approach to problem-solving that has wide applicability in their work. These respondents indicated that this is probably the single most valuable benefit gained from AFGRAD. Indeed, Uganda's Vice President and Prime Minister, who were interviewed during the study, both expressed strong support of and praise for the U.S. higher education system.

Many alumni also made reference to improved time management, organizational and management skills and industriousness. Still others believed that the most important contribution of the AFGRAD experience was the insight obtained from cross-cultural experiences which increases sensitivity and understanding of differences in attitudes and behavior among various groups and individuals.

**Mali.** In several cases, alumni reported that their English language fluency turned out to be an unexpected benefit of their AFGRAD education. For them, this has meant access to promotions and further training, additional income from teaching and interpreting, and invaluable use of state-of-the-art technical resources (most often published in English).

There was also a consensus among the Mali alumni that, as a result of their U.S. training, they had developed broader and more practical technical skills, as well as a valuable problem-solver's attitude. They attributed this attitude to their exposure to the American system of education which contrasts markedly with the French system in place in Mali. One interviewee succinctly compared the two educational attitudes in the following quote:

*"The French professor is a "mystifier" who has all the answers and sets up a barrier between himself and his students. But the American professor is relaxed, open to and involved with his students, and seeks to de-mystify the problems in the curriculum. He tries to show students how to solve the problems, not just give the solution."*

Many of the focus group members in master's degree programs explained how AFGRAD had increased their self-confidence and given them the ability to be effective problem-solvers. There was considerable discussion about the value of the practical skills developed in the United States. Two

other alumni, who work with the United Nations, cited their familiarity with the American management style as a contributing factor to greater effectiveness on the job.

**Madagascar.** Like the interviewees in Mali, those in Madagascar frequently noted that their acquired **English fluency had proved to be a very useful asset.** Several are involved in English teaching as a second occupation, and many others serve as the source of English-language professional and technical resources at their workplace, where they informally provide information from English journals and state-of-the-art research. Two alumni who returned to Madagascar with computer degrees are now instrumental in this booming field: one heads the National Management Institute's computer center, and the other has established his own graduate-level private school. Another alumnus is now recognized as a local expert in conservation and, in addition to teaching at the University of Antananarivo, is collaborating in research in invertebrate conservation with a grantee from Duke University. The purpose of this research is to develop a methodology for appropriate natural resource management in Madagascar's unique protected areas.

**Ghana.** In Ghana, respondents in the focus groups reported many instances of enhanced capabilities related directly to their AFGRAD experience. In addition to new technical skills acquired abroad, examples included such characteristics as an improved work ethic, better time management, increased analytical skills geared toward problem solving, greater concern for productivity, improved research methodology and, perhaps most important, a general increase in self-confidence and ability to set goals and motivate others to greater accomplishment. In the view of nearly all respondents, the U.S. education experience clearly played a major role in changes in behavior and attitude.

### **3. Leadership Development**

**3.1 Alumni in Positions of Influence.** Most of the information gleaned for this area of inquiry was generated from the field interview data and is descriptive. It provides a view of how these same topics might be answered in the rest of the 42 countries in the study.

#### **The Field Interviews**

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**Uganda.** AFGRAD has clearly established itself as a leadership program in Uganda. The Prime Minister reviewed the list of alumni in the presence of the field team, and indicated a personal familiarity with many of the scholars whom he characterized as "outstanding," "brilliant," "highly productive," and other superlatives. The fact that a Prime Minister in a country of 17 million is personally familiar with many of the graduates is a tribute to AFGRAD. Alumni include a Ph.D. (animal science) who at present serves as Ambassador at a large post; the Governor of the Central Bank and its Director of Planning, Monitoring and Evaluation; the Director of Economic Affairs in the President's office; the General Secretary of the Uganda Cooperative Alliance; the Head of the Department of Animal Science at Makerere University; the Director of Research of the Ministry of Agriculture, Animal Industries and Fisheries; Managing Director of a local architectural firm and former head of the Architects' Association of Uganda; and the Secretary of the Islamic University in Uganda. Many others, such as Deputy and Assistant Department Heads, and Lecturers and Assistant Professors at Makerere University are in positions in which they can also impart new ideas and techniques to colleagues and students.

**Madagascar.** In Madagascar, an AFGRAD alumni, the past Director of the National Park, was very successful in reorganizing the park administration. He initiated exchange programs with international environmental organizations and university departments abroad. It is expected that he will be nominated to a new and higher position in the new government.

Madagascar's MBA alumni have distinguished themselves as well. One is the financial director of Air Madagascar and has been credited with making the company profitable. **In the computer science field, AFGRAD alumni are directly responsible for training most of the new people engaged in accounting and computer operations in the private sector.**

**Mali.** Since their return to Mali, many alumni have come to be recognized as experts or leaders in their fields. They play important roles in the areas of English teacher education, government finance and trade policy, and livestock production and commercialization. Several alumni with master's degrees avowed that they were considered experts in their fields. Most did not identify themselves as "leaders" *per se*, even though they said that the AFGRAD experience could serve to reinforce inborn leadership traits and personal motivation. Several AFGRAD alumni in the livestock sector are clearly considered key leaders in the development and promotion of this sector, which represents one-quarter of the national economy. AFGRAD's involvement in training technical personnel over the years has left its mark on the public sector; now many alumni are moving out of that sector to start private businesses in their fields.

**Ghana.** In Ghana, AFGRAD alumni tend to be an elite leadership group. Most were competitively selected and placed in excellent U.S. universities where they received relevant and appropriate training. Those who returned found a receptive climate for introducing new ideas and skills into their workplace and broader community. Those contacted in the field visit reported very little resistance from supervisors or colleagues to new ideas. The major constraints experienced by nearly all those interviewed were lack of equipment and supplies and low salaries. A roster of AFGRAD alumni in influential positions includes:

- # The Registrar and Deputy Registrar at the University of Ghana/Legon;
- # The first female Associate Professor (Biochemistry) at the same university;
- # The first lecturer in the history of the University of Ghana/Cape Coast who was recommended by his mentors for promotion to an Associate Professorship without first applying for it;
- # Several Deans of major university faculties;
- # The head and founder of a major Ghanaian construction engineering firm;
- # The head and founder of the country's first photogrammetry firm and Ghana's first photogrammetrist;
- # Chief Executive of the Aluminum Industries Commission;
- # Ghana's first female Clinical Psychologist;
- # Dozens of university lecturers on all three major campuses;
- # Senior management executives with a range of parastatals, including the minerals commission;
- # Head of Policy, Planning and Evaluation in the Ministry of Works;
- # The current Secretary of Foreign Affairs.

## 3.2 Professional and Civic Roles

### **The Survey Findings**

Another reflection on the leadership roles of AFGRAD alumni is the nature of their involvement in professional and civic organizations. A complete listing of all the organizations to which the AFGRAD alumni in the sample belong is contained in Annex 10. A majority of sample alumni (63 percent) belong to professional organizations in their home countries, of which approximately 25 percent hold executive officer positions. About one third of these positions (31 percent) are at the level of president or vice-president, chairpersons represent 21 percent of the officers, and 23 percent serve as secretary. Other roles including director and coordinator accounted for the remaining 24 percent of the officers. Alumni reported occupying these leadership positions for an average of four years. This represents a significant leadership contribution to organizations on the continent.

In addition to professional organizations, almost half the sample (46 percent) reported that they were members of voluntary and civic groups in their community, including NGOs, community groups, development organizations, women's organizations, fraternal organizations and church groups. These organizations are also listed in Annex 10. Another example of alumni's leadership development is reflected by 27 percent of AFGRAD alumni, who have received some type of honor or award since their return from training. This participation appears to be contributing substantially to the growth of civil society institutions in Africa.

### **The Field Interviews**

**Uganda.** In Uganda, while many of those contacted professed that they contributed time and energy to community activities, there were not many concrete examples. Several participants commented that during the time of political disturbance, which did not end until 1986, one could be harassed or arrested for trying to organize professional associations, let alone community organizations. However, a few cases which came to light during the interviews illustrate the wide range of activities and commitment of AFGRAD graduates. An engineer, somewhat frustrated in his job, is showing tremendous initiative in spearheading the development of an NGO, the Ishasha Basin Development Scheme, and devotes a considerable portion of his spare time and enthusiasm to this organization. A private sector architect who founded his own firm served as President of the Uganda Society of Architects and as a Director of the Bushenji Technical College. He also is Director of Community Services in the Rotary Club in Kampala. The President-elect of the Rotary club is another AFGRAD alumnus. The Managing Director of a major mining company, Kilembe Mines Ltd., is also the chairman of an NGO, Gisorora Twubaki Association, which is attempting to help those in need of decent housing. This effort is being supported by Habitat for Humanity and UNICEF.

**Ghana.** Ghanaian AFGRAD alumni tended to be modest about discussing civic activities and reluctant to reveal their community work. In the focus groups, it was often a third party who would volunteer information concerning alumni's community activities. Most alumni are members of churches, and many serve on various church committees. Others are active in their home area development programs. Two of the engineering alumni have played a leading role in organizing the private sector engineering community in Ghana. It is likely that more is occurring in this area (probably as much as one would expect of a leadership group such as this), than the evaluators were

able to document during the field visit. The high degree of church affiliations might support a tendency towards modest descriptions of community involvement.

**Mali.** In Mali, alumni were found to be involved in a variety of civic activities. One has been actively involved in Peace Corps training and wrote an agricultural development booklet for the volunteers. Another works with an Association des Jeunes Diplômés (Young Graduates' Association) in his community, where he is often called upon to speak about his professional and educational experience. Another example is an alumna in livestock science, who has become a national-level leader in women's rights, as well as a spokesperson for the environment. She frequently represents her country at world conferences and has been asked to work on policy planning.

**Madagascar.** There was not much discussion of professional and civic organization activities among alumni in Madagascar, although it was reported that many work with NGOs; and others reported belonging to scientific professional societies. No specifics were forthcoming but this should not lead to the conclusion that there is no activity.

## **B. Impact at the Organizational Level**

The following discussion of the impact of AFGRAD training at the organizational level is discussed in terms of alumni's job and subsequent organizational performance. In order to identify this impact, the appropriateness of the training itself must first be established: i.e., in terms of its applicability to local physical conditions, as its well as relevance to the organization's goals and specific job requirements. Secondly, certain

**AFGRAD training, in general, has made important contributions to the improved job performance of alumni and subsequently improved capacity and productivity of their respective organizational work units.**

organizational conditions must be conducive to the application and utilization of these new ideas and skills from training, including personal and infrastructural factors. These include the "receptivity" and openness by senior staff and colleagues to the new ideas being introduced by alumni, as well as the existence of resources and support necessary for the application of these new ideas or techniques. Finally, the real impact measure of the training should be reflected in the innovative behavior of individual alumni, in terms of how they have been able to apply their newly acquired knowledge and skills, and what examples of changes or innovations they have been able to contribute to their respective organizations. The following discussion of these factors, based on the survey findings, support this conclusion.

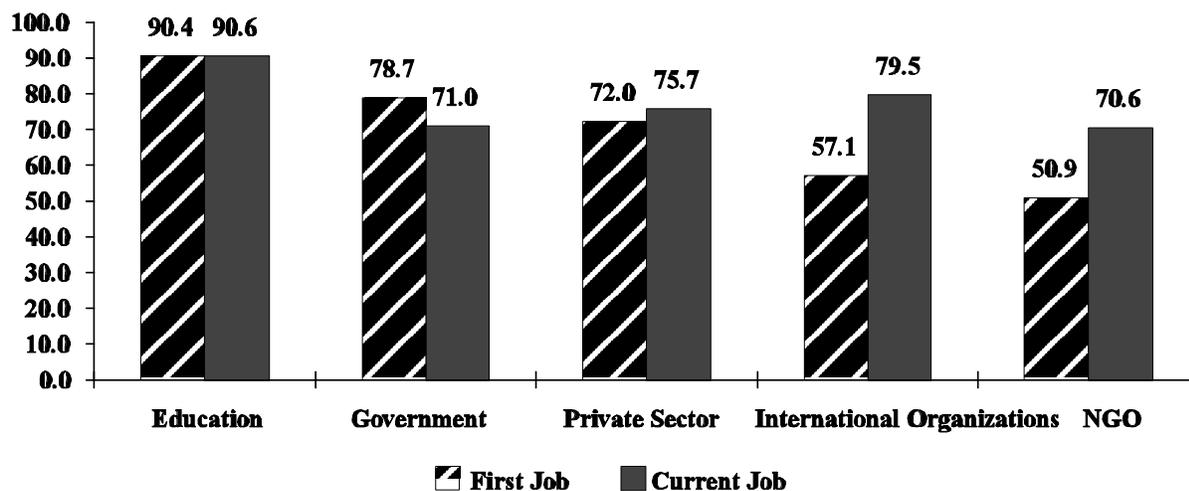
## The Survey Findings

### 1. Training Appropriateness: Relevance and Applicability

Based on the survey findings, AFGRAD training has been very applicable to local physical conditions (i.e., environmental and technological) in the home countries of a sizable majority of sample alumni (73 percent). Indeed, only three percent of the sample indicated that their training was not applicable. Furthermore, it appears that the applicability of this was high among alumni with some kind of PT experience in these programs. (See Table III.21b, Annex 8) Overall, a majority of the respondents (85 percent) reported high levels of training relevance in their first job after training. For those alumni who subsequently changed jobs, still a majority (80 percent) similarly reported high levels of relevance in their current jobs. (See Tables III.21-27, Annex 8)

Among different fields of study, alumni in the health, public administration, and engineering fields reported slightly lower levels of relevance in their first job than other fields; and alumni in bachelor's degree programs also seemed to report lower levels of training relevance. A sector analysis reveals that alumni working in the education sector reported higher relevancy levels than the other sectors in both their first and current jobs. NGOs reported the lowest levels of relevance, which might be attributable to the skills requirements by NGOs, which tend to be more general. The following chart demonstrates the **enduring relevance of alumni's U.S. training, which reflects positively on the AFGRAD program's ability to meet the training needs of its clientele.**

Chart 14 - High Training Relevance in First and Current Jobs  
by Employment Sector



### 2. Receptivity to New Ideas and Skills

A sizable majority of sample alumni (73 percent) indicated that their colleagues and superiors were very receptive to the new ideas they have introduced from their training experiences.

The high levels of training relevance over time reflect positively on the AFGRAD program's ability to meet the training needs of its clientele.

Similar to previous discussion of male/female differences, females reported slightly lower levels of receptivity. An analysis by degree objective, however, reveals that the higher the degree, the more receptive colleagues are to new ideas. Both POSTAF Fellows and PhD recipients (86 percent and 76 percent respectively) were less likely to meet resistance to their new ideas than alumni returning with bachelors' degrees (67 percent reported high receptivity levels). Understandably, this reflects the higher prestige and status of more advanced degrees. An examination of differences among various fields of study suggests that alumni in business administration and engineering encounter slightly more resistance to their new ideas than alumni in other fields. There did not seem to be any noticeable differences among the different employment sections. (See Tables III.28-30, Annex 8)

### **3. Institutional Constraints to Utilizing Training**

**It is important to note that Africans are operating under a number of severe constraints in their workplaces.** Based on the survey findings, the most common constraints are lack of funds (70 percent reporting), lack of equipment and supplies (68 percent), lack of journals and books (62 percent), and lack of professional travel opportunities (53 percent). Other impediments mentioned by alumni include bureaucratic policies and procedures, lack of economic rewards, lack of transportation for job-related travel and lack of qualified staff. While business administration graduates reported the lowest percentage of constraints, alumni in the animal science and education fields reported funding constraints with the greatest frequency (78 percent and 73 percent respectively). The lack of equipment and supplies was also cited by a majority of alumni in the animal science, engineering and educational fields. (See Tables III.31-32, Annex 8)

Time series data suggest that the perception of constraints is related to the time lapsed since alumni's return home. Accordingly, those who were funded under AFGRAD I reported encountering constraints with greater frequency than alumni who have more recently returned. (See Table III-33, Annex 8)

### **4. Training Utilization and Innovative Behavior**

Despite the difficulties imposed by the various institutional constraints discussed above, the survey findings related to the utilization of training and alumni's innovative behavior reflect high utilization levels in current jobs among a majority of alumni (75 percent). Indeed only five percent of the sample reportedly use only a little or none of their AFGRAD skills. Training utilization levels were fairly uniform across fields of study. An analysis by employment sector indicates higher utilization levels by alumni working in educational and international organizations, compared to noticeably lower levels in government jobs and NGO's. An analysis over time (based on time lapsed since alumni's return) reveals a clear trend, in which the oldest alumni reportedly use more of their skills and knowledge from their AFGRAD training than more recently returned groups. **Thus, as alumni gain greater experience and stature in their jobs, they seem to be able to utilize their AFGRAD experience better.** (See Tables IV.34-37, Annex 8)

It is interesting to note that alumni with a practical training component in their programs appear to be using their training more than those who had no practical training experience. (See Table III.38, Annex 8)

In open-ended questions, alumni were asked to list the ideas or skills learned from AFGRAD that they considered most valuable in carrying out their jobs. Accordingly, research and analytical skills, management and planning skills, and technical skills were the three most valuable skills mentioned. Other skills cited by many alumni include interpersonal and human relations skills, curriculum development, the use of computers, and communication skills. (See Tables III.39, Annex 8)

Many alumni have undertaken a variety of new initiatives in their jobs since their return, involving the knowledge and skills they acquired from training. Over half the sample reported their involvement, in varying frequency, in program development (65 percent), policy development (59 percent), planning workshops or seminars (57 percent), developing or revising administrative procedures (55 percent), and introducing new techniques or methods (51 percent). Substantial proportions of alumni have also reported developing new courses (48 percent), revising instructional materials (46 percent), improving programs, services or products (39 percent), introducing new equipment (34 percent), and developing extension programs (31 percent). (See Table III.40, Annex 8)

Many examples of these types of new initiatives, as well as illustrations of alumni's training utilization were provided in the focus group and follow-up field interviews.

## The Field Interviews

**Uganda.** Based upon a review of the questionnaires, the focus group discussions and the several tracer studies undertaken in Kampala, it is clear that the relationship between training received and subsequent use has been highly satisfactory for Ugandan AFGRAD alumni. In virtually all cases, U.S.

*In virtually all cases U.S. training was relevant to perceived personal and occupational needs and the alumni indicated that they have been able to apply their newly acquired skills sufficiently.*

training was relevant to perceived personal and occupational needs and, with few exceptions, the alumni indicated that they have been able to apply their newly-acquired skills sufficiently. Several others claimed only partial relevance and use of training because their duties had become more administrative. As a result, they were restricted in applying the technical skills they received during training. In addition, many alumni pointed out constraints such as limited supplies, equipment and tools to work with, and small budgets for research.

Many examples were given of ways alumni are using their training. In one case, an engineer whose regular job involved project appraisal activities, applies his technical engineering skills working with an NGO that he helped create on a broad-scale area development scheme. One senior official in the Central Bank used his training in developing and installing a sophisticated econometric monetary policy-monitoring computer system throughout the bank. Another official working in a parastatal organization was able to introduce for the first time a performance evaluation system based on objective criteria. This has now been institutionalized as a major factor in determining promotions and pay increases. A third senior official, who was assigned to the Prime Minister's office for more than six years after returning from his AFGRAD training, said the analytical and organizational skills he acquired under AFGRAD were a great help in preparing an important report on the East African Community Compensation Fund, which took three years to complete.

**Ghana.** The relationship between AFGRAD training and utilization in Ghana is very high. **In fact, there are virtually no known cases in which those who have returned are not using their U.S. training to a substantial degree in their work.** Alumni recounted many examples of how they applied newly-acquired ideas to the work environment at home. One university faculty member said he introduced the case study method of teaching which he learned in the U.S.; another was so impressed by the U.S. semester and course module system that he spearheaded his university's efforts to introduce this major change into Ghana's higher education system.

The focus group discussions revealed many instances of improved organizational performance related to AFGRAD influence. A Scientific Instrumentation Officer is currently introducing a new adaptive control system which he expects will greatly benefit Ghana's manufacturing industry. An engineering firm's senior officer introduced work scheduling and a new reporting system which have increased the company's efficiency and effectiveness. A senior civil servant, the head of a major government department, cited his AFGRAD experience as instrumental in his success in organizing his department, setting up training programs and introducing reporting and monitoring systems that helped the department achieve its goals. He also reported that the skills, particularly technical knowledge, acquired in the U.S. were an immense help in eventually establishing a large private agribusiness, a 90,000 layer poultry farm, which is the second largest in the country.

**Madagascar.** None of the alumni concluded that their U.S. training had been inappropriate to local conditions, despite difficulties in obtaining proper equipment to pursue advanced research. They reflected that they had ended up doing more than they expected with their training; some had moved into teaching or supervisory positions for which additional training in the U.S. in pedagogical and management methods would have been useful. For example, one AFGRAD alumnus has been fundamental in providing U.S.-style management skills training at IMATEP (Institut Malgache des Techniques de Planification), which provides virtually all the training in planning skills available in Madagascar. This internationally recognized organization imparts planning skills to the military, as well as to visiting professionals from all parts of francophone Africa.

*...units in the Ghana higher education system and to a lesser extent, certain areas in the private sector, seem to have been significantly influenced by a relatively small number of AFGRAD alumni.*

Several other alumni claimed that their adoption of the practical American approach in their technical orientation and workstyles has improved the performance of their respective organizations. In fact, some noted that their colleagues often expect more from them and seek them out for advice. Because of their high-quality job performance, most advanced quickly into supervisory positions.

**Mali.** The MBA degree holders were all putting their AFGRAD education to good use. Two MBAs work in the same Malian bank where they have been very successful in running the commercial accounts department. The evaluators were told that one of them will soon be promoted to Managing Director - a notable accomplishment for a man of his age. AFGRAD alumni noted that American management attitudes are dominant in the business world, and so their exposure to the U.S. environment has made them very valuable to their organizations. Interestingly, the group felt that it was too early to make conclusions about the market value of MBAs in Mali.

### C. Institutional and Sector Development

Many of the insights on institutional and/or sectoral development were gained from the focus groups and interviews conducted in the field. Respondents were asked to describe their most important contributions to African development in general, and to the development of their respective institutions and professional sectors in particular. In addition, several case studies on several institutions in the higher education, financial and livestock sectors were carried out to gain more insights into the impact of alumni's training under ADGRAD on institutional and sector development. The following presents the findings from the field interviews, including highlights from the case studies (*see Case Studies, Annex 3*), which support the conclusion that AFGRAD alumni have been instrumental in the development of their institutions and professional sectors.

**Ghana.** The higher education sector in Ghana consists of several established universities: University of Ghana (Legon), University of Science and Technology (Kumasi), University of Cape Coast and two fledgling institutions which are in the initial stages of development. The combined student body is approximately 11,000 and consists largely of undergraduates, although a growing number of master's and PhD programs are being offered. Altogether there are some 1,300 faculty consisting of lecturers and professors in virtually all established disciplines. Each of the major colleges has a specialty or specialties: Legon - agriculture, humanities, law and medicine; Kumasi - science and technology; and Cape Coast - education; but most disciplines are taught at all three institutions. There are 70 AFGRAD alumni, some 50 of whom are currently active as teachers or administrators, in this sector. It is surprising that such a small percentage of the total faculty (about 5 percent) could form enough of a critical mass to have significant impact on an entire sector, but it has. **It appears that the right people were selected at the right time, and those who returned found a receptive environment for applying their newly acquired skills and ideas.**

There have been other influences of U.S. higher education in Ghana. The modular system adopted entails greater student and teacher interaction, as well as a larger volume of work involved in reading papers, grading tests and other activities. There have also been some changes in pedagogy and teaching methods which can be traced back to the influence of U.S. training. For example, visual aids, such as overhead projectors and slides, are more prominent in classrooms, and there is reportedly more give-and-take in the student-teacher relationship than before. Previously, learning was a fairly static process consisting of lectures which students transcribed with little questioning. University vice chancellors, registrars and other interviewees frequently attested to AFGRAD's role in this restructuring.

Many of the returnees have distinguished themselves in academic leadership positions. AFGRAD alumni include deans, department heads, registrars, full professors and other leaders in the university system. One alumnus is the chairperson of the committee that initiated the conversion to the semester/modular system and monitors its progress at Cape Coast University. Thus, the various departments and faculties in the Ghana higher education system seem to have been significantly influenced by a relatively small number of AFGRAD alumni. More important, the AFGRAD graduates' overall impact on the higher education sector has been even more significant, perhaps, than their direct impact on individual organizational units. (*See Case Study on Higher Education in Ghana, Annex 3*)

**Uganda.** There is only one organizational unit in Uganda in which AFGRAD alumni comprise enough of a critical mass to have institutional impact. However, there are other instances in which individual efforts have influenced organizations directly or indirectly in a positive manner. Institutional impact has been clearly felt in the Bank of Uganda, which is the country's Central Bank. In brief, four of the nation's most senior bank staff are AFGRAD products. While this does not constitute a large percentage of the 50 executive-level personnel in the bank, the four include: (1) the Governor; (2) the Director of the Planning, Monitoring and Evaluation Department in the Governor's office; (3) the Deputy Director of Research; and (4) the Assistant Director of the Agricultural Secretariat (a unique agricultural policy-making function located in the Central Bank).

The Governor, who received a master's degree from Syracuse University in Political Science in 1965, is naturally in a position to exert strong influence over the character and direction of the Bank. The Director of Planning, Monitoring and Evaluation serves as the *de facto* prefect of the Bank, reviewing annual work plans for all 20 departments, as well as monitoring and evaluating progress toward achieving targets. He attributes the analytical and organizational skills which are essential to effective performance in his job to his AFGRAD training at the University of Arizona, where he obtained a Master's in Banking and Finance in 1979. The Deputy Director of Research, who obtained a Master's in Statistics in 1985 from Louisiana State University, has been highly praised by senior bank officials for his contributions in building an empirical policy-oriented, computer-based quarterly macro-economic financial forecasting model for Uganda. The Assistant Director of the Agricultural Secretariat, who is the principal economist of this high-level policy-making staff, is also highly regarded. The influence of these four AFGRAD-trained officials extends into virtually all aspects of the bank's operations, especially in such areas as establishing the value of hard work, conscientiousness, management skills and analytical approaches to problem solving. (*See Case Study in Uganda, Annex 3*)

Two other organizations also show indications of organizational impact - the Uganda Development Bank and the Faculty of Agriculture and Forestry at Makerere University.

*The influence of these four AFGRAD trained officials extends into virtually all aspects of the bank's operations, especially in such areas as establishing the value of hard work, conscientiousness, management skills and analytical approaches to problem solving.*

The Project Appraisal Unit of the Uganda Development Bank shows signs of influence from AFGRAD, although it employs only one alumnus, who received a Master's in Civil and Environmental Engineering from the University of

Cincinnati in 1986. The Unit's director has just returned from a similar USAID-sponsored program through which he received a master's in Public Administration from the Kennedy School of Government at Harvard University. He strongly believes that his performance, along with that of the AFGRAD alumnus, clearly sets the standard within the Bank for such qualities as high productivity, time management and overall management skills. Both the AFGRAD alumnus and his superior credit their U.S. training experiences in helping them develop these useful skills and attitudes. The impact of improved performance in the Project Appraisal Unit spills over to other departments which interface with it in the process of development lending. Bottlenecks in other departments become more clear as the Project Appraisal Unit awaits clearances from other units and comparisons in productivity become evident. If top management handles such disequilibrium judicially, the result

could be improved performance in the entire institution, but it is too soon to judge if this will be the case.

Makerere University is the predominant institution in the higher education sector in Uganda; thus, any impact on a particular faculty could well affect other faculties in the university and the higher education sector in general. At present, Makerere is preoccupied with trying to catch up from the deprivations brought about by nearly two decades of neglect, and is operating under greatly reduced budgets, low salaries, declining morale, and other constraints. The challenge for the Faculty of Agriculture and Forestry is to introduce innovative educational curricula and methodology that will prepare as many Ugandans as possible in the shortest time to provide leadership in the agricultural sector. To this end, it is evident that the faculty is drawing on its strong ties to the U.S. higher education system, in part through the AFGRAD alumni, for ideas.

The Head of the Department of Animal Science of the Faculty of Agriculture and Forestry at Makerere University is an AFGRAD alumnus (master's degree in 1966 from the University of Illinois). The faculty includes another alumnus, as well as many other members who have been trained in the United States. It was reported that 80 percent of the faculty have received at least one degree in the U.S. The faculty has had linkages with the U.S. Land Grant College system dating back to the 1960s. Two AFGRAD alumni number among the many who have been immersed in U.S. higher education. When considered as a group, the U.S.-trained faculty has had a dramatic impact. Some of the characteristics adapted from the U.S. include the periodic testing and examination system to measure progress rather than reliance on the final exam; greater involvement of students in their educational process; flexibility of course selection; and adoption of the semester system which should help increase the number of students who can be accepted into the University each year.

**Mali.** In Mali, AFGRAD alumni have made a variety of small but significant contributions and technical innovations in their professions. Two sectors represented in a focus group of PhDs included English teacher training and livestock production in which the alumni reported on many contributions. Much of their impact is due to the fact that the alumni returned to their organizations years ago when these sectors were in their formative stages. The AFGRAD alumni quickly moved into leadership positions and were able to broker the appointment of additional U.S.-trained personnel which, for a period, created an important critical mass. (*See Case Study: Livestock Sector in Mali, Annex 3*)

In the focus group of MBA alumni, two reported managing the key commercial section at the bank where they work. Their performance has caused bank managers to consider sending more personnel to the United States for MBA degrees. The U.S. expertise of these AFGRAD alumni has been instrumental in forging partnerships with international banks and in developing banking services geared toward capturing the growing private sector market. These alumni reported that they can better serve American client banks because of their knowledge of U.S. business operations, and also noted the value of having acquired fluency in English, the international business language.

Other examples of AFGRAD alumni's contributions to their respective institutions and sectors include:

- # Introduction and dissemination of American approaches and techniques in animal epidemiology via a decentralized government extension service.

- # Development of the commercial livestock sector by setting up modern slaughterhouses; creating a cattle and meat quality classification system that is adapted to sahelian breeds; establishing improved methods of cattle fattening; and introducing range management techniques.
- # Enhancement of local poultry production through the introduction of regular vaccination practices and the improvement of feed formulas, which are now being commercially exploited.
- # Liberalization of external trade mechanisms such as the improved foreign exchange system, and abolition of export taxes, foreign currency import quotas, and commodity price controls.
- # Introduction and dissemination of improved accounting and management systems for cooperatives served by the government's cooperative extension service.
- # Improvement of the English and economics curricula at the National Teachers Training School (ENSUP). In the English department, the innovations have included improved language teaching methods and the establishment of regular professional seminars for the faculty. The U.S.-inspired content and methods have been disseminated by ENSUP graduates who teach in Malian high schools.
- # In livestock production, AFGRAD alumni brought American "know-how" in commercialization to a sector previously dominated by French-trained veterinarians whose main concern was animal medicine.

**Madagascar.** At the Ecole Normale Supérieure (National Teacher Training School-ENS), AFGRAD alumni make up the majority of the two science faculties. Their impact has been remarkable in terms of the quality of the curriculum and the teaching methods used. A multiplier effect exists since ENS trains high school science teachers for the entire country, and these U.S.-inspired methods and curriculum are now standard. The example of AFGRAD professors at ENS has motivated a "second generation" of AFGRAD alumni in the sciences who are now returning to teach at ENS. The internal management of the two science departments also was praised. According to the last two directors of the school, prior to the arrival of the U.S.-trained team, the department was impossible to manage, while now it is a model for ENS and the larger university system.

*According to the last two directors of the school (ENS), prior to the arrival of the U.S.-trained team the department was impossible to manage while now it is model for ENS and the larger university system.*

**AFGRAD returnees have also created new and valuable local institutions.** The recently-opened ESSTIM (Ecole Supérieure des Sciences Techniques d'Informatique et de Management) was founded by an AFGRAD PhD in Computer Science. It currently has 42 students in the five-year "Informatique de Gestion" program, and in 1994 will add degree programs in software development and hardware maintenance, which will result in a total enrollment of 140 students.

A third example of institutional impact is INSCAE, a quasi-governmental training organization that has evolved into a very highly regarded private business. An AFGRAD alumnus currently is in charge of all computer instruction and has been instrumental in developing a revenue-generating computer center to be opened within the next year.

Another field in which AFGRAD alumni have made significant contributions to Madagascar is environmental conservation. Alumni's efforts have included the reorganization and improvement of the national park system; the establishment of a National Environmental Protection Plan; and the development of important linkages with international universities and conservation institutions.

## **D. Private Sector Development**

### **The Survey Findings**

As discussed earlier, AFGRAD alumni have been moving into the private sector in greater numbers over the years. (*See Section III - Alumni Career Patterns*) This trend is expected to continue for two reasons. The most important is the downsizing of government and the closing of parastatal industries in most African countries. As government positions are lost or consolidated with the move to economic reform and the opening of market-based systems, the private sector has expanded and is beginning to provide new job opportunities. In response to this trend, many USAID missions have increased their emphasis on recruiting private sector applicants for AFGRAD.

On the whole, private sector alumni share the characteristics common to all AFGRAD graduates; however, there are a few important differences. Based on the survey findings discussed earlier, private sector graduates appear to have some additional opportunities and face fewer problems than do government and education sector employees. In the discussion on alumni's career advancement, for example, it was found that private sector alumni receive more salary increases in their first year after training than other alumni and were relatively more satisfied with their compensation than most others. Alumni from the private sector also appeared to be the most satisfied with their professional and career development. The field studies included a special assessment of alumni in the private sector to identify ways in which they have been contributing to the growth of this movement in their respective countries.

### **The Field Interviews**

**Mali.** In Mali, an AFGRAD alumnus contributed to the start-up of a business assistance service for small- and medium-sized enterprises. The regional office that he now directs also arranges small loans averaging a total of 5.5 million CFA per year.

Another spent years applying the technical expertise from his AFGRAD degree (electrical engineering) in building, staffing and managing the national hydroelectric facility in Selingé. Looking for new challenges, he has now left government service to run a group of four private enterprises owned by a local bank. Asked why he chose to leave his comfortable position to work in the private sector, he responded:

*"In the United States, I was impressed most of all by just what can be done in such a relatively short time; how man can transform the environment into so much development. This gave me the desire to be more entrepreneurial in my ambitions."*

Another AFGRAD alumnus worked for years as Chief of the Epidemiology Section at the National Livestock Directorate before deciding to take his expertise to the private market. Poultry production units he started now raise 4,000 layers a year for the local market. He is also actively negotiating for the rights to cover the veterinary health needs, on a fee-for-service basis, of a large geographical area of the country (essentially privatizing the non-functional government services).

**Ghana.** In Ghana, of 214 AFGRAD alumni, 20 are in the private sector, excluding those who work in parastatals which have both public and private sector aspects. These 20 alumni range from single entrepreneurs to senior officers of large-scale commercial enterprises. Several have their own, or are partners in, management consulting firms. Several others (who as a group probably have made the most impact) are private sector engineers. These include: an alumnus (MBA, University of Missouri, 1967) recognized as the doyen of the Ghanaian construction engineering profession, who heads his own firm, one of a handful of internationally-recognized indigenous companies; a 1975 graduate of the University of Cincinnati (MS in Civil Engineering), who is in charge of civil engineering for one of the other major engineering firms in the country; a former university lecturer and the country's first PhD photogrammetrist (PhD, Ohio State, 1972), who heads one of only two private remote sensing firms in Ghana; and a civil engineer (MS, University of Iowa, 1976), who is with one of the major quantity surveying firms in the country. While few in number, these four alumni have had significant impact on their organizations and the field of private sector consulting engineering. This impact is described in more detail in an accompanying case study. (*See Annex 3*)

There are other alumni who have distinguished themselves in private business. One, the former head of the Department of Veterinary Services (MS in Veterinary Science, University of California/Davis, 1972), developed a profitable large-scale poultry farm of 90,000 layers. Another (MS in Electrical Engineering, University of New Mexico, 1969) is the Project Director of the GIHOC Pharmaceutical Company, Ltd., a large manufacturing enterprise in which he supervises 500 employees. There is also an alumnus (PhD in Geography, UCLA, 1971) who, tiring of a university teaching career, formed his own tourism-oriented company, Villa Cisneros Ltd., which provides accommodations, catering, sales, marketing and public relations aimed at developing the tourist industry in Ghana.

These private sector alumni credit a good deal of their success to their U.S. education. As a group, they found their training to be appropriate and relevant to conditions at home, although lack of equipment and supplies was often a constraint to full utilization. They reported that very little modification or adaptation was required, especially in the engineering and veterinary areas. In addition to their technical training, the qualities the alumni cherished most from their U.S. experience were "the work ethic," organization and management, time management, productivity and analytical skills, and problem-solving techniques. The private sector alumni tended to be more satisfied as a group with their status in life than those in the public sector, not a surprising situation considering the latter's low pay and relative career immobility. A repeated request during the focus group discussions was for short-term technical, state-of-the-art upgrading.

**Uganda.** In Uganda, if the private sector is defined to exclude parastatals, there are only about ten AFGRAD alumni in this field. They include a financial officer with Shell Oil Company who received his Master's in Business Administration from Hampton Institute in 1991; the senior partner in a law firm he established; an architect with his own firm; a Finance Officer with Standard Bank who received her Master's in Accounting from the University of Wisconsin in 1990; an alumnus who established his own management consulting firm after receiving a Master's in Economics at Vanderbilt; the Executive Director of the Uganda Manufacturers' Association; an associate of an international engineering firm that works on World Bank projects; the Managing Director of the National Insurance Corporation in Kampala; the Managing Director of a scientific instrument manufacturing and supply company; and an associate of a private computer firm. In addition to these individuals, there are many AFGRAD alumni who are senior officials in parastatals such as The Central Bank, The Development Bank, and Kalelembe Mines, which operate in a semi-private capacity, although they are owned by the Ugandan Government.

There seems to be little doubt that alumni in the private sector, as well as in parastatals, tend to be work-oriented, productive, and ambitious. Since salaries and benefits are several times higher in these organizations, they tend to attract outstanding personnel.

## V. ALUMNI AS AGENTS OF SUSTAINABLE CHANGE: THE DIFFUSION OF KNOWLEDGE

### A. Alumni's Networking Activities

Membership in a professional association is one of the more important networking mechanisms available to alumni, which not only serves to reinforce their training, but also provides a forum or vehicle for diffusing their knowledge and skills to others. As discussed earlier, (*See Section IV, Selected Impacts of AFGRAD Training*), a majority of alumni (63 percent) belong to professional organizations in their home countries. Many alumni also belong to professional organizations outside their country, primarily in the United States (39 percent). Another 21 percent are members of African regional organizations, and a similar proportion (19 percent) belong to organizations elsewhere (e.g., Europe). Business administration is the only field in which professional memberships in national, regional or international is below average. This corresponds with the fewer private sector organizational and networking opportunities available in Africa and overseas.

Respondents were also asked to report the names of the associations with which they are affiliated. (*See Annex 10 for a complete listing of the associations reported by country*) This data was captured by the study team for use in ATLAS outreach activities in individual countries, as well as in the impact study. A great majority of the sample alumni (81 percent) reported affiliations with organizations in their countries and elsewhere. A total of 1,423 organizations were cited. Participants were also asked to report both professional and civic associations in order to capture more than one dimension of their networking activities. The organizations listed are located in 39 countries across the continent. The impact on growth of civil society from all these organizations is surely sizeable.

Although alumni are very active in professional associations, the frequency of their involvement in other types of networking activities at a regional or international level is somewhat limited. Alumni were asked to comment on the type and frequency of this activity in terms of their contact with other AFGRAD alumni or others educated in the United States, contact with U.S. professional colleagues in their field of specialization, contact with colleagues met at international conferences, collaborative research with U.S. professional colleagues, visits with U.S. colleagues (either in the United States or in their home countries), and corresponding with the U.S. training institution. These types of activities also support alumni in keeping up with developments in their fields, as well as encourage the sharing of ideas and experiences at a professional level. The survey, however, indicated that few alumni are actively involved in these kinds of important networking activities on a regular basis. Indeed, only 13 percent of the sample meet frequently with other AFGRAD alumni on a professional basis; and 19 percent reported this on a social basis. However, alumni meet more frequently with other colleagues educated in the U.S.; almost one third do this both on a professional and social basis. A notable proportion (28 percent) also are in correspondence with their respective U.S. training institutions.

## The Field Interviews

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Since professional and community networking was discussed earlier in Section IV in relationship to alumni's leadership development, the networking behavior among AFGRAD alumni, which was examined in depth through the field interviews, is discussed in this section. The four countries visited can present only a limited view.

**Madagascar.** The most positive case is that of Madagascar, where there is an AFGRAD/ATLAS Alumni Association (AAAA) with about 20 members. It was formally established over a year ago with the advent of the new democratic government. The association has already proven useful to its membership.

One of its achievements was the passage of a law that recognizes the U.S. PhD in the Government of Madagascar's civil service salary grade system. However, this ruling does not affect one's position title and this is still a big issue for the AFGRAD returnees in the university. Therefore, while the civil servant association members are satisfied to be named to the highest grade - *catégorie 10* - those in higher education have yet to achieve automatic academic recognition of their U.S. degree, along with the status, privileges and title that should accompany it.

AAAA members are interested in transforming the association into an NGO in the future, so that they can pursue funding to help buy computers for alumni and to support the publication of members' research and perhaps a newsletter. The organization hopes to become a real publishing house for its members. The association has also had contacts with other regional alumni associations. However, since AAAA was more advanced in development than the others, these contacts resulted in giving, instead of receiving, hoped-for advice. Still, the AAAA president expressed a desire to establish contacts with alumni groups in other parts of the world.

One AFGRAD MBA recipient has started an MBA Association in Antananarivo. This association has three kinds of members: (1) a steering committee of six who all have MBAs; (2) associates, numbering about 20, who have a BA in management or business; and (3) about 50 individuals who are business students or are interested in business studies. The purpose of the association is to discuss American management theories and practices, to help member MBAs in pursuing private sector employment, and to encourage others to take up management study. In addition, the president of the association is thinking about establishing a local MBA program that would include an exchange with a U.S. school for the second year of study. He has already discussed this idea with people from the University of California.

**Mali.** In Mali, the alumni founded an official organization (*Association des Anciens Universitaires Américains* - AAUA) in 1988; before then the association consisted of a small group of people who met informally. AAUA has about 175 members including alumni of U.S.-sponsored long-term training other than AFGRAD. The association is primarily for people who work in rural development, since most of the USAID-sponsored training through bilateral projects, AFGRAD, and TLD (Training and Leadership Development) is in this area.

A year ago, AAUA organized the first symposium held in Mali on privatization; this was funded by USAID. The members feel that they helped advance the process of privatization, especially given that this subject had not received much attention in Mali prior to the symposium.

The association has sponsored a consulting firm, CDAN (*Consultants Diplômés d'Amerique du Nord*). This organization is composed of both Canadian- and U.S.-trained alumni. There are about 400 eligible members, although only about 20 are dues-paying thus far. For each consultancy that members undertake, CDAN sets aside a portion of the profits for itself. CDAN continues to look for ways to sell its services to the many international organizations in Mali.

**Uganda.** In contrast to the two francophone countries visited, there does not appear to be very much networking among AFGRAD alumni in Uganda. AAI encouraged the formation of an alumni association several years ago, but response was limited. Because of the modest number of AFGRAD returnees in Uganda, it does not seem feasible to attempt to organize an exclusively AFGRAD association. The alternate option of including returnees from all programs has the disadvantage that members would lack a common ground.

**Ghana.** In Ghana, networking among AFGRAD alumni is also virtually non-existent. Alumni tend to network with their associates at work, with whom they share common professional interests and activities. The potential members of a networking association are busy, dedicated career people who tend to place low priority on such activities. The lack of interest is compounded by the fact that few AFGRAD alumni knew each other during training. The 214-student body extends over a 30-year period and covers such a wide range of fields that there has been little opportunity for bonding to take place. There have been several attempts by USAID and AAI to encourage the formation of an alumni association.

Among the civic organizations reported were a large number of community development, educational and church-affiliated groups. This networking tendency among the alumni could form a basis for developing democratic governance activities in selected countries by using alumni as local contact points to encourage democratic responses to community challenges in development. There appears to be a very high level of networking in these types of groups among the responding alumni, with each person reporting an affiliation with an average of almost three organizations.

With regard to outreach and extension activities, there have been very effective results in Ghana inasmuch as a large segment of the AFGRAD alumni are associated with the university system, in which outreach and extension play a major role in the system's objectives. There has also been considerable extension and outreach by AFGRAD alumni with various research institutes and even in the private sector, especially in the engineering field where AFGRAD alumni have taken a special interest in using their U.S.-acquired skills to develop an indigenous engineering industry capable of competing with expatriate firms.

## B. Formal and Informal Training Activities

### The Survey Findings

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The education sector has been and continues to be the foremost employment sector for AFGRAD alumni, accounting for approximately 40 percent of the alumni sample in jobs before and after training. The spread effect of AFGRAD graduates in education at all levels is one of the greatest impacts of the project. For example, **the numbers of students trained by AFGRAD professors is in the tens of thousands.** In addition, many AFGRAD alumni have served as academic student advisors: 35 percent at the graduate level, and 38 percent at the undergraduate level. These alumni reported having an average of 10 graduate students and 68 undergraduates respectively. (See Table IV.3, Annex 8)

**The innovations, curriculum development, research opportunities and professional guidance offered by these alumni have helped to directly build and strengthen African educational institutions.** It is no wonder, then, that the largest number of activities listed by participants in response to the open-ended question about their contribution to African development concern teaching, development of seminars, and training and curriculum development. A sizable number of AFGRAD alumni (48 percent) have developed and presented, on the average, five new courses. A similar proportion (46 percent) have revised an existing curriculum to add new skills, technology or information. Alumni who planned a workshop or seminar for professional colleagues (57 percent) did so an average of nine times. And those reporting establishing or improving extension programs (31 percent) averaged eight new programs. (See Table III.40, Annex 8)

In addition, a sizable number of alumni have made presentations at domestic conferences (61 percent), as well as at international conferences (57 percent). In both cases, alumni who participated in these activities did so an average of ten times. (See Table IV.3, Annex 8)

### The Field Interviews

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**Ghana.** A large percentage of AFGRAD alumni are affiliated with the university system in which formal training of students is the sector's major objective. Informal training exists in most other cases, especially in the research institutes, where AFGRAD alumni hold mid-to-senior-level scientific positions and are well placed to impart their U.S.-acquired knowledge to their associates and assistants.

**Uganda.** More than one-third of the alumni who have returned to Uganda are in colleges or universities and institutes where educating others is their primary (or secondary) responsibility. Those in research institutes also provide on-the-job training to their assistants, and considerable informal education and training are being provided by AFGRAD alumni in a variety of ways - on the job, training of subordinates, workshops and seminars. **Many of those contacted expressed the view that they are considered role models in their organizations and the broader community because of their AFGRAD experience, and it is incumbent on them to share as much of their newly acquired ideas and skills as possible.**

**Madagascar.** AFGRAD alumni's influence at ENS (Ecole Normale Superieure - Teacher Training School) has been large. Their impact has been in training hundreds of students who have gone on to teach in high schools all over the nation. Another important mark made by an AFGRAD graduate was the creation of IMATEP (*Institut Malgache des Techniques de Planification*) which provides virtually all the training in planning skills available in Madagascar.

**Mali.** The Director of the National Budget, an AFGRAD MPA degree recipient, has dramatically revamped the budgeting systems used by the government. In order to make this operational, he has spent a lot of time training his staff to use the American techniques that he learned in Buffalo. At the *Ecole Normale Superieure (ENSup)* the training program for teachers of English has been dominated by AFGRAD alumni. They have led the other language departments in state-of-the-art language-training techniques. One of first returnees in this group went on to become the national teacher supervisor/inspector and for years performed on-the-job training with other supervisors and teachers all over the country.

### C. Research and Publication Activities

#### The Survey Findings

AFGRAD alumni have been active in research and publication activities, especially at the universities. Almost one half of the sample (44 percent) indicated that they have published an original article in a professional journal. These alumni averaged seven articles published, with the most prolific publishing 50 articles. Another 23 percent have published an average of three books or monographs, with four people reporting more than 20. A majority (63 percent) of the sample has participated in research projects, with an average of 14 projects. This shows that research is clearly an ongoing process for these alumni, and continues to be an important contribution to their respective professional fields and sectors. (See Table IV.3, Annex 8)

#### The Field Interviews

**Uganda.** Given the large number of college and university alumni in Uganda, as well as those involved in research, one would expect a considerable amount of research and publication activity. Among those contacted, there is evidence of productive research in the Hepatitis B/HIV area and in planning appropriate computer program models for various fiscal and monetary policy and management responsibilities in the Central Bank. One senior engineer who is the chair of the Ugandan Academy of Science and vice chair of the UNESCO Regional Committee on the Renewal of Science and Technology Teaching in Africa has produced a considerable number of research and project papers and has had two published internationally.

**Madagascar.** Several scientists noted that they spend a large portion of their time applying for research grants. They complained that U.S. research grants have been awarded to Americans for research in Madagascar, rather than to equally qualified U.S.-trained Malagasy scientists. In the environmental and botanical sciences, the American-trained faculty are the most frequently published, using their facility in English to acquire technical information not available in French.

**Ghana.** Publishing is a sensitive issue in the university system of Ghana and, to a lesser extent, in the research institutes. The field team was repeatedly informed of the "publish or perish" (or at least stagnate) syndrome. Promotions in the university system and the research institutes are based on a person's publishing record. (This is somewhat less true for the research institutes.) While this is far from unique to Ghana, a poor publication record means stasis in career development or promotions. There are many highly educated AFGRAD alumni who have remained at the university lecturer level for 10, 15, or even 20 years. When queried, the general response was that it was almost impossible to do acceptable research in certain areas due to the lack of materials, supplies and budgets. Further, alumni stated that finding the means to publish research results in a recognized peer-reviewed professional journal has become virtually impossible. The result has been career stagnation as well as deterioration of motivation and morale. The fact that a few faculty members somehow find the means to publish acceptable articles in peer-reviewed journals indicates that it can be done. But those who have not yet achieved a satisfactory publication record argue that the subject matter is the major determinant, i.e., research in some areas such as physical sciences is especially difficult to undertake at a level acceptable to the external examiners who must pass judgment on the research. Reportedly, publication in local or regional professional journals will now be acceptable, whereas in the past it was necessary to publish in journals of international repute. An AFGRAD alumnus is one of the organizers and editors of one such peer-reviewed local journal.

## VI. AFGRAD AND GENDER CONSIDERATIONS

### A. Women Trained

#### The Survey Findings

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As presented earlier in this report, women have increasingly become participants in the AFGRAD project. Constituting only seven percent of candidates under AFGRAD I, women represent 22 percent under AFGRAD III. As the role of women in African development and the difficulties they face in attaining higher education have become better understood, the AFGRAD project has responded by increasing its emphasis on recruiting and retaining female participants. (*See the discussion and corresponding chart in Section I.*)

The only major field of study in which women constitute a majority is health, constituting 54 percent of the alumni sample, with sizable proportions in education and agriculture (22 and 17 percent, respectively). Several important fields, including economics and engineering, have no women in the sample. In other fields with fewer than ten alumni represented, not one was composed entirely of women, in contrast to 16 fields in which men constitute 100 percent of those represented. Thus, women candidates have come primarily from the health, education and agriculture fields. (*See Table V.1, Annex 8*)

According to the results reported previously, it appears that women face somewhat more challenges than men as they make their way through the workplace. Virtually all the analysis of questionnaire responses by gender suggests that men have more positive experiences and outcomes than women. However, in a number of cases, the difference is not statistically important. Gender may not always be the determining factor for lower ratings. For example, the time series data indicate that older alumni with more years of job experience are more satisfied with their jobs and careers than alumni who have more recently returned. This finding might be explained by a number of expected re-entry adjustment difficulties experienced as alumni resume their professional careers. Since a majority of women in AFGRAD participated in the more recent phase (AFGRAD III), this might explain their lower satisfaction levels.

According to responses to the question about salary increases, women are less likely to receive a salary increase than men in the first year after training, and are more likely to feel inadequately compensated. (*See Tables III.3 and III.5, Annex 8*) While most women are satisfied with their career progression, the percentage is again much lower than for men, and the dissatisfaction rates are twice that of men. (*See Table III.13, Annex 8*)

**Women report that they have experienced significant changes in behavior, both personally and in their workplaces, as a result of AFGRAD training. These changes are even more significant for women than for men, since they imply that women are taking on non-traditional roles in their societies.** Learning and applying new ways of working are therefore important for women's full participation in the workforce. (*See Table V.2-3, Annex 8*)

One of the tracer studies conducted during the field visits (*See Annex 4*), as well as the field interviews provide additional insights into the nature of the impact of AFGRAD training on female alumni's professional development and their subsequent contributions to their organizations.

## **The Field Interviews**

**Ghana.** In Ghana, there were 11 women in the total number of 214 AFGRAD alumni, confirming that gender balance was not given much consideration during AFGRAD's earlier years. Recently, the trend has somewhat improved; i.e., four of the last 16 AFGRAD choices were women.

**Uganda.** There were only ten women among the 111 AFGRAD alumni in Uganda. There is little indication that gender was a factor in the AFGRAD selection process. Of the ten women selected, one has been serving as the Deputy Director of UNIFEM in New York, two are deceased, and the whereabouts of a fourth is unknown. Contact was made with two of the remaining six, both of whom are in the public health field, one as a medical officer dealing with Hepatitis B and pediatrics, and the other as a senior research officer dealing with Hepatitis B/HIV relationships. Both appear to be highly motivated professionals who are trying to do what they can to improve the state of the art in their research activities. Those not contacted appear to have responsible positions including the woman with the Standard Bank mentioned in Section VI. Another is a lecturer in geography at Makerere University, a third is a Cooperative Officer with the Ministry of Cooperatives; the fourth, Assistant Director of Research at the Kawanda Research Station of the Ministry of Agriculture.

**Madagascar.** In Madagascar, four alumni were interviewed. All felt that their training improved their self-confidence and made them more assertive, especially in their professional environment. They agreed that their educational experience demonstrated that one does not have to be a man to succeed in higher education, even in highly technical fields. Two alumnae who are lecturers at the university are continually performing research and are the most prolific publishers in their department. They cite their U.S. experience and fluency in English as reasons for their success. They have also been able to attract several research partnerships from abroad.

### **B. Women in Leadership Positions**

**Ghana.** Similar to alumni, the women selected for AFGRAD in Ghana were, for the most part, of a high caliber and appear to be making good use of their U.S. training. An outstanding alumna, a biochemist and head of her department at the University in Legon, has recently been promoted to Associate Professor, the first woman so honored at the university. Another alumna is a clinical psychologist at the Legon University Medical school, the first woman and only the second Ghanaian in the country trained in that field. A third woman is in charge of the Counseling and Guidance Service in the Ministry of Education. A fourth, a teacher at the Ghana International School, has had extensive experience in TV broadcasting in Nigeria and, since March 1993, has been an anchor person with the Ghana Broadcasting Corporation. Two other women are Senior Lecturers in the university system in the areas of animal science and biochemistry. An eighth is the Principal Collector and Deputy Head of the Laboratory for the Customs, Excise and Preventive Service. All of these alumnae attribute new ideas or skills acquired in the U.S. to their success at home. Several are active in the effort to encourage high school and grade school girls to specialize in the sciences. Most point to changes in work style, such as better organization, time management, broadened outlook and

improved interpersonal skills, in addition to the acquisition of technical knowledge, as among the major benefits of their U.S. training experience. One woman introduced the concept of peer counseling in schools to help overcome the lack of professionally trained counselors. She also has started her own counseling service for teenage mothers.

*All of these (Ghanaian) alumnae attribute new ideas or skills acquired in the U.S. to their success at home. Several are active in the effort to encourage high school and grade school girls to specialize in the sciences.*

**Uganda.** In Uganda, AFGRAD alumnae appear to be in responsible positions, but the field team was unable to ascertain the degree to which the women are in leadership roles, with the exception of the Deputy Director of UNIFEM and the Senior Researcher at the Virus Institute. She is clearly a leader in her field in the study of the Hepatitis B virus.

**Mali.** In Mali, one of the female interviewees has been a leader in policy formulation for the rural development ministry. This involved working closely with the various donor agencies in Mali to maintain a certain harmony in development policy. During her tenure in this coordination function, she organized several conferences and workshops on the integration of women in development.

### **C. Changes in Organizational Recruitment**

There seems to be a growing recognition in Ghana that women deserve more equitable treatment in the work place. There are more women professionals than ever before: e.g., lawyers, doctors, scientists, teachers, professors, etc., but there is still a large gap between the percentage of professional women and men in the work force.

In Uganda, the only indication observed in recruitment policies was the current emphasis on gender considerations in the selection process. The Scholarship Secretary in the Ministry of Education, who is a central figure in selection along with the Deans' Committee, indicated that, other things being equal, a woman would be chosen over a man in the current cycle.

Mali has a very proactive women recruitment emphasis across all its training programs. The USAID Mission has placed special emphasis on gender analysis of programs in recent years and has entered into very direct negotiations with the government to assure that more women are nominated for long-term training positions.

## VII. CONCLUSIONS

The conclusions from the study are presented below in relation to the ten principal research questions the study was intended to address:

### 1. **What are the major characteristics of AFGRAD alumni and their training programs?**

Based on data in AAI's AFGRAD alumni database on selected variables (e.g., field of study, training objective, program completion and repatriation rates, gender, age and employment sector), the following summarizes the major characteristics of alumni and their training programs:

# Training under AFGRAD has largely been targeted at the graduate level (master's and PhDs), with smaller numbers of undergraduate and postgraduate awards. Although fields of study have varied across countries and over time, there have been major concentrations of alumni in the fields of education, engineering, economics and business administration, agriculture and animal science, and health. Unique features of the AFGRAD program include opportunities for practical training components and for conducting graduate research in Africa.

# The majority of the more than 2,500 Africans sponsored for U.S. academic training have been men. However, the proportion of female participants has steadily increased over the life of the project; e.g., from seven percent female in AFGRAD I to 18 percent female in AFGRAD II and to 22 percent in AFGRAD III. This trend has been a result of programmatic efforts to include more female candidates, which is an explicit goal in other Africa Bureau and regional training programs.

# Although the majority of AFGRAD alumni are employed in either the education or the public sector, an increasing number of alumni are moving into the private sector, including NGO's and international organizations.

# Data on alumni's program completion and repatriation rates reflect positively on the AFGRAD project, since over **90 percent of all alumni have successfully completed their training objectives**, and more than **80 percent have returned to Africa** after completing their programs to resume their professional roles.

### 2. **What is the relationship between USAID training priorities and AFGRAD training?**

A review of AAI Cooperative Agreements and USAID program strategy statements was undertaken in several countries in order to examine how AFGRAD training has contributed to USAID program objectives.

# There does not appear to be a systematic strategy linking AFGRAD training to specific objectives among the countries examined. While some USAID programs or projects carefully articulate the capacity-building objectives to which long-term training is expected to contribute, others simply allocate resources for training in critical areas. As a longstanding regional project, AFGRAD has managed to accommodate the strategic objectives of individual countries. The emphasis on

programming more strategically is expected to increase under the results-oriented reengineering initiatives currently underway.

**3. What have been the major trends in alumni career patterns over the course of the program?** The study examined the incidence and frequency of shifts in alumni's jobs, especially in relation to their institutional affiliations, movement between public and private sectors, and changes in occupations and professional fields.

- # Career change and development have been the hallmark of AFGRAD alumni. AFGRAD alumni appear to have a high job mobility rate, many with increased responsibility in positions of influence and authority.
- # The largest numbers of alumni continue to be working in the education sector, particularly higher education. While the percentage of alumni employed by the government sector has been declining over the years, the number of alumni working in the private sector and in other non-governmental entities has increased dramatically. This trend reflects the efforts of many African governments to restructure and reduce their role in their respective economies.
- # While the majority of alumni's jobs before training primarily involved teaching, research and technical duties, an increasing number of alumni are serving policy-making and management roles. This trend reflects the increase in responsibility and professional growth experienced by alumni since their training.
- # Despite alumni's apparently high job mobility, especially in cases involving a shift in occupation and/or employment sectors, most alumni continue to work in the professional field in which they specialized under AFGRAD. In general, the higher the degree achieved, the more likely that this trend holds true. This factor contributes significantly to sustainability in this sector.

**4. What impact has the AFGRAD training experience had on alumni's professional development?** The study examined alumni's career advancement and promotion patterns, as well as the contributions of the AFGRAD training experience to alumni's professional capabilities and job performance.

- # Most alumni reported receiving a salary increase within one year after their return from training, which was attributed by half of the survey sample to their AFGRAD experience. Salary increases were noted especially in the fields of economics, engineering, and business administration.
- # Most respondents felt that they were not adequately compensated for their increased qualifications, despite some increases in salary. Many believed this was due to a lack of resources in their respective organizations, especially for alumni working in NGOs. A notable number, especially in francophone countries, reported that their U.S. degrees were not appropriately recognized. Degree recognition, however, did not appear to be a problem for private sector alumni in francophone countries.

# Most alumni (87 percent) felt that their AFGRAD experience had a very positive effect on their career and professional development and almost all (94 percent) were generally to very satisfied with their career development.

# AFGRAD training has contributed significantly to the enhanced capabilities of alumni, at both the personal and professional levels. Many alumni reported experiencing a variety of changes in attitude or values as a result of their training, especially in terms of increased self-confidence, a broadened outlook and open mind, increased self-reliance, and more flexibility. Important changes in work skills were also reported by a majority of alumni, including improved problem-solving skills, better organizational and management skills, and greater team work.

**5. What impact have AFGRAD alumni had on their organizational work unit?** The contributions of AFGRAD training to alumni's employing organizations and individual work units were examined in terms of the appropriateness of training to organizational and job needs, as well as improved organizational performance through training-related innovations made by individual alumni (e.g., use of new technology; program and policy development; operational changes and improvements, etc.).

# The knowledge and skills from alumni's AFGRAD training is reportedly very applicable to the physical conditions found in most alumni's home countries. Most alumni also confirmed that their training was very relevant to their specific job assignments in their first jobs upon return. A further analysis indicated that training relevance levels remained high over time, as many alumni changed jobs.

# The ideas introduced by AFGRAD alumni in the workplace found a receptive audience in their colleagues. All returnees face severe workplace constraints, which prevent them from fully applying their newly acquired knowledge and skills. These constraints were largely a result of resource limitations.

# Despite the various constraints in the workplace, most alumni reported high levels of knowledge and skills use from training in their respective jobs. Interestingly, alumni who had been back the longest reported higher training utilization levels in their jobs than more recently returned alumni. The three skills gained from training that alumni considered most valuable in carrying out their jobs were research and analytical skills, management and planning skills, and technical skills.

# Many alumni have undertaken new initiatives in their jobs involving the ideas and skills from their training. In varying frequency, a majority has developed new programs, developed policies, planned workshops or seminars, made administrative changes, and introduced new techniques or methods. Many examples of these types of new initiatives and other ways alumni have used their AFGRAD training were provided in the field interviews.

**6. What impact have AFGRAD alumni had on institutional and sector development?** An examination of the contributions of a critical mass of alumni to improved performance and capacity of selected institutions in several sectors (higher education and private sector engineering in Ghana, livestock production and marketing in Mali, the Central Bank in Uganda) was used to provide evidence and institutional development. There is no doubt that inquiries in more countries would have revealed even more.

# The greatest impact of the project on institutional development was found in the education sector. AFGRAD alumni have helped to change the way that students are taught throughout Africa. This conclusion was evident in the field studies conducted in Ghana, Mali, Madagascar and Uganda.

# In Mali, AFGRAD's contribution to the livestock sector has been profound, especially in the early years of the project under AFGRAD I. In recent years, diminishing government resources for this sector has caused many alumni to leave the field or seek private employment. As a result, many alumni are working in regional or international arenas, but still in the sector.

# Other significant institutional impacts have been made in the Central Bank of Uganda and in the Finance Ministry in Mali. In both these cases, key AFGRAD alumni have introduced American financial analysis techniques and computer technology to completely revamp financial management systems that have significantly helped these two countries implement structural adjustment programs.

**7. How has AFGRAD training contributed to private sector development?** In addition to examining the number of alumni working in and in support of the private sector, alumni's contributions to the private sector, including NGO's, were examined.

# Over time alumni have increasingly moved out of education and government sector employment to the private sector. Private sector positions make up 14 percent of the sample alumni's current jobs -- an increase of more than 200 percent over the number of private sector jobs prior to AFGRAD. Since private sector employment does not normally require attainment of a PhD, this avenue has more often been used by master's, especially MBAs, and bachelor's-level alumni. (A number of PhD alumni have moved into some private sector activity in response to declining opportunities in the public sector.)

**8. How has AFGRAD training contributed to leadership development?** A sizable number of alumni are holding positions of influence and authority in key development institutions and private enterprise. The study examined how the AFGRAD experience has helped alumni move into these leadership positions and how they are using leadership skills in professional organizations and civic activities.

# In the countries where field interviews were conducted, AFGRAD alumni occupy high positions in government and education. Some examples include the following:

- ! **Ghana:** University Registrar and several Deans, Managing Directors of several parastatals, Secretary of Foreign Affairs;
  - ! **Mali:** Prime Minister, Ambassador, Assistant Resident Representative of the World Bank mission, Director of the National Budget, Managing Director;
  - ! **Madagascar:** Director of the National Parks, Financial Director of the national airline, academic Department Heads, and the founder and Director of the National Institute for Management Studies and Strategic Planning;
  - ! **Uganda:** Governor of the Central Bank, Ambassador, Director of Economic Affairs at the President's Office, academic Department Heads, and Research Director.
- # A large number of alumni hold positions of leadership in professional and civic organizations:
- ! Twenty-five percent of the survey sample are executive officers in a professional organization and almost one third hold positions of chairman, president or vice-president.
- # In addition, some AFGRAD alumni are demonstrating leadership in private sector and related organizations. Examples include alumni who are directors or owners of the following:
- ! a small business service providing loans and counseling;
  - ! private poultry production and veterinary services;
  - ! private engineering firms;
  - ! private technical schools; and
  - ! public relations firms.

**9. How has AFGRAD training addressed the participation of women in the program?**

The number and type of women trained under the AFGRAD project were identified, and their respective leadership roles examined through field interviews, including a tracer study.

- # The number of alumnae has grown significantly over the life of the project to the present level of 25 percent of the total alumni population. It is important to note that the largest percentage of females was sponsored for training under the most recent AFGRAD Phase, and thus have not been home and back at work long enough to have risen into leadership roles. This is expected to change in a positive direction over time.
- # Women in Africa face more constraints and impediments in their careers and are thus somewhat less satisfied with their careers than men. While women reported lower satisfaction with their salary levels and career advancement than men, the differences were not large.

**10. Are AFGRAD alumni effective change agents?** The extent to which alumni are producing spread or multiplier effects through the application of their training was examined in relation to their involvement in professional networks and associations, training and outreach activities, and their research and publication record.

# The multiplier effect from alumni working in the education sector is clearly one of AFGRAD's greatest contributions. Alumni are revising university teaching systems, developing curricula and new courses, and are advising and guiding students every day. Tens of thousands of students are benefitting from the expertise of AFGRAD alumni.

# In addition, alumni have acted as agents for sustainable development through their research and publication activities. About one third of the alumni sample has published books, monographs or original articles; and almost one half are participating in research projects.

# In the countries where field visits were conducted, alumni were introducing innovative methods into public and private organizations and businesses.

# AFGRAD alumni participate widely in professional and civic organizations in their communities.

# Alumni maintain some ties to their U.S. universities, either through occasional contact with their professors or fellow students, or through correspondence. Many alumni also maintain ties with their AFGRAD experience through professional and social contact with fellow AFGRAD alumni, or with others trained in the United States. This contact serves to reinforce the knowledge and skills they acquired.

# **ANNEX 1**

## **MSI SCOPE OF WORK**

## ANNEX 1

### MSI SCOPE OF WORK

MSI will conduct a second follow-up study of AFGRAD alumni that will analyze the effect of the AFGRAD participant training program on African development in participant countries under AFGRAD II and III. The study will focus on those participants who have completed the program since 1980, and will include an update of the results of an earlier study of the program (1963-1980).

MSI will focus on the following aspects of the training program:

- # Review USAID priorities in human resource development as reflected in the relevant cooperative agreements between AAI and USAID;
- # Examine, along sectoral lines, the broad policy themes of leadership, institution building, development of the private sector and increased participation of women that have been the cornerstones of USAID's support for training programs in Africa over the past 25 years;
- # The relationship between selected USAID mission strategies (as reflected in the CDSS) and the nature of the training offered through AFGRAD to participants from those selected countries;
- # Patterns and changes that have taken place in long-term and short-term graduate education within the academic community over the course of the AFGRAD program with special input from the Deans' Committee;
- # Comparison of career patterns of AFGRAD alumni since the program began as reflected in AAI's database;
- # The relationship between the training offered to participants and the resultant use made of that training as reflected in the career patterns in order to determine what trends, if any, can be identified in the African job market;
- # Conduct a limited post-training survey, using selected countries, to determine how AFGRAD participants regard the usefulness of the training with respect to their career development; and
- # Review critically the training offered in one selected country, within one sector, and its effect on institution building within that country.

The terms of the assignment are to:

- analyze the database prepared by AAI on each participant;

- update and modify the AAI questionnaire to be given to each participant;
- field test the questionnaire with a selected group of AFGRAD participants from the previous study in cooperation with AFGRAD Field Representatives;
- design a series of interview questions to be asked of selected participants;
- carry out a series of interviews, in selected countries in Africa, with a representative group of AFGRAD alumni;
- review, modify and update data from the previous AFGRAD study, as appropriate;
- review with AFGRAD staff existing monitoring and evaluation instruments and help develop new instruments when necessary; and
- provide a written report at the end of the study, providing both qualitative and quantitative information on the effectiveness of the AFGRAD project.

**ANNEX 2**

**QUESTIONNAIRE**

**ANNEX 3**

**CASE STUDIES**

## ANNEX 3

### CASE STUDY

#### The Higher Education Sector in Ghana

Ghana attaches great importance to its higher education sector. There are three major government owned universities and two fledgling ones currently being developed.

The oldest, largest and still premier institution is the University of Ghana Legon which was founded in 1948 as the University College of the Gold Coast with strong ties to the United Kingdom. It became the University of Ghana in 1957 when the country became independent and by 1961 it attained sovereign university status with authority to award its own degrees. An almost fully residential institution, there is a student body of approximately 5,000 students. In addition to its Faculties of Agriculture, Arts, Law, Science and Social Studies, it has two major schools: the Medical School and the School of Administration. There are also five institutes associated with the university including: Adult Education, African Studies, Statistical, Social and Economic Research, Medical Research and Population studies. In addition, the university maintains three Agricultural Research Stations outside the campus. There are approximately 600 faculty members scattered throughout the various organizational units, some 20 of whom are AFGRAD alumni.

The second largest university is the University of Science and Technology at Kumasi (UST) which also was inaugurated in 1961 and specializes in preparing students for careers in the fields of science and technology, although it provides degrees in other areas as well. Also a residential institution, its six halls can accommodate about 3,600 students. Total enrollment in the 1992-93 academic year was 4,374 students. UST consists of five faculties: Agriculture, Environment and Development studies, Pharmacy, Science, and Social Sciences; two schools: Engineering and Medical Sciences; and three institutes: Mining and Mining Engineering, Renewable Natural Resources, and Technical Education; and one College: the College of Art. There are also a variety of research centers attached to UST. The total faculty (academic staff) consists of nearly 500 over half of whom are lecturers (260) followed by Senior Lecturers (114) and Associate Professors (35). There are only seven professors in the entire faculty. There are 20 AFGRAD alumni scattered throughout the various UST faculties and schools.

The third major institution, the University of Cape Coast which was granted full university status and degree conferring status in 1971, after existing nine years as a college. While constrained by a shortage of residential facilities, only 2,500 students can be accommodated on campus until new dormitories are completed. There are approximately 3,000 students and 180 faculty members at the moment. The university consists of four faculties: Education, Natural Sciences, Social Science, and Arts; two schools; agriculture and graduate school, and various institutes and centers including an Institute of Education which oversees the academic work of some 38 teacher training institutes in the country, and an Institute of Planning and Administration which provides courses for educational planners. The university is the pre-eminent teacher training institution in the country. There are some 21 AFGRAD alumni at Cape Coast.

The two fledgling institutions are the University of Development Studies in the northern part of the country and the University College of Education at Winneba, both of which are in the developmental stage. The head of the institution in Winneba is an AFGRAD alumnus.

The total enrollment in the universities is approximately 11,000 which is far shy of demand. Expansion plans on all campuses are constrained by shortage of funds. Meanwhile eligible students who are not admitted to one of the universities either try to go abroad or seek employment. While it is difficult to measure the influence of the universities on Ghana's economic growth it is obviously a major factor in the development of the indigenous human resource base which is essential if the country is to continue on its recent path of economic recovery and growth. It appears that university policy makers are sensitive to the need to relate course offerings to the development goals of the country and seem to recognize the importance of their role in the process.

While the field team does not have overall statistics on the educational attainment of the 1,300 faculty members in the three universities, based on the many discussions with senior university officials as well as digesting available written material, the educational background of university faculty appears to be quite similar to what one would find in U.S. universities. Virtually all faculty members have at least a master's degree and a high percentage hold PhDs. The career ladder runs from Assistant Lecturer, Lecturer, Senior Lecturer, Associate Professor and Professor, the major breakthrough appearing to be the move from Senior Lecturer to Associate Professor. A person's publishing record plays a major role in this progression and is a source of major complaint by many faculty members because of reported difficulties they have encountered in conducting acceptable research and publishing findings in recognized journals.

With regard to the impact of AFGRAD alumni on the university system, it would hardly appear that 60 alumni out of some 1,300 faculty members could have much influence but this has not proved to be the case. It is impossible to isolate the 60 AFGRAD alumni from other sponsors of U.S. training such as the Ghana Government, Fulbright or independently sponsored students in terms of assessing impact. However, discussions with a cross section of university faculty members in the three major universities at Legon, Kumasi and Cape Coast clearly indicate that AFGRAD alumni have played a major role among the overall U.S. graduate population in introducing new skills and ideas into the university system. While there are numerous individual alumni contributions, the major impact of U.S. training can be summarized as follows.

Traditionally, the U.K. higher education system predominated in Ghana dating back to the colonial era with the opening of the Legon campus in 1948, followed by Kumasi in 1963 and Cape Coast in 1971. In the early days, the U.S. higher education system was neither well known nor recognized as equal to the British system. The equivalency of degrees was difficult to establish and for years the bias was in favor of the U.K. system. It was not until the late 60's and early 70's when large numbers of Ghanaians first matriculated to U.S. universities for advanced degrees that the U.S. system became understood and appreciated. Ghanaian officials began to see the relevance of the U.S. system to the country's human resource development objectives and its advantages over the British system. Gradually the influence of U.S. higher education began to be felt in Ghana and, despite considerable resistance from the traditionalists, the U.S. model has by now replaced the U.K. one as the

predominant higher educational system. U.S. trained alumni have been instrumental in bringing about this major structural change.

The essentials of the change include converting to the U.S. semester system in which there are two 16-week terms each year as contrasted to the former system of three terms of 10 to 11 weeks each. The semester system lends itself more to modular courses in which a student selects from a variety of courses in his/her major area of study. These courses are completed by the end of each semester. During the semester there are periodic tests and continuous assessment of the student's progress. The student is free to select other modular courses the following semester for additional credit toward his/her degree. The former system was quite different inasmuch as the student spent the entire academic year (i.e., the three 10-11 week terms) studying essentially the major subject and was tested at the end of the year in a final examination. If the student failed this exam the entire year was lost (unless a supplemental test was given) whereas in the modular system, testing is a continuous process and the pass/fail determination is on an individual course by course basis, and not on the overall year's work.

There have been other influences from the U.S. higher education system in the Ghanaian universities. The modular system entails greater student and teacher interaction and a larger volume of work; e.g. reading papers, test, grading, etc. There have also been some changes in pedagogy and teaching methods which can be traced back to U.S. training. For example, visual aids are more prominent in class rooms; e.g. overhead projectors, videos, etc., and there is reportedly more "give and take" in the student-teacher relationship in the classroom than before when it was a fairly static situation with little student questioning in the process.

AFGRAD clearly played a role in this major restructuring as attested to frequently by Vice Chancellors, Registrars and other senior university officials. Many of the returnees have distinguished themselves in leadership positions. AFGRAD alumni include Deans, Department Heads, Registrars, full Professors and other leaders in the university structure. Indeed, one such alumnus is the chairperson of the committee that initiated the conversion to the semester/modular system and continues to monitor its progress at Cape Coast University.

It is difficult to comment on the relationship between USAID training priorities and AFGRAD training given the 30 year time span of AFGRAD and the completion of its selection process some three years ago. However, in essence, AFGRAD operated as a scholarship program in which outstanding candidates were selected on a competitive basis to pursue their academic interests without serious consideration of the country's priority human resource requirements. For all intents and purposes, AFGRAD functioned as a separate entity with no linkages to the USAID mission or its training priorities. This situation has been reversed in ATLAS, the successor project to AFGRAD, and there is little doubt that the USAID intends to play a major role in all aspects of ATLAS if and when it decides to participate in it.

With respect to leadership development, university faculty de facto are considered leaders and exert influence by virtue of their positions beyond the confines of their particular student body. There appears to be virtually no networking among AFGRAD alumni per se except for those who share mutual interests in their current work. It does not appear that AFGRAD alumni in the university

system play major civic roles off campus. In fact, to a large extent, they seem to be sequestered in the campus environment where they live and work, where their children attend school, and where their social life seems to center. This lifestyle might tend to limit activities off campus. It also might be that Ghanaians are not as active in undertaking community based voluntary work as their counterparts in some other countries. A notable exception is one of the senior lecturers who took his sabbatical to work with village level community groups and his consultancies have extended to many village level well and water project systems.

AFGRAD did not do a very good job in gender considerations in the higher education system. Only four women were among the 70 alumni in this sector. However, one of them, a biochemist, is the head of her department at Legon and the first woman to become an Associate Professor in the university's history. The current policies of the universities seem to encourage a greater role for women and future training programs such as ATLAS should have no difficulty favoring women over men for training slots, other things being equal.

In summary, the impact of AFGRAD alumni on the higher education sector in Ghana provides insight into what a relatively small group can accomplish if they are properly selected, well trained and given the opportunity to apply new skills upon returning home. Although higher education was a high AFGRAD priority, there was no orchestrated plan to remodel the Ghana university system. Indeed, the AFGRAD students quite likely were not aware during training that they may eventually participate in a major institutional change process, fashioned in some means by their U.S. education experience. There is no way of quantifying the number of people it takes to have impact in organizations or sectors. In this case, some 70 AFGRAD alumni scattered in dozens of faculties and disciplines out of a total faculty of 1,300 proved to be sufficient to have significant impact on an entire sector.

With regard to the foreseeable future, there is a need in the universities for a continued flow of graduate trainees overseas. While graduate level opportunities are gradually expanding in Ghana, they fill only a small part of the need. Unfortunately, donor assistance for overseas scholarships has become quite limited with the Commonwealth program, CIDA (Canadian International Development Agency), Fulbright and a few other small programs supplementing the modest Ghana Government scholarship program. Many of the AFGRAD alumni, as well as other senior university officials, are approaching retirement age and there is a growing gap between senior staff and the new locally trained graduates entering the system at the Assistant Lecturer level. The Vice Chancellors are actively seeking donor support to increase the flow of overseas academic advanced degree opportunities. There is also a need for upgrading the skills of existing mid-to senior staff in short term training programs such as internships, seminars and workshops including computer applications. Such exposure would be particularly valuable for those in the 45-50 year bracket who obtained overseas degrees 15-20 years ago and have had little state-of-the-art updating since.

## CASE STUDY

### Engineering Consulting Business - Ghana

There are approximately four recognized indigenous construction engineering firms in Ghana, another four or five in the area of quantity surveying and two in the more esoteric field of photogrammetry/remote sensing. There are successful AFGRAD alumni in each of these three fields, two in construction engineering and one each in the latter two areas. All four are leaders in their work and have contributed to the growth and development of the private consulting and contracting sector.

The AFGRAD alumnus in photogrammetry was a Teaching Assistant at the University of Science and Technology (UST) before he left in 1968 for four years at Ohio State University where he obtained a Ph.D. in Geodetic Science/Photogrammetry. He returned as a Lecturer to UST. After seven years he was promoted to Senior Lecturer and remained at this level until 1984 when he accepted an assignment to RECTAS in Nigeria as a Principal Lecturer for one year. Following this assignment, he was appointed Director of Training at CRTO in Burkina Faso, a regional geodetic/photogrammetry center. He remained there until 1990 when he returned home to establish his own engineering consulting firm, Mensah Okang and Partners. He is the first Ghanaian PhD in his field and the first to open an indigenous firm. He is considered the doyen of photogrammetry in Ghana having developed courses, syllabi, workshops and seminars in Ghana, Nigeria and regionally in his assignment with CRTO in Burkina Faso. He has been active in the Ghana Institution of Surveyors, drawing up rules and syllabi for professional examinations in land surveying. He serves on the council of the Ghana Institution of Surveyors as well as remaining an active member of the American Society for Photogrammetry and Remote Sensing. He credits his AFGRAD training in large measure for his success and impact on his sector. He especially benefitted from the U.S. characteristics of academic seriousness, mid-term examination, open-book examinations and publications which influenced his performance as a lecturer at UST. He also found such characteristics as team work, time management, delegation of responsibility and problem solving techniques to be useful particularly in managing his consulting firm.

The alumni in the quantity surveying consulting firm was a site engineer with a local company when he won his AFGRAD scholarship to Iowa State University where he obtained a Master's degree in Civil Engineering in 1976. He worked for the next 14 years with different engineering firms in Nigeria before returning to Ghana in 1990 as a partner in a quantity surveying firm, one of four such indigenous companies in Ghana in a field which for years had been dominated by British and other expatriate companies. His work primarily consists of construction management and supervision and he hopes to be able to share his experience by becoming a part-time lecturer at UST Kumasi soon. He claims he is able to impart a good deal of technical and managerial knowledge to younger engineers on the job sites and gives credit to his AFGRAD experience, especially for his U.S. acquired skills in project management, contract planning and cash flow projections. He also commented on the value of his AFGRAD training in such areas as delegation of responsibility, time management and team work in addition to the acquisition of technical engineering knowledge and skills.

The two other alumni are senior executives in two of the major indigenous construction engineering firms in the country. One received an MBA from the University of Missouri in 1967, the other a Masters in Civil/Structural Engineering from the University of Cincinnati in 1975. Both had worked for local engineering firms before their U.S. training. One returned to the same company that sponsored his training and he has since risen to the rank of Partner/Director in which he is in charge of engineering and supervises a technical/administrative work force of some 60 people. His firm is one of the largest in the country and has been awarded contracts in surrounding countries. One of his major projects was serving as Project Manager in the construction of a headquarters building for ECOWAS in Lomé, Togo. The other Alumnus returned home to work with another construction engineering firm for two years until he established his own firm, TWUM BOAFO & Partners which is now one of the largest and most established private companies in the sector. He serves as Managing Director and employs 120 professional, technical, administrative and clerical personnel.

The most noteworthy accomplishment of these two alumni is the pioneering role they have played in developing the indigenous private engineering profession. The Ghana Consulting Engineers Association was already in existence but it had not been very active in promoting the development of indigenous firms until overseas trained engineers of the caliber of these two alumni returned and took on an active role in upgrading standards and gaining recognition for local firms. They were deeply involved in preparing working papers to present to the African Development Bank and other donors or sponsors of construction projects and through the dint of their and their colleagues' efforts, local firms are now given equal recognition in bidding on projects to expatriate organizations. These alumni claim that local firms such as theirs can match the capabilities of any external firm and take great pride in the progress they have been instrumental in achieving in their industry over the past 15 to 20 years. Both are leaders in their field and remain very active in promoting/developing the private sector construction engineering industry. One of the two is President of the Institution of Ghana Engineers. The other is the Chairperson of the Building and Program Committees as well as the secretary of the Ghana Consulting Engineers Association. One is about to attend the American Association of Civil Engineers meeting in Texas where he will make a presentation and receive official recognition of the Ghana Association.

They attribute a good portion of their professional accomplishments to their AFGRAD experience. In addition to applying the technical skills they acquired in their programs, they emphasize that such qualities as the U.S. work ethic, improved management skills and better time management have proved to be of great value in the development of their organizations.

All four alumni feel a need for additional master's-level training in their sector in addition to short-term technical updating for leaders like themselves who have had very limited opportunities to keep abreast of state-of-the-art advances like computer modeling. They expressed deep concern about the "brain drain" issue and asserted that if appropriate selection criteria and conditions were in place, future students will return home. In their view, these conditions include:

- # Sending only people who have had three to five years work experience and are sponsored by his/her firm;
- # Candidates should be married, preferably with children; and

- # Employers should instill a feeling in the candidate that he is an important asset; his training will be valuable and his skills will be needed upon returning home where there is most assuredly a job in the waiting.

## CASE STUDY

### The Bank of Uganda

#### **1. Characteristics of the Institution**

The Bank of Uganda, the country's central bank, the premier monetary institution, is somewhat similar to the Federal Reserve Board in the U.S. The bank has 1,776 employees of which 362 are officers. Approximately 50 of the officers are considered executive personnel. There are 20 departments headed by Directors who report to the Governor, an AFGRAD alumnus. In addition to the traditional role of a central bank in formulating and monitoring monetary policy, the Bank of Uganda has a unique Agricultural Secretariat which is the government's primary agency for setting agricultural marketing policies for the country--there is also an AFGRAD alumnus in this policy making unit.

All 50 of the executive level personnel have at least undergraduate degrees, but very few have gone beyond this point. Most of the undergraduate degrees are from Makerere and the incumbents tend to be older than the handful of graduate level returnees in more recent years, five of whom hold master degrees and two have PhDs. The Bank is in indigenous hands except for two of the 20 departments, management information systems and research which are still directed by expatriates. Short-term expatriate technical assistance is also provided from time to time in such areas as development, finance and external debt but only in the form of advisory services.

#### **2. Impacts of AFGRAD Alumni**

The Bank has had five AFGRAD alumni, four of whom are in influential policy-level positions starting with the Governor himself. The Governor received a Masters in Political Science from Syracuse University in 1966 under AFGRAD after obtaining an undergraduate degree from Brandeis. Upon returning he rose steadily in the ranks of the Bank and by 1975 he was appointed Deputy Governor, a position he held for four years until he became Governor in February, 1979. By 1980 the political situation had deteriorated so badly that he left the country for Kenya where he went into private business and subsequently served as Governor for the Central Bank of Botswana through 1986 when he returned to Uganda. For one year he was chief executive officer of the Nile Bank. In May, 1990 he was reappointed as Governor of the Central Bank, the position he has retained until this day where he has been actively involved in implementing a structural readjustment program. IMF officials state that Uganda has met and surpassed all targets for that program.

A second AFGRAD alumnus, Mr. D, 43, is Director of the Planning, Monitoring and Evaluation Department where he is in a position to oversee all aspects of the Bank's planning, monitoring and evaluation functions. Mr. D, an AFGRAD graduate of the University of Arizona with a master's degree in finance and banking is the youngest director of a major bank department. He was appointed to this position in June, 1992 after serving more than six years as an economic advisor in the Prime Minister's office. As with the Governor, Mr. D spent several years in exile during Uganda's protracted period of political, civil, and economic instability. Mr. D's impact on the Bank is far

reaching by virtue of his portfolio and the high standards he inserts in carrying out his duties, a trait which he attributes in large measure to skills acquired in his AFGRAD program.

A third AFGRAD alumnus, Dr. E, is the Deputy Director of another major bank unit, the Research Department. Dr. E, only 35 years of age, obtained a master's degree in applied statistics and banking under AFGRAD from Louisiana State University in May 1985 after spending 18 months in the U.S. His research emphasis was on econometric modeling of the banking sector. After returning to the Bank at a higher level for three years, he obtained his PhD in monetary economics at South Hampton in the U.K. under the Commonwealth Scholarship Commission, returning again to the Bank in October, 1991 where he has remained until now. He recently was appointed as Deputy Director of Research and it is expected that he will rise fast to head a department in a year or two. Dr. E's major impact on the Bank and the country is his building an empirical policy-oriented computer-based quarterly macro-economic financial forecasting model for Uganda. He advises policy makers in the specialized area of monetary policy.

A fourth alumnus, Mr. F, obtained a master's degree in statistics from Kansas State University in 1976 and is presently serving in a policy-level position as Assistant Director in the Agricultural Secretariat which, as mentioned above, provides a unique bank function in setting national policy in agricultural marketing.

The fifth AFGRAD alumnus, Mr. G, obtained a master's degree in economics from Temple University in 1976 but was withdrawn from the PhD program in February 1979 because of the termination of the USAID program in Uganda at that time. This disruption appears to have shaded Mr. G's career. Although he holds an important position as a Senior Principal Banking Officer in charge of exports, he has not risen to the policy-level positions of the other four alumni, and it is doubtful that he is having a major impact on Central Bank policy or practices.

There is little question that the AFGRAD program has provided a sufficient critical mass in the Bank of Uganda to have significant impact on the Bank's character. Four of the five alumni are in policy-making positions where they have ample opportunity to apply whatever new skills and ideas they acquired under AFGRAD. It is, of course, unrealistic to attribute all their contributions to the banking system to their AFGRAD program—they all received additional training under other auspices but—it is reasonable to conclude that their U.S. experience under AFGRAD auspices has influenced these senior officers with respect to how they perform their duties.

### **3. Relationship between USAID Training Priorities and AFGRAD Training**

There appears to be very little relationship between USAID training priorities and AFGRAD training. Indeed, the USAID Mission had very little involvement in the selection process under AFGRAD and was not in the communication mainstream which essentially flowed between the African American Institute and the Scholarship Secretariat of the Ministry of Education. The USAID Training Officer attended meetings and interviews from time to time but only as an observer.

#### **4. AFGRAD's Contribution to Leadership Development**

It is clear that at least four of the five AFGRAD alumni in the Central Bank are leaders in their professions. The Governor demonstrated outstanding leadership traits in returning from exile to rebuild the banking system that had been destroyed through years of mismanagement and stagnation. As Governor, he must walk the tightrope to deal effectively with the technocrats of the International Monetary Fund on one hand and the populists of the National Resistance Movement, the ruling party, on the other. He has proven that he has the technical expertise as well as the political acumen to develop in a few years a monetary system that is exceeding all expectations with minimal inflation and a debt servicing record that is among the best in the developing world.

The other three AFGRAD alumni have demonstrated their leadership qualities through the highly professional standards they have set as technocrats as described above. Additionally all four are active in civic activities mainly centered in their home areas. For example, Dr. E is financial secretary of his village development committee and Mr. D is the chairman of a Resistance Council concerned with village level development throughout the country.

A sixth AFGRAD alumnus with a Master's degree from Yale University who is currently a World Bank Economist in Washington, D.C., is being recruited for a high level position in the Bank in Washington, DC.

#### **5. Conclusion**

This case study indicates that four persons trained under AFGRAD are sufficient to have significant impact on an organization employing 1,756 people as long as: a) highly qualified and motivated individuals are selected; b) they receive training relevant to the needs at home; and c) they return to positions where they can apply newly acquired skills and ideas. Fortunately, all three conditions have been met in recent years in the Bank of Uganda. It does not appear that there is an immediate need for long-term training in the Bank but short-term Bank related workshops and seminars for updating the state-of-the-art in central banking would be useful.

## **ANNEX 4**

# **TRACER STUDIES & SAMPLE SECTOR FOCUS GROUP - LIVESTOCK-MALI**

## ANNEX 4

### GHANA TRACER STUDY

Mr. F, 43, is an Instrumentation Officer with the Scientific Instrumentation Center, one of 14 units comprising the Council for Scientific and Industrial Research (CSIR), which is a government owned public service organization, similar to a parastatal. A unique feature of Mr. F's professional development is in its origin. He is not a product of the traditional academic stream which proceeds from "O" to "A" levels in secondary school to admission to one the Ghana Universities for the undergraduate degree and then, hopefully, abroad for a master's or Ph.D.. Rather, he went into the technical stream at approximately the sixth grade of primary school and proceeded from O levels (equivalent to the U.S. High school diploma) to a polytechnic institution where he received an ordinary national diploma (OND), and eventually to the University of Science and Technology where, after two years, he obtained a Higher National Diploma (HND), which is normally considered a terminal qualification. HND holders usually become mid- to senior-level technicians and supervisors in industry and do not advance to the professional engineer or scientist level. For that matter, few young people who enter the technical stream achieve university degrees in any field. After completing his HND in 1974, Mr. F served a mandatory one year of national service and joined the Ghana Water and Sewage Corporation as an Assistant Technical Engineer, a typical job for an HND holder. However, he aspired to higher qualification and by dint of his own determination, managed to obtain admission to Lakehead University in Thunderbay, Ontario in 1977. He supported himself there for three years after which the Government of Ghana provided financial assistance until he obtained a Bachelor's of Engineering degree in 1982.

Upon returning home, Mr. F was employed by the Accra Polytechnic where he taught such subjects as electronics, mathematics and electrical engineering principles for nearly three years. In November 1985, Mr. F joined the Scientific Instrumentation Centre as Assistant Instrumentation Officer where he has remained until this day.

It became evident to Mr. F that he needed advanced training in scientific instrumentation and controls both for promotion and better job performance so he applied through his employer, CSIR, for an AFGRAD scholarship. Mr. F was one of the two CSIR employees selected and in August, 1989, he was admitted to Southern Illinois University in Carbondale, Illinois, to undertake a Master's degree in Electrical Engineering which he completed in 28 months with a 3.8 grade point average. Shortly after returning home, Mr. F was promoted to Instrumentation Officer where he is in charge of the electric/electronic repair shop in the Scientific Instrumentation Centre.

The Centre's primary function is to take care of the country's scientific equipment such as spectra photometers, PH-meters, analytical balances and centrifuges. The government realized the need to develop the capability of maintaining and repairing equipment locally in order to avoid the high costs and long delays in shipping equipment abroad for servicing. (There was also an interest in introducing scientific instruments in secondary schools and to manufacture scientific lenses but these objectives have yet to be realized.) Mr. F's responsibility essentially consists of repairing and maintaining scientific instruments. The two major components of his work are instrumentation and controls. He supervises nine technicians and is the only professional engineer on the staff.

Mr. F likes his work and has no plans, at least at this time, to change occupations or employment despite the constraints of low pay, limited budgets for research operations, etc. He was quite pleased with his program at Southern Illinois as far as it went but there was a significant deficiency--there was very little available there in the instrumentation side which created a void he still needs somehow to fill. Perhaps a six month's course or attachment to a laboratory in the U.S. would be the answer. He found the control side of his training extremely helpful in carrying out his duties. He is in the process of introducing an adaptive control system in place of the classical control theory which he learned at Carbondale, into local industry which he thinks will be highly beneficial to local manufacturing. Mr. F had little difficulty adjusting to the U.S. higher education system because of his five years at the undergraduate level in Canada. He said that he received great support from the African American Institute and the local Episcopal Church which was helpful in boosting his morale while he was away from his wife and newborn child.

Mr. F credits his AFGRAD experience as a major contributor to his current status which is similar to a lecturer at the university. While he would have eventually been promoted, it was expedited by his AFGRAD degree. More importantly, however, were the new skills and ideas gained in Carbondale and the overall sense of self confidence his attainment of a master's degree has instilled in him. Future promotions will be based on years of service, job performance, and, to a lesser extent than university lecturers, research publications.

Mr. F is a hard working, conscientious scientist with a seemingly well balanced perspective on life in which his wife and family play as an important role as his work. For example, he likes teaching and would be interested in becoming a lecturer in his field at the University of Science and Technology but it is located some 150 miles away in Kumasi and he does not think it would be in the best interests of his family to relocate them at this time so he is not pursuing this option.

He has one solid piece of advice to pass on to future scholarship aspirants: "Don't take anything for granted. Question course offerings at universities to make sure your interests will be met." He claims that he accepted Southern Illinois University more on faith than knowledge and he could have turned it down for another institution that would have offered instrumentation had he been more proactive in the process.

## **GHANA TRACER STUDY**

Dr. G, 60, is currently the Chairman of the Board of Directors of Sydals Ltd. a large scale poultry farm which he developed while still serving the government. He enjoyed a long and distinguished public service career in the area of veterinary medicine. His AFGRAD education came at mid-career and was taken at the University of California at Davis where he received his Master's degree in Veterinary Medicine with a research emphasis on swine diseases in August, 1972. At the time he left for the U.S. he had already been the Director of Veterinary Services in the Ghanaian Government for four years. Prior to that time he had been seconded by the Government of Ghana to head the Department of Veterinary and Animal Husbandry in The Gambia for two years.

Returning from his AFGRAD experience, he resumed his position as Director of Veterinary Services until he retired in 1984 to take a position with UNDP in The Gambia, once again as Director of the Department of Veterinary and Animal Husbandry where he served until 1988. Since then he has been involved with his agribusiness and a consultancy with the Government of Tanzania.

Dr. G studied in the British system until the sixth form. After completing his A levels he worked in the Department of Veterinary Services. In 1955 the government awarded him a scholarship to study Veterinary Medicine at Cornell University. He was given two years' university credit for his previous studies and after six months additional work at Cornell he entered the School of Veterinary Medicine, graduating with a doctorate in Veterinary Medicine in 1959. He returned to the Veterinary Services Department in Ghana where he was named director in 1967.

When Dr. G first entered as Director, it was against government regulations to have an outside practice or employment. Several governments later, the policy changed and officials were urged to begin farming so the country could help feed itself. He purchased a 50 acre farm in 1973, 17 miles outside Accra and began to raise hogs. He soon found that it was costing too much to feed them and switched to broiler chickens which proved to be more profitable. However, layers eventually proved to be even more lucrative. His farm currently has 90,000 layers. He also ran a small animal veterinary clinic for 15 years but gave it up when he retired from government service.

Dr. G, a respected elder citizen, is clearly a leader in veterinary medicine in Ghana and has extended his skills and knowledge to other African countries. Most recently he has been working as a consultant in Tanzania helping them to privatize their Governmental Veterinary Services Department. He also serves as a model farmer having created a profitable poultry industry which is now being managed by his son. His wife also appears to be a leader in her own right, having successfully run a primary school for many years.

He has used his AFGRAD experience in the areas of training, departmental organization, and creation of forms and procedures. His technical studies in disease surveillance were most helpful both in the department and in his own poultry farm.

His advice to future students is to work in the country for several years after obtaining a bachelor's degree. His advice to sponsors is to be assured that candidates for overseas training are already established in Ghana in their work and personal life so they will feel obligated to return home.

## UGANDA TRACER STUDY

Mr. D, 43, obtained a Master's degree in Finance and Banking from the University of Arizona on September, 1978 after 15 months of study. He had been working for the central bank, the Bank of Uganda as a Banking Officer for two years prior to his AFGRAD scholarship and returned there upon completion of his master's program for several years until he went into exile because of the political turmoil in Uganda during that time. Although Mr. D returned to the Central Bank, he had not been nominated for AFGRAD by his employer and he had no contact with the Bank while in the States. He indicates that he obtained the scholarship on his own initiative.

From 1981 until 1986, Mr. D worked in a wide variety of occupations in the private sector in both Kenya and Zambia until he felt free to return to Uganda under the new government. From February 1986 until May 1992, he served as Commissioner/Economic Assistant to the Prime Minister in which he specialized in banking and financial matters. He opted to receive no compensation for his work during this entire six and one half year time period which he viewed primarily as his contribution to the reconstruction of the country after all the years of economic and political upheaval. On June 1, 1992, Mr. D returned to the Central Bank in a senior executive position as the Director of the Planning, Monitoring and Evaluation Department.

Mr. D distinguished himself during his six years in the Prime Minister's office primarily by demonstrating his ability to cope with so many different issues in a calm and professional manner despite the political and bureaucratic pressures at the highest governmental levels in which he worked. A highlight of this period was his chairmanship of a technical committee to investigate the East African Community Compensation Fund. Briefly, the East African Community, which constituted a range of common services such as transportation, communications, higher education, and scientific research shared among Kenya, Tanzania and Uganda broke up in 1977. At the time of dissolution, Uganda was owed a substantial sum in remittances from Kenya which agreed to repay in semi-annual installments of \$14 million until the books were balanced. The repayments took various forms including trading in commodities. Suspicions of impropriety in the repayment process began emerging, and peaked in 1989 when the Ugandan President ordered all transactions to be halted and called for an investigation to ascertain the status of the Kenya debt and the history of repayment transactions since 1986. Mr. D was appointed the Chairman of the technical committee conducting the investigation which took three years to complete primarily because of the difficulty in obtaining documentation concerning the transactions. The end product was a 500 page report which was submitted to the cabinet in late 1992 where it is still pending. The committee estimates that approximately \$40 million was siphoned off through various collusive actions by parties in both countries and that the documentation trail points to some influential people in both countries. This was obviously a highly sensitive and difficult undertaking which Mr. D obviously carried out in a professional manner. The Prime Minister alluded to this report and to Mr. D's outstanding role in the three year investigative study. Indeed, the Prime Minister was so impressed with Mr. D's work that he recommended that he be appointed as a Permanent Secretary despite his relative youth and limited civil service tenure.

Mr. D preferred a reassignment from the Prime Minister's office back to the Central Bank where he had worked both before and after his AFGRAD education until his self-imposed 1981 exile. In 1992 he was appointed Director of Planning, Monitoring and Evaluation, in the Governor's office. This appointment to a major department made him the youngest officer in the Bank ever to achieve such a senior position. In his present capacity, he monitors virtually all plans and activities of the Bank inasmuch as each department submits annual work plans to his office which must be approved, monitored and evaluated at year's end.

Mr. D credits his AFGRAD training as a major factor for his success. He claims that his U.S. experience developed or at least sharpened his strong convictions that:

- # knowledge is everything;
- # hard work is a virtue;
- # self reliance and self improvement is a continuing process; and
- # professionalism and the work ethic must prevail.

He feels that the analytical framework he learned in Arizona has been invaluable to him as he has dealt with such a wide range of economic, financial, political and bureaucratic issues since returning home. If he were to do it all again he would do the same thing both academically and in his work. He advises that AFGRAD candidates as well as selection officials should probe deeply into the motivation for seeking scholarships. He believes a successful candidate must be able to make a convincing argument to the selection committee why he or she should be chosen. If the major reason is more money or a promotion, Mr. D suggests the committee turn to the next candidate.

Mr. D's record is an example of how successful a program like AFGRAD can be when the right candidate is selected, he or she receives appropriate training, and is given the opportunity to apply newly acquired skills and ideas upon returning home.

## UGANDA TRACER STUDY

Mr. H, Senior Principal Loan Officer, Uganda Development Bank, Kampala, Uganda

Mr. H is a dedicated, productive and effective officer with the Uganda Development Bank, one of the country's principal institutions for financing local development projects. He is a qualified civil and environmental engineer with a master's degree from the University of Cincinnati from which he graduated in 1986 under the AFGRAD program after a two year stay in the U.S. Because of his technical expertise, his supervisor, who is highly complementary of Mr. H, claims that Mr. H provides a valuable service to the Bank inasmuch as he is the only graduate engineer on the staff. While Mr. H recognizes this role, he states that he spends 20 percent of his time at most on technical matters and is somewhat frustrated in not utilizing more of his engineering skills on the job.

His formative education followed the normal pattern for successful Ugandan students, culminating in his obtaining an A level (post secondary) certificate in 1973 and receiving a scholarship to Makerere College in Kampala from which he graduated in 1978 with a degree in civil/electrical/mechanical engineering. After graduation he worked briefly for the Ministry of Labor as a Factory Inspector which he did not find very satisfying partly due to the prevailing military environment. After eight months he left the Ministry and joined the Uganda Technical College as a lecturer and researcher and also lectured part-time at Makerere. He remained in this situation until 1983 when he found a more promising position with his current employer, the Uganda Development Bank (UDB) as a Loan Officer. While still with the Technical College he was awarded a five month training course in the U.K. in Water Engineering Maintenance which he found very useful.

Before joining the UDB, Mr. H had applied and been selected for AFGRAD but he was not in a position to accept the grant in 1983 when it was first offered because of his father's illness and related personal issues. He was granted a year's postponement by AFGRAD. His new employer was not pleased when it learned that he planned to study in the U.S. for two years after only one year as a Bank employee. However he held firm to his plan and was prepared to accept the consequences even if it meant seeking other employment upon his return. Because of this somewhat strained relationship with the Bank he had very little contact with or support from, his employer during his two years in Cincinnati. As for his experience in the U.S., he claims it went very well overall. His only serious strain were the roadblocks he encountered in arranging his wife's visit to the U.S. She eventually spent three weeks with him in Cincinnati but was marooned on the Kenya-Uganda border for four months on her return home due to political unrest in the area.

Mr. H did well in his academic studies and took advantage of any spare time by traveling around the U.S. on Greyhound Bus to enlarge his insight into American life. Upon returning to Uganda in 1986, he established himself with the Development Bank after several weeks of negotiations and he has worked there ever since. Although he does work on engineering matters from time to time, most of his efforts concern project development and appraisal from a financial feasibility standpoint, requiring skills in micro economic and financial analysis. His supervisor states that Mr. H is a very hard worker, assumes responsibility willingly, is a self-starter, and performs well under pressure. Indeed, he appears to be his supervisor's alter ego, another hard working impressive young Ugandan who just

recently completed an MPA program at the Harvard Kennedy School of Government. These two are the only U.S. trained officers in their unit and reportedly stand out heads and shoulders above their peers in terms of both quality and productivity of work.

Mr. H, now 40 years old, wants to remain in Uganda and with UDB despite the limited use of his engineering training. He has progressed to the position of Senior Principal Loan Officer and has the possibility of gradual further advancement in the Bank. But it is clear that his major enthusiasm lies with an NGO which he helped establish, The Ishasha Basin Development Scheme, which is actively involved in local development programs. He was instrumental in preparing a feasibility study of the Ishasha Basin and obtaining funds from the Austrian Government to support the preparation of the report which is now being reviewed by other donors and various Government of Uganda offices. He firmly believes that local people must become involved and empowered to undertake their own development if sustainable results are to be obtained. This NGO provides a significant outlet for him to apply his engineering skills and make greater use of his AFGRAD training. In both his UDB job as well as his NGO activity with the Ishasha Development Authority, Mr. H claims that the following four skills acquired in his AFGRAD program have been most valuable to him:

- # analytical ability;
- # better interpersonal communication;
- # presentation of ideas, and
- # activity organization.

He believes that he would not be in the position he is in today without the AFGRAD program and cautions future candidates that if rapid promotion and increased income are the major motivating factors in their seeking scholarships, rather than a true desire to expand one's horizons and obtain greater knowledge, they may well wind up frustrated and unsuccessful.

## UGANDA TRACER STUDY

Ms. I, 48, obtained a Master's degree in Medical Virology from The Johns Hopkins University School of Public Health after two years of study. She had been working as research assistant at the University's Department of Virology prior to her AFGRAD program. Her last two years of high school were completed in Greece on a scholarship sponsored by the Queen of Greece. A superior student, Ms. I was awarded a scholarship to attend Greek medical school. She opted instead to accept a scholarship sponsored by IIE to attend Tufts University where she received her undergraduate degree in chemistry and biology.

Although the University of Chicago offered her a scholarship for her Ph.D. in pharmacology, she decided it was time to return home. Her father was a king of one of the tribes in Uganda and had been given one of the factories that was left behind by the Asians when Idi Amin deported them. By the time Ms. I returned home, her father had been jailed by the Amin regime and was very sick. He asked her to take over the management of his cotton seed factory.

Ms. I was general manager and director of finance and administration for the next twelve months. She was very much involved in the day-to-day running of the factory and introduced new ideas such as two shifts instead of one; the preparation of vegetable ghee from cotton seeds; extraction of all impurities by refining oil two times instead of one and the installation of a maize mill within the factory premises. The factory became very profitable and Amin took it back. It has since been returned to the original Asian owners who had been given the land on which the factory was built by her father. The current owners still consult with her on the factory's business.

Before the factory was taken back by the government, Ms. I's father was released from the hospital, at which time she told him that she really wanted to resume her research career. She began working with the Uganda Virus Research Institute in Entebbe where she has remained for the past 14 years. The low government salaries, lack of funding for her research projects, lack of transportation facilities as well as poor administration at the Institute contribute to her dissatisfaction with her career at this time. However, she has had success in the introduction of systematic laboratory procedures such as making certain that all results of experiments are read and documented daily instead of postponing this function until the end of the week; testing the serum specimens with modern techniques and has initiated collaboration with a German institute in the testing of Ugandan sera. Other contributions to the development of her country include publication of two papers on infectious but preventable viruses, research into the interaction between the Hepatitis B and the AIDS viruses and her active participation in the development of women in Uganda. Her memberships include Women Engineers, Technicians and Scientists in Uganda and a committee to provide strategic planning for the introduction of a Hepatitis B vaccine. Civic activities include having served as the Secretary for Women's Affairs at the District Council and membership of the district constitutional and disciplinary committee of the National Resistance Movement. Always looking to increase her knowledge and technical expertise, she has attended numerous national and international conferences in her field.

When her father died, the succession as King went to her brother who was a Minister in the current cabinet. With his death last year, she is now the head of her tribe. This was decided by a council

consisting of her mother and various step mothers and step brothers and sisters. This entails a big responsibility and she is trying to decide whether to run for the council assembly, the new body to make recommendations for the next constitution. As her government salary pays too little for her to have a car, she has to take three buses to get to her homeland.

Her AFGRAD education has shaped her career. The analytical tools she received she uses daily. AFGRAD training also exposed her to the ideas that it is really ok to work and get one's hands dirty whereas she feels that those trained in the U.K. have some problem getting into hands-on practical experience. She most values her ability to solve problems not only at work but also in daily life as well. While in the U.S., she also learned how to manage projects and the importance of supervision and caring about others.

## MALI TRACER STUDY

### LIVESTOCK (POULTRY) MASTER'S IN ANIMAL NUTRITION

#### INTERVIEW HIGHLIGHTS

What are the major organizations involved in this sector?

OMBEVI (Office Malien de Bétail et Viande), DNE (National Livestock Directorate), LCV (Central Veterinary Laboratory), and NGOs such as Peace Corps, among others.

Explain Peace Corps' activity.

Each year PC organizes in-service training for volunteers and some of their workers in poultry which lasts from 1 to 3 weeks. Since Peace Corps volunteers work with villagers, they do have an impact. They teach them how to do small, practical things, such as how to build improved chicken coops. I have trained about 20 PCVs each year since 1988.

I know there are other NGOs which exist, but I can't tell you the names of them. Not all of them are U.S. NGOs. I have a friend who works with the Germans who have livestock projects.

What about the private sector?

There are lots of individuals. Of course, I know the poultry sector best. There is one company with 3,000 chickens. There is another individual who has about 6,000 chickens. I work for the first company as his consulting veterinarian. Another AFGRAD alum who is a veterinarian also has poultry.

In general, I don't think that the poultry raisers here in Mali are a very organized group. What I mean by that is that they have not organized the industry into a poultry interest/lobbying group or trade association. There isn't much entente between the players, which doesn't make much sense. For example, right now is harvest season, and half of the chicken feed is made up of corn. If they worked together they could get a good low price for sure stocks throughout the year. Instead they have to each pay different (high) prices throughout the year.

Aren't there any co-ops?

There are lots of co-ops composed of either young graduates or villagers. But many of these co-ops don't work because they are not sufficiently capitalized. The FED finances many co-ops, as well as the Canadians, but still, lack of capital is a generalized problem for co-ops.

The CMDT (Companie Malienne de Textiles) also is a player in the Livestock arena. Overall, they are responsible for the cotton production in the south of the country. It's a 50% Malian / 50% French

government owned organization. Because animal traction is promoted for the production of cotton, there is a range of services they offer to villagers, which could classify CMDT as a player in the livestock sector. A Mali-Canadian project in the north of the country, which provides livestock services - ODIK "Operation du Développement Intégré de Karta" (region in the north), is another one of these players.

Isn't this a lot of overlapping of services?

No, because the DNE is purely governmental, and their area of specialization is animal medicine- vaccinations. At the same time they try to train the villagers in livestock raising. The DNE extension agents work in the same direction, but alongside the NGOs and other actors in the sector.

Can you contrast this with the private sector activities? Is there any difference in the quality of their services?

In the private sector there is a more serious attitude than in the public sector. This is not to say that the governmental services don't work; they do, despite the lack of materials and equipment.

Which is the biggest of these services?

# **DNE.** It's in each region, where there is a veterinary coordinator. There is also a DNE presence at the level of "cercle" and "arrondissement." There are several hundred people working for DNE.

# **OMBEVI,** on the other hand, was created for research purposes, specifically to do project studies. It used to direct projects, but I'm not sure that they do this anymore. Because I don't work closely with them, I don't know how many people they have or even if they have people in each region.

# **LCV** (Central Veterinary Lab): They have two divisions: the first deals with the production of vaccines, and the second deals with research- diagnostics and studies. They work quite closely with USAID, which provides substantial quantities of equipment and supplies. They also collaborate with foreign researchers. For example, I have a friend at LCV who is currently collaborating with the University of Washington - this is under the APEX (USAID funded) project. The LCV has about 100 employees. Most of them are here in Bamako. There are even some people at LCV who collaborate with the AEA - Atomic Energy Association in Vienna: [apparently the AEA does development projects such as tsetse fly research, in addition to their atomic energy work...]

Where are the AFGRAD people here in the sector?

# One works in ODEM - in Mopti;

# A second works at Niono for the DNE;

# A third works under the APEX Project in Segou;

# A fourth is a director at the ICRISAT (ag research) station outside of Bamako;

- # A fifth (not AFGRAD, but trained in the U.S.);
- # A sixth works in the U.S.A (previously he worked for OMBEVI);
- # The seventh who was at OMBEVI and is now at DNE - ODEM.

Have there been enough people trained for this sector to have an impact?

Yes. For example, the TAMU project for tsetse fly control: there were scholarships available and three or four people were trained under this. There are five people, including me, at the LCV trained in the U.S. I don't know about the DNE. OMBEVI has or had about 4 or 5, but there have been so many projects with a lot more training made available in the U.S. than I know about.

There is no university here; where were the others in this sector trained? How is the pie divided?

About 75% studied in the former USSR, 10% in the U.S., and 15% in France. Scholarships for the former eastern bloc countries were much easier to get. However, I know that the results which U.S.-trained people obtained are much better than people trained in the east.

Give us a concrete example of a change or an innovation which you personally introduced.

An example is in producing formulas for poultry feeds. In the past we did not go so far into detail as calculating the amino acid requirements. Because of what I learned in the U.S., I now detail this out. I have changed the formulation of this feed, and I trained people in this, too. One guy I trained produces and markets his own feed. (His business is called MOULAVIC). The feed formula may be different than what you find elsewhere, I don't know. It's a good formula; if the results had not been good, he would have left this business years ago.

Another example is chicken coop construction practices. In the Peace Corps training, we have taught this two years running, and I know that it has been used near Sikasso. [Actually, he did not learn this in AFGRAD training, but from an American technical assistant for Peace Corps training.] They say it's more expensive, but there have been reduced poultry mortality rates with it.

What individuals or organizations have been instrumental in your work? Who are the leaders in the sector?

I can only speak for the poultry sub-sector, not the whole livestock sector. I'm not at the bottom of a list of qualified people—people come to me for advice in poultry. I am a subscriber to technical journals; then there's one guy with whom I can talk who was trained in Holland.

Does LCV produce vaccines for all types of livestock in Mali?

At one point we produced chicken vaccines, but you need pathogen-free chickens which are raised under very strict conditions. The number of eggs we normally obtained from this for vaccine production was so small that it was just not profitable enough.

How did you become a leader?

I was not originally a poultry specialist. I worked at OMBEVI, on the Mali Livestock II project. I worked on the meat classification system (see Tracer Study for Dr. Almouzar Maiga) and even did a thesis on it. I requested a transfer to poultry activities, because I was tired of working in rural areas. I also simply liked working with chickens. I am also a pigeon fan. I raise them as a hobby.

How did you make the transition to poultry?

My advisor in the States was helpful, and I had an excellent internship after my AFGRAD studies at Pilgrim's Pride poultry producers in Nashville, Arkansas. I worked with the servicemen who went out and worked with the farmers. I also worked with a man in Cochehton, New York, who had 75,000 layers.

What is the future of the poultry industry in Mali?

It's good, but you won't get rich on it. It's a local market. When you say that 24% of the Malian economy is livestock, you're talking about cattle. It could have been a lot higher for cattle had it not been for the droughts that we have had. The poultry sub-sector grew during this period, as the GOM's policy was to develop the poultry sub-sector when livestock raising became too expensive for the average villager. Poultry was a much cheaper way to keep protein in the diets of average Malians at that point. Poultry was also exported around the region at one point (though it no longer is). I remember there was a study to transform the Centre Avicole into a cooperative (it was supported by the USAID), but this never panned out.

## **MALI TRACER STUDY**

### VETERINARY MEDICINE MASTER'S IN VETERINARY PREVENTATIVE MEDICINE

#### AFGRAD HISTORY AND CURRENT EMPLOYMENT

I was the Chief of Project for a DNE (National Livestock Directorate) project which ran extension services for livestock feeding. It was a method introduced by the Peace Corps in 1972 or 1974. At the time, I was sent to Washington, D.C. to help choose new PCVs. At the end of this Peace Corps staging, I went on a cultural tour. I ended up at University of California in Davis, since: 1) I was interested in veterinary medicine, and 2) the Associate Peace Corps Director was from the area. I talked with the people at UC Davis, who put me in touch with AAI, and I ended up applying to the school and for an AFGRAD scholarship. I had done my earlier studies in Kiev, USSR, and was already a veterinarian when I left on this AFGRAD scholarship.

I returned to Mali, and one day I got a call that the AAI person was in country and wanted to interview me for a scholarship. I eventually was awarded the scholarship. I spent six months at Georgetown studying English, and then left for two years at UC Davis.

If you already had a Doctorate in Veterinary Medicine, why did you apply for the AFGRAD scholarship?

I wanted to specialize in Epidemiology. In Kiev, I was in general veterinary science. Actually, the program was an ensemble of statistics and veterinary science, culminating in an MVPM—Masters in Veterinary Preventive Medicine.

After UC Davis, I returned to work again for the DNE. However, during my absence there was a redistricting in the Bamako area of veterinary services, and I was named to this district. I was responsible for the supervision of all meat sales in this district, including following what was coming into the district, making sure that all the butchering was done according to code, and that all was done "above board".

Epidemiology was a personal interest of mine; besides which, there was a real need for this specialty in the country at the time. I was asked to move to the LCV (Central Veterinary Laboratory), where we manufactured vaccines for the most prevalent diseases here in the country. Our task was to make projections of the prevalence of these livestock diseases, in order to be better prepared to treat them on a national basis.

I worked at LCV until 1987, when I left the Civil Service for the private sector. I was the first vet to go into private practice in Mali. This solid work experience stood me in good stead, because I know the sector inside and out. The young vets, who are now also in private practice, have no practical work experience. While they are in the private sector because there is no public sector work

for them (there have been no new civil servants for the last five years - the IMF mandated this freeze), I left the civil service because I had gotten as far as I could go in my discipline.

By the time you left, what was your title?

Chief of the Epidemiology Section at LCV. There were only three divisions at LCV at the time: Vaccine Production, Diagnostics/Research and Administration. Epidemiology was under the Diagnostics section. (There were about 150 people working at LCV).

DNE is biggest and most decentralized of all the services in the livestock sector—there are about 700 - 800 people employed there. And it's a big, inefficient bureaucracy, as far as I am concerned. Just the other day, I told the director that I could cover the whole Segou region's veterinary needs, and make it run with just a couple of people, as opposed to doing it the way they do it. One of the reasons I left was because I was sick of the inefficiency.

So that was your real motivation to leave public service?

I really don't like being supervised, which is the fate of a civil servant. I have always had a holy terror of the administration. I've always had this attitude but being in the U.S. reinforced it in me.

So, I went to the U.S. and France looking for business partners. I had a \$20 million project, and I actually found a partner in the U.S. The project involved embryonic transfers in cattle. The potential partner not only wanted the Malian market, but the entire West African market - we could have done it. Back home in Mali, I made the mistake of not going directly to the President of the Republic for an OK, but to the Livestock Minister, and for that my project was blocked for six months. My funders finally got fed up and went elsewhere. I'll go back to the States to look for other funders for other projects I have, but in the meantime, I'll serve the public in providing veterinary services as a private vet.

On the side, I also raise 4,000 layers for the local market, and I am looking for zones in Mali where I can cover the veterinary health needs.

## INTERVIEW HIGHLIGHTS

Who are the leaders in livestock today in Mali?

I am one of the leaders. Lots of the people at OMBEVI were trained in the U.S. You should speak to Dr. Maiga [see interview notes as page 39]. Another person who can tell you about impact is the Livestock Minister Boubacar Sada Sy.

Tell us some concrete impacts.

Generally speaking, my approach to work is much better organized. I can't say they're perfect, but when you work with U.S.-trained people you have a much better chance of achieving your objectives. All of us at LCV, who were trained in the U.S. have the same way of working, and all of those people

who didn't get U.S.-training are always two steps behind us. I'm talking about people trained in the ex-USSR and in France. The number of people trained in France is far lower than the number of people trained in the old USSR.

"I can't say they're perfect, but when you work with U.S.-trained people you have a much better chance of achieving your objectives. All of us at LCV, who were trained in the U.S. have the same way of working, and all of those people who didn't get U.S.-training are always two steps behind us."

There was a huge mass of folks sent to the USSR in the sixties, and they were spoiled. They were greeted, given everything, all kinds of assistance... while those people trained in France had to tough it out on their own. You had to fight for things the same as the French students. So those trained in France were tougher and more sophisticated, I can say. In France, the profs also were in a position to relate the training to Mali, since it was one of their

colonies. In the USSR teachers had no clue what life in Mali was about - technically the French training was somewhat better, too.

What was the difference then between U.S.-trained and French-trained?

I don't have enough information to make a good comparison. For one, French-trained people usually went there after the baccalaureate degree, and those who went to the U.S. went after completing some university study - so the people were at different levels of training - you can't compare Ph.D. and Master's-level training. Also, I can say that you're comparing apples and oranges because U.S.-trained people specialized in small animals and elsewhere they specialized in large animals. You can't compare people who specialize in different things. There's really too much variety to compare properly.

Those people who went to France were really the top notch people, while the "masses" were sent to the USSR. The French-trained people came back with a certain snobbishness.

Are there things which you can say have been uniquely U.S. contributions in this sector?

It's too early to say. There are a lot of people, and the contact with the U.S. has helped with engendering creativity in the sector, I can say. When you live in the U.S., you tend to look at the world with other eyes than the government-provided viewpoint, which is what you have in most African countries. The public sector is such a small part of the overall economy. I predict that people with 15 years of experience will soon leave the civil service for the public sector, because it needs people with real technical skills, which you have developed in the public sector. For example, at OMBEVI, they were trained to deal with commercialization of cattle. However, when you come back from the U.S., you always have bigger ambitions than the public sector, and when the public sector cannot satisfy those ambitions, you leave it.

Can the livestock sector be profitable?

Yes. For example, I can provide the same veterinary services as the government for the same price, and still make a decent return on my initial investment as well as a decent income. I did some

calculations last week in Segou, and I think I can cover that market. I have made a proposition to the State to give me the Segou market.

What about the participation of women the sector? Do they play a part?

There are women in the private sector, but there are only a few in livestock. They are usually found in commerce. While men have a hard time, when women get into commerce they do it well. A lot of them are in the construction industry.

If you want to be an entrepreneur, you need to take risks, and most Malians don't like risks. If you don't have any other choice, then you get into small/micro enterprise– women find it tough to find employment in large enterprises. So women get into business via small enterprise. They don't do private sector livestock because they don't like the degree of risk. However, in five years you will see that there will be a lot more public sector women in livestock; people who have been trained in livestock will eventually begin to take risks.

**MALI  
TRACER STUDY**

**HIGHER EDUCATION - ENGLISH LANGUAGE  
PH.D. LINGUISTICS**

**AFGRAD HISTORY AND CURRENT EMPLOYMENT**

I got to AFGRAD in a somewhat different way than the others here in Mali. While I was teaching general English on the high school level, I got a scholarship from USIS for a 45 day study visit in linguistics at the University Southern California (USC). At the end of my stay, USC wanted me to stay but under the terms of the visit program USIS wouldn't allow it. So when I got back to Mali, I submitted my application for study to AFGRAD through USIS and with the assistance of an AFGRAD alumni. I was accepted and got to go to the University of Indiana at Bloomington to study linguistics. Bloomington offered African languages and they were interested in having me teach Bamana.

In 1974, I completed my MS in applied linguistics and English education. As the University of Indiana didn't have a Ph.D. program, I went to Columbia Teachers College; this was arranged by AFGRAD in New York. Unfortunately Teachers College required that their students get a M.Ed. before being allowed to work on a Ph.D. with Columbia University. Therefore I completed an M.Ed. in 1977 and proceeded with my Ph.D. program at Columbia with supervision from Teachers College.

In 1977, when I entered the Ph.D. program, I had my wife come to New York to join me. As my stipend was too small to support the two of us, I asked AFGRAD to allow me to work and they said OK for me to work up to 20 hours a week. I then got an offer to work at the United Nations, as a handyman/gofer, which would pay much better than the part-time and my stipend combined so I informed AFGRAD that I was leaving and they cut the scholarship (this is why on the Fellows List I'm listed as W/D for the Ph.D.). I continued on my own to get a Ed.D. in teaching English. I never regretted this move as I recognized that I made my decision to have my wife with me and was prepared for the consequences.

I think that AFGRAD should look at the problems associated with having spouses join students in the U.S. One problem is arranging for health insurance for their families as AFGRAD students have to insure themselves and this can be very expensive. One alternative would be for AFGRAD to just refuse to let families come. Instead the program leaves the choice to Africans and you know what the typical Malian does? They decide to bring their wives to the U.S. even though they are told that AFGRAD will not offer any support. They justify this by telling themselves that if there are any problems it will just force the question and AFGRAD will have to take care of them after all. In my case, my wife had a child and the hospital bill was \$4,000 which AFGRAD wouldn't pay and then the Malian government wouldn't pay.

As for the quality of the training, I have only praise. Indiana was good and Teacher's College provided me with exactly what I wanted. My objective was to come back and become an Inspector de l'Education (teacher supervisor) and my education was perfect for this move. The program was

"My objective was to come back and become an Inspector de l'Education (teacher supervisor) and my education was perfect for this move. The program was excellent; it didn't teach us how to teach but instead helped us really learn the inside and out of teaching techniques on our own."

excellent; it didn't teach us how to teach but instead helped us really learn the inside and out of teaching techniques on our own.

When I returned after my Ph.D., it took three months to regain my job during which I was not paid. It was difficult because although I had the position I had still had

the bureaucratic paper chase (getting reinstated, my degree recognized, and being called back to work). I first worked at Ecole Normale Superieure - ENSup (National Teachers Training School) as the head of the research department and then was named Inspector General in charge of training the ENSup professors. It is in this area where I really think my education paid off; I was very well prepared for my responsibilities.

I served as one of the two national Inspector Generals (one for the secondary level and myself for the superior level) from 1979 to 1992 and also taught part-time at the ENSup. In March 1992, I left my Inspection General position to join ENSup full-time and now occasionally consult. Now I'm interested in writing for instance in professional journals, and occasionally for the Forum Magazine.

## HIGHLIGHTS OF INTERVIEW

What kind of innovation did you bring to ENSup training?

For the first two years nothing much because the Peace Corps Volunteers had an English training course in place and so I observed what they did. You see, to make changes in the Malian system as to the curriculum, you first have to write up a proposal and go through the administrative channels to get your ideas accepted.

Where I improved ENSup was in introducing teaching methodologies that PC and other teachers were not using. This included new techniques of micro-teaching, observation systems (which are still being used) and techniques that focus on positive reinforcement. The language department was still using the behavioral objectives approach even though in Canada and the U.S. language teachers had moved to competency-based training techniques.

An example of an innovation that I introduced was in 1979 when I returned to Mali is the English language program; it was poorly elaborated, it was just a list of rubrics without sufficient detail about the actual content to be covered. Teachers were not well oriented in their teaching and the quality of instruction suffered. I fleshed this out so that there would be more thoroughness and uniformity in our instruction.

Another change came after I noticed that what the teachers taught in class was based only on what was to be tested - as they do in the French system of education - instead I learned in the U.S. to test only what you teach. Therefore I changed the system by getting the subject of the tests changed to reflect the program that we ourselves had conceived and implemented. The tests are driven by the instruction and not vice versa - this makes a big difference is what it learned.

Although these two examples are definite improvements that I was able to make based on my U.S. education, the tangible results of these changes are hard to judge. I won't summarize on the improvement of our English program because many other teachers offered innovations as well.

However, one thing that I can take credit for is the training of the teaching staff. I organized many seminars with USIS funding to train the ENSup teachers in the new methods that I acquired in the U.S.

In 1984 I went to Great Britain for a seminar and there I picked up the "communicative approach". With this experience and contacts in Britain, I was able to arrange, between the years from 1985 to 1989, training courses at ENSup using visiting experts for staff. This helped them a lot. They now understand the importance of "less teacher talk, more student talk" and of not correcting faults but praising communication. One of my key observations to the staff has been that "no one has come to the world with perfect understanding of their language" and so they should not expect faultless speech at the cost of free communication.

Then in 1990 and 1991 I was also able to send two colleagues to Britain to learn evaluation techniques which served to improve our testing techniques.

How many language teachers in total did you have an effect on?

All told there are 140-145 teachers in country and I trained 80 of them. As Inspector General, I supervised ALL.

What has been AFGRAD's impact in the English Department if any?

Firstly, besides myself there are six other Ph.D. in English in Mali and all of them teach at ENSup where there are 18 in the English Department. Among this group four of us are AFGRAD.

As for U.S.-inspired impact on the department, there are several things. We allow students to come into our office; other professors in other department think this is odd (due to the French notion of professional distance) and that we are messing up the system. The American influence is involved and we have a positive attitude about the students. For instance, the method of using error analysis instead of criticism is indicative of this approach. I'm sure that I instilled in the teachers the American attitude of encouraging and not oppressing their students—the value of the positive approach in language teaching.

I was also able to get the other Inspector General sent to study short-term to England and the U.S. several times to get him to broaden this perspective so that he'd see things from my same point of view.

What about the issue of degree equivalency?

The degree equivalency issue was a problem for the other AFGRAD alumni in the department but not for me because I occupied a high administrative position at the Ministry.

Which persons or organizations were most instrumental and why?

John Fanselow at Teacher's College had a great effect on me and I am still in contact with him. And Mr. Grafton at USC too—because of him I believe that you can't teach a language without accompanying it with the study of the culture.

Cynthia Wise at AAI had a great effect on me also. She was in Mali before going to AFGRAD and with her knowledge she helped me adapt to the U.S. from the Malian context, thereby easing the culture shock.

What impact has AFGRAD training experience had on your professional development?

If I had not had AFGRAD training I would still be a high school teacher and my dreams would have been choked. I had a vision from my early education that I wanted to be an Inspector General and it was AFGRAD that helped make that happen.

"If I had not had AFGRAD training I would still be a high school teacher and my dreams would have been choked. I had a vision from my early education that I wanted to be an Inspector General and it was AFGRAD that helped make that happen."

Also because my education was well regarded, I was able to be heard at the Ministry. I was always included in important meetings, and my ideas were readily accepted by my peers and superiors. Part of this was due to the fact that I did my foreign training and returned before most of the others that were at the Ministry of Education; due to my seniority I had a certain influence on them.

Another area where I've had some influence is the BEEP (Basic Education Expansion Project). By my nature I don't get involved in that which I'm not invited but I know all about the project because I've translated everything that ABEL (the overseeing project) has sent to the Minister. I have very often seen problems in the implementation of the activities and never hesitated to take these opinions to ABEL. An example is that the BEEP collects data from school directors. We, inspectors, due to our travel, know that this information can be faked. Whenever we noted a discrepancy between our own observations and the data reported, we would advise the project of the problem.

In fact, Manlafi Keita, the USAID Training Specialist, often asks my opinion on program matters. A recent example was about sponsoring English training for U.S. scholarships here as opposed to the U.S. because it would be cheaper. This way the investment dollars will go further for more trainees.

I have also served as a consultant for PNUD - UNESCO in studying the status of secondary teaching in Mali, as part of a worldwide comparative study. We identified problems in the secondary education system and proposed solutions.

I want to note that I'm sure that exposure to U.S. education has affected even the politics in this country. The desire for the freedom of choice is reflected in this. This attitude came to people through those educated there. Another example that the Malian people got from looking at the U.S. was the importance of good financial management in public institutions; eventually this will come here.

Looking back on my career I am proud to have changed the attitude of the English professors here against their nature and French training. I am also very pleased with the quality of the latest English program that we put together.

I have a wish for AFGRAD in Mali. After a certain point AFGRAD stated that they didn't want to train any more English teachers, but now that ENSup has grown and some of us will soon be retiring, there is still a need for two or three new English professors to be trained.

## MALI TRACER STUDY

### PRIVATE SECTOR DEVELOPMENT ECONOMIC GEOGRAPHY

#### AFGRAD HISTORY AND CURRENT EMPLOYMENT

Prior to going to the U.S. for my AFGRAD study, I was a secondary teacher in economic geography working for the Education Ministry. My objective in going to the U.S. was to get a higher degree that would allow me more career mobility. So in arranging for my study I got the Planning Ministry to sponsor me—this way they got my expertise and I got out of the teaching profession.

When I returned, I joined the Planning Ministry as anticipated. There I worked in the technical office of the Ministry's "Société Nationale des Etudes pour le Développement" - SNED (National Development Studies Company). Until 1984, I served there as a "Chargé d'études" (Director of Studies) and had 40 people working under me. Later I was named Assistant Director of the Department of Economics and Management, where I served until 1987.

In 1987, the FED (Fonds Européen de Développement) funded the creation of a new decentralized parastatal organization to support small and medium enterprises and industries. The Government of Mali assigned three people to work in this organization and I was among them.

The organization, Cesiri-sô (meaning "to tighten the belt") assists small businesses to assemble business plans, perform feasibility studies and assists with business loans. The services are paid for by the client if the business loan application is accepted by the credit committee. The maximum loan is 500,000,000 CFA with the average loan size being 250,000 CFA. To date we have financed 805 businesses from our seven regional offices. Among those served, 159 have been women.

Cesiri-sô has always been autonomous in its administration and financial management, although for the first five years we were employees of the Ministry of Economics and Management. The organization was completely privatized in January 1992 and I left the civil service to stay with the organization. I'm now the Director of the local bureau in Sikasso called Yiriwa-sô (meaning "hope and success").

In Sikasso we have a staff of eleven professionals. We handle around 40 business proposals a year which average 5.5 million CFA each. The loans require a 10% minimum investment on the part of the business owner. Our client profile is made up of young graduates and former-civil servants.

## HIGHLIGHTS OF INTERVIEW

Since AFGRAD have you received any other training?

Yes, I was sent to New Delhi to get training in small enterprise development at NIESBUD (National Institute of Entrepreneurship and Business Development).

Talk about the impact of AFGRAD on your career development.

The U.S. education is well viewed in Mali. When the FED project director came around recruiting for Cesiri-sô, he was impressed by the fact that I had been trained in the U.S. and that really helped me get the job. Another impact on AFGRAD alumni is the way in which we work; we're more efficient.

Do you really think the fact that you were trained in the U.S. made a difference?

Yes. When I was at SNED, I was certainly given more work than my colleagues because they saw that I was capable and that I produced good work. I'm not sure whether it's just me or my training; it's hard to separate the two but there are discernible differences—it's in the approach, which consists of small steps in the way I do things compared to others.

As for job promotions, this was something one has to learn here in Mali because it has nothing to do with one's training. How to get ahead in this environment is something I learned here on the ground.

Can you identify any disadvantages in having received AFGRAD training?

I really did not feel that there were any. I work in a field where this question of degree equivalence means nothing. As it was, my objective was to leave teaching and do something better. I really didn't have the idea of going into private sector development, I just wanted to leave the boredom of what I was doing and my AFGRAD training helped me make that change.

Do you have any advice for new AFGRAD candidates?

Oh, I feel jealous of them—but seriously, I'd tell them to have a lot of courage. They'll have everything there that they need to get an excellent education so if they want it bad enough they should take advantage of the experience.

**MALI  
TRACER STUDY**

**PUBLIC ADMINISTRATION  
DIRECTEUR NATIONAL DU BUDGET**

**AFGRAD HISTORY AND CURRENT EMPLOYMENT**

I received my Master's in Public Administration in 1979 under AFGRAD from the University of Albany. I did my English studies in Buffalo. Afterwards, I continued (not AFGRAD-sponsored) at Albany for my Ph.D. in Public Administration, specializing in Public Finance.

What were your plans at that time? Did you always want to be Director of the National Budget?

Not specifically; I just knew that I wanted to be in public service, specializing in finance.

Where had you been employed previously, and where did you end up being placed post-AFGRAD?

I was in the National Budget Directorate before leaving, and had no problem getting right back in. When I returned I was named advisor to the then Budget Director. Then there was an economic reform project with USAID called APREP - I was placed in charge of budget restructuring under this project until 1991, when I was named National Budget Director.

**INTERVIEW HIGHLIGHTS**

Can you address the difference between the training that your colleagues received in France (or elsewhere) and your skills?

There is a difference. The experience that I had at the ENA - Ecole Nationale d'Administration - (here in Mali before I left for the USA) in public finance was practically "la literature," meaning it was all reading and no practice with problem solving. In the U.S., in contrast, the training methods permitted you - forced you - to attack the problem head-on. You learn to be a legalist in the ENA and in France, where you study legal texts and regulations and so forth. You are not presented with problems in order to solve. In the U.S., you get a lot of "If you have X problem, here's how to solve it." or... "When you have the choice between X and Y expenditures, here's how to analyze the problem and make the decision, and here's the potential impacts on the economy."

This kind of training shows you how to look for and to find solutions. This is noticed by your superiors, who then call on you to work on programs.

Did you encounter resistance to your new ideas? What did you do about it?

Not much resistance. But if you do, then you just show people how your ideas are better. Now I have to train people every day. When I give tasks, often I have to go over them in great detail with my subordinates. Sometimes you have to spend all day working through the task with a person. Then there are the times when I have to do it all myself.

As far as difficulties due to not having the same work conditions as in the U.S., there are some adaptations to be made. In the U.S., the analysis techniques come with the training—you have your machines, etc. But here, you don't have computers—you just do the best you can with what you have. We have managed to computerize some parts of our office: payroll, telephone and electric as well as the monitoring of expenditures. Little by little we're getting it computerized.

"In the USA... the training methods permitted you—forced you—to attack the problem head on. You learn to be a legalist... in France, where you study legal texts and regulations and so forth. You are not presented with problems in order to solve."

Are there other AFGRAD alumni working with you? What personnel support do you have?

My job: Everything and everyone converges on the Director of the Budget; it is the nerve center. So I have to train people over and over again. I have one AFGRAD alumni here working with me, and one fellow who was at University of Dakar who is also competent.

Did you have the problem of diploma equivalence that everyone else seems to have had?

Yes, I still don't have equivalency. They say here that it's a ISFRA-type diploma (Institut Supérieur de Formation et de Recherche Appliqués). They told me that my Ph.D. was more than a Doctorat 3ème Cycle but not quite a Doctorat d'Etat. They have a problem conceiving of people being able to finish the same degrees in different time spans—the length of time someone spends getting a degree is more meaningful to them. However, this equivalency issue did not put any brakes on my career. I know I'm a Doctor of Public Administration, and it will never change what's in my head, and so I just do my best with what I have. It was worth it.

"This equivalency issue did not put any brakes on my career. I know I'm a Doctor of Public Administration, and it will never change what's in my head, and so I just do my best with what I have. It was worth it."

## **MALI TRACER STUDY**

### **ALUMNI LEADER**

**PRESIDENT OF AUA: "ASSOCIATION DES ANCIENS UNIVERSITAIRES AMERICAINS"**

#### **INTERVIEW HIGHLIGHTS**

We founded the organization AUA officially in 1988. Before that there was small group of people who met informally. There are about 175 members in AUA—not just AFGRAD, but all the alumni of U.S.-sponsored long-term training. Members pay 5,000 CFA initially and 500 francs yearly after that to remain on our active list. Mostly it is people who work in rural development, since that is mostly what USAID has sponsored through bilateral projects, AFGRAD, and TLD (Training and Leadership Development). I am the president, and have a mandate for two years.

AUA's objectives are to:

1. Promote our members; to make their skills known for potential consulting opportunities that may arise, or for full-time employment;
2. To maintain ties with the United States;
3. To keep alive the skills we learned in the United States; and
4. To meet socially from time to time with Americans.

We are trying to keep lines open for members who are all losing their English. AFGRAD told us they would continue to support us with journals and all, but after a few years there was nothing much more to be heard from them. Even in the cultural sense; while we don't have money for contacts, we would like to organize something like host family visits, welcome centers, etc., for Americans coming here to Mali.

We haven't met for a year, because we are looking for an office. We're looking for this office because we're also turning into a consulting firm: CDAN (Consultants Diplômés d'Amerique du Nord. This organization is composed of both Canadian and U.S.-trained alumni. There are about 400 possible members, although so far only about 20 are dues-paying members. Members pay 10,000 CFA initially, and 5,000 CFA per year thereafter. This provides us with some capital and a bit for operating expenses. For each consultancy that CDAN members undertake, we will set aside a portion of the profits for CDAN. AUA has about 175 members, and CDAN has about 20.

We continue to look for ways to sell our services to the many international organizations here in Mali. We have put in three bids for work so far from CDAN but we've had a hard time lately. [Actually, AFGRADS are all working; nobody is unemployed and they are mostly all in high places and positions.]

AUA organized the first symposium held in Mali on privatization; it was also supported by USAID. This symposium was held at a time when nobody at all was talking about privatization here, so we feel that we helped the process along here in Mali.

## **MALI TRACER STUDY**

### **ALUMNA MASTER'S IN ANIMAL SCIENCE**

#### **AFGRAD HISTORY AND CURRENT EMPLOYMENT**

Prior to my AFGRAD scholarship I earned my bachelor's degree in Zoology here in Mali, and was hired right after school as a Section Chief at the Malian Cattle and Meat Office (OMBEVI: Office Malien de Bétail et de Viande). I spent two years in this section, which oversees range management. At that time, Dr. X was my boss, and it is partly because of him that I was chosen for the AFGRAD scholarship.

I spent four months studying English, then did my Master's degree in Zoology in two years. I had no internship at the end, nor did I attend any seminars. When I finished I came right back home, and resumed working at OMBEVI, but this time I was given a promotion to Chief of the Information Management Division. I didn't particularly want to make this switch, as I had wanted to remain in my technical area, and knew nothing about information management.

My main job there was to put together a management information system, and computerize the entire network of scattered documentation centers for the OMBEVI ..... it was "au revoir" to animal science. I remained in this post until 1991, and I had indeed computerized the cataloging of all the documentation, with some help from the USAID Livestock II Project, and my four assistants. As a result of our efforts, the different services within OMBEVI now know where and how to get documentation anywhere in the system. Then, in 1991, I was named Technical Advisor at the Ministry of Women's Condition.

#### **HIGHLIGHTS OF INTERVIEW**

It seems as though each job takes you further from your AFGRAD training.

Yes, this nomination was a complete change from my previous jobs and my technical specialty. But I agreed to the change because I was really interested in it. In this position I was involved with policy formation for this Ministry. When I was in the OMBEVI Information Management Division I learned how to define strategy, and I used this extensively in my new job as Technical Advisor. There was a certain harmony that needed to be kept between all the (sometimes) competing policies of donor agencies working in Mali. During this time several conferences and workshops were held on the integration of women in development. In fact, I recall that USAID/Mali financed a small workshop to help us prepare for the large national conference.

As part of my work in the integration of women in development, in June 1992 I was a member of the Malian delegation to the worldwide Environmental Conference in Rio de Janeiro. Soon after we returned from the conference, my Ministry was dismantled. A National Women's Commission

(Commissariat des Femmes) was created to replace this Ministry, but it has never really functioned as a real entity. I am now a civil servant waiting to be assigned to my next position.

What have you been doing?

I have been writing on how Mali can put the Rio environmental recommendations into place—some of them have already been put into place. I write on my own time, and have also worked on a volunteer basis with the technical advisor in the (then) Ministry of Rural Development and Environment. I volunteered for six months because I liked it so much. Then a "Cellule de Planification de la Statistique" (Statistical Planning Unit) was created in this Ministry. I was sent there, where at least I have an address. I have not completely abandoned animal science, however, as I plan on one day starting up my own model ranch. However, it will take a lot more land and capital than I have at the moment.

When the Ministry of Rural Development and the Environment was split in two in February of 1993, I was assigned to stay with Rural Development, despite all my work in the environment, and I have been less than happy there. I foresee that one day I will be back working on environmental issues in an official position. I have no taste for politics so that is not one of my potential future activities.

How do you manage your professional, volunteer and personal responsibilities?

It is difficult for women who don't have understanding husbands. My husband encourages me and supports me, as he did when I first learned of my AFGRAD scholarship more than ten years ago.

I feel that I inherited my dynamism from my father, who was in the first government of the newly-independent Mali. He brought us up so that we all have a certain combativeness and strength. We know how to fight and are self-sufficient. I'm very happy to have studied in the U.S., which reinforced the training my father gave us.

Who are the most influential / key leaders in the livestock field in Mali today?

Akan Makadjy, Moussely Maiga, Almozar Maiga, and myself, Lansry Haidara.

Talk about the influence that AFGRAD people have on the development of the livestock sector in Mali.

First, livestock is THE key sector of the economy in Mali. If all these people trained in the U.S. didn't exist, I don't think the sector would have developed commercially as fast as it has done.

What's different about the contribution of U.S.-trained people (especially, but not only AFGRAD) is that we have introduced and institutionalized the concept of Integrated Livestock Management. The fact that we touch all the various aspects of the livestock sector - infrastructure, breeding, animal care, commercialization - everything - is extremely important. We helped it all come together in an integrated manner. OMBEVI remains the organization most concerned with livestock

commercialization, while the "Division Elevage" (the DNE) within the Ministry retains its traditional focus on animal medicine.

Given that this approach was quite different from the traditional approach to livestock, how much support did you receive from your supervisors and colleagues? Did you have any resistance?

Yes, some. There were several schools of thought at the time—U.S., French, and others. However, because of our numbers we were able to exert a certain amount of pressure.

**MALI  
TRACER STUDY**

LIVESTOCK SECTOR  
Ph.D. IN ANIMAL SCIENCE

INTERVIEW SUMMARY

This summary report also contains information on CDAN (Consultants Diplômés de l'Amerique du Nord) - the consulting firm made up of alumni from the U.S. and Canada.

**"I cannot even remember the names of all the people  
I have trained over the years."**

Twenty-four percent of the Malian economy is taken up by livestock. However, it is getting harder and harder to maintain this given the increased competition from European meat exported throughout Africa. We know that the EC is dumping third quality frozen meats at half the price of our best quality meat.

The EC markets EC meat as superior quality, but we know that this is not true. I once followed a shipment of Malian veal shipped by road to Côte d'Ivoire. By the time it had arrived in Abidjan, it had all been stamped "French veal."

The bureaucracy is still killing the private operator, and much of our beef passes by land and around the legal accounting of our exports. Our transporters are not going to be interested in distributing our goods if they can't make a decent return on their investment. So when it takes more than a week to obtain each of the necessary signatures or permits to export, it deters many people from this activity.

When we compared our receipts recently for meat and livestock to neighboring countries, we found that our receipts were very low compared to our neighbors'. Since we know we are the biggest beef producer, we know that a good percentage of our production is making its way out of the country, outside of the official channels.

Another potential market would be in pork production. Despite the majority of the population being Muslim, pork production could be a viable product for export. However, because quality control for pork has been neglected, it is not a very large component of the livestock sector here.

Impact of AFGRAD on the sector: You'll say I'm conceited, but I tell you that before I came back from my training in the sixties, there was NO industry, and no organization of this sector at all. Since then, we AFGRADs have made a huge impact on this sector. Even when you look at the rotisseries (local outdoor barbecue pit /restaurants) you can see a difference. Before they were disgusting, now at least you can recognize the cuts of meat, and they are much better organized.

Before, to most people, meat was meat, no matter what the grade or the cut. Now we produce for export following internationally recognized standards. As well, we have produced our own classification system for grades of meat, which was inspired by the USDA classification system but adapted to the Sahelian species. This system has even become a model for other nations in west Africa, and has been applied in France, as well. Unfortunately its use is not legally mandated yet here in Mali, so its use is not uniform.

Who are the leaders in the livestock sector, in your opinion?

In terms of production, commerce, and industrial applications, I would have to say that it's me. In veterinary medicine, it's Dr. Daouda Sylla, who works with the FAO, and in animal science research it's Dr. Ngolo Traore, who was trained in France. [He started to mention "vaccination, clinics" and never finished the thought.] But you know, today's professionals are not like the guys back in the sixties. The old-style vets never hesitated to jump on a camel or walk to see the animals in their areas, but these new guys complain all the time. They could be only 25 km away from a farmer and not see his animals for six months at a stretch.

The industry covers all the usual products: milk, meat, leather, poultry, and you will find AFGRADs all over the industry. However, they are mostly in the production end of the industry. Unfortunately, many of them find themselves working as administrators where their productivity is low compared with that for the private sector. This is not all their fault, since we can only control so many of the factors which influence productivity in this sector.

USAID is always on our case to produce for export, but if we do that, there is no incentive to improve the infrastructure we have here which supports local consumption of livestock products.

There is a new breed of producers here with well-developed technical skills, but currently they work as administrators in the civil service, since the civil service is practically the only employer in town. If there were a viable private sector which could provide jobs to keep these folks busy doing the work they were trained to do, others would be enticed to move into this sector, including all the ancillary businesses which support the sector. The current banking system does not exist to serve the clients, as is the case in the United States.

So, the AFGRAD investment has not been wasted, but the payback is a long way off.

## **MALI TRACER STUDY**

### **PUBLIC SECTOR - FINANCE MINISTRY MASTER'S IN ECONOMICS**

#### **AFGRAD HISTORY AND CURRENT EMPLOYMENT**

I was at the National Direction of Economic Affairs (DNAE) in the Finance Ministry for six years before going to the U.S. I left for the U.S. in 1986 to be a visiting Parvin Fellow for one year at the Woodrow Wilson School at Princeton. This is a program for professionals from developing countries which was funded through USIS. Afterwards I returned to the DNAE and applied to the AFGRAD program. It was my idea to do a Ph.D. in Economics. However, during my studies for my MA at the University of Oregon I decided that if I went on I would end up being too theoretical. I was interested in practical applications in my education and a Ph.D. would be useful mostly for teaching. So after 15 months, with my MA completed I came home. I had asked for a practical internship/training but AAI wasn't able to arrange one after my program, so I returned directly to Mali.

When I returned there was a general problem for all foreign alumni in getting their civil service jobs back. Equivalency problems were a part of this. Another reason was that people here were threatened by U.S. diploma holders—this stems from the attitude in the French system. Many people waited a year before getting a job but for me it was only six months. Not that when I returned from Princeton my re-integration was immediate. This was because the Parvin program was not a degree program and so there was no question of promotion. But with AFGRAD I returned with a higher degree and I was expecting a better position. I eventually returned to the same organization although in a different department.

A problem for many U.S.-trained alumni was that they would be offered a position in their organization inferior to that which they had before leaving. This is what discouraged many alumni and served to make them leave the country.

#### **HIGHLIGHTS OF INTERVIEW**

What aspects of your training have been the most useful in your career?

There are many aspects of my education that I have been able to apply to my work in the Finance Ministry. First, there are the attitudinal aspects; my practical orientation and problem-solver's attitude.

Secondly, the technical aspects of my education allowed me to be much more rigorous in my economic analysis. Americans have a larger and more realistic view of economics and this allows for better analysis. You come out with not just a mastery of economics but of international economic analysis.

The quality of my economic analytical ability is also due to the teaching methods used in the U.S. This develops much better analytical abilities than in those trained in France. I work with these people and I find that I can make an economic analysis in two pages but for them it takes ten pages.

Were there ever problems with superiors given the different nature of your education?

Yes, first, one can have better skills than one's boss and, second, there can be conflicts with colleagues over the different way of seeing the problems at hand. Luckily I didn't encounter many problems because I had the chance to have a Minister who was very open and sought to understand his staff members.

What was the impact, if any, of AFGRAD on your career?

Well after my AFGRAD experience, I was named Director of International Trade and after five years, in 1985, I decided that my training at Eugene was still too theoretical so I applied for an MPA program in applied economics at Harvard (the Kennedy School). I studied there from 1985 to 1986 and after I returned I was named Assistant Director for Economic Affairs and then in 1990 was promoted to Director. Then in 1991, I was named Technical Advisor to the Minister. This is a better position because it is at this level that conceptual work and planning are done as opposed to an implementing role played by Economic Affairs.

Wouldn't your career have been the same without AFGRAD?

It is not sure that I would have followed this path. What counts here is my acquired working method—the efficiency of a diploma is best seen on the job and this is why I never was too interested in debating the equivalency issue. Due to our performance (AFGRAD alumni) everyone wants an American degree now. Parents are paying their own money to send their kids to the U.S. to study.

Have there been any particular institutional impacts stemming from your U.S. studies that you can cite?

I can speak to my case. First, with a U.S.-training you get more confidence from the donor partners. For example, you can much better speak and understand their language at the World Bank. Due to this understanding and facility I was able to initiate many economic reforms here. When I was Director General for Economic Affairs, we were able to liberalize the entire external trade structure, including the foreign exchange system, a total abolition of the export tax and foreign currency quotas for imports, and the abolition of price control on imports including hydrocarbons.

In 1989, I also put in place a one-stop import/export window to streamline formalities for the private sector. It consists of providing, in one place, the several essential administrative services required for import/export. This was a two day process at best before and now it is reduced to two hours.

Our timely progress with enacting reforms with the IMF was due to our understanding of the pertinence of these reforms, thanks to our American education and approach. In contrast, other important reforms needed in other ministries have gone nowhere. To date nothing has been done on

the fiscal code and the customs schedule. This is because of resistance on the part of decision-makers who don't understand the economic situation and don't have a practical and realistic orientation.

Do you have any advice for future AFGRAD students?

The only advice would be to go to a school that has a very practical orientation—such as the Kennedy School.

## **MALI TRACER STUDY**

### **PRIVATE SECTOR MASTER'S IN ELECTRICAL ENGINEERING**

#### **AFGRAD HISTORY AND CURRENT EMPLOYMENT**

In 1971, I graduated from high school in Bamako where I specialized in science. From 1971 to 1975, I studied electrical engineering at the Ecole Nationale d'Ingénieurs (National Engineering School). I then taught electronics at the Ecole Centrale de l'Industrie, du Commerce et de l'Administration (Central School for Industry, Commerce and Administration) for seven months because, even though I was hoping to get into AFGRAD, I had missed the 1975 deadline.

I was accepted into AFGRAD in 1976 and started with English at Georgetown University for five months. In 1977, I then went to the University of Connecticut at Storrs where I got an MS in Electrical Engineering with a specialization in power systems engineering. At the end of my AFGRAD I went to New York to ask if I could pursue a second master's in business administration because I sensed that business management would eventually be a large problem in Mali. A second area of study wasn't an option and I was given the choice between going on to get a Ph.D. or having a practical post-graduate internship. A Ph.D. would only serve for teaching and I was interested in operations so I chose the practical internship.

I had done a practical internship during the summer of 1978 at Northeast Utilities and so after my degree program arranged for another internship at the same place for six months. The internship was very valuable because I learned supervisory control and production planning for power networks.

I returned to Mali in August of 1979 and I was sent from the Education Ministry (my original sponsor) to the Ministry of Industry where I was given a job at the Selingé Hydroelectric Dam.

From 1979 to 1991, I worked on the installation of the equipment during the dam construction. In 1980, when the plant was complete, I had to organize the plant operations which included recruiting the personnel and organizing the running of the plant. In 1981, I was named head of the plant and served in that capacity for ten years.

I decided that I wanted to leave the electric company because of my personal financial ambitions as well as the probable instability that would occur in the sector with the planned World Bank reorganization of the public utilities; in short, I saw privatization coming.

In 1991, I read about the creation of a modern printing company that the BIAO was recruiting for. I applied and they were very interested and eventually we were able to negotiate a deal for me to join them. The company, SEGIM, started as a holding company for BIAO's non-banking operations. At first it was 100% owned by the bank but has since been re-formed into an independent company with 50 % BIAO ownership, a second private investor who holds 40%, and then diverse smaller interests. I have been working as the Director General since September 1992.

"The way of thinking, for example, what I learned in electronics about systems control, using systems analysis, is something that I adapted very successfully to business management."

The SEGIM group contains a maintenance operation, a printing plant, electrical contractors, an air conditioning and refrigeration company, and will soon be joined by a building management operation. The printing plant is responsible for 50 percent of the group's gross revenue and, for the moment, it is my main focus of concern. At first the group served the

BIAO's needs exclusively but now we have many other clients which include other banks, donor organizations, the government, and private companies.

## HIGHLIGHTS OF INTERVIEW

What aspects of your training have been the most useful in your career?

The way of thinking, for example. What I learned in electronics about systems control, using systems analysis, is something that I adapted very successfully to business management. My skills in systems analysis methods that I learned in the U.S. have served me a lot. When I was preparing the company organigram and figuring out the profile of the people needed to work with us, this skill was invaluable. Another example was when I was at Selingé, the technical training I received, especially from my internship, was immensely useful.

And in your present job as Director of SEGIM?

Now I supervise technical work groups and have to frequently play the role of technical advisor. I often call on my technical training even though I'm doing business management.

Beyond your technical training, what else from your AFGRAD experience do you use in your work?

I find that the transposition of systems planning techniques including planning by objectives and control via feedback mechanisms has been applicable in developing control systems for business management.

Wouldn't this training have been possible, and easier, to have done in France?

No, those I've met who completed their studies in France do not approach problem-solving in the same way as I do. I have no jealousy whatsoever of the electrical engineers who studied in France. I strongly believe that the U.S. educational approach teaches the student how to reason, to think, to do active problem-solving rather than filling his head with pieces of knowledge. The French-trained engineers return as good implementors but not effective planners. The U.S.-trained professional's problem-solving ability is a much broader way of looking at problems.

Do you think that if you had done your training elsewhere you would have advanced in your career like you did?

It is hard to say because often one's career evolves along a certain path for reasons other than just one's training. The evolution is not always direct; there are other factors. Here in Mali, promotions are not always based on job performance but on subjective reasons.

Where will you be in five years?

I don't know. I just entered the private sector and I've yet to prove myself. I want to open my own business, in electricity perhaps, responding to rural electrification needs when the time goes and funding is funneled in that direction, but at this point I am not sure when this will happen. It depends on my own resources and the progress of privatization, which is sure to come.

Which persons or organizations were most instrumental during your AFGRAD education and why?

In the U.S., I was impressed most of all by just what can be done in such a relatively short time; how man can transform the environment into so much development. This gave me the desire to be more entrepreneurial in my ambitions.

"In the U.S., I was impressed most of all by just what can be done in such a relatively short time; how man can transform the environment into so much development. This gave me the desire to be more entrepreneurial in my ambitions."

What other training would you want, if any?

I could use more training in financial management specifically. In the other aspects of management, such as personnel, I find that I have sufficient skills.

What advice do you have to give others AFGRAD candidates?

I would tell them to be really observant—there is a lot to learn there. And maybe also, I'd tell them to bear down on their studies, but also to take care to make and keep professional contacts so that eventually they'll have profitable associates and partnerships. After all, as the world gets smaller some of the big companies will want to get involved here and those with external contacts will be the best placed to take advantage of this.

**MALI  
TRACER STUDY**

**WITHDRAWN CANDIDATE  
CANDIDATE FOR MASTER'S IN AGRONOMY**

**AFGRAD HISTORY AND CURRENT EMPLOYMENT STATUS**

Please tell us what you did before your AFGRAD experience, and about your motivation for your AFGRAD application.

I was an agricultural researcher in the Ministry of Agriculture. I was expected to come back to the same service and continue with research, concentrating on cotton production. I had an application pending at my Ministry for advanced training, and when this AFGRAD opportunity came up, I took it.

Briefly describe your AFGRAD experience.

From the outset, I thought that there was a requirement to have a certain level of English in order to be accepted into the program, and I was really a zero in English. But I was accepted and began English in Alabama. I had agreed to six months to get the English, followed by 24 months for the master's.

When I did not achieve AFGRAD's TOEFL minimum of 525-550, they let me do another 3 months of English. I also pre-registered for Mississippi in anticipation of getting the TOEFL score (although Mississippi only required a 475 for TOEFL).

I still did not make the 525 TOEFL minimum after that extra three months, and AFGRAD allowed me to continue for an additional three months, bringing the total time spent learning English to twelve months. At this point I was at level five in the lessons (highest level), and I really had it down - composition, speaking and writing, but when I took the TOEFL, I still could not get the 525 score - only a 490.

At this point AFGRAD terminated my master's program, and arranged for me to do some short-term study before returning home. I want to stress that I understood then and I understand now AFGRAD's position on the TOEFL tests, and I have no quarrel with it. It was difficult, nevertheless, because I had in fact achieved Mississippi's requirement, but not AFGRAD's.

My AAI advisor helped me to obtain the Malian government's OK, and got me registered in two short-term activities.

First, I went to the National Agricultural Research Facility in Beltsville, MD, and I did a literature search on cotton for six weeks. I was interested in cotton quality and fertilization. I had assistance from an advisor there.

Then I went to College Station, Texas (a Texas A&M research station) and worked for eight weeks on nematodes, under another advisor - Dr. Joe Rich. I spent this time doing both a literature search and some field and lab work. From both of these short-term activities, I brought back large amounts of documentation which my department had previously not had access to.

What happened when you returned home?

I returned directly to Mali when I finished these short-term activities. This was in 1986, and I regained my old position. I had wanted to continue work on nematodes in this position, but my supervisor said that since there was really no large problem with nematodes here in Mali, that I should concentrate on cotton technologies. I am no longer in that position.

I was then transferred to the Agronomy Service of my Ministry, and assigned to the Foodstuffs Section. Then I was assigned to the Sorghum Improvement Program, a project which I directed for three years. Then I was transferred to Samanko, which is a substation of the Sotuba agricultural research facility. I am currently the director of this facility.

## INTERVIEW HIGHLIGHTS

How do you rate the utility of your AFGRAD training? Was it worthwhile?

Yes, I really congratulate AFGRAD in terms of letting me do the English language training. Since returning I was sent to the Netherlands for plant breeding training. I would not have been chosen for this training if I had not had the English language capacity. I feel personally proud that I can express myself in English. Socially, I can say that I changed during my AFGRAD experience, too. Previously, I was very nervous and aggressive. It was really profitable for me to see how people interact in the U.S., and I was able to bring this back to use in my department. I feel that I am now much better prepared to direct a staff of people.

Any disadvantages to having done your AFGRAD training?

I was very disappointed to not have finished the master's, especially when I had told them from the very beginning (before departure from Mali) about my English difficulties. I have to admit that it was hard to deal with it when I saw everybody else finish their programs. However, my current superiors know how well I work and what I am capable of, so not finishing the degree has had no big repercussions for me on the job. [See comment in following paragraph on impact on career progression.]

If you had to do it over again, would you do anything differently?

If I had anything to do over again, I would have done everything possible to get the master's diploma, and to have finished what I set out to do. Career-wise, I am a bit handicapped in that I can progress only so far with the degree I currently have. When I look at my English training I'm very pleased; I see that I have certain skills now. Maybe I need to improve my reading skills and listening

comprehension, but on the whole I am pleased with how I handled the language, despite not getting the AFGRAD TOEFL score required.

What have been the biggest benefits from your AFGRAD experience?

Personally, it was mastering the English language. For Mali, the biggest benefit has been the documentation that I was able to bring back for my department.

Do you have any advice to give future AFGRAD candidates?

Make sure that you get the English down right away. Even better would be to make sure that you have a base in English before you depart.

## **MALI TRACER STUDY**

### **PUBLIC SECTOR - COOPERATIVE DEVELOPMENT MASTER'S IN ECONOMICS**

#### **AFGRAD HISTORY AND CURRENT EMPLOYMENT**

I am the National Director of "l'Action Coopérative et du Développement Régional et Local" (Cooperative Action and Regional for Local Development). I am unusual in that I did my studies in two languages: German and English. Prior to AFGRAD I studied at the advanced school of agronomy in Eastern Germany and returned here in 1976. After my return I worked in the "Direction Nationale de la Coopération" [the same organization that he directs now but with a different name]. At this point, I was also teaching agronomy in high school as a part-time consultant.

In 1977, I saw an AFGRAD announcement and was attracted to the idea of doing some studies in a western country. I wanted to get a different experience after having been in a communist country. I also always believed in the value of the American system. I figured that with a U.S. education I would be more capable of getting a promotion on my return. In 1977, I was the head of the technical division. This is the most important division at the organization because it provides technical assistance to cooperatives in order to improve their organization, administration and the profitability of their activities.

After being accepting for AFGRAD, I studied English for five months at Georgetown University, then was moved to Buffalo University for three more months of study. This move was because AAI said that Buffalo was less expensive.

After eight months I moved to the University of New Hampshire. The university is situated in a small town in New Hampshire and I stayed there the whole time that I was in the U.S. There were only five blacks and three of them were Africans. I studied economics with a specialty in agricultural economics. I regret not having taken any seminars during my AFGRAD study although I was invited to a post-graduate seminar in Wisconsin. It would have taken three months and I needed to get back to my job responsibilities in Mali.

The application of my degree study relates to my work with cooperatives in the aspects of economic and social development. In cooperatives, the economic functions finance the social ones and so the internal management of the group has to be excellent in order for the group to serve its members. With my U.S. training, I was able to train my technical assistance team to better assist the cooperatives in their financial management.

Another application of my AFGRAD education was that I also taught agricultural economics at the Institut Polytechnique Rural (Rural Polytechnic Institute) in Katibougou. I had taken part in a seminar there prior to my first foreign study and so I was well aware of the program and conditions there. This part-time job supplemented my income.

## HIGHLIGHTS OF INTERVIEW

What were the most useful practical applications of your AFGRAD training in your work?

"I had done extensive study on linear programming in the U.S. and I was able to use these techniques to plan and rationalize the transportation system that we set up to serve the many coops in the rural villages."

The organizational abilities that I acquired. I was able to use this in my work, for example, in the commercialization of agricultural products where the organization of transportation of the products to market is often a problem. I had done extensive study on linear programming in the U.S. and I was able to use these techniques to plan and rationalize the transportation system that we set up to serve the many co-ops in the rural villages. Many co-ops are spread out far away from Bamako. By rationalizing the transport system we were able to reduce our cost in fuel, time and equipment use. This resource management was based on ideas that I'd learned in the U.S.

Another example was the introduction of simple management skills to bring production costs under control. I improved my staff's capabilities by showing them better methods of accounting to teach the co-op members. This allowed the cooperatives to make yearly comparisons of their expenditures in order to better control production costs.

I also introduced an improvement of our institution's statistical analysis. I taught our statistical unit the statistical methods that I had learned in U.S. and the effect was less loss of time and more viable information to use in management.

The co-ops used to make decisions without considering the alternatives and as a result their profit margins were limited. After these innovations they were able to be more profitable. We noted from 1988 to 1990 that the total gross revenue of the co-ops climbed from 500 million CFA to 3 billion CFA! Note that during the same period, we also reduced our operating costs as a result of our improved management.

How has AFGRAD helped you progress in your career?

I've have been regularly promoted. Before 1984, I was the head of technical service and then from 1984 to 1987, I served as the Assistant National Director. Since 1987, I've directed the organization although this time the name of the organization has changed several times. The part that AFGRAD education played in this was to help me confront challenges and to go after promotions whenever possible.

Wouldn't your career have progressed as such without AFGRAD training?

I haven't studied in England but I do know Germany and I can compare the U.S. training. I was much more capable after my U.S. studies than after my studies in Germany. The economics that I studied there was socialist economics and in the U.S. the orientation is capitalist-profit-making. I also became computer-fluent in the U.S.

Do you use the computer skills?

I thought you'd ask that - there are many things you learn in U.S. that you can't use because of limited resources in Mali. Our institution is not computerized and this limited our ability is doing statistical analysis.

Were there any disadvantages associated with AFGRAD training?

My directorate has limited resources. It would be good if AFGRAD alumni could benefit from occasional seminars in the U.S. to keep their training current.

Are there any particular persons or organizations who helped you in AFGRAD studies?

I don't have any contacts with U.S. organizations during AFGRAD but I had many contacts with families who helped me get to know the town in New Hampshire.

I'm a member of the ACI (Alliance Coopérative Internationale - International Cooperative Union) and they organize regular conferences which I attend. We are now in contact with CLUSA and benefit from their information.

Do you have any regrets about having done U.S. training?

Not at all. On the contrary, in American universities you can register for classes in a variety of areas and if you desire you can study many other things. The library is readily available and the learning possibilities are unlimited.

Would you do anything differently if you had the chance?

In the beginning I wanted to become a lawyer or jurist but destiny had it that I went into rural development. As for my U.S. experience, I wouldn't have done anything differently and now that I'm in rural development I really believe in it.

Do you have colleagues in your field who were also U.S.-trained?

There is only one who teaches at the Institut Polytechnique Rural in Katibougou and who teaches engineering, rural public works and animal husbandry.

What advice do you have for others going to study under AFGRAD?

You must be very courageous. We are from another culture and the first shock that I had was purely cultural. In the RDA, people came to meet us at airport and took us to our home, but in the U.S. at JFK airport, there was no one from AFGRAD to meet us. Instead, AFGRAD contracted with a tourist agency to meet us and put us in a taxi to go to an hotel. For an African this was strange. You have to put it in your mind that one has to take care of oneself. I think graduates come back with this attitude of self-sufficiency and this is different from the Malian attitude.



## MALI TRACER STUDY

### AAI-RELATED HISTORY MASTER'S IN BUSINESS ADMINISTRATION

Mama Tapo worked on a volunteer basis as the AAI representative in Mali from 1979 to 1980. At this time, USAID was officially in charge of AFGRAD fellows, but found that Tapo would be a more logical representative than the Mission for AAI activities, being a former AFGRAD fellow himself. Tapo was then working within the Ministry of Plan, which was in charge of forwarding candidates for AFGRAD training, and was involved in developing the DLT project (*see below*). During this same period, the Malian AFGRAD coordinator at USAID was involved in a money-for-scholarships scandal which USAID wanted to avoid in future long-term training placements.

Mr. Tapo wore two USAID training hats at this point - that of AFGRAD and DLT, the Mission's "Development for Leadership Training" project. This project was actually conceived by Tapo while working at the Ministry of Plan. In contrast to AFGRAD, which concentrated on scientific and university-level personnel development, DLT was created to fill skill deficiencies in the Malian administration in areas such as income tax, education administration, and general civil administration. It sought to provide a wider distribution of scholarships than was available at the time. There were about 64 people funded under this project, which lasted about ten years (from the first to go to the last to return).

### INTERVIEW HIGHLIGHTS

What has been your relationship with returnees?

My relationship has changed dramatically from when there was only AFGRAD. People came directly to see me on their return. I knew everybody, and because of my position I could facilitate their reinsertion into the jobs they were supposed to occupy. If they had problems with degree equivalency, I managed to solve the problem for some people (though we were never able to get the Ph.D. ENSup teachers' case resolved). At the time it was very complicated to be re-absorbed into the Civil Service, so people came to see me about these problems quite often. Then there was a major re-organization of the Civil Service procedures, and it became much easier for people to regain their previous civil service appointments. The amount of time I spent on these cases was reduced dramatically.

Another factor in my not seeing as much of the alumni is the changing nature of USAID's involvement. Since the long-term training (ATLAS) has become a buy-in process rather than centrally funded, the USAID Mission has much more direct contact with returned participants. People now think that they have to report to USAID, and they don't come to see me like they used to. I don't even know when they're back - it's not really so hard to get in touch with me. I used to keep a notebook with everybody's name and I knew when everybody was due back, but now I am no longer on top of where people are.

I see my role as more than just simply being an AAI employee. I saw my role as a facilitator for both AAI and alumni. When I did a trainee search, I never asked for reimbursement for the costs that I incurred. Now, I just can't get in touch with these folks in a minute like I used to.

You have talked about how you facilitated the return of trainees to the public sector - what about those returning to the private sector?

There were no private sector people from Mali involved in AFGRAD training.

Where has AFGRAD made the biggest impact in Mali?

Livestock, because that's the sector which has the biggest number of AFGRAD alumni. Wherever you go, you'll find an AFGRAD.

OK, so there is a critical mass of people, but...

There has really been an impact made by individuals - take the case of the ex-Prime Minister, who is an AFGRAD alumni. You know, whatever personality you have, your training reinforces it, but if the PM had never gone to the U.S., he would still be out in the Project where he worked before, as a technician. His training gave him a "dimension supplémentaire" - it really gave him a boost.

What about if the PM had earned a French Ph.D.?

No, it wouldn't be the same. U.S. training really does teach leadership in the classroom, but in France you sit there and observe.

What other sectors should AFGRAD/ATLAS be emphasizing?

Business administration will be needed for some time to come. You know, I'm among the first MBAs to return. When I came back to the Ministry of Plan, people observed me at work and made comments about how I was the youngest technical advisor at the Ministry ever, how I was lucky to have gone to the U.S. and how I was aggressive (in my reasoning and work style, not in my personality). So people thought that there was something to be had from a MBA from the U.S. People in advisory positions really would benefit from this training—they are the people who inform the decisions of the policy makers here.

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"I worked at the President's Office for one year, and there I heard them say:  
"We need a person with American training."  
To them, American training means competency.

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But couldn't you have gotten the same training in France?

No, I worked at the President's Office for one year, and there I heard them say: "We need a person with American training." To them, American training means competency. I really think from the point of view of effectiveness and efficiency, that yes, U.S.-training is better. In the U.S., the fact that you are required and encouraged to speak up in class makes you proactive, while in France you sit and listen and you are simply reactive (passive). Being in the American environment also plays a part in this attitude change; it makes you more assertive.

Are there any disadvantages?

When I came back here I almost had a heart attack I was so discouraged and revolted. I have my own computer and don't give anything to our secretary anymore—I do all my own typing. It makes me sick to see the Malian and French style of giving all the correspondence to secretaries. It's such a waste of time, and I know that this in itself is a cause of the work ethic which needs to be seriously changed here.

People also work as if they have to hide information from you until you discover it on your own. It's as though by keeping important work information from you they keep you from gaining an advantage over them. They don't understand that if we all have the information we can use it to help us all in our jobs.

Has the perception of AFGRAD training changed over the years?

People didn't even know AFGRAD existed at first. I first heard about it from a friend, and I went to make an application, and had it signed by the Minister of Education. I worked at IPGP (Institut de Productivité et de Gestion Prévisionnelle - Institute for Productivity and Management Planning; now called CAPES) for one year before leaving on my training.

When I came back I worked at Ministry of Plan, then followed the Minister to the Ministry of Industrial Development and Tourism when he was moved there. After that I worked at the World Bank, with my last and longest position there being the Deputy Resident Representative.

What other areas should AFGRAD/ATLAS be emphasizing?

So far we have financed very technical disciplines, and that's enough. However, we still need more in management. We need public finance, banking, economics, taxes (no more general public administration, however), educational sciences, including programming, planning, and management of education.

**MALI  
TRACER STUDY**

USAID TRAINING OFFICE

INTERVIEW NOTES

Participant Key:     1 = Alumni    1  
                          2 = Alumni    2  
                          3 = Alumni    3

**What have been your roles in the AFGRAD program?**

- 1:     Our roles have evolved. When we first came to USAID, all we knew about AFGRAD was the list of alumni because back then the program was run by Washington. Little by little we took on the selection of the candidates, especially after AFGRAD started to allow missions to buy-in for additional scholarships. Then we became intimately involved in managing the program in Mali. I was always involved in selection activities. As for reporting, Manlafi took care of this as he was responsible for the PTMS.
- 2:     The office has always been privileged by the fact that the members of the group cooperate very well. In fact, if ever someone is absent, the rest of us have no problem covering for them. In this same way we've worked as a team on AFGRAD.
- 3:     I'm very new here, having only started a year or so ago with the beginning of ATLAS.
- 1:     When the AFGRAD alumni would come back they would normally come here and any of the three of us - whoever was available - would meet with the alumni to discuss how things went and how we could help in re-integration.
- 2:     There are no formal briefings but we would listen to what went well or not in the U.S., and occasionally help them in getting their new job assignment (note that during AFGRAD nearly everyone came from the public sector). The process of getting back into their job is time-consuming and complicated, but it is a process that doesn't require a lot of assistance from us and so we don't get very involved in this.
- 1:     As for degree equivalency we often assisted in translating their academic program description into English so that the government committee set up to judge equivalency could review their case.

**Not many people have mentioned the equivalency issue to us. Is the degree equivalency problem general to all the returnees or is it a much more pronounced issue for those teaching at ENSup?**

- 1: I'm surprised that the master's degree holders have not stated that this is a large problem because they were the ones who pushed this issue to us. We went to the government several times but it got to be very delicate, with recalcitrant attitudes and claims of national sovereignty. Although we went around and around with this issue the results have not been very favorable.

The official equivalency for an MA is a DEA (diplôme des études approfondies), although we heard tell that some Francophone African countries give this the equivalency of a Doctorat de 3ème cycle. The Ph.D. is considered a Doctorat de 3ème cycle; however, the AFGRAD alumni claim that it should be considered a Doctorat d'Etat. The government has been impossible on this issue. The true irony is that for the Ph.D. equivalence in France there is little debate any more because the French no longer have two "doctorats" – they've become the same degree - but the Malians aren't recognizing this. They insist on determining degree equivalence by counting the number of years of study and can't seem to understand accelerated programs or the credit system. The other issue is whether the MA includes a thesis or not.

To help avoid the equivalency problem, USAID had demanded for some time that all MA programs include a thesis so that eventually the government will accept these degrees as Doctorat de 3ème cycle.

After much frustration, we have handed the fight over to the Alumni Association hoping that they'll form a pressure group but they have not really done much about this; there have been no meetings, publications, etc., as we had hoped.

**It is interesting that no one has really complained about this with the exception of the few who teach at the university level (those at ENSup).**

- 2: This may be because most alumni are government officials and in the civil service they receive other perks like cars, kick-backs, etc., so the equivalency is not an economic constraint to speak of. But those who complained (at ENSup) don't have access to these perks and are paid by function of their level of education. Furthermore, their advancement – being named department head for instance – is impeded by the lack of degree recognition.

**So why this reluctance on part of the government to grant equivalency?**

- 2: My personal opinion is that, as everyone on the equivalence committee studied in France, they think that no one who studied elsewhere should have the same status level as someone who studied in France.
- 3: I checked at the Ministry and they said that they count the number of years of study to calculate the equivalence of the MA. Of course this doesn't explain the problem with the Ph.D. equivalence.

**Does this issue compromise the value of the program in your opinion?**

1: No, not completely, but it does de-motivate many of the returnees.

**Do you think that the AFGRAD studies have been a wasted investment?**

1-3: To some degree, yes.

2: At one point U.S.-trained people were distrusted in Mali.

1: Right, when we were a socialist country—back at independence - there was considerable mistrust. In fact, even our friends would tease us about us being involved with the American enemies. You know often serious things are said in jest. I know that with certain bosses they were very mistrustful of the alumni and therefore would not give them good work opportunities.

However, the situation has changed a lot and now the returnees are no longer distrusted. They are given important responsibilities and have distinguished themselves and the U.S. degree.

**How has the perception of U.S. training changed over the time?**

1: Soumana Sako's (ex-Prime Minister) career did a lot to change the perception toward the positive.

IPGP<sup>2</sup> [a public organization that works in private sector development and has attracted many young consultants to work there] was a veritable reservoir for USAID and we recruited many U.S. scholarship awardees (5 people) from there. They returned to IPGP and other donor groups have since employed them in their organizations.

2: More and more the private sector looks for graduates with U.S. training for two reasons: they have practical abilities, and they speak a second language.

**"Practical"—what does that mean?**

2: That the orientation of the training is much different than those trained elsewhere—France or the USSR.

3: I have a good explanation. I studied in the USSR for six years and spent the whole time working out of books only. There was only one practical experience in a bank where I sat and did NOTHING. It was only when I returned here that I started to learn to perform practical functions. And then it took me three years here before I got a job.

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<sup>2</sup> The "Institut de Productivité et de Gestion Prévisionnelle" is the Institute for Productivity and Provisional Management.

- 1: USSR students complain about the amount of idealogy. The non-practical nature of the USSR training is also well recognized in the market.
- 3: Compared to those who studied in France, you find more U.S. graduates in the private sector.
- 2: U.S.-trained people also don't find problems getting jobs but not the French-trained; they spent many years looking for work.

Yes, but now the "so what" question. What impact have these alumni been able to make?

- 1-3: No response - We don't have sufficiently detailed information.

**OK, then what sectors have been most impacted by AFGRAD (or USAID sponsored trainees) and how?**

- 1: That's easy—the sector of animal production is one where alumni are everywhere. They've been responsible for research studies, and above all, the development of the commercialization of cattle.

**About the impact in the livestock sector—isn't impact mostly back in the distant past when the first AFGRAD returned in the mid-60's?**

- 1: Well the sector is saturated; there are the most trained professionals in this sector than in all of the other domains.
- 2: Yes, and in the past there were big projects and now they have ended and these people have moved on.

**What sectors will be focused on by ATLAS?**

- 1: Well, I need to tell you that we have been informed by the Program Office that the ABS for ATLAS in 1994-96 is at zero. We were interested in funding studies in journalism, IEC (development information, education and communication) specialists and mass media specialists as well as studies in the environment such as agro-forestry which include skills in sociology.
- 2: We have been asked to describe what the impact of this level of funding will be, so the decision may not be final. HRDA also has problems for financing. It is being dropped from the \$1 million a year (levels for '91, '92 and '93) to \$500,000 for 1994. There is very little funding for any kind of long-term training. However, there are 19 MA/Ph.D. slots already funded in the SPARC project.

**How does USAID use AFGRAD alumni?**

- 2: For U.S.-trained Malians in general, USAID has hired them more and more over the years.

- 1: The problem in making sure that Malians are used as consultants is that the rules that require competition preclude us specifying certain people. There are other problems, too. For example: the alumni group did an excellent study of the financial feasibility of the Cours de Langues (Language Training Center) but when it came to delivering the report on time there were all kind of delays. The people were not available on a timely basis as they are also civil servants and a one week consultation took five weeks to be completed.

**What is the relationship between long-term training and the USAID's strategic objectives?**

- 1: In my opinion local human resource development is essential to conceive and invigorate sustainable development and long-term training delivers on this. No country can remain dependent on external technical assistance and no external technical assistance, no matter how excellent, can offer the insight of a locally-born professional.

## **MALI TRACER STUDY**

CDAN: CONSULTANTS DIPLÔMÉS DE L'AMERIQUE DU NORD  
PRESIDENT

### **HISTORY OF THE ORGANIZATION**

We got our official recognition as an organization in 1992. We wanted to form a GIE ("groupement d'intérêt économique" - a for-profit association). We currently have about 20 members, who each have contributed 10,000 CFA for membership, and who pay 5,000 CFA annual dues.

We wanted an organization which could be a "trampoline" for its members to do other activities [in addition to their civil service jobs]. We also wanted to respond to members' needs in terms of helping them start up businesses.

Our objectives include the following services for members:

- 1) We will have a fund to guarantee members' business loans where necessary;
- 2) We will lend funds to members to bring up their "personal funds" balances required when they apply for business loans. In this case, CDAN would become a stockholder in the business;
- 3) To take on a certain percentage of the interest charged for commercial loans to members, when necessary;
- 4) To prepare feasibility studies for members' business ideas; and
- 5) We can help our members who live in other parts of the country when they come to Bamako for extended periods of time, such as when they retire and need to spend a month getting all the necessary paperwork sorted out.

There are also certain services which we intend to make available to people who are not members of the organization, such as acting as guides or interpreters for consultants or newly arrived North American expatriates while they're getting to know the country.

CDAN can help the AUA (American Alumni Association) to organize meetings and to help visitors from U.S. partner organizations who may want to visit other parts of the country.

The services we sell are our own capabilities, and there are numerous areas where we have expertise. We propose to do studies for both USAID and ACDI (the Canadian International Aid Agency). We sent an unsolicited proposal to USAID for the privatization of the Cours de Langues (Language Learning Center) which was originally set up under the Mali Livestock II Project of USAID. Since that time it has never been granted legal status and cannot continue as such. We don't want to disband it, since it provides services to a wide range of clients around the city and country. (This does not include AFGRAD trainees.) It manages to exist on its revenues as this project funding ended. USAID and the GOM need to decide what to do with it. We want there to be an American technical assistant assigned to it under USAID financing and for USAID to create an operating fund for it so that it can

successfully make the transition to private sector organization. However, USAID does not seem to be interested in this proposition.

We believe that our primary clients should be USAID and ACDI, but the response so far from these organizations has been less than favorable. At USAID, they always shunt us over to the local employees who have no decision making power. At ACDI, they are clear that they will hire only Canadian-trained people.

So far, our biggest handicap is no building (AUA and CDAN together). We need a permanent location so that it's easier for us to market and organize our services. We need a permanent staff to help us respond quickly to requests that we might receive.

## **MALI TRACER STUDY**

### **COURS DE LANGUES - LANGUAGE TRAINING CENTER DIRECTOR**

#### **BACKGROUND**

The Cours de Langues (Language Training Center) opened in 1977 with funding from the USAID Livestock III project (which ended in 1988) as part of its information and communication activities. The purpose of the center was to conduct intensive English language training in-country for the many U.S.-bound graduate students who participated in the DLT (Development Leadership Training Program). Although the need for cost-effective English language training for USAID project collaborators provided the initiative, the center's activities have always been broader, offering English courses to the general community as well as offering classes in French and Bamana (Bambara) to expatriates. The center also serves as the testing place in Mali for the various American college entrance standardized tests, such as the TOEFL, the GRE, the GMAT and the LSAT.

At one point, the Peace Corps used Cours de Langues to conduct French training for its volunteers before they set up their own language training program at the Peace Corps training center. Oddly enough the AFGRAD candidates have never received their English training there, with the exception of one group of ten trainees who attended Cours de Langues during the very first days of AFGRAD. The Director wonders why this is the case because USAID/Bamako requests that all scholarship programs use Cours de Langues. He extrapolates that the reason that AFGRAD pays for U.S. language training is because the universities or AAI prefer to further their profits from the U.S.-based study. In fact, until the inception of ATLAS last year, the center did not even test AFGRAD students for the TOEFL.

For the first ten years of Cours de Langues' existence its operating costs were funded from two sources: course revenues and bilateral project funds provided by the government. During this period, two staff members, the Malian Director and one secretary, worked at the center as civil servants. The rest of the staff were either private Cours de Langues employees (the support staff) or part-time contractual workers (the teaching staff). In addition to the Malian staff, the center had an American advisor at least up until 1988 when external funding ended. At the end of project funding the center was fully privatized and the Malian Director left the civil service to stay with the operation. Although the Director, Mr. Fofana, admits that having the center turned over completely to the Malians was a good thing, he thinks that it is also good to have a native speaker (advisor) on staff as this brings a cachet with attracts business.

Cours de Langues' Malian clients buy language training there for primarily two reasons: 1) to prepare to go study abroad (language courses either paid by donors or self-paid), or 2) to improve their job performance in international settings, such as those who work as bilingual secretaries, bankers, post office workers, administrators at international organizations, etc.

## HIGHLIGHTS OF INTERVIEW

You have seen so many U.S.-trained students pass through your center and so you know them very well. Based on your years of familiarity with them, what is the difference in their abilities, if any, with those trained elsewhere?

Firstly, I am personally familiar with almost all of the U.S.-trained students, even those who did not take their English training here. But to answer your question, I noted a big change in these people once they returned. This is evident in the way they do things. I am sure that this is not a change that they could have acquired if they had stayed in Mali.

An example is Mama Tapo (an MBA and the AAI Representative). Since he has returned to Mali his career has consisted of a series of very high level and influential jobs. (He has been the technical advisor to the World Bank, then the President and now the Prime Minister.)

Couldn't this change in the U.S.-trained Malians just be due to their personality?

Yes, in part it could be but it also must depend on what they received in their schooling.

Is this difference due to U.S. experience or just the fact that they trained abroad? Is there something special to American training that sets it apart from other education abroad?

Yes, there is always a "plus" to those who did studies in the U.S. as opposed to those who went to France or the USSR, even though the group trained in the latter two countries is much larger. Maybe this clear difference is due to methods used in the U.S. - the directness and practicality of the alumni's way of doing things is obvious.

If the U.S. training really helped make the alumni more practical and efficient, there should be some good examples of what returnees have been able to accomplish in Mali.

OK. For example, in the arrangement of their work they are more organized. If you take someone who leaves Mali to study in the U.S. for three or four years, you'll see that he has changed on his return. It is in the way that he faces problem-solving; the way he deals with problems. It's difficult to find precise examples but in his behavior it is obvious that he's changed.

A concrete example of someone who went to the U.S. is Diaguely Sylla (AFGRAD, MA in Range Management) who now works with the APEX project (USAID) at OMBEVI (Office Malian du Bétail et de la Viande - Malian Office of Cattle and Meat) in Segou. I knew him when he left here at a young age. He worked at OMBEVI before AFGRAD and when a problem would come up with a butcher, for instance, he used to react immediately to the complaint but after returning to Mali his interpersonal approach has changed. His reaction to problem-solving was broader. When faced with a worker's complaint he will engage in information seeking with the plaintiff's peers in order to understand the full problem rather than reacting in course.

For my own case I noticed a change in myself although I recognize that this change could have happened if I had gone to France or the USSR. Before I went to the U.S. I worked as a language teacher of adults and I was sent to take courses in communication techniques. I learned a lot about psychology and interpersonal techniques that I'd never heard of before. After I returned I taught in my previous job but I also worked with the young people in my neighborhood and these skills really helped me to be better understood and more successful in my work. Then later I got involved in politics and found that I used these same skills.

What do AFGRAD returnees report to you as the most remarkable aspects of their experience in the U.S.?

They all cite the value of learning the American approach and the improved ways of organizing their work—they really appreciate this about their U.S. experience.

Is there a relationship particular to AFGRAD studies when it comes to employment opportunities?

A good education doesn't necessarily get one a good job in Mali. I've told the USAID Director several times that, "It is your role to assure that returnees are put into the right job, that corresponds to their education." His response is that he is not interested in playing politics and so he stays clear of this.

I think the AFGRAD alumni's job is a very important aspect of the program. Of course to get a good job here many things come into question: one's education, personality, political contacts, etc.

You'll note however that no AFGRAD alumni are unemployed. If the student had a job before going to the U.S. in any program - AFGRAD, DLT, etc. they do not end up unemployed after their return. But the important question is "Do they get promotions?" This depends more on the person's relationship with their bosses and less on their education.

What about the nation? All we've heard about has been in terms of the personal impact of the program. Is the number of U.S.-trained professionals so small here that no broader effect can be noted?

Perhaps that is the case, but if you were to survey the population to see what the impact of AFGRAD returnees was in general I'm sure that you'd see the positive way that the alumni deal with problems and get their jobs done. I know that in each and every case not one person would have negative things to say about their job performance. Like for instance, Soumana Sako (transitional Prime Minister) and Bakary Traore (present Minister of the National Budget); the AFGRAD alumni are actively involved in the community.

What do Malians recognize as professional qualities in Soumana Sako and Bakary Traore?

They cite Sako's rigor for work. When he was the Finance Minister in the Second Republic we saw him implement many improvements in the Ministry. When he was the Prime Minister during the

transition, the newspapers talked at length about his open way doing business and the efficiency of his administration.

Bakary Traore is presently doing an excellent job. This is a new Ministry and we hope that he will be able to control the excesses of past governments. Politically, he is very appreciated by the population. When he addresses the nation in the local language on the television, the reaction from the people is always very positive. He has a political future for sure.

What advice do you have for future AFGRAD students?

For their language learning, I tell them to not stay closed in their rooms but to take it easy and to be open to making personal contacts. Also, I'd encourage them to listen to people but not always believe what people tell them, but rather to verify the information before acting.

# MALI TRACER STUDY

## SUPERVISOR INTERVIEW DIRECTOR OF OMBEVI<sup>3</sup>

### INTERVIEW SUMMARY

I believe that it is always a good thing to provide advanced university training in order to improve the human resources in a developing country such as Mali. For OMBEVI, the impact of this kind of training has been significant and obvious; however, it is important to note the extent of this impact depends on the local working conditions in which returnees find themselves. The returnees must find the right work conditions, meaning position and adequate equipment, in order to have an impact on the sector.

Those who came back from the U.S. are definitely more confident and professional. In 1965, there were around five U.S.-trained people who returned from their U.S. studies and, as the conditions were ripe, got immediately involved applying their education in the sector. These few had an incredible impact on the sector. But now many specialists come back and end up working in generalized areas even though the sector still needs this expertise. This is because the powers that be don't utilize them appropriately due to lack of resources.

You see the sponsoring organization itself must create a favorable situation so that the returnees stay within their organization and apply their skills. You'll note that now many highly educated foreign graduates are now working for NGOs or in administrative positions.

Mrs. Lansary is such a case. I don't conclude that her education in animal science was a waste of time/energy because she learned other things that she is using in her work. She's been able to contribute in other ways but her particular expertise is of no use to this sector. This group of returnees did benefit from their U.S. education in terms of their improved mental capabilities but many have not been able to apply their science.

Is there anything particular about U.S. training compared to other training?

I was only trained in Mali so I can't make comparisons between different types of foreign study. I can say that the U.S.-trained are more ambitious and practical in their work. In the U.S. they developed a somewhat "pushy" attitude; they are more willing to go after results and to develop themselves.

"The U.S. alumni have a certain temperament. This "pushy" temperament had advantages and disadvantages to it. Sometimes the returnees are not very realistic about what can be done here in the short term; they want to go faster than things can go."

---

<sup>3</sup> Office Malien du Bétail et de la Viande - Malian Cattle and Meat Office.

Can this attitude change be attributed to the U.S. training in particular, or would any foreign training have had similar effects?

I think that by coming into close contact with another culture, one sees other ways of doing these things and that brings new ideas and even improved behavior. The U.S. alumni have a certain temperament. This "pushy" temperament had advantages and disadvantages to it. Sometimes the returnees are not very realistic about what can be done here in the short term; they want to go faster than things can go.

Those who are French-trained come back very talkative and not very practical. They have more of a tendency to be theoretical. Of course, I have more information on the U.S.-trained alumni than the French-trained because only two people here did their studies in France.

Those trained in Russia either went there as undergraduates and continued their graduate studies there or they pursued technical areas. I never met a Malian who completed his university level study here and then went to USSR for post-graduate study. In any case, I find that Russian-trained students received a lower quality of training.

Who are the leaders in this sector?

Leadership has nothing to do with a person's training or the country of training. It is rather dependent on the person's family, resources, and maybe their personality. The leaders in this sector are those who are now from 45 to 55 years old and have had the most time to influence the system. It is a little political. They are the "old boys" who have been at it for 20 years.

What have been the effects/results for the animal production sector?

We have more rapidity in conception of projects, even though there have been many recent returnees who don't find that they can participate in the sector.

Fifteen years ago the resources were greater than what they are now. New returnees can't do as much now -- they are "forced" to go elsewhere and find other work.

What have been AFGRAD alumni contributions, if anything?

One example is the meat classification system was created by Dr. Maiga. This system, adapted to the species of animal found in the Sahel, inspired the neighboring countries to adopt the same system. The FAO helped in funding this activity, but then they didn't push for its application. The economic recession has been such that here in Mali this quality control system is less respected in the market with the exception of the professional exporters who use the system in their external commerce.

Animal husbandry (fattening programs) progressed here because of the Mali Livestock I Project (USAID funded) and those trained in U.S. for this project ran it. Now I can see the progress made in the sector; cattle are more plentiful and of better quality.

Other contributions made by the early returnees were in new or improved techniques of range management (U.S.-trained were the first to work in this) and socio-economic studies.

What type of long-term training, if any, should the USA fund for the development of Mali?

I think that training at the Ph.D.-level is good to develop the teaching profession. To develop the country in the medium-term, degrees such as the master's are good. For example, in animal production to establish more modern installations. The potential for livestock production is still high in Mali. Do you realize that the average Malian consumes less meat, milk and eggs than he did before independence? Just one area that needs to be studied is improved home livestock production methods that could be adopted by the average citizen.

## **ANNEX 5**

### **LIST OF PEOPLE INTERVIEWED**

## Annex 5

### LIST OF PEOPLE INTERVIEWED

#### GHANA

##### Legon University

Vice Chancellor

Mr. G.F. Daniel, Registrar

Prof. Nukunya,

Pro-Vice Chancellor

Dr. Florence Dolphyne,

Dean of Arts

Dr. A.K. Ahunu,

Dean of Faculty of Agriculture

Mr. N. Woode,

Dean of the School of Administration

Prof K. A. Bilson,

Acting Dean of Students

##### Kumasi - People for Focus Group

Dr. Phaniel Bediako

Dr. Victor Kpodo

Dr. David Ardeyfo

Dr. Dennis Obeng

Dr. Alfred Agyei

Dr. Emmanuel Annan

Dr. E. Jackson

##### Others at Kumasi

Vice Chancellor

Dr. John Wiafe-Akenten

Obed Atubra

P. Austin Tetteh

Emmanuel Tamakloe

Dr. Samuel Oteng Seifah

##### Interviews in Legon

Mr. Samuel Quagraine

Mr. Joseph Ansah

##### Focus Group - Engineers in Private Sector

Mr. K. Twum Boafo

Dr. Joseph Okang

Mr. Frederick Asare-Yeboah

Mr. Kwame Adu-Sarkodie

##### Wednesday Focus Group - Agriculture

Mr. Andrew Aryeetey

Dr. Francis Fianu

Dr. Joshua Geker

Dr. Bawa Awumbila

Mrs. Anna Barnes

Dr. Sydney Quartey

##### Cape Coast Focus Group

Dr. Victor Ametewee

Dr. Joseph Essuman

Dr. Augustine Sosu

Dr. Christopher Ameyaw Akumfi

Dr. Moses Antwi

Dr. Samuel Boadi-Siaw

Mr. Victor Gadzekpo

##### Others at Cape Coast

Adrian N. DeHeer-Amisah

Pro-Vice-Chancellor

Vice Chancellor

##### Focus Group - Legon

Ms. Margaret Bartels

Ms. Ama Afo Blay

Dr. Marian Cole-Addy

Dr. Araba Sefa-Dedeh

##### Focus Group - School of Administration

Dr. Stephen Nkrumah

Mr. Van Nelson Sesi

Mr. Alfred Konu

Mr. Kwame E. Sarpong

##### USAID

Dr. Habib Kahn Human Resources Officer

Mr. Joseph Emuson Training Officer

AAI

Mrs. Cecelia Bannerman

Mrs. Genevieve Nassar

**LIST OF PEOPLE INTERVIEWED**

UGANDA

USAID Mission

Keith Sherper, Director

Norman Olson, Program Officer

Mathias Kibuka, Training Officer

Leticia Diaz, Deputy Directory

AFGRAD Participants

Mr. Joseph Mwanja,

Financial Analyst, Shell Oil Co

Dr. Polycarp Musinguzi,

Department Director, Research

Department, Bank of Uganda

Mr. Rashid Kitunzi, Director,

Project Planning, Monitoring and

Evaluation, Bank of Uganda

Mr. Mukalizi Kibuka,

Director of Finance Government,

Central Purchasing Organization

Mr. Johnny Odongo Layika, Principal

Banking Officer, Exchange Department,

Bank of Uganda

Dr. Eriabu Lugujjo, Associate Professor,

Faculty of Technology, Makerere

University

Dr. Johnson Acon, Head, Department of

Veterinary Surgery, Makerere

University

Dr. Yakobo Moyini, Lecturer, Department

of Forestry, Makerere University

Sam Nahamya, Director of Economic

Affairs, National Resistance Movement

Barnabas Tumwesigye, Principal Loan

Officer, Uganda Development Bank

Amos George Mfite-Basaza, General

Manager, Kilembe Mines Ltd.

Mr. Stanley Mulumba, Principal Partner,

Mulumba Associates

Rose Nadiope Kajumbula, Uganda Virus

Research Institute

Janet Kayita, Department of Pediatrics,

Mulago Hospital

David Kitimbo, District Medical Officer,

Jinja District

Professor Julius Zake, Head of Soil

Science Department

Professor Gabriel Kiwuwa, Head of

Department of Animal Science

Supervisors

Sarah Odongo, Executive Director,

International Operations, Bank of

Uganda

Josuha Mugenyi, Executive Director,

Administration, Bank of Uganda

Lenoard Mpuuma, Financial Controller,

Shell Uganda Ltd

Gerard Paulides, Finance Manager, Shell

Uganda Ltd

Moses Kibirige, Head of Project Appraisal

Unit, Uganda Development Bank

Commissioner of Geology

Dr. Samson Kesekka, Vice President,

Uganda

The Right Honorable Cosmas Adyebo,  
Prime Minister, Uganda

Others

Mr. Francis Bitambeki, Secretary, Central  
Scholarships Committee  
Ministry of Education and Sports  
Rev. Dr. Kironde-Kigozi, Vice Chancellor,  
Christian University

## **ANNEX 6**

# **RESPONDENT SAMPLE AND TOTAL AFGRAD POPULATION**

## ANNEX 6

### RESPONDENT SAMPLE Total AFGRAD Population

Country	Usable Questionnaires Received	# of Awards as of 6/93	Existing Addresses
Benin	4	21	7
Botswana	1	32	29
Burkina Faso	14	40	37
Burundi	8	32	28
Cameroon	40	123	81
Cape Verde	3	31	19
Central African Republic	10	20	17
Chad	2	7	6
Comoros Islands	3	8	2
Congo	9	20	10
Cote d'Ivoire	27	101	74
Djibouti	1	10	7
Equatorial Guinea	1	15	6
Ethiopia	24	182	102
Gambia	14	29	18
Ghana	65	213	137
Guinea	11	40	29
Guinea-Bissau	3	35	23
Kenya	15	126	99
Lesotho	9	37	31
Liberia	12	79	19
Madagascar	19	44	30
Malawi	20	60	52
Mali	26	81	62
Mauritania	0	18	7
Mauritius	12	28	20
Morocco	0	8	2
Mozambique	8	21	4
Niger	1	8	5
Nigeria	40	222	174
Rwanda	3	29	20
Sao Tome	0	17	11
Senegal	28	69	48
Seychelles	4	12	11
Sierra Leone	32	84	57
Somalia	2	48	35
Sudan	7	79	64
Swaziland	10	52	44
Tanzania	13	63	50
Togo	29	68	51
Tunisia	2	26	14
Uganda	33	106	73
Zaire	9	79	50
Zambia	18	72	61
Zimbabwe	8	21	15

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<b>TOTAL</b>	<b>617</b>	<b>2,522</b>	<b>1,741</b>
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## **ANNEX 7**

# **SAMPLE REPRESENTATIVENESS ON SELECTED VARIABLES**

## ANNEX 7

### SAMPLE REPRESENTATIVENESS

**Table 1 - Comparison of Sample Alumni  
with Total Alumni by Project Phase**

AFGRAD Phases	Total Alumni		Sample Alumni	
	#	%	#	%
<b>Phase I</b>	1293	57.0	284	46.0
<b>Phase II</b>	522	23.0	173	28.0
<b>Phase III</b>	453	20.0	160	26.0
<b>TOTAL</b>	2268	100.0	617	100.0

**Table 2 - Comparison of Sample Alumni  
With Total Alumni by Gender**

Gender	Total Alumni		Sample Alumni	
	#	%	#	%
<b>Male</b>	1977	87.2	524	85.0
<b>Female</b>	291	12.8	93	15.0
<b>TOTAL</b>	2268	100.0	617	100.0

**Table 3 - Comparison of Sample Alumni  
With Total Alumni by Age**

Age	Total Alumni		Sample Alumni	
	#	%	#	%
<b>21-30</b>	68	3.0	12	2.0
<b>31-40</b>	522	23.0	216	35.0
<b>41-50</b>	1043	46.0	290	47.0
<b>51-60</b>	590	26.0	99	16.0
<b>61+</b>	45	2.0	0	0.0

<b>TOTAL</b>	2268	100.0	617	100.0
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**Table 4 - Comparison of Sample with Total Alumni by Current Employment Sector**

<b>Sector</b>	<b>Total Alumni</b>		<b>Sample Alumni</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
<b>Education Research</b>	862	45.3	245	39.7
<b>Government Service</b>	533	28.0	175	28.3
<b>Int'l Organizations</b>	148	7.8	83	13.5
<b>Private Sector</b>	328	17.2	52	8.4
<b>NGO</b>	18	.9	22	3.6
<b>Other</b>	14	.8	40	6.5
<b>TOTAL</b>	1903	100.0	617	100.0

**Table 5 - Comparison of Sample Alumni with Total Alumni by Training Objective**

<b>Degree Objective</b>	<b>Total Alumni</b>		<b>Sample Alumni</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
<b>Bachelors</b>	108	4.1	30	4.5
<b>Masters</b>	1767	67.2	397	59.6
<b>PhDs</b>	702	26.7	201	30.3
<b>POSTAF</b>	50	2.0	37	5.5
<b>TOTAL</b>	2627	100.0	665	100.0

AAI's New Count as of 2/95 (2811)

N.B. 75 alumni received more than one AFGRAD award.

## **ANNEX 8**

# **SURVEY FINDINGS: STATISTICAL TABLES**

**ANNEX 8**

**SURVEY FINDINGS: STATISTICAL TABLES**

**Table I-1: Total Alumni Population by Project Phase and Gender**

	<b>I 1963-1976</b>		<b>II 1977-1984</b>		<b>III 1985-1992</b>		<b>Total</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
<b>TOTAL</b>	<b>1294</b>	<b>51.4</b>	<b>712</b>	<b>28.3</b>	<b>510</b>	<b>20.3</b>	<b>2516</b>	<b>100%</b>
<b>Male</b>	<b>1205</b>	<b>93.1</b>	<b>571</b>	<b>80.2</b>	<b>385</b>	<b>75.5</b>	<b>2151</b>	<b>85.9</b>
<b>Female</b>	<b>89</b>	<b>6.9</b>	<b>141</b>	<b>19.8</b>	<b>125</b>	<b>24.5</b>	<b>355</b>	<b>14.1</b>

**Table I-2: Current Age Distribution**

<b>Range</b>	<b>#</b>	<b>%</b>
<b>21-30</b>	<b>76</b>	<b>3.0</b>
<b>31-40</b>	<b>579</b>	<b>23.0</b>
<b>41-50</b>	<b>1157</b>	<b>46.0</b>
<b>51-60</b>	<b>654</b>	<b>26.0</b>
<b>61+</b>	<b>50</b>	<b>2.0</b>
<b>TOTAL</b>	<b>2516</b>	<b>100.0%</b>

**Table I-3: Employment Sector \***

<b>Sector</b>	<b>#</b>	<b>%</b>
<b>Education/Research</b>	<b>862</b>	<b>45.3</b>
<b>Government Service</b>	<b>533</b>	<b>28</b>
<b>Int'l Org./Donor</b>	<b>148</b>	<b>7.8</b>
<b>Private Sector</b>	<b>328</b>	<b>17.2</b>
<b>NGO</b>	<b>18</b>	<b>.9</b>
<b>Other</b>	<b>14</b>	<b>.8</b>
<b>TOTAL</b>	<b>1903</b>	<b>100.0</b>

\* From AAI Files; March 21, 1995

**Table I-4: Major Field Of Study Breakdown on Total and Sample Alumni Population**

<b>Field of Study</b>	<b>Total Alumni %</b>	<b>Sample Alumni %</b>
<b>Ag/Animal Science</b>	<b>12.4</b>	<b>14.3</b>
<b>Engineering</b>	<b>15.4</b>	<b>14.2</b>
<b>Economics</b>	<b>14.9</b>	<b>11.7</b>
<b>Education</b>	<b>9.1</b>	<b>12.0</b>
<b>Business</b>	<b>11.3</b>	<b>13.3</b>
<b>Health</b>	<b>6.5</b>	<b>6.0</b>
<b>Biology</b>	<b>7.2</b>	<b>9.0</b>
<b>Other</b>	<b>23.2</b>	<b>19.1</b>
<b>TOTAL</b>	<b>100</b>	<b>100</b>

**Table I-5: Repatriation Rates for the Total Group of Alumni and the Sample**

Repatriation Data	Frequencies		Percentages	
	Total Alumni Data	Sample Alumni Data	Total Alumni Data	Sample Alumni Data
<b>RETURNED HOME</b>	<b>1619</b>	<b>419</b>	<b>64%</b>	<b>68%</b>
<b>Stayed in U.S. for PRACTICAL TRAINING</b>	<b>398</b>	<b>80</b>	<b>16%</b>	<b>13%</b>
<b>Stayed in U.S. for STUDY (not AFGRAD)</b>	<b>207</b>	<b>35</b>	<b>8%</b>	<b>6%</b>
<b>Stayed in U.S. for ANOTHER REASON (employment)</b>	<b>176</b>	<b>28</b>	<b>7%</b>	<b>5%</b>
<b>Went to a Foreign Country for PRACTICAL TRAINING</b>	<b>3</b>	<b>10</b>	<b>0%</b>	<b>2%</b>
<b>Went to Foreign Country for STUDY</b>	<b>21</b>	<b>88</b>	<b>1%</b>	<b>1%</b>
<b>Went to a Foreign Country for ANOTHER REASON</b>	<b>39</b>	<b>14</b>	<b>2%</b>	<b>2%</b>
<b>Some Combination of Above</b>	<b>-</b>	<b>14</b>	<b>0%</b>	<b>2%</b>
<b>Unknown</b>	<b>53</b>	<b>9</b>	<b>2%</b>	<b>1%</b>
<b>TOTAL</b>	<b>2516</b>	<b>617</b>	<b>100%</b>	<b>100.0%</b>

**Table I-6: AFGRAD Repatriation Statistics**

	AFGRAD			
	Alumni Awards	Returned Home	Non- returnees	Repatriation
Benin	21	17	4	81.0
Botswana	32	32	0	100.0
Burkina Faso	43	42	1	97.7
Burundi	33	30	3	90.9
Cameroon	127	121	6	95.3
Cape Verde	33	27	6	81.8
Central African Republic	20	18	2	90.0
Chad	7	5	2	71.4
Comoros	8	8	0	100.0
Congo	20	20	0	100.0
Cote d'Ivoire	101	95	6	94.1
Djibouti	10	9	1	90.0
Equatorial Guinea	15	14	1	93.3
Ethiopia	188	139	49	73.9
Gambia	29	24	5	82.8
Ghana	223	187	36	83.9
Guinea	40	36	4	90.0
Guinea-Bissau	36	28	8	77.8
Kenya	130	118	12	90.8
Lesotho	37	35	2	94.6
Liberia	82	64	18	78.0
Madagascar	50	44	6	88.0
Malawi	66	61	5	92.4
Mali	86	81	5	94.2
Mauritania	19	19	0	100.0
Mauritius	28	28	0	100.0
Morocco	8	7	1	87.5
Mozambique	21	19	2	90.5
Niger	8	7	1	87.5
Nigeria	225	214	11	95.1
Rwanda	29	21	8	72.4
Sao Tome	17	13	4	76.5
Senegal	69	66	3	95.7
Seychelles	12	12	0	100.0
Sierra Leone	93	75	18	80.6
Somalia	49	37	12	75.5
Sudan	79	68	11	86.1
Swaziland	57	57	0	100.0
Tanzania	66	61	5	92.4
Togo	71	63	8	88.7
Tunisia	26	23	3	88.5
Uganda	110	91	19	82.7
Zaire	81	65	16	80.2
Zambia	75	70	5	93.3
Zimbabwe	21	20	1	95.2
<b>TOTAL</b>	<b>2,601</b>	<b>2,291</b>	<b>310</b>	<b>88.1</b>

**Table II-1: Re-entry Status of Sample Alumni**

Re-entry Status	Sample Alumni	
	#	%
Returned Home Immediately After Degree Completion	419	67.9
Follow-on Practical Training - USA	80	13.0
Follow-on Practical Training - Other	10	1.6
Follow-on Study - USA	35	5.7
Follow-on Study - Other Country	8	1.3
Stayed in USA (other reason)	28	4.5
Went to Other Country	14	2.3
Other Issues	14	2.3
Not Applicable	1	.2
No Response	8	1.3
<b>TOTAL</b>	<b>617</b>	<b>100.0</b>

**Table II-2: Duration of Practical Training**

# Months	#	%
<3	120	19.5
3-6	91	14.7
7-12	24	3.9
>12	24	3.9
None	351	56.9
No Response	7	1.1
<b>TOTAL</b>	<b>617</b>	<b>100.0</b>

**Table II-3: Time Elapsed Between Program Completion and Return**

<b>Months/Years</b>	<b>#</b>	<b>%</b>
<b>&lt;3 months</b>	<b>47</b>	<b>7.6</b>
<b>3-6 months</b>	<b>50</b>	<b>8.1</b>
<b>7-11 months</b>	<b>27</b>	<b>4.4</b>
<b>1-2 years</b>	<b>30</b>	<b>4.9</b>
<b>3-4 years</b>	<b>10</b>	<b>1.6</b>
<b>&gt;4 years</b>	<b>20</b>	<b>3.2</b>
<b>Didn't Return</b>	<b>21</b>	<b>3.4</b>
<b>N/A</b>	<b>403</b>	<b>65.3</b>
<b>No Response</b>	<b>9</b>	<b>1.5</b>
<b>TOTAL</b>	<b>617</b>	<b>100.0</b>

**Table II-4: Non-Completion**

<b>Completion Status</b>	<b>#</b>	<b>%</b>
<b>Completed Program</b>	<b>573</b>	<b>92.9</b>
<b>Didn't Complete</b>	<b>39</b>	<b>6.3</b>
<b>No Response</b>	<b>5</b>	<b>.8</b>
<b>TOTAL</b>	<b>617</b>	<b>100.0</b>

**Table II-5: Time Elapsed Between Return and Resumed Job**

	#	%
<3 months	47	7.6
3-6 months	50	8.1
7-11 months	27	4.4
1-2 years	30	4.9
3-4 years	10	1.6
>4 years	20	3.2
Didn't Return	21	3.4
N/A	403	6.53
No Response	9	1.5
<b>TOTAL</b>	<b>617</b>	<b>100.0</b>

**Table II-6: Assumed Job for Which Nominated**

	#	%
Yes	347	56.2
No	249	40.4
N/A	10	1.6
No Response	11	1.8
<b>TOTAL</b>	<b>617</b>	<b>100.0</b>

**Table II-7: Percentage of Respondents Whose First Job was the Position for Which They Had Been Nominated**

<b>Degree Category</b>	<b>Yes</b>	<b>No</b>
<b>Bachelor's</b>	<b>39.3%</b>	<b>60.7%</b>
<b>Master's</b>	<b>50.8%</b>	<b>49.2%</b>
<b>Successive Master's &amp; Ph.D.</b>	<b>72.2%</b>	<b>27.8%</b>
<b>Ph.D.</b>	<b>72.2%</b>	<b>27.8%</b>
<b>POSTAF</b>	<b>72.2%</b>	<b>27.8%</b>

**Table II-8: Sample Alumni's Job Changes**

<b>Transition from Job Prior to AFGRAD to First Job</b>	<b>Transition from First Job to Current Job</b>
<b>222 alumni had the same position as their "prior job" (36%)</b>	<b>75 alumni are in the same position as their prior job (12.2%)</b>
	<b>147 alumni are now in a different position from their prior job (23.8%)</b>
<b>395 alumni went to a different position from their "prior job" (64%)</b>	<b>111 alumni are still the same position as their "first" job position (18%)</b>
	<b>284 alumni are now in a different job (46%)</b>
<b>N=617</b>	

**Table II-9: Percentage of Alumni Job Changes by Employment Sector**

<b>Employer</b>	<b>Job Prior to AFGRAD</b>	<b>First Job After AFGRAD</b>	<b>Current Job</b>
<b>Education</b>	<b>42.1%</b>	<b>48.3%</b>	<b>39.7%</b>
<b>Government</b>	<b>33.4%</b>	<b>36.6%</b>	<b>28.3%</b>
<b>Private Sector</b>	<b>4.4%</b>	<b>6.5%</b>	<b>13.5%</b>
<b>International Organizations</b>	<b>1.1%</b>	<b>3.4%</b>	<b>8.4%</b>
<b>NGOs</b>	<b>1.1%</b>	<b>1.6%</b>	<b>3.6%</b>
<b>Not Employed/Other Status</b>	<b>17.9%</b>	<b>3.6%</b>	<b>6.5%</b>

**N=607**

**Table II-10: Employment Sector by Field of Study: Alumni's Prior Job**

	<b>Education</b>	<b>Government Service</b>	<b>Private Sector</b>	<b>International Organizations</b>	<b>NGOs</b>	<b>Other Sectors</b>
<b>Agriculture</b>	<b>39.4%</b>	<b>44.9%</b>	<b>1.1%</b>	<b>1.1%</b>	<b>0%</b>	<b>13.5%</b>
<b>Engineering</b>	<b>39.4%</b>	<b>33.3%</b>	<b>10.6%</b>	<b>0%</b>	<b>1.5%</b>	<b>15.2%</b>
<b>Business Administration</b>	<b>15.4%</b>	<b>43.1%</b>	<b>10.8%</b>	<b>3.1%</b>	<b>1.5%</b>	<b>26.2%</b>
<b>Education</b>	<b>66.1%</b>	<b>22.0%</b>	<b>0%</b>	<b>1.7%</b>	<b>0%</b>	<b>10.2%</b>
<b>Economics</b>	<b>33.3%</b>	<b>35.3%</b>	<b>2.0%</b>	<b>2.0%</b>	<b>0%</b>	<b>27.5%</b>
<b>Biology/Animal Science</b>	<b>43.1%</b>	<b>37.3%</b>	<b>0%</b>	<b>0%</b>	<b>2.0%</b>	<b>17.6%</b>
<b>Health</b>	<b>27.6%</b>	<b>58.6%</b>	<b>0%</b>	<b>3.4%</b>	<b>10.3%</b>	<b>0%</b>

**N = 606**

**Table II-11: Employment Sector by Field of Study: Alumni's First Job**

	Education	Government Service	Private Sector	International Organizations	NGOs	Other Sectors
<b>Agriculture</b>	39.7%	49.2%	0%	7.5%	1.6%	1.6%
<b>Engineering</b>	46.4%	34.2%	12.2%	2.4%	2.4%	2.4%
<b>Business Administration</b>	9.1%	43.2%	29.5%	9.1%	0%	9.1%
<b>Education</b>	67.6%	29.4%	0%	3.0%	0%	0%
<b>Economics</b>	22.6%	54.8%	9.7%	12.5%	0%	0%
<b>Biology/Animal Science</b>	63.0%	37.0%	0%	0%	0%	0%
<b>Health</b>	21.4%	50.0%	0%	7.1%	14.4%	7.1%

N = 606

**Table II-12: Alumni's Employment Sector Prior to AFGRAD by Degree**

	Education	Government Service	Private Sector	International Organizations	NGOs	Other Sectors
<b>Bachelor's</b>	30.0%	36.7%	3.3%	0%	0%	30.0%
<b>Master's</b>	31.3%	43.8%	6.4%	1.5%	1.5%	15.5%
<b>Successive Master's &amp; Ph.D.</b>	62.0%	12.0%	0%	0%	1%	25.0%
<b>Ph.D.</b>	69.0%	13.0%	1.0%	1.0%	0%	16.0%
<b>POSTAF</b>	56.8%	16.2%	2.7%	0%	0%	24.3%

N = 606

**Table II-13: Employment Sector by Degree: Alumni's First Job**

	Education	Government Service	Private Sector	International Organizations	NGOs	Other/ Unemployed
Bachelor's	11.5%	50.0%	15.4%	7.7%	0%	15.4%
Master's	33.3%	44.6%	11.6%	6.4%	2.0%	2.0%
Successive Master's & Ph.D.	84.9%	9.6%	0%	2.7%	1.4%	1.4%
Ph.D.	70.5%	18.0%	3.3%	4.9%	0%	3.3%
POSTAF	70.6%	17.6%	5.9%	0%	0%	5.9%

N = 386

**Table II-14: Percentage of Alumni Who Did Not Change Jobs Since Their First Position by Field of Study**

Field of Study	Percentage of Respondents	Number of Respondents
All Fields	30.2	591
Anthropology	67	3
Physics	67	9
Philosophy	50	2
Political Science	50	2
Meteorology	50	2
Mathematics	43	14
Law	41	18
Health	41	29
Chemistry/Pharmacology	36	22
Agriculture	37.2	86
Engineering	34.9	63
Business Administration	17.2	64
Education	31.6	58
Economics	11.8	51
Biology	33.3	51

N = 591

**Table II-15: Sample Alumni's Occupational Change**

<b>Job Concentration*</b>	<b>Prior</b>		<b>First</b>		<b>Current</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
<b>Policy Making</b>	11	1.9	21	3.4	57	9.2
<b>Mgmt/Administration</b>	68	11.0	58	9.4	75	12.2
<b>Technical-Professional</b>	118	19.1	137	22.2	70	11.3
<b>Teaching/Training</b>	170	27.6	182	29.5	57	9.2
<b>Research</b>	57	9.2	69	11.2	25	4.1

N = 617

\* in which alumni reported spending 50 percent or more of their time.

**Table II-16.1: Alumni's Sector of Secondary Employment**

<b>Employment Sector</b>	<b>#</b>	<b>%</b>
<b>Education</b>	98	37.5
<b>Government</b>	39	14.9
<b>Int'l Org./Donor</b>	66	25.3
<b>NGO</b>	8	3.1
<b>Private Business</b>	38	14.6
<b>Self-Employed</b>	12	4.6
<b>TOTAL</b>	261	100.0

**Table III-16.2: Type of Secondary Employment**

Job Type	#	%
Teaching	108	41.4
Technical	75	28.7
Research	38	14.6
Mgmt/Admin	11	4.2
Other	29	11.1
<b>TOTAL</b>	<b>261</b>	<b>100.0</b>

**Table II-17: Alumni in Supervisory Jobs**

	Prior Job		First Job		Current Job	
	#	%	#	%	#	%
Percentage Reporting Supervisory Position	234	37.9%	257	41.7%	262	42.5%
Number of people supervised (average)	65		71		172	
Number of people supervised (median)	11		11		20	

**Table II-18: Relationship Between Training and Alumni's Jobs**

Training-Related Job	First Job		Current Job	
	#	%	#	%
Yes	524	84.9	316	76.7
No	73	11.8	96	23.3
N/A	10	1.6	-	-
No Response	10	1.6	-	-
<b>TOTAL</b>	<b>617</b>	<b>100.0</b>	<b>412*</b>	<b>100.0</b>

\* N = Alumni who changed jobs since first job.

**Table II-19: Percentage of Respondents Whose First Job was in the Same Field as Trained by Field of Study (Representing 12 Most Important Fields)**

<b>Field of Study</b>	<b>Percent of Alumni in Same Field as Trained</b>	<b>Number of Alumni Represented</b>
<b>All Fields</b>	<b>87.6</b>	<b>460</b>
<b>Agriculture</b>	<b>89.5</b>	<b>86</b>
<b>Engineering</b>	<b>84.1</b>	<b>63</b>
<b>Business Administration</b>	<b>85.9</b>	<b>64</b>
<b>Education</b>	<b>86.2</b>	<b>58</b>
<b>Economics</b>	<b>86.3</b>	<b>51</b>
<b>Biology/Animal Science</b>	<b>96.0</b>	<b>50</b>
<b>Health</b>	<b>81.5</b>	<b>27</b>
<b>Political Science</b>	<b>50.0</b>	<b>2</b>
<b>Urban Planning/Architecture</b>	<b>60.0</b>	<b>5</b>
<b>Anthropology</b>	<b>67.0</b>	<b>3</b>
<b>Psychology</b>	<b>75.0</b>	<b>4</b>
<b>Public Administration</b>	<b>76.9</b>	<b>20</b>
<b>Non-respondent</b>	<b>--</b>	<b>27</b>

**N = 460**

**Table II-20: Percentage of Respondents Whose First Job was in the Same Field as Trained by Degree Category**

<b>Degree Category</b>	<b>Yes</b>	<b>No</b>
<b>Bachelor's</b>	<b>73.3%</b>	<b>26.7%</b>
<b>Master's</b>	<b>85.2%</b>	<b>14.8%</b>
<b>Successive Master's &amp; Ph.D.</b>	<b>93.8%</b>	<b>6.2%</b>
<b>Ph.D.</b>	<b>94.8%</b>	<b>5.2%</b>
<b>POSTAF</b>	<b>97.1%</b>	<b>2.9%</b>

**N = 590**

**Table III-1: Reported Salary Increase by Field of Study**

<b>Field of Study</b>	<b>Yes</b>	<b>No</b>
<b>All Fields of Study</b>	<b>65.5%</b>	<b>34.5%</b>
<b>Agriculture</b>	<b>52.4%</b>	<b>47.6%</b>
<b>Engineering</b>	<b>78.5%</b>	<b>21.5%</b>
<b>Business Administration</b>	<b>74.6%</b>	<b>25.4%</b>
<b>Education</b>	<b>61%</b>	<b>39%</b>
<b>Economics</b>	<b>72.5%</b>	<b>27.5%</b>
<b>Biology/Animal Science</b>	<b>60.8%</b>	<b>39.2%</b>
<b>Health</b>	<b>57.1%</b>	<b>42.9%</b>
<b>System Engineering, Physical Science Education, Law, Astronomy, Art</b>	<b>100%</b>	<b>0%</b>
<b>Computer Science</b>	<b>80%</b>	<b>20%</b>
<b>Anthropology, Acting</b>	<b>67%</b>	<b>33%</b>
<b>TV/Radio, Philosophy, History</b>	<b>0%</b>	<b>100%</b>
<b>Urban Planning/Architecture</b>	<b>25%</b>	<b>75%</b>
<b>Physics</b>	<b>37.5%</b>	<b>62.5%</b>
<b>Political Science, Psychology, Meteorology, Linguistics</b>	<b>50%</b>	<b>50%</b>
<b>Geology</b>	<b>60%</b>	<b>40%</b>

**N = 590**

**Table III-2: Percentage of Respondents Reporting a Pay Increase after AFGRAD Training by Type of Degree**

Type of Degree	Yes	No
Bachelor's	46.7%	53.3%
Master's	66.5%	33.5%
Successive Master's & Ph.D.	67%	33%
Ph.D.	67.7%	32.3%
POSTAF	51.4%	48.6%

N = 609

**Table III-3: Percentage of Respondents Reporting a Salary Increase by Gender**

	Increase	No increase
All Respondents	65.5%	34.5%
Male	67.3%	32.7%
Female	55.6%	44.4%

N = 609

**Salary Increase Attributable to AFGRAD Training**

	#	%
Yes	311	50.4
No	79	12.8
N/A	211	34.2
No Response	16	2.6
<b>TOTAL</b>	<b>617</b>	<b>100.0</b>

**Table III-4: Percentage of Respondents Stating That They Receive Fair Compensation by Sector of Employment**

<b>Sector of Employment</b>	<b>Yes</b>	<b>No</b>
<b>All Sectors</b>	<b>62.8%</b>	<b>37.2%</b>
<b>Secondary Education</b>	<b>75.0%</b>	<b>25.0%</b>
<b>Education</b>	<b>56.5%</b>	<b>43.55</b>
<b>Government Service</b>	<b>60.8%</b>	<b>39.2%</b>
<b>Private Sector</b>	<b>69.1%</b>	<b>30.9%</b>
<b>International Organizations</b>	<b>81.0%</b>	<b>19.0%</b>
<b>NGOs</b>	<b>43.8%</b>	<b>56.2%</b>
<b>Other Sectors</b>	<b>50.0%</b>	<b>50.0%</b>

N = 414

**Table III-5: Percentage of Respondents Stating That They Receive Fair Compensation by Gender**

	<b>Yes</b>	<b>No</b>
<b>All Respondents</b>	<b>58.6%</b>	<b>41.4%</b>
<b>Male</b>	<b>59.5%</b>	<b>40.5%</b>
<b>Female</b>	<b>52.8%</b>	<b>46.1%</b>

N = 592

**Table III-6: Countries Where Respondents Reported the Most Difficulty in Degree Recognition**

<b>COUNTRY</b>	<b>Percentage of Respondents Reporting Difficulty</b>
<b>All Countries</b>	<b>17.5</b>
<b>Central African Republic</b>	<b>80.0</b>
<b>Burkina Faso</b>	<b>76.9</b>
<b>Benin</b>	<b>75.0</b>
<b>Mali</b>	<b>65.4</b>
<b>Burundi</b>	<b>57.1</b>
<b>Congo</b>	<b>57.1</b>
<b>Tunisia</b>	<b>50.0</b>
<b>Madagascar</b>	<b>47.4</b>
<b>Senegal</b>	<b>35.7</b>
<b>Comoros</b>	<b>33.0</b>
<b>Togo</b>	<b>31.8</b>

N = 382

**Table III-7: Percentage of Reported Degree Recognition Difficulties by First Employer**

<b>Employment Sector</b>	<b>Percentage of Reported Degree Recognition Difficulties</b>
<b>Education</b>	<b>20.0</b>
<b>Government</b>	<b>28.1</b>
<b>Private Sector</b>	<b>12.1</b>
<b>International Organizations</b>	<b>23.8</b>
<b>NGOs</b>	<b>0</b>

N = 382

**Table III-8: Reported Effect of AFGRAD on Respondents' Career Development by Field of Study**

<b>Field of Study</b>	<b>Very Positive</b>	<b>Somewhat Positive</b>	<b>Neither Positive Nor Negative</b>	<b>Total</b>
<b>All Fields of Study</b>	<b>87.2%</b>	<b>11.3%</b>	<b>1.5</b>	<b>100%</b>
<b>Agriculture</b>	<b>89.9%</b>	<b>6.7%</b>	<b>3.4%</b>	<b>100%</b>
<b>Engineering</b>	<b>87.7%</b>	<b>12.3%</b>	<b>0%</b>	<b>100%</b>
<b>Business Administration</b>	<b>87.7%</b>	<b>12.3%</b>	<b>0%</b>	<b>100%</b>
<b>Education</b>	<b>82.8%</b>	<b>15.5%</b>	<b>1.7%</b>	<b>100%</b>
<b>Economics</b>	<b>86.3%</b>	<b>13.7%</b>	<b>0%</b>	<b>100%</b>
<b>Biology / Animal Science</b>	<b>86.0%</b>	<b>12.0%</b>	<b>2.0%</b>	<b>100%</b>
<b>Computer Science</b>	<b>90.0%</b>	<b>0%</b>	<b>10.0%</b>	<b>100%</b>
<b>Health</b>	<b>86.2%</b>	<b>13.8%</b>	<b>0%</b>	<b>100%</b>
<b>Anthropology, Education, History, Law, Meteorology, Philosophy, Physical Sciences, Physics, Systems Engineering, Sociology, TV</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>	<b>100%</b>

**N = 602**

**(Note: There were NO negative responses from the sample of respondents)**

**Table III-9: Reported Effect of AFGRAD on Respondents' Career Development by Gender and Sector of Employment (For Alumni who Changed Jobs After AFGRAD)**

	Very Positive	Somewhat Positive	Neither Positive Nor Negative	Total
<b>All Respondents</b>	<b>87.2%</b>	<b>11.3%</b>	<b>1.5%</b>	<b>100%</b>
<b>Male</b>	<b>88.4%</b>	<b>10.4%</b>	<b>1.2%</b>	<b>100%</b>
<b>Female</b>	<b>81.3%</b>	<b>15.4%</b>	<b>3.3%</b>	<b>100%</b>
<b>Education</b>	<b>87.4%</b>	<b>11.9%</b>	<b>.7%</b>	<b>100%</b>
<b>Government Service</b>	<b>85.6%</b>	<b>11.2%</b>	<b>3.2%</b>	<b>100%</b>
<b>Private Sector</b>	<b>81.9%</b>	<b>15.3%</b>	<b>2.8%</b>	<b>100%</b>
<b>International Organizations</b>	<b>95.5%</b>	<b>4.5%</b>	<b>0%</b>	<b>100%</b>
<b>NGOs</b>	<b>70.6%</b>	<b>23.5%</b>	<b>5.9%</b>	<b>100%</b>
<b>Other / Not Employed</b>	<b>88%</b>	<b>12%</b>	<b>0%</b>	<b>100%</b>

N = 615 for Male/Female

N = 426 for Sectors

(Note: There were NO negative responses from the sample of respondents)

**Table III-10: Reported Effect of AFGRAD on Respondents' Career Development by Type of Degree**

Type of Degree	Very Positive	Somewhat Positive	Neither Positive Nor Negative
<b>Bachelor's</b>	<b>93.3</b>	<b>6.7</b>	<b>0</b>
<b>Master's</b>	<b>84.5</b>	<b>13.5</b>	<b>2.0</b>
<b>Successive Master's &amp; Ph.D.</b>	<b>89.9</b>	<b>9.1</b>	<b>1.0</b>
<b>Ph.D.</b>	<b>90.8</b>	<b>8.2</b>	<b>1.0</b>
<b>POSTAF</b>	<b>89.2</b>	<b>10.8</b>	<b>0</b>

N = 602

(Note: There were NO negative responses from the sample of respondents)

**Table III-11: Reported Effect of AFGRAD on Respondents' Career Development by AFGRAD Phase**

<b>Response by AFGRAD Phase</b>	<b>AFGRAD I</b>	<b>AFGRAD II</b>	<b>AFGRAD III</b>
<b>Very Positive</b>	<b>89.3%</b>	<b>84.7%</b>	<b>86.8%</b>
<b>Somewhat Positive</b>	<b>9.2%</b>	<b>14.1%</b>	<b>11.2%</b>
<b>Neither Positive nor Negative</b>	<b>1.5%</b>	<b>1.2%</b>	<b>2.0%</b>
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

**N = 401**

**Table III-12: Overall Satisfaction with Career and Professional Development**

<b>Satisfaction Level</b>	<b>Sample Alumni</b>	
	<b>#</b>	<b>%</b>
<b>Extremely Satisfied</b>	<b>161</b>	<b>26.1</b>
<b>Very Satisfied</b>	<b>277</b>	<b>44.9</b>
<b>Somewhat Satisfied</b>	<b>121</b>	<b>19.6</b>
<b>Somewhat Dissatisfied</b>	<b>36</b>	<b>5.8</b>
<b>Extremely Dissatisfied</b>	<b>12</b>	<b>1.9</b>
<b>N/A</b>	<b>5</b>	<b>.8</b>
<b>No Response</b>	<b>5</b>	<b>.8</b>
<b>TOTAL</b>	<b>617</b>	<b>100.0</b>

**Table III-13: Percentage of Respondents' Satisfaction with Career Advancement by Gender and Employment Sector**

	<b>Extremely Satisfied</b>	<b>Somewhat Satisfied</b>	<b>Extremely Dissatisfied</b>
<b>Male</b>	<b>74.0%</b>	<b>19.0%</b>	<b>7.0%</b>
<b>Female</b>	<b>61.8%</b>	<b>24.7%</b>	<b>13.5%</b>
<b>Education</b>	<b>73.3%</b>	<b>20.0%</b>	<b>6.7%</b>
<b>Government Service</b>	<b>69.0%</b>	<b>22.2%</b>	<b>8.8%</b>
<b>Private Sector</b>	<b>76.4%</b>	<b>13.9%</b>	<b>9.7%</b>
<b>International Organizations</b>	<b>86.0%</b>	<b>9.3%</b>	<b>4.7%</b>
<b>NGOs</b>	<b>76.5%</b>	<b>17.6%</b>	<b>5.9%</b>
<b>Other Sectors</b>	<b>64.7%</b>	<b>23.5%</b>	<b>11.8%</b>

**N = 605 for Male/Female**

**N = 425 for Sectors**

**Table III-14: Reported Career Satisfaction by AFGRAD Program**

<b>Response by AFGRAD Phase</b>	<b>AFGRAD I</b>	<b>AFGRAD II</b>	<b>AFGRAD III</b>
<b>Extremely Satisfied</b>	<b>75.6%</b>	<b>69.2%</b>	<b>67.3%</b>
<b>Somewhat Satisfied</b>	<b>17.7%</b>	<b>20.7%</b>	<b>24.0%</b>
<b>Extremely Dissatisfied</b>	<b>6.7%</b>	<b>10.1%</b>	<b>8.7%</b>

**N = 590**

**Table III.15 - Alumni's Reported Changes in Attitude/Values**

Reported Increase	Very Much		Somewhat		No Change	
	#	%	#	%	#	%
Self-Confidence	501	81.2	87	14.1	20	3.2
Flexibility	330	53.5	220	35.7	50	8.1
Broadened Outlook	500	81.0	84	13.6	21	3.4
Self-Reliance	383	62.1	167	27.1	51	8.3
Openness to Different Views	405	65.6	160	25.9	36	5.8

N=617

**Table III-16: Percentage of Respondents Reporting High Levels of Changes in Attitude/Values by Field of Study**

Field of Study	Increased Self-Confidence	More Flexibility	Broadened Outlook	More Open to Different Views	Increased Self-Reliance
Agriculture	79.8%	50.6%	77.5%	60.2%	62.5%
Engineering	90.6%	57.8%	84.6%	72.3%	72.3%
Business Administration	84.6%	56.3%	84.1%	69.8%	67.7%
Education	83.1%	59.6%	89.5%	71.9%	68.4%
Economics	80.8%	59.6%	84.6%	59.6%	59.6%
Health	86.2%	51.7%	75.9%	69.0%	69.0%
Biology / Animal Science	82.0%	51.0%	90.0%	76.0%	57.1%
	N = 601	N = 594	N = 598	N = 594	N = 595

**Table III-17: Percentage of Respondents Reporting High Levels of Changes in Attitude/Values by Degree Type**

Type of Degree	Increased Self-Confidence	More Flexibility	Broadened Outlook	More Open to Different Views	Increased Self-Reliance
Bachelor's	86.2%	58.6%	83.3%	79.3%	66.7%
Master's	81.1%	54.1%	81.2%	65.1%	61.2%
Successive Master's & Ph.D.	88.8%	63.5%	90.8%	77.3%	72.4%
Ph.D.	181.6%	53.1%	86.9%	66.7%	67.7%
POSTAF	80.6%	42.4%	75.0%	61.1%	65.7%

N = 617

**Table III.18 - Alumni's Reported Changes in Work Skills/Style**

Work Skill/Style	Very Much		Somewhat		No Change	
	#	%	#	%	#	%
Delegate Responsibility More	246	39.9	229	37.1	109	17.7
More Team Work-Oriented	338	54.8	176	28.5	70	11.3
Better Management Skills	348	56.4	170	27.6	73	11.8
Better Organized	358	58.0	171	27.7	61	9.9
Better Management of Time	311	50.4	196	31.8	77	12.5
Better Problem-Solving Skills	383	62.1	164	26.6	37	6.0

**Table III-19: Percentage of Respondents Reporting High Levels of Changes in Work Skills or Style by Field of Study**

Workplace Change by Field of Study	Greater Delegation of Responsibility	More Team Work	Better Management Skills	Better Organized	Better Time Management	New Ways of Problem Solving
Agriculture	45.2%	58.3%	51.2%	58.1%	51.2%	59.8%
Engineering	39.1%	56.3%	48.4%	64.1%	68.8%	71.9%
Business Administration	45.2%	71.0%	87.3%	65.1%	62.3%	63.9%
Education	49.1%	66.7%	60.7%	53.7%	50.9%	69.1%
Biology / Animal Science	44.0%	55.1%	63.3%	66.0%	54.0%	70.0%
Health	44.8%	55.2%	62.1%	64.3%	58.6%	51.7%
Economics	43.1%	60.8%	64.7%	63.5%	45.1%	58.8%
	N = 578	N = 578	N = 584	N = 583	N = 577	N = 578

**Table III-20: Percentage of Respondents Reporting High Levels of Changes in Work Skills/Style by Degree Type**

Degree Type	Greater Delegation of Responsibility	More Team Work	Better Management Skills	Better Organized	Better Time Management	New Ways of Problem Solving
Bachelor's	48.1%	50.0%	78.6%	73.3%	71.4%	67.9%
Master's	42.8%	60.4%	60.6%	59.1%	51.6%	59.5%
Successive Master's & Ph.D.	40.0%	57.0%	58.8%	66.3%	56.3%	76.8%
Ph.D.	40.6%	55.3%	50.5%	63.5%	51.6%	78.9%
POSTAF	30.3%	51.5%	44.1%	65.7%	58.8%	72.7%

**N = 617**

**Table III-21a: Training Applicability to Local Home Conditions**

Degree of Applicability	#	%
Extremely Applicable	136	22.0
Very Applicable	313	50.7
Somewhat Applicable	138	22.4
Not Very Applicable	10	1.6
Not at All Applicable	7	1.1
No Response	13	2.1
<b>TOTAL</b>	<b>617</b>	<b>100.0</b>

**Table III-21b: Relationship of Practical Training to Training Applicability**

Practical Training	High	Medium	Low
No Practical Training	71.3%	25.2%	3.5%
<3 months	79.2%	20.0%	.8%
3-6 months	76.9%	20.9%	2.2%
7-12 months	81.8%	18.2%	0.0%
>12 months	83.3%	12.5%	4.2%

**Table III-22: Training Relevance to First Job**

Level of Relevance	#	%
Extremely Relevant	306	49.6
Very Relevant	198	32.1
Somewhat Relevant	65	10.5
Not Very Relevant	14	2.3
Not at All Relevant	13	2.1
N/A	11	1.8
No Response	10	1.6
<b>TOTAL</b>	<b>617</b>	<b>100.0</b>

**Table III-23: Training Relevance to Current Job**

<b>Level of Relevance</b>	<b>#</b>	<b>%</b>
<b>Extremely Relevant</b>	<b>175</b>	<b>28.4</b>
<b>Very Relevant</b>	<b>155</b>	<b>25.1</b>
<b>Somewhat Relevant</b>	<b>60</b>	<b>9.7</b>
<b>Not Very Relevant</b>	<b>13</b>	<b>2.1</b>
<b>Not at All Relevant</b>	<b>9</b>	<b>1.5</b>
<b>N/A</b>	<b>196</b>	<b>31.8</b>
<b>No Response</b>	<b>9</b>	<b>1.5</b>
<b>TOTAL</b>	<b>617</b>	<b>100.0</b>

**Table III-24: Reported Relevancy of AFGRAD Training to First Job by Sector**

<b>Employment Sector</b>	<b>High Relevant</b>	<b>Somewhat Relevant</b>	<b>Low Relevant</b>
<b>All Sectors</b>	<b>84.5%</b>	<b>11.0%</b>	<b>4.5%</b>
<b>Education</b>	<b>90.4%</b>	<b>6.4%</b>	<b>3.2%</b>
<b>Government</b>	<b>78.7%</b>	<b>13.9%</b>	<b>7.4%</b>
<b>Private Sector</b>	<b>72.0%</b>	<b>24.0%</b>	<b>4.0%</b>
<b>International Organizations</b>	<b>57.1%</b>	<b>28.6%</b>	<b>14.3%</b>
<b>NGOs</b>	<b>50.0%</b>	<b>50.0%</b>	<b>0%</b>

**N = 593**

**Table III-25: Reported Relevancy of AFGRAD Training to First Job by Field of Study**

<b>Field of Study</b>	<b>% Reporting Relevant</b>	<b>% Reporting Somewhat Relevant</b>	<b>% Reporting Not Relevant</b>
<b>All Fields</b>	<b>84.5</b>	<b>11.0</b>	<b>4.5</b>
<b>Agriculture</b>	<b>82</b>	<b>14</b>	<b>4</b>
<b>Engineering</b>	<b>76</b>	<b>16</b>	<b>8</b>
<b>Business Administration</b>	<b>85</b>	<b>13</b>	<b>2</b>
<b>Education</b>	<b>89</b>	<b>7</b>	<b>4</b>
<b>Economics</b>	<b>88</b>	<b>10</b>	<b>2</b>
<b>Biology / Animal Science</b>	<b>88</b>	<b>10</b>	<b>2</b>
<b>Health</b>	<b>70</b>	<b>15</b>	<b>15</b>
<b>Public Administration</b>	<b>70</b>	<b>18</b>	<b>11</b>

**N = 589**

**Table III-26: Reported Relevancy of AFGRAD Training to First Job by Type of Degree**

<b>Degree Category</b>	<b>High Relevance</b>	<b>Somewhat Relevant</b>	<b>Low Relevance</b>
<b>Bachelor's</b>	<b>72.7%</b>	<b>99.27%</b>	<b>0.73%</b>
<b>Master's</b>	<b>79.8%</b>	<b>99.20%</b>	<b>0.80%</b>
<b>Successive Master's &amp; Ph.D.</b>	<b>97.9%</b>	<b>99.02%</b>	<b>0.98%</b>
<b>Ph.D.</b>	<b>92.7%</b>	<b>99.07%</b>	<b>0.93%</b>
<b>POSTAF</b>	<b>94.4%</b>	<b>99.06%</b>	<b>0.94%</b>

**N = 593**

**Table III-27: Relevancy of AFGRAD Training to Current Job**

<b>Employment Sector</b>	<b>High Relevance</b>	<b>Somewhat Relevance</b>	<b>Low Relevance</b>
<b>All Sectors</b>	<b>80.1%</b>	<b>14.6%</b>	<b>5.3%</b>
<b>Education</b>	<b>90.6%</b>	<b>7.4%</b>	<b>2.0%</b>
<b>Government Service</b>	<b>71.0%</b>	<b>21.0%</b>	<b>8.0%</b>
<b>Private Sector</b>	<b>75.7%</b>	<b>18.6%</b>	<b>5.7%</b>
<b>International Organizations</b>	<b>79.5%</b>	<b>13.7%</b>	<b>6.8%</b>
<b>NGOs</b>	<b>70.6%</b>	<b>17.6%</b>	<b>11.8%</b>
<b>Other Sectors</b>	<b>87.5%</b>	<b>12.5%</b>	<b>0%</b>

**N = 412**

**\* For those who changed jobs after first.**

**Table III-28: Receptivity of Colleagues to New Ideas by Gender and by Sector of Employment**

	<b>Receptive</b>	<b>Somewhat Receptive</b>	<b>Not Receptive</b>
<b>All Respondents</b>	<b>73.4%</b>	<b>21.8%</b>	<b>4.8%</b>
<b>Male</b>	<b>74.3%</b>	<b>21.2%</b>	<b>4.5%</b>
<b>Female</b>	<b>67.8%</b>	<b>26.4%</b>	<b>5.7%</b>
<b>Education</b>	<b>75.0%</b>	<b>19.6%</b>	<b>5.4%</b>
<b>Government Service</b>	<b>71.2%</b>	<b>24.0%</b>	<b>4.8%</b>
<b>Private Sector</b>	<b>75.0%</b>	<b>17.6%</b>	<b>7.4%</b>
<b>International Organizations</b>	<b>66.7%</b>	<b>28.6%</b>	<b>4.7%</b>
<b>NGOs</b>	<b>70.6%</b>	<b>23.5%</b>	<b>5.9%</b>
<b>Other Sectors</b>	<b>81.3%</b>	<b>18.7%</b>	<b>0%</b>

N = 588 for Male/Female

N = 416 for Sectors

**Table III-29: Receptivity of Colleagues to New Ideas by Type of Degree**

<b>Type of Degree</b>	<b>Receptive</b>	<b>Somewhat</b>	<b>Not Receptive</b>
<b>Bachelor's</b>	<b>66.7%</b>	<b>26.7%</b>	<b>6.7%</b>
<b>Master's</b>	<b>71.5%</b>	<b>22.7%</b>	<b>5.8%</b>
<b>Successive Master's &amp; Ph.D.</b>	<b>76.6%</b>	<b>20.2%</b>	<b>3.2%</b>
<b>Ph.D.</b>	<b>76.3%</b>	<b>21.6%</b>	<b>2.1%</b>
<b>POSTAF</b>	<b>86.5%</b>	<b>10.8%</b>	<b>2.7%</b>

**Table III-30: Receptivity of Colleagues to New Ideas by Field of Study**

Field of Study	Receptive	Somewhat Receptive	Not Receptive
All Fields of Study	73.4%	21.8%	4.8%
Agriculture	78.6%	16.7%	4.7%
Engineering	67.2%	24.6%	8.2%
Business Administration	60.9%	31.3%	7.8%
Education	73.7%	24.6%	1.7%
Economics	76.5%	17.6%	5.9%
Biology / Animal Science	75.5%	18.4%	6.1%
Health	72.4%	24.1%	3.5%

N = 582

**Table III-31: Constraints to Using Training**

Lack of	#	%
Equipment and Supplies	419	67.9
Transportation for Travel	220	35.7
Funds or Resources	431	69.9
Qualified Staff	238	38.6
Support from Superiors	176	28.5
Books Journals	382	61.9
Too Many Administrative Duties	166	26.9
Bureaucratic Policies & Procedures	291	47.2
Travel Opportunities	326	52.8
Economic Rewards	291	47.2

N = 617

**Table III-32: Types of Constraints by Field of Study**

Field of Study	Lack of Funds	Lack of Equipment/Supplies	Lack of Journals/Books	Lack of Travel Opportunities
Agriculture	59.6%	48.3%	28.1%	28.1%
Engineering	61.9%	63.5%	44.4%	33.3%
Business Administration	36.9%	25.4%	25.4%	28.6%
Education	72.7%	56.4%	40.0%	38.2%
Economics	48.0%	46.0%	30.0%	24.0%
Biology / Animal Science	78.0%	60.0%	46.0%	22.0%
Health	48.3%	24.1%	31.0%	34.5%

N = 583

**Table III-33: Types of Constraints by AFGRAD Phase**

	Lack of Funds	Lack of Equipment/Supplies	Lack of Journals/Books
AFGRAD I	62.8%	54.8%	42.2%
AFGRAD II	58.4%	47.0%	28.9%
AFGRAD III	43.6%	44.3%	30.9%

N = 573

**Table III-34: Training Utilization**

Use of Knowledge and Skills	#	%
All	144	23.3
A lot	319	51.7
Some	116	18.8
A Little	22	3.6
None	9	1.5
NR	7	1.1
<b>TOTAL</b>	<b>617</b>	<b>100.0</b>

**Table III-35: Training Utilization by Field of Study**

Field of Study	Level of Utilization		
	High	Medium	Low
Agriculture	77%	19%	5%
Engineering	66%	33%	1%
Business Administration	75%	20%	5%
Education	78%	15%	7%
Economics	72%	22%	6%
Biology/Animal	68%	24%	8%
Health	83%	14%	3%
Public Administration	78%	11%	11%

N=602

**Table III-36: Skills and Knowledge Used by Sector**

Employment Sector	Level of Utilization		
	High	Medium	Low
Government	65.9%	27.8%	6.3%
Education	84.2%	15.8%	0.0%
Private Sector	70.8%	20.8%	8.4%
International Organizations	79.1%	16.3%	4.6%
NGO's	52.9%	29.4%	17.7%

**Table III-37: Amount of Skills and Knowledge Used by Project Phase**

Amount of Skills and Knowledge Used	AFGRAD I	AFGRAD II	AFGRAD III
High Level	80.7%	74.3%	67.1%
Some	14.4%	19.9%	27.6%
Low Level	4.9%	5.8%	5.3%

N = 593

**Table III-38: Relationship of Practical Training to Training Utilization**

<b>Practical Training Duration</b>	<b>High</b>	<b>Medium</b>	<b>Low</b>
<b>No Practical Training</b>	<b>73.4%</b>	<b>21.9%</b>	<b>4.6%</b>
<b>&lt;3 months</b>	<b>80.7%</b>	<b>15.1%</b>	<b>4.2%</b>
<b>3-6 months</b>	<b>76.9%</b>	<b>14.3%</b>	<b>8.8%</b>
<b>7-12 months</b>	<b>78.2%</b>	<b>17.4%</b>	<b>4.3%</b>
<b>&gt;12 months</b>	<b>79.1%</b>	<b>16.7%</b>	<b>4.2%</b>

**Table III-39: Most Valuable Skills Learned**  
**[3 Most Valuable in Order of Importance]**

<b>Skill Area</b>	<b>Most Valuable</b>	<b>2nd Most Valuable</b>	<b>3rd Most Valuable</b>	<b>Total</b>
<b>Management</b>	<b>98</b>	<b>102</b>	<b>70</b>	<b>270</b>
<b>Research</b>	<b>135</b>	<b>112</b>	<b>60</b>	<b>307</b>
<b>Technical</b>	<b>96</b>	<b>56</b>	<b>50</b>	<b>202</b>

**Table III-40: New Initiatives Undertaken Since Training**

<b>Initiative</b>	<b>#</b>	<b>%</b>
<b>Develop or Revise Policy</b>	<b>366</b>	<b>59.3</b>
<b>Improve or Change Procedures</b>	<b>337</b>	<b>54.6</b>
<b>Program Development</b>	<b>402</b>	<b>65.2</b>
<b>Improve Services or Product</b>	<b>241</b>	<b>39.1</b>
<b>New Techniques</b>	<b>317</b>	<b>51.4</b>
<b>Develop Extension Programs</b>	<b>190</b>	<b>30.8</b>
<b>Develop New Course</b>	<b>298</b>	<b>48.3</b>
<b>Revise Curriculum</b>	<b>281</b>	<b>45.5</b>
<b>Plan Workshop</b>	<b>351</b>	<b>56.9</b>
<b>New Equipment</b>	<b>212</b>	<b>34.4</b>
<b>Submitted Project Proposals</b>	<b>365</b>	<b>59.2</b>
<b>Served on Special Task Forces</b>	<b>386</b>	<b>62.6</b>

**N = 617**

**Table IV-1: Membership in Professional Organizations**

Field of Study	Home	Africa	U.S.	Elsewhere
All Fields of Study	63.2%	20.7%	39.0%	18.9%
Agriculture	64.8%	15.9%	48.9%	11.5%
Engineering	65.1%	7.9%	39.7%	14.5%
Business Administration	49.2%	14.5%	31.7%	14.5%
Education	62.1%	26.3%	30.4%	8.9%
Economics	52%	16.0%	26.0%	11.5%
Biology/Animal Science	75.5%	26.5%	43.4%	23.4%
Health	58.6%	20.7%	37.9%	17.9%
Computer Science	90.0%	30.0%	50.0%	10.0%
Medicine	92.3%	38.5%	23.1%	38.5%
	N = 608	N = 595	N = 590	N = 589

**Table IV-2: Networking Activities**

Type of Networking Activity	Frequency of Contact					
	Often		Sometimes		Rarely-Never	
	#	%	#	%	#	%
Professional Contact with AFGRAD Alumni	79	12.8	160	25.9	354	57.3
Social Contact with AFGRAD Alumni	117	19.0	217	35.2	262	42.4
Professional Contact with Others Trained in U.S.	191	31.0	200	32.4	198	32.1
Social Contact with Others Trained in U.S.	187	30.3	228	37.0	177	28.6
Collaborative Research with U.S. Professors or Other Students	19	3.1	58	9.4	518	83.9
Visited Prof. Contacts in the U.S.	29	4.7	84	13.6	478	77.4
Received Visits from U.S. Prof. Contacts	43	6.8	94	15.2	453	73.4
Corresponded with U.S. Prof./Students	51	8.3	183	29.7	365	59.2
Received Correspondence From U.S. Training Institute	174	28.2	196	31.8	230	37.3

**Table IV-3: Other Academic and Professional Activities**

<b>Type of Activity</b>	<b>#</b>	<b>%</b>
<b>Graduate Student Advisor</b>	<b>214</b>	<b>34.7</b>
<b>Undergraduate Student Advisor</b>	<b>236</b>	<b>38.2</b>
<b>Made Presentations at Domestic Conferences</b>	<b>379</b>	<b>61.4</b>
<b>Made Presentations at International Conferences</b>	<b>351</b>	<b>56.9</b>
<b>Participated in Research Activities</b>	<b>386</b>	<b>62.6</b>
<b>Published Article in Professional Journal</b>	<b>272</b>	<b>44.1</b>
<b>Published Book or Monography</b>	<b>142</b>	<b>23.0</b>
<b>Published Teaching Materials</b>	<b>159</b>	<b>25.8</b>

**Table V-1: Percentage of Male and Female Respondents by Field of Study**

<b>FIELD OF STUDY</b>	<b>Male</b>	<b>Female</b>
<b>Agriculture</b>	<b>83.1%</b>	<b>16.9%</b>
<b>Engineering</b>	<b>100.0%</b>	<b>0%</b>
<b>Business Administration</b>	<b>89.2%</b>	<b>10.8%</b>
<b>Education</b>	<b>78.0%</b>	<b>22.0%</b>
<b>Economics</b>	<b>100.0%</b>	<b>0%</b>
<b>Biology / Animal Sciences</b>	<b>92.2%</b>	<b>7.8%</b>
<b>Health</b>	<b>46.4%</b>	<b>53.6%</b>

**N = 606**

**Table V-2: High Levels of Personal Changes by Gender**

<b>Gender</b>	<b>Increased Self-Confidence</b>	<b>More Flexibility</b>	<b>Broadened Outlook</b>	<b>More Open to Different Views</b>	<b>Increased Self-Reliance</b>
<b>All Respondents</b>	<b>82.3%</b>	<b>55.0%</b>	<b>82.8%</b>	<b>67.3%</b>	<b>63.6%</b>
<b>Female</b>	<b>75.8%</b>	<b>48.9%</b>	<b>79.1%</b>	<b>66.3%</b>	<b>60.0%</b>
<b>Male</b>	<b>83.2%</b>	<b>56.1%</b>	<b>83.4%</b>	<b>67.5%</b>	<b>64.2%</b>
	<b>N = 606</b>	<b>N = 598</b>	<b>N = 603</b>	<b>N = 599</b>	<b>N = 599</b>

**Table V-3: High Levels of Workplace Changes by Gender**

	<b>Greater Delegation of Responsibility</b>	<b>More Team Work</b>	<b>Better Management Skills</b>	<b>Better Organized</b>	<b>Better Time Management</b>	<b>New Ways of Problem Solving</b>
<b>All Respondents</b>	<b>42.3%</b>	<b>58.1%</b>	<b>58.9%</b>	<b>60.9%</b>	<b>53.4%</b>	<b>65.8%</b>
<b>Female</b>	<b>43.8%</b>	<b>52.8%</b>	<b>58.0%</b>	<b>53.4%</b>	<b>53.4%</b>	<b>62.1%</b>
<b>Male</b>	<b>42.0%</b>	<b>58.9%</b>	<b>59.1%</b>	<b>62.2%</b>	<b>53.4%</b>	<b>66.5%</b>
	<b>N = 582</b>	<b>N = 582</b>	<b>N = 589</b>	<b>N = 588</b>	<b>N = 582</b>	<b>N = 582</b>

## **ANNEX 9**

# **AFGRAD III EVALUATION SUMMARY OF FOUR COUNTRY VISITS**

## ANNEX 9

### AFGRAD III EVALUATION SUMMARY OF FOUR COUNTRY VISITS

#### TRIP OVERVIEW

Site visits to four countries were made to interview AFGRAD alumni, supervisors, and host country and USAID officials in connection with this evaluation. The organization of the evaluation teams was as follows:

Drew Lent and Barbara Howald traveled to: Madagascar from Sept. 20 through 30, and Mali from Oct. 2 through 14.

Roberta Warren and Tom Moser traveled to: Uganda from Sept. 28 through Oct. 5, and Ghana from Oct. 7 through 16.

Focus group or individual interviews were held with 105 AFGRAD alumni. The focus group attendees were grouped by nature of degree, field of study or gender. The teams conducted the in-country interviews in very little time, and their productivity was enhanced by the careful preparations made by the USAID/Uganda Training Officer and by the AAI representatives in the other three countries.

#### INTERVIEWS CONDUCTED

<b>COUNTRY</b>	<b>Total Interviews</b>	<b>Number of AFGRAD Alumni Interviewed</b>	<b>Number of AFGRAD Alumni Interviewed in FOCUS GROUPS</b>	<b>Number of AFGRAD Alumni Interviewed INDIVIDUALLY</b>
<b>Ghana</b>	<b>55</b>	<b>40</b>	<b>31</b>	<b>4</b>
<b>Madagascar</b>	<b>28</b>	<b>20</b>	<b>12</b>	<b>11</b>
<b>Mali</b>	<b>32</b>	<b>27</b>	<b>20</b>	<b>12</b>
<b>Uganda</b>	<b>31</b>	<b>18</b>	<b>17</b>	<b>4</b>

#### NOTABLE EXAMPLES OF IMPACT FROM GHANA

1. At the University of Ghana, AFGRAD alumni have been instrumental in adopting the U.S. style semester and course module system as well as new teaching methods, such as case study technique. In addition to the acquisition of technical skills, respondents frequently mentioned changes in their work style and attitude. These enhanced capacities include: improved "work ethic", better time management, increased analytical skills and problemsolving approach, greater concern for productivity, and an increase in self-confidence. It is significant to note that these same affective changes were cited frequently in each of the four countries visited.

In higher education, the small percentage of U.S.-trained professors (5% of the whole) comprises a critical mass within the three major universities in Ghana. The U.S.-trained faculty have been able to institute changes in classroom pedagogy and institutional management which constitute an important departure from the traditionally British approach.

2. In the private sector, one AFGRAD alumnus has introduced a work scheduling and reporting system that has increased his company's efficiency. Another alumnus has put into place an adaptive control system that will improve the manufacturing sector's performance. Three of the major civil engineering operations in Ghana are run by AFGRAD alumni and these professionals serve as leaders in their field.
3. In the public sector, an alumnus who is of a major governmental department cites that his U.S. education has allowed him to reorganize his organization and set up training and reporting systems that have helped his unit meet its goals.
4. After returning to Ghana, one alumnus, a civil servant, was able to establish a large private agribusiness -- a 90,000 layer poultry farm which is the second largest in the country.

#### **NOTABLE EXAMPLES OF IMPACT FROM MADAGASCAR**

1. At the *Mole Normals Superieure* (ENS - the National Teacher's Training School), AFGRAD alumni make up the majority of the two science faculties and their impact has been remarkable in terms of the quality of the curriculum and the teaching methods used. A multiplier effect has been noted there due to the fact that ENS trains all the high school science teachers for the entire country, and these U.S.-inspired methods and curriculum have now become a standard.

The example of AFGRAD professors at ENS has motivated a "second generation" of AFGRAD alumni in the sciences, who are now returning to teach at ENS.

The internal management of the two science departments also was praised. According to the last two directors of the school, prior to the arrival of the U.S.-trained team, the department was impossible to manage while now it is a model for ENS as well as the larger university system.

2. AFGRAD returnees have also created new and valuable local institutions. The newly opened ESSTIM (*Ecole Superieure den Sciences Techniques d'Informatique et de Management*), founded by an AFGRAD PhD in Computer Science, offers private technical engineering degrees. It currently has 42 students in the five-year *Informatique de Gestion* program, and in 1994 will add degree programs in software development and hardware maintenance. This will create a total enrollment of 140 students.

3. Another AFGRAD alumnus has been instrumental in providing U.S.-style management skills training at IMATEP (*Institute Malgache Des Techniques de Planification*), an institution which provides virtually all the available training in planning skills in Madagascar. This includes training members of the military in planning techniques. This internationally recognized organization has also trained visiting professionals from all over francophone Africa.
4. A third example of institutional impact is INSCAE, a quasi-government training organization, which has evolved into a private business and is highly regarded by the private sector. An AFGRAD alumnus is currently in charge of all computer instruction and has been instrumental in the development of the revenue-generating computer center to be opened within the next year.
5. In environmental conservation, AFGRAD alumni have made significant contributions to Madagascar. This has included the reorganization and improvement of the national park system, the establishment of a National Environmental Protection Plan, and the development of important linkages with international universities and conservation institutions.

#### **NOTABLE EXAMPLES OF IMPACT FROM MALI**

1. AFGRAD alumni have made a variety of small but significant contributions and technical innovations in their professions. These include:
  - a. Introduction and dissemination of American approaches and techniques in animal epidemiology via a decentralized government extension service;
  - b. Development of the commercial livestock sector by setting up modern slaughterhouses, creation of an adapted cattle and meat quality classification system, establishment of improved methods of cattle fattening and introduction of range management techniques;
  - c. Enhancement of local poultry production through the introduction of regular vaccination practices and the improvement of feed formulas, which are now in commercial exploitation;
  - d. Liberalization of the external trade mechanisms such as the improved foreign exchange system, and abolition of export taxes, foreign currency import quotes, and commodity price controls; and
  - e. Introduction and dissemination of improved accounting and management systems for cooperatives served by the government's cooperative extension service.
2. Improvement of the English and economics curricula at the National Teachers Training School (ENSUP). In the English department, the innovations have included improved language teaching methods and the establishment of regular professional seminars for the faculty. The

U.S.-inspired content and methods have been disseminated by ENSup graduates who teach in Malian high schools.

3. In the private sector, one AFGRAD alumnus contributed to the start-up of a business assistance service for small and medium enterprises. The regional office that he now directs also arranges small loans averaging a total of 5.5 million CFA per year.
4. In several cases, alumni reported that their English language fluency turned out to be an unexpected benefit from their AFGRAD education. This has meant for them access to promotions and further training, additional income from teaching and interpreting, and invaluable use of state-of-the-art technical resources (most often published in English).

### **NOTABLE EXAMPLES OF IMPACT FROM UGANDA**

1. At the Central Bank of Uganda there exists a significant critical mass of well-placed AFGRAD alumni who are making important contributions to the national economy. The innovations and impacts include:
  - a. A sophisticated computerized econometric monetary policy monitoring system; and
  - b. Dissemination of improved management skills and analytical approaches to problem-solving within Bank operations.

The improved performance of the Bank directly extends to the overall monetary and financial well-being of the banking sector and the welfare of the nation at large. Since these changes have been instigated, inflation has been reduced from triple-digit percentages in 1990 to virtually zero and, after two decades of government mismanagement, economic growth has been spurred.

2. An AFGRAD alumnus chaired a National Commission which prepared an exhaustive three-year technical research study, investigating the East African Community Compensation Fund, which documented the siphoning of approximately \$40 million through collusion by high-placed officials in Uganda and Kenya.
3. At a principal Ugandan parastatal, one AFGRAD alumnus has been responsible for the introduction and institutionalization of a personnel performance evaluation system, based on objective criteria, used to determine promotions and pay increases. This served as a "first" and as a model for other organizations.
4. At the Agriculture and Forestry Faculty at Makerere, 80 percent of the faculty have received at least one degree in the U.S. Their impact on the institution's program has been dramatic. The faculty has adopted U.S.-style innovations in many aspects including the examination procedures, flexibility in student's course selection, and adoption of the semester system.

5. Another alumnus with a degree in virology has been instrumental in introducing improved systematic laboratory procedures and in the development of research on the connections between hepatitis B and the AIDS viruses.

## **ANNEX 10**

# **LIST OF PROFESSIONAL AND CIVIC ASSOCIATIONS**

**ANNEX 10**

**Benin**

**Men**

<b>Professional</b>	<b>Civic</b>
-Travel and Tourism Research Association	-Alumni Association of Coulibaly Grammar School -AID Association to Unemployed
-AID Association to Unemployed -Agronomists Association of Benin -Benin Association of Translators	
-American Society of Agronomy -Soil Science Society of America	

**Botswana**

**Women**

<b>Professional</b>	<b>Civic</b>
-Botswana Educational Research Association -Botswana Environmental Education Programme -National Geography Association of Botswana -African Studies Programme -The National Council for the Social Studies	-Environmental Education Awareness Campaign
	-AIDS Action Trust
-Nurses Association of Botswana -East Central and Southern African College of Nursing (ECSACON) -Botswana Nursing Council	-Botswana Council of Women -Association of Women in Development (AWID)
-Breastfeeding Promotion Group -East Central Africa Food/Nutrition Specialist Committee	-Village Development Committee
-Entomological Society of America	
	-Seventh Day Adventist Church (Family Life Program)
	-Ngwao Bosua

**Men**

<b>Professional</b>	<b>Civic</b>
	-University of Botswana Alumni Association
-British Computer Society	-Northside Primary School PTA
-Botswana Civil Service Association	-Thornhill Primary School -Baitlotli Community Junior Secondary School -National AIDS Committee
-ICOM -SADC Association of Museums	
-The American Anthropological Association	-Kopung Burial Society -Black Peril Football Club -United Congregational Church of Southern Africa -Maunatlata Tlhabologo Youth Movement
	-Community Junior Secondary School Board

**Burkina Faso****Men**

<b>Professional</b>	<b>Civic</b>
-SID -CIKARD -International Society of Sociology -African Studies	
-Design team of the American Language Center in Ouagadougou, Burkina Faso	
-Burkina Management Association	-ARSO (Association for the Development of a Village- SONGNABA) -General Secretary
-National Association of Teachers of English -National Literacy Commission	

-Association des Liguists u Zaire -Association du Personnel de l'Oua -Linguistics Newsletter of the University of Illinois -North Kivu Farmers' Association	
-Sous-commission Nationale du moore -West African Linguistic Society	
-AECT (Association for Education Communications & Technologies) -ASTD(American Society for Training & Development) -APIB(Association des Professionels de l'Informatique du Burkina)	-Consumer's Organisation -Regional Development Association
-Association Scientifique du Burkina -Association Francophone & Education Comparée -Society for International Development (Italy) -Association Burkinabe de Sociologie (Ouagadougou)	
-Association of American Black Universities -Association des Professionels de l'Education (Burkina Faso)	-National Federation of Taekwondo -National Olympic Committee
-CEDRES -FRADERSA	
-Association of Environmental Saving (ABUSE) -Organisation of Forester Economic based in Bamako	-ABUSE

### Burundi

#### Men

Professional	Civic
-National Association for Small Ruminants Research Programme -National Network for Animal Nutrition -National Network for Great Ruminants Development	-Burundese Human Rights League
-Conseil de L'Ordre des Médecins	
-Public Auditor -Burundi International Transport Association -Parastatals	-RADDES (Political Party)
-Burundi-American Friendship Association -American Assoc. of Agricultural Economists	

	-Community High School Committee
-Beat (Bureau d'Etudes en Adduction et Techniques de Construction) -ASME (American Society of Mechanical Engineering)	
-Burundi-American Friendship Association	
-American Economic Association -Omicron Delta Epsilon	-Amicale de Kayokone -Burundi-American Friendship Association

**Cameroon**

**Women**

<b>Professional</b>	<b>Civic</b>
-Teacher Union of Higher Education -MAU (Mathematical African Union) -SIAM of Computer Machinery	
-Association of Education for World Peace -Association of Educational Administrators and Planners of Nigeria	-Catholic Women Association -Creative Women's Group
	-ADPM (Association de Développement des Pays de Mpangala)
	-Ejagha Women's Group -Mamyu Women's Cooperative -PSS Besonggabang Ex-Students Union -Ex-AFGRAD Graduates
	-Forum Universitaire Chrétien -Femmes Camerounaises en Science
-ELTA (English Language Teachers' Association of Cameroon) -TESOL. INTER. INC (Alexandria, Virginia) -CTA (Cameroon Teachers' Association)	-Cameroon Womens' Networking Association -Noni Women's Development Association -St. Augustine's Ex-Students Association -Catholic Women's Association
	-Local Choir -Women's Groups

**Men**

Professional	Civic
<ul style="list-style-type: none"> <li>-African Association for Public Administration &amp; Management</li> <li>-African Economists Assoc.</li> <li>-British Institute of Management (BIM)</li> </ul>	<ul style="list-style-type: none"> <li>-Mbengwi Elements Development Association (MEDA)-NGO</li> </ul>
<ul style="list-style-type: none"> <li>-Bioscience Society of Cameroon</li> <li>-SAFGRAD &amp; CORAF (maize research networks)</li> <li>-Creps Science Society &amp; American Genetics Association</li> <li>-International Network for the Improvement of Planting</li> </ul>	
<ul style="list-style-type: none"> <li>-Forestry Society of Cameroon</li> <li>-Tanzania Conservation Society</li> </ul>	
<ul style="list-style-type: none"> <li>-AERA</li> </ul>	<ul style="list-style-type: none"> <li>-Village Development Committee</li> <li>-Alumni Association St. Domonique</li> </ul>
<ul style="list-style-type: none"> <li>-Engineers Association</li> <li>-Economics Association</li> <li>-NYU Alumni</li> <li>-Former Residents International House Association</li> </ul>	
<ul style="list-style-type: none"> <li>-IEEE (New York)</li> <li>-Cameroon Society of Engineers</li> <li>-Cameroon Society of Biomedical Professionals</li> </ul>	<ul style="list-style-type: none"> <li>-ESU Development Committee</li> <li>-AFGRAD-ATLAS Alumni Association (Cameroon)</li> </ul>
<ul style="list-style-type: none"> <li>-Association of Biologists</li> <li>-American Animal Sciences Society</li> <li>-Harvard Alumni</li> </ul>	<ul style="list-style-type: none"> <li>-Environment Protection Association</li> </ul>
<ul style="list-style-type: none"> <li>-SNI Executives Association</li> <li>-African Development Finance Institutions</li> <li>-American Management Association</li> </ul>	<ul style="list-style-type: none"> <li>-Village Development</li> </ul>
<ul style="list-style-type: none"> <li>-Cameroon Order of Pharmacists</li> <li>-Union of African Association of Pharmacology</li> <li>-West African Association of Pharmacology</li> <li>-African Academy of Sciences</li> <li>-Rho Chi</li> <li>-Sig Max</li> <li>-American Pharmaceutical Association</li> </ul>	<ul style="list-style-type: none"> <li>-Faith Baptist Church</li> </ul>

-British Institute of Management -Kilcary Development Association -Sasse Old Boys Association	
-Beta Chapter of Colorado -Honor Society in Economics -Alumni Association of the University of Arizona	-NKO Development Authority
-IUSSP -UAPS -Cameroon Medical Association -RSTM & H -MFPH Medical -Internal Epidemiological Association -ICCIDD -IPPF-CAMNAFACO -SYNES	-NGO Cultural Association -Lamso Choir -English Choir And Youth Group -Sassy Old Boys Association
-Cameroon Academy of Sciences -Cameroon Bio-Sciences Society	
-Bureau Africain des Sciences de l'Education	-MCDDI (political party whose role is education)
-Club 77 -Club Finance International	-Village Development Committee -Regional Development Committee -S & I Financial Association
-Cameroon Bio-Science Society -American Society of Animal Science -Cattle Research Network	-Evangelical Lutheran Church -Lions Club
-Olympus International -Mt. Febe Jogging Club -AFGRAD	
-Cameroon Science Academy -African Political Science Association -African Studies Association -American Studies Association -Professors World Peace Academy -Société de Tocqueville	-Village Development Committee
-American Meteorological Societe	

-The American Economic Association -Project Management Institute	
-Cameroon National Order of Doctors -Society of Obstetricians and Gynecologists	-Cameroon National Association for Family Welfare -Lions Club
	-Lions Club International
	-Family Association
-Cameroon Bio-Sciences Society -Livestock Systems Research Society (CORAF) -American Dairy Science Association	
	-Church Alumni Association -Tutor (English & Math) -Development Association
-Cameroon Bioscience Society -American Society of Animal Sciences -Animal Biotechnological Network -African Cattle, Meat and Milk Network	-PTA -Village Water Management Committee
-GRESIF -UREF -ASAA -HRD (Washington)	-Association de Développement du Pool
-National Geographic Society -Professors' World Peace Academy -International Society for Teachers Education (ISTE)	-Alou Cultural and Development Association
-National Association of Cameroonian Veterinarians -American Society of Tropical Medicine -Society of Microbiology	-Church -Wimbum Cultural Association
-Bankers Association of Cameroon	-Traditional Society (Ngwerong) -BONGNAVTI (Cultural Association)
-TESOL (US) -IATEFL (Britain) -Cameroon Teachers of English -Cameroon Linguistic Association	-St. Joseph School Board -Ashong Development Association

-Association of Engineers	
	-Muaku Cultural Development Association -Bangeum Cultural Development Association -Public Works Football Association -Boy Scouts -Southwest Province Choral Association
-Cameroon Veterinary Association	-Bamenda-Nkwe Cultural Association -Northwest Cultural Association
-Association of Engineers -ORSA (Operations Research Society of America)	-Development Committee of NGOUSSO

**Cape Verde**

**Men**

<b>Professional</b>	<b>Civic</b>
-Association of Designers and Architects -International Association of Engineers -Alumni Association of IST	
	-Montanha Magazine

**Central Africa Republic**

**Men**

<b>Professional</b>	<b>Civic</b>
-Réseau de Recherche sur la Résistance à la Sécheresse -Conférence des Responsables de Recherche Agronomique Africains -American Agricultural Economics Association	
-Association of American Forester -Buletin Periodique des Statistiques	-Quarter Committee -Jehovah's Witness Congregation
-The American Society of Civil Engineers (ASCE) -Sociedad de Ingenieros (New Mexico State University)	-The North American's Universities Alumnus in C.A.R. -A Voluntary Group
-Association des Anciens Etudiants de Gestion de l'Université de Bangui -North American Universities Alumni Association (C.A.R.)	
-Forest Products Research Society (USA) -Steering Committee of the 6th International Chemistry Conference in Africa (ICCA)	
-ITE Institute of Transportation Engineers	
-CAR's Economists Body	
	-Organisation for Road Repair
-Cowpea Network at African Unity Organisation (SAFGRAD) -Cotton Network in CAR	
-U.S. University Alumni Society of American Foresters	

**Chad**

**Men**

<b>Professional</b>	<b>Civic</b>
-American Meteorological Society	
	-Church Board -National Children Evangelical Fellowship

**Comoros Island**

**Men**

Professional	Civic
	-Ulamga Environment Association
-TESOL Association (Teachers of English to Speakers of Other Languages Association)	-Cultural and Educational Association -Solidarity Movement of Mirontsians living in Moroni

**Congo**

**Men**

Professional	Civic
-International Reading Association -Association for Supervision and Curriculum Development -Association of Congolese Inventors -Association of Congolese Educators	-Kikongo Language Committee
-Teachers' Organisation	

**Cote d'Ivoire**

**Women**

Professional	Civic
-Union des Ingénieurs Agronomes -Association des Cadres Catholiques -Amicale des Anciens du CEFEB	
-U.S.-Alumni -Association des Sciences Agronomiques -Uniagro -Entomological Society of America -Anciennes du Lycée Providence de Rouen, France	-Association des Jeunes Chrétiens Protestants Methodistes de Yop-Kouté
	-Réseau d'Education Nutritionnelle (REMA) à Lomé

**Men**

Professional	Civic
<ul style="list-style-type: none"> <li>-Association des Ingenieurs Agronomes de Cote d'Ivoire</li> <li>-World Ecology Association Notre Planète Terre</li> </ul>	<ul style="list-style-type: none"> <li>-MURA(Mutuelle des ressortissants d'Adjouan) (Comité de Reflexion)</li> </ul>
<ul style="list-style-type: none"> <li>-Cote d'Ivoire Engineers and Technicians Association</li> <li>-ENSTP</li> <li>-Engineers and Technicians Association</li> <li>-Syndicat of Public Workers</li> </ul>	
<ul style="list-style-type: none"> <li>-Ivorian Agronomists Association</li> <li>-Green Cross of Cote d'Ivoire</li> <li>-American Mgmt Association</li> </ul>	<ul style="list-style-type: none"> <li>-ABY Young Farmers Association</li> </ul>
<ul style="list-style-type: none"> <li>American Water Work Association (AWWA)</li> </ul>	<ul style="list-style-type: none"> <li>-NGO (Dealing with Urban Pollution)</li> <li>-Communes d'Afrique</li> </ul>
<ul style="list-style-type: none"> <li>-ITB</li> <li>-Conservatoire des Arts et Métiers (France)</li> </ul>	<ul style="list-style-type: none"> <li>-Town Council of Dabakala</li> </ul>
<ul style="list-style-type: none"> <li>-Ivorian Agronomy Society</li> <li>-ASA</li> <li>-CSSA (U.S.)</li> </ul>	
	<ul style="list-style-type: none"> <li>-Church Choral</li> </ul>
<ul style="list-style-type: none"> <li>-APICI(Association Professionnelle des Informations de Cote d'Ivoire)</li> <li>-UAPI ( Union Africaine des Professionels de l'Informatique)</li> </ul>	<ul style="list-style-type: none"> <li>-Mutuelle de la Bagoé</li> </ul>
<ul style="list-style-type: none"> <li>-ASCE</li> <li>-AUPELF/UREF Association des Ponts et Chaussées</li> <li>-Alumni of University of Illinois</li> </ul>	<ul style="list-style-type: none"> <li>-Jaycees</li> </ul>
<ul style="list-style-type: none"> <li>-British Businessman's Association</li> </ul>	
<ul style="list-style-type: none"> <li>-Association Ivoirienne des Sciences Agronomiques (AISA)</li> <li>-American Society of Agronomy</li> <li>-Crop Science Society of America</li> </ul>	<ul style="list-style-type: none"> <li>-Union des Jeunes de Mbribo</li> </ul>
<ul style="list-style-type: none"> <li>-The American Chamber of Commerce</li> </ul>	
<ul style="list-style-type: none"> <li>-The Ivorian Agriculturalists Association(Cote d'Ivoire)</li> <li>-The American Agricultural Economic Association (USA)</li> </ul>	

-Entomological Society of Cote d'Ivoire -Ivorian Association of Agronomic Science -The Association of Agronomic Engineers of Cote d'Ivoire -The Scientific Committee of The African Oil Palm Development Association	-Regional Association of Development
-AGERA(Association of Exploration Geophysics in Africa)	
-Association Ivoirienne pour le Developpement Educatif	
-Syndicat des Industriels -American Chamber of Commerce -Groupement de l'ingenieuriet des Machines Informatiques (GIMI) -APICI (Association Professionnel des Informaticiens de Cote d'Ivoire)	-Rotatry Club Riviera
-Sigma Xi -American Water Works Association -Association des Sciences de l'Eau -Association of African Consultants	
-OIC (Cote d'Ivoire)	-Stratégies & Finances -Association of Fellows (from native village) -Tiebissou Conseil Municipal

**Djibouti**

**Men**

Professional	Civic
-Association of Arid and Semi Arid Land Studies	

**Ethiopia**

**Women**

Professional	Civic
-Ethiopian Teachers Association -University Teachers Association -USDESA	-Foundation of Christ

**Men**

Professional	Civic
-Chemical Society of Ethiopia -Natural Projects Research Network for East and Central Africa -American Society of Pharmacognosy	
-African Council on Communication Education (ACCE), Nairobi Kenya -Family Guidance Association of Ethiopia (FGAE) -Ethiopian Teachers Association (ETA)	
-Geological Society of America -Tennessee Academy of Science -Association of Geologists for International Development -American Geophysical Union	
	-Eritreans for Peace and Democracy (EPD) -Eritreans Relief Committee (ERC) -United Campus Ministry
-Association of Ethiopian Engineers and Architects -American Society of Civil Engineers	
-African Association for Public Administration and Management -Kappa Sigma Chi -Ethiopian Statistical Association	
-American Association of Pharmaceutical Scientists -Swedish Pharmaceutical Society -European Pharmaceutical Society	-Humanitarian Organisation (Sweden)

-American Chemical Society (ACS) -Association of American Pharmaceutical Scientists (AAPS) -American Society of Mass Spectrometry (ASMS)	
-African Academy of Science (Nairobi, Kenya)	
-Ethiopian Statistics Association -Ethiopian Economics Association -African Statistics Association -Eastern and Southern Africa Economic Association -Population Association of America -International Association of Survey Statisticians	-Parents Committee, M.H.M. Junior Secondary School -Local Neighbourhood Association
	-Urban League -Commission of Human Relations
-American Society of Metals	
-Ethiopian Association for Seismology and Earthquake Engineering -Ethiopian Association of Engineers and Architects (EAEA)	
-The Ethiopian Family Guidance Association -Ethiopian YMCA	
-Ethiopian Association of Engineers and Architects -African Association of Science Editors -American Society of Civil Engineers -Internastional Association of Structural and Bridge Engineers	
-Pan African Institute for Development (Cameroon)	-Red Cross -Church -Kebele
-American Planning Association -Regional Science Association -African Studies Association -Global Awareness	-Greenville Board of Adjustments -Greenville Greenways Committee
-American Association of Mechanical Engineers	

**Ghana**

**Women**

Professional	Civic
-Ghana Science Association -Ghana Biochemical Society -Association for Women in Science and Technology (WIST) -African Conference on the Biochemistry of Lipids (ACBL)	
-Ghana Society of Animal Production -Ghana Animal Science Association -Ghana Science Association	
-AACD -Chi Sigma Iota	-Teen Mothers Council -Ghana Association on Human Needs
-Ghana Institute of Nutrition and Food Technology -Institute of Food Technologists (U.S.) -Chemical Society of Ghana	-Soroptimist International Club of Accra (ghana) and of Cotonou (Benin)
-Ghana Science Association -West African Science Association -Ghana Biochemical Society -American Association for the Advancement of Science (AAAS)	
	-Afgrad Alumnus Association -Mental Health Association

**Men**

Professional	Civic
-Ghana National Association of Teachers -Rural Sociological Society (U.S.)	
	-Village Development Committee
-Ghana Science Association	
-Institute of Chartered Accountants	-Tuifo/Hemang/Tower Denkyira District

-Ghana Institute of Engineers	
-Ghana Institute of Engineers -Professional Engineers (USA) -American Society of Civic Engineers	-Scripture Union
-American Association of Cost Engineers -American Institute of Industrial Engineers	
-Soil Science Society of Ghana -Ghana Science Association -Agricultural Society of Ghana	-Parent-Teacher Association (University Primary School) -Presbyterian Church Youth Association (Agbozume)
-Ghana Sociological Association -American Sociological Association -University Teachers Association of Ghana	-Old Age Center -Amnesty International
-Ghana Science Association -Ghana Assn of Crustacean Biologists	
-Ghana Geographical Association -Nigerian Geographical Association -Historical Assoc. of Ghana	-Central Region Development Company (Ghana)
	-Church Development Committee
-Union of Academic Staff,University of Cape Coast -Historical Society of Ghana	-Gideons International Association -University Residents Church -Presbyterian Church of Ghana
-Agricultural Society of Ghana	
-Institute for Engineers -Ghana Consulting Engineers Association	-Church
-Geological Society of Ghana -Geological Society of America -American Geophysical Union -Agency for International Development -Council for Undergraduate Research	-Presbyterian Church

-Association of Ghana Agriculturists -Ghana Historical Society	-Bible Study & Prayer Fellowship of Evangelical Presbyterian Church of Ghana -Church In Kumasi
-Ghana Veterinary Medical Association -Ghana Public Health Association -Pan-African Veterinary -Medical Association -Commonwealth Veterinary Medical Assn	
-Ghana Science Association	-Hill Club Development of Logba Tota -Church Singing Group
-Ghana Institution of Engineers	
-Ghana Society of Animal Production -Ghana Animal Science Association -Poultry Science Association (US)	
-Institute of Engineers -Commonwealth Institute of Engineers -American Society of Civil Engineers -British Institute of Structural Engineers	-Church
-Historical Society of Ghana -National Council on Black Studies -History Teachers Association of Ghana	-Scripture Union -Ghana Fellowship of Evangelical Students
-Economics Teachers Association of Ghana	
-Consulting Assn of Nigeria	-EGMBFI
-Ghana Animal Science Association -Agricultural Society of Ghana -Ghana Society of Animal Production	-Youth Association: "The Group" for Development
-Linguistics Circle of Accra -West African Linguistics Society -African Language Teachers Association -Association of University English Teachers of South Africa	
-Ghana Chemical Society -Royal Society of Chemistry	

-Agricultural Society of Ghana -Royal Agriculture Society of the Commonwealth	-Committee on Churches Participation in Development -Ghana Presbyterian Church Committee on Agriculture and Rural Development
-Ghana Association of Visual Artists (GAVA) -Royal Society of Arts (London) (FRSA) -International Society of Education through Art (NSEA) -Artists Alliance, Accra (AA)	-Full Gospel Businessmen's Fellowship International
-Ghana Manufacturers Association -Ghana Hotels Association	-Aditor Development Association
-Ghana Biochemistry/Science/ Pharmaceutical -West African Science/Pharm./Third World Academy of Science -New York Academy of Science	-Voluntary Group in Presbyterian Church (Welfare of Sick and Needy in Society)
-Ghana Academy of Arts and Sciences -Inter-African Council for Philosophy -Council for Research in Values and Philosophy (USA) -Dutch-Flemish Association for Inter-Cultural Philosophy (Holland)	-Rotary Club of Achimota -Church
-Ghana Association of Engineers	
-Ghana Society of Animal Production -Ghana Animal Science Association -British Society of Animal Production	
-Ghana Association of University Administrators	
-Ghana Institution of Engineers	-E.P. Church of Ghana Bible Study and Prayer Fellowship -E.P. Church of Ghana, Amakom Parish -Ghana Empretec Forum
-AAPAM -Ghana Institute of Management	-Akwatia Urban Council
-Ghana Institution of Engineers	
-Ghana Institute of Food Technologists -International Association of Milk, Food and Environmental Sanitarians	-Dansoman Residents Association
-Ghana Institution of Engineers	-Labadi Development Association

-Ghana Science Association -Association for Environmental Control	-Fire Fighter
-Ghana Institution of Surveyors (GIS) -American Society for Photogrammetry and Remote Sensing (ASPRS)	
-Training And Development(UK) -Ghana Science Association	-Mpraessoman Kuo-Development of Mpraeso Town
	-Lighthouse Preparatory School
-IEEE	
-Ghana Research Association for Development of Education -Internation Council of Psychologists -International Roundtable for the Advancement of Counselling -ACES -National Vocational Guidance Association -American Association for Counselling and Development	-Ghana Mental Health Association
-Institute of Food Technologies (USA) -Ghana Institute of Nutrition and Food Technologies -The Scientific Research Society (USA)	
-Ghana Science Association - Institute of Electrical and Electronics Engineers	
-Ghaa Veterinary Medical Association	
-Ghana Science Association -West African Science Association -African Assoc. Insect Scientists (AAIS)	-Friends of the Earth (Ghana) -Central Adentan Resident Association -Network of Environmental NGOs
-Ghana Science Association -Ecological Society of America -Society for Intl Development (Italy)	
-African Studies Association -National Council of Black Studies -NYS African Studies Association -AAG	-Black Arts Festival -NYS African Studies Association

-Ghana Association of Consultants -Federation of African Consultants Based in Abidjan	-Friends of the Earth
	-Ghana-Canada Society
-Ghana Association of French Teachers -Nigerian Association of Translators and Interpreters	
-Ghana Institute of Planners -Chartered Institute of Transport	

**Guinea Bissau**

**Men**

<b>Professional</b>	<b>Civic</b>
-Association dos Armadores de Pesca	
	-AD (action for Development)

**Guinea Conakry**

**Women**

<b>Professional</b>	<b>Civic</b>
-Alumni Association (4A Guinee)	
-Ordre des Pediatres Guinéens -Ordre National des Médecins -Syndicat Libre des Travailleurs de la Santé	
-International Committee for Studies on Bauxite	

**Men**

<b>Professional</b>	<b>Civic</b>
-American Dairy Science Association (ADSA) -American Society of Animal Science (ASAS)	
	-Association of Mali's Wokers
-American Public Health Association	
-Syndicat Libre des Chercheurs et Enseignants de Guinée (SLECG)	
-ONIBAT -ITE (Institutes of Traffic Engineers)	

**Kenya****Women**

<b>Professional</b>	<b>Civic</b>
-Educational Research Network in Kenya (ERNIKE) -Adult Education Association in Kenya -Association of African Women in Research and Development (AAWORD)	-Board of governors for one of the Progressive H. Schools in the community
-Nairobi Microbiology Cluster Group	

**Men**

<b>Professional</b>	<b>Civic</b>
-The Kenya comparative Education Society -The Kenya Academy of Science	-The Nderi Self Help Water Project -Kikuyu Development Commity -Fund Raising Committees
	-Kalumbia Girls H. School -Catering Committee, United Kenya Club -Agro Rural Conservation Program -Kenya Arts Foundation -Election Committee

-Kenya Society of Agricultural Engineers -Kenyan Society of Animal Production -American Society of Agricultural Engineers -Israel Society of Architects & Engineers	
-Kenya Mathematical Society -African Mathematical Union -PME	-Kalimani Secondary School Board of Governors -Matinyani Secondary School Board of Governors
-Kenya Architectural Trainers Association	-Agricultural Society of Kenya
-Institution on Engineers of Kenya	-Neighbourhood Welfare Group
-Organisation for Social Science Research in Eastern Africa (OSSREA) -International Community Based Epilepsy Research Group (ICBERG) -Social Science & Medicine Africa Network (SOMA-NET) -Network of AIDS Research of E & Southern Africa (NARESA) -Center for the Study of Culture & Medicine -Harvard Medical School	
-Geological Society of Kenya -Kenya National Academy of Sciences -AGID -International Commission for Earth Sciences in Africa -Geological Society of Africa	-Kamira School Harambee Project -Karachnonyo Water Project -"Bush Osiepe" Group
-Institution of Engineers of Kenya	
-Kenya Institute of Management	-Nairobi School, Board of Governors -Kyangala Secondary School, Board of Governors -Kenya/United States Association
	-Divisional Development Committee
-East Africa Society of Range Management -Animal Production Society of Kenya	

**Lesotho**

**Women**

Professional	Civic
<ul style="list-style-type: none"> <li>-Lesotho Educational Research Association (LERA)</li> <li>-Lesotho Mathematics &amp; Science Teachers Association</li> <li>-National Council of Teachers of Mathematics</li> <li>-AERA: American Educational Research Association</li> </ul>	
<ul style="list-style-type: none"> <li>-Lesotho Educational Research Association</li> <li>-African International School Association</li> <li>-Teachers of English to Speakers of Other Languages</li> </ul>	<ul style="list-style-type: none"> <li>-S. Lesotho Planned Parenthood Association</li> </ul>

**Men**

Professional	Civic
<ul style="list-style-type: none"> <li>-Lesotho Educational Research Association (LERA)</li> <li>-African Languages Association of Southern Africa (ALASA)</li> <li>-Lesiba Writers' Guild</li> <li>-Lesotho Language Academy</li> </ul>	<ul style="list-style-type: none"> <li>-Christian Council of Lesotho</li> <li>-Sodapax Commision</li> </ul>
<ul style="list-style-type: none"> <li>-Lesotho Association for Non-Formal Education</li> </ul>	
<ul style="list-style-type: none"> <li>-American Physical Society</li> <li>-Canadian Association of Physicists</li> </ul>	<ul style="list-style-type: none"> <li>-University Students Athletics</li> </ul>
<ul style="list-style-type: none"> <li>-International Association of Mathematical Physicists</li> <li>-Lesotho Science and Technology Association</li> <li>-Southern Africa Mathematical Sciences Association</li> </ul>	
<ul style="list-style-type: none"> <li>-Lesotho Educational Research Association</li> <li>-Lesotho Association of Journalists in Universities in Southern Africa</li> <li>-Association of Administrators</li> <li>-Association of Third World Journalists</li> </ul>	<ul style="list-style-type: none"> <li>-Local High School</li> <li>-Soccer Club (Management Committee)</li> </ul>
<ul style="list-style-type: none"> <li>-Lesotho Association of Non-Formal Education (LANFE)</li> <li>-African Association for Literacy &amp; Adult Education (AALAE)</li> <li>-International Council for Adult Education (ICAE)</li> </ul>	<ul style="list-style-type: none"> <li>-S &amp; J Unity Club</li> </ul>
	<ul style="list-style-type: none"> <li>-Lesotho-Durhum link Under the Angelican Diocese of Lesotho</li> </ul>

**Liberia**

**Women**

<b>Professional</b>	<b>Civic</b>
	-MENSA
-Liberian Bankers Association	
	-Women's Development Association of Liberia -Liberia Red Cross -YWCA
	-Liberia Table Tennis Association
-West African College of Nursing -Illinois Public Health Association	-Evanston H. C. Society

**Men**

<b>Professional</b>	<b>Civic</b>
-Professional Working Group (Liberia) -American Management Association (USA) -AIESEC Alumni International (Belgium)	-United People's Party -National Planning Committee
	-Bomi Youth Movement for Progress -Social and Cultural -University of Liberia Red Cross Branch
-West African Fertilizer Management Network	
	-Episcopal Church
	-Rotary Club of Monrovia
-Society of Professional Earth Sciences	

## Madagascar

### Women

Professional	Civic
-Académie Malgache -AETFAT -NIFTAL -The Bean Bag	-Malagasy Lutheran Church
-Bean Improvement Cooperative -AFRGRAD-ATLAS Alumni Association	
-Malagasy Academy (Madagascar) -Bean Bag (US) -Leguminosae Database (UK)	
-Engineer Association	-Tantely -ACCN -FITEFA
-Institute of Food Technologists	

### Men

Professional	Civic
-Société d'études des Pays du Commonwealth (France) -Equipe de Recherche: "Problèmes Inter-Minoritaires et Culturels" (France)	
-AAAA (Afgrad Atlas Alumni Association) -AMA (American Management Association) -IMI (International Marketing Institute)	
-AFGRAD ATLAS Alumni Association -Malagasy Physical Society -American Physical Society	
-Institute of Food Technologists	
-SMSP -ICTP	-4A -NGO for Development

-Rotary Club of Antananarivo -AFGRAD ATLAS Alumni Association (Madagascar) -MBA (Madagascar) -U.S. Freemason Lodge (US)	
-Société Magalache des Sciences Physiques	
-Association pour la Connaissance et la Conservation de la Nature (ACCN- MAdagascar) -AETFAT in Africa -BGCS (Botanical Garden Conservation Secretariat) in US, UK	

**Malawi**

**Women**

<b>Professional</b>	<b>Civic</b>
-American Management Association	-Church Building Committee -Church
-Ecumenical Church Loan Fund of Malawi	-Women's Group- Limbe Cathedral
-Chemical Society of Malawi -Third World for Women in Science	-Cheshire Homes -PTA -Mount View Primary School Management Committee

**Men**

<b>Professional</b>	<b>Civic</b>
Association for Advancement of Science	-Lions Club of Zonba
-British Institute of Management	
-Computing in Southern and Central Africa -Institute of Electrical and Electronics Engineers Computer Society	

-American Economics Association -African Studies Association -Eastern Economics Association -Council of Black Studies -Southern Economics Association -Pennsylvania Economics Association	
	-Finance Committee of Chichewa -University Football Club
-African Association for Public Administration and Management (AAPAM) -African Association for Political Scientists (AAPS)	
-American Society for Microbiology	
-Association for Advancement of Science and Technology of Malawi -Alley Farming Network for Tropical Africa -American Society for Horticultural Science	
-Association for Advancement of Science in Malawi	- Football Club
	-Jaycees
-Association for Advancement of Science and Technology of Malawi	
-Malawi Medical Association -East African Surgeons Association -Royal Society of Medicine (UK)	-Malawi Against Polio
-Association for Advancement of Science of Malawi -IEEE	
-Association for Educational Communication and Technology -The Malawi National Flora and Fauna Organisation	

**Mali**

**Men**

<b>Professional</b>	<b>Civic</b>
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-Ordre National Veterinaire du Mali -Association des Anciens Universitaires d'Amerique du Nord	
	-Association des Ressortissants de "Sébéra" -Association of the People from Sebera, living in Bamako
-Odre de la Profession Veterinaire du Mali	
-Human Rights Association	
-AAEA (American Agricultural Economists Association) -ISU	-Political Party -Local Primary School Association
-Ordre des Veterinaires -Association des Anciens Stagiaires des Etats Unis d'Amerique -Union Nationale des Travailleurs du Mali	
	-AUA (Anciens Universitaires d'Amérique) -AMDU
-Bankers Association	-Association for the Development of the County
-The Association of Private Enterprise Promotors	
-AMELA: Association Malienne des Enseignants de Langue Anglaise	
	-OSIVE NGO for Youngs and Environment
-American Dairy Science Association -Farming Systems Research & Extension Association	
	-Solidarity Fund
-Ordre National de la Profession Vétérinaire du Mali	-Association de Devloppement de Rharous -Coordination des Associations de Cercles de Tombouctou -Collectif des Ressortissants du Nord
-AWWA	-ADCY
-Engineering Association	

**Mauritius**

**Women**

Professional	Civic
-National Science Teachers Association, USA	-Human Science Trust

**Men**

Professional	Civic
-American Economic Society	-Environmental Protection and Conservation Organization
-Mauritius Veterinary Association -Veterinary Council -Natl Codex Alimentarian Committee -OIE	
-IEEE	
-Institution of Engineers -Council of Registered Professional Engineers -American Marketing Association	-Rotary Club of Rosehill
-GMDOA	
-Mauritian Society of Animal Production -American Society of Animal Science	
-Town and Country Planning Board -Mauritius Horticultural Society	

**Mozambique**

**Men**

Professional	Civic
-Associcas Medica de Mocambique	
-American Economists Association -Teachers Association	

-MUSA Association -American Marketing Association	
-American Society of Agronomy	

**Niger**

**Men**

<b>Professional</b>	<b>Civic</b>
-Association Nigerienne des Professionnels de l'Informatique	

**Nigeria**

**Women**

<b>Professional</b>	<b>Civic</b>
-Associas Economistas Caboudearos	
-The Capeverdean Society of Engineers and Architects	
-Professional Womens Association	-Red Cross (Cape Verde)

**Men**

<b>Professional</b>	<b>Civic</b>
	Fellowship of Christian Students
-Nigerian Economic Society -Nigerian Statistical Association -Institute of Bankers	
-Science Association of Nigeria -Genetics Society of Nigeria -Nigerian Field society -Sigma-Xi The Scientific Society of North America	

-Nigerian Society of Engineers -Nigerian Society of Water Engineers -American Water Works Association -American Water Pollution Federation -American Society of Civil Engineers -British Society of Civil Engineers	-Club 80, Offa
-Nigerian Mathematical Society -Science Association of Nigeria -American Mathematical Society	
-Nigerian Statistical Association -African Statistical Association -American Educational Research Association	
-Nigerian Mining and Geosciences Society -The Nigerian Institute of Physics -The Solar Energy Society of Nigeria -The Geological Society of Africa -The Society of Exploration Geophysicists	-Jawaran Kogi Parent-Teacher Association -Chapel of Redemption Men's Fellowship -Dekina Old Boy's Association
-Institution of Medical Engineers (London) -Nigerian Society of Engineers -Solar Energy Society of Nigeria	-Ninzam Development Association
-Cape Verdean Society of Engineers and Architects -American Society of Agricultural Engineers	-Sports Association Group
-Science Teachers Association of Nigeria -Association of Science Education (England)	
-Soil Science Society of Nigeria	-Community Development Association of Shorou in Benue State
-Nigerian Society of Engineers -Nigerian Society of Chemical Engineers	-Abia Development Union
-Nutrition Society of Nigeria -Agricultural Society of Nigeria -Nigerian Society for Animal Production	

-Nigerian Veternarian Medical Association -Nigerian Society for Animal Production -American Society for Animal Science -Royal College of Veternarian Surgeons	
-Science Association of Nigeria -Biochemical Society of Nigeria	-BAFT Club
-National Association of Nigeria Nurses and Midwives -Sigma Theta Tam -Royal Sty of Health -West African College of Nursing	-African Network for Prevention and Protection Against Child Abuse and Neglect -Anglican Youth Christian Association
-Nigerian Academy of Science -Africa Academy of Science -Third World Academy of Science -Mathematical Association of Nigeria -European Academy of Arts, Science and Humanities -American Mathematieal Society -Pan-African Union for Science and Technology	-Lions Club
-Nigerian Mathematical Society -Mathematical Association of Nigeria	-Utugwany development Association -Ukprinyi Development Association -Nigerian Organisation for Development and Solidarity
-Nigeria Society of Agriculture -African Farming and Food Processing	
-International New Towns Association	-Bena Development Association -Planners Forum, Abu Zaria
-Nigerian Institute of Chartered Accountants of Nigeria -British Institute of Cost And Management Accountants	-Apapa Lions Club -Idumuje-Unor Patrotic Union Of Nigeria
-Society of Nematologists(USA) -ONTA(USA) -Nigerian Society for Plant Protection -Nigerian Soybean Association -Science Society of Nigeria -Institute of Biology(UK)	

-IEEE, New York -ACM, New York -Nigerian Society of Engineers -Computer Association of Nigeria -Science Association of Nigeria	-Church Management Committee
-Nigerian Society of Engineers -Nigerian Society of Agricultural Engineers -American Society of Agricultural Engineers -Sigma Xi, the Scientific Research Soc. of North America	
-Nigerian Society for Plant Protection -Agricultural Society of Nigeria -Society of Nematologists -Pakistan Society of Nematologists -Nigerian Soybean Association	-Provisional Rotary Club of Mokwa
-Institute of Personnel Management of Nigeria -Nigerian Institute of Management -Institute of Management Consultants of Nigeria -Nigerian Industrial Relations Association	-Enabling Environment Forum
-International Center for Tropical Ecology (Caracas,Venezuela)	
-Farm Management Society of Nigeria -Nigerian Agricultural Economics Society -Indian Agricultural Economics Society	-Saganu Club, Nigeria
-Entomological Society of Nigeria -Science Association of Nigeria -African Association of Insect Scientists -Entomological Society of America	
-Historical Society of Nigeria -African Spelees Association(USA) -American Historical Association(USA)	-Nigerian Red Cross (Imo State) -Knights of St. Christopher (Church of England) -Umuode-Umuanu Okorosha Cultural Society
-Agricultural Society of Nigeria -Science Association of Nigeria -Weed Science Society of Nigeria	-St. James Church -Ibadan Boy's High School Old Student's Association -University of Ibadan Alumni Association

-Nigerian Economic Society -African Statistical Association	-Roe Development Association -St. Stephen Board of C&S
-Nigerian Institute of Management -Nigerian Economic Society -West African Economic Association -British Institute of Petroleum -International Association for Energy Economics	-Oke Ogun Club
-New York Academy of Science -American Society for Pharmacology and Experimental Therapeutics -American Association for Advancement of Science -Southeastern Society for Pharmacology	
-The Nigerian Political Science Association -Nigerian Society for Public Administration & Management	-Ishua Development Association -Akoko Development Group
-Nigerian Economic Society -Nigerian Statistical Association	
-Nigerian Economic Society -Development Studies Association (England)	-IKOT Eko Ibon Central Executive -AKWA Esop. Imaisons Ibibio

### Rwanda

#### Women

Professional	Civic
-Association of Women in International Development	

#### Men

Professional	Civic
-Society of Community Medicine -American Public Health Association -Association for Francophone Epidemiologists -National Council for International Health	

-Association of Rwandan Engineers -American Concrete Association	
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**Senegal**

**Women**

<b>Professional</b>	<b>Civic</b>
-Senegalese Association of U.S. University Graduates -SUNY Alumni at Albany -Club of Economics of Lycee Limamoulaya (Dakar) -Amicale des Praticquants des Parcours Sportifs	
-International Conference on Management and Planning (ICOMP)	-Committee of Disherited Children of UNICEF
-SYTBEF-Syndicat desa Travailleurs des Banques et Etablissements Financiers	

**Men**

<b>Professional</b>	<b>Civic</b>
-National Consultants Association -Financiere Internationale	
-Senegalese Association of Agricultural Engineers (ASIA) -Senegalese Association for the Irrigation & Drainage Promotion (ASPID) -American Society of Agricultural Engineers	
-ADEF/A -ACS (Association des Chercheurs Senegalais) -AAPAM (African Association of Public Administration and Management)	-Association des Amis de la Nature (ASAN)
-Association of Forestry Engineers in Senegal	
-Anglophone Business Club -AME-Association of Mining Engineers	-Association of Young People At Popenguras (Native Village)
	-ASSOPAF (Association des Paysannes du Fleuve)
-Association des Sciences du Sol du Senegal -Association des Anciens du Louvain	

-Association des Chercheurs Sénégalais -Soil Science Society of America	
-Association Sénégalaise des Ingénieurs de l'Agriculture -Association des Pedologues du Sénégal	-Association pour la Renaissance de la Langue Poular
-Association Francaise des Volontaires du Progrès -Réseau Recherche et Développement (FRANCE)	
-Bar Association Bureau -ASDUA (Association Sénégalaise des Diplômés des Universités Américaines)	-Renaissance (Sport Club) -Association Sénégalaise de Santé Publique

### Seychelles

#### Women

Professional	Civic
-International Personnel Management Association	-Seychelles Yachting Association

#### Men

Professional	Civic
-Seychelles National Climate Committee -American Meteorological Society -British Royal Meteorological Society	
	-Young Democrats
-Animal Science Society	

### Sierra Leone

#### Women

Professional	Civic

-AFGRAD Alumni Association (Sierra Leone) -Sierra Leone Union for Population Studies (SLUPS) -Union for African Population Studies (UAPS) -Population Association of America	-Planned Parenthood Association of Sierra Leone
-Medical and Dental Association of Sierra Leone	-Soroptimist
	-Musu Lake Women's Organisation -S.L. Blind School Organzatoptm -Women's Temprast of S.L.
	-Inner Wheel Club Club of Greater Freetown
-Association for Distance Education in Sierre Leone -West African Distance Education Association	-Sierra Leone Association of University Women -Mother's Union

**Men**

<b>Professional</b>	<b>Civic</b>
-Sierra Leone Agricultural Society -The African Communications Association (Nigeria)	-Amnesty International
-Environmental Scientific Group (Freetown Sierra Leone) -African Studies Association (Georgia) -Conservation Society of Sierra Leone)	
-Sierra Leone AFGRAD	-Local Preachers Mutual Aid Association -S.L. United Nations Association
	-Sierra Leone Junior Dinner Club -Freetown Lodge No.1955EC -Sierra Leone Holy Royal Arch Chapter
	-Nursery School Association
-Sierra Leone Association of Journalists (SLAJ)	-Sierra Leone Consumers Association
-Senior Academic Staff Association, Njala Branch -Liberian Educational Research Association (Liberia) -AFGRAD Alumni Association of Sierra Leone	
-Sierra Leone Agricultural Society	

-Sierra Leone Agricultural Society -West African Association of Agricultural Economics	
-Sierra Leone Association of Journalists	
-Association of Sierra Leone Economists	
-Sierra Leone Association of Journalists -Speech Communication Association (US)	-Sierra Leone Football Association -National Council for Children -S.L. Red Cross Society
-Fisheries Advisory Board -Fisheries Technical Committee -Science Association (Sierra Leone)	-Red Cross (Sierra Leone) -YMCA
-Sierra Leone Agricultural Society (SLAS) -Agronomy And Crop Science Society of America	-Red Cross
-Sierra Leone Association of Town Planners	-National Agricultural Research Committee
	-Local Development Project
-USAID-Trained Education Consultancy -American Association of School Administrators	-King-Tom Community Educatin Centre
-Sierra Leone Guidance and Counsellors Association -American Personnel & Guidance Association -American College Personnel Association	-King of Glory Lutheran Church -Kailahun District Descendants Union -Z.B.C. Alumni Association
-American Vocational Association	
-Sierra Leone Institution of Civil Engineers	
-American Evaluation Committee	
-Sierra Leone Agriculture Teachers Association(SL) -Agricultural Society of Sierra Leone (ASSL) -NVATA (US) -Phi Delta Kappa (PDK) (US) -University of Illinois Alumni Association (UIAA) (US) -American Vocational Association (US)	-Bell Memorial United Methodist Church -N.V.C. Agricultural Enterprises Committee
-Sierra Leone Computer Society	

**Somalia**

**Men**

Professional	Civic
-Agronomy Society of America -Crop Science Society of America -Austrial Society of Crop Physiology	-African Student Association

**Sudan**

**Women**

Professional	Civic
-Sudonese Dental Association (Khartoum) -Academic Staff Association (Khartoum) -International Dental Association (USA)	
-Sudan Veterinary Association	

**Men**

Professional	Civic
-Sudan Veterinary Association Executive Committee -World Health Association	-Municipal Council
-Beta Gamma Sigma: the national honorary society for students of business and management -Phi Beta Delta: the honor society for international scholars	
	-Southern Sudanese Peace Forum (Nairobi) -Refugee's Study Program in Nairobi

**Swaziland**

**Women**

<b>Professional</b>	<b>Civic</b>
-Family Life Association of Swaziland -International Union For the Scientific Study of Population	-Family Life Association of America
-Uniswa Research Group for Women -Linguistic Association for SADCC Universities -Association For Languages in Southern Africa	-UMISWA Women research Group

**Men**

<b>Professional</b>	<b>Civic</b>
-Swaziland Educational Research Association -Economics Association of Swaziland	
-Rotary International	-Rotary International
-South African Grassland Society -Holistic Resource Management -Livestock Producers Association, Wildlife Producers Association	
-Swaziland educational Research Association -Southern African Society of Education (SASE) -Southern African Comparative And History of Education Society (SACHES)	-City Council -Local and International Church of Nazanene
-Economic Association	-Africa Cooperative Action Trust (ACAT) -Evelyn Baring High School -Old Boys Club

**Tanzania**

**Women**

Professional	Civic
<ul style="list-style-type: none"> <li>-Catholic Womens Association</li> <li>-Diocesan Medical Board</li> </ul>	

**Men**

Professional	Civic
<ul style="list-style-type: none"> <li>-Institution of Engineers Tanzania</li> </ul>	
<ul style="list-style-type: none"> <li>-Textile Manufacturers Association of Tanzania</li> <li>-Tanzania Bureau of Standards</li> <li>-ISO/TC/SCS</li> </ul>	<ul style="list-style-type: none"> <li>-Rotary Club of Dar-es-Salaam</li> </ul>
<ul style="list-style-type: none"> <li>-Tanzania Veterinary Association (TVA)</li> <li>-Tanzania Society of Animal Production(TSAP)</li> <li>-Royal Colllege of Veterinary Surgeons (London)</li> </ul>	
<ul style="list-style-type: none"> <li>-National Adult Education Association of Tanzania</li> <li>-Society for General Semantics(USA)</li> <li>-International Conferance for Adult Education(ICAE)</li> </ul>	
<ul style="list-style-type: none"> <li>-Institute of Engineers Tanzania</li> <li>-Association of British Confederation of Industry Scholars</li> </ul>	
<ul style="list-style-type: none"> <li>-American Economic Association</li> </ul>	
<ul style="list-style-type: none"> <li>-Essential National. Health Resource</li> <li>-African Immunological Networks</li> <li>-HUGO</li> <li>-American Society for Tropical Med &amp; Hygiene</li> <li>-New York Academy of Sciences</li> <li>-American Association Immunologists</li> </ul>	
<ul style="list-style-type: none"> <li>-National Adult Education Association</li> <li>-Tanzania Professional Teachers' Association</li> <li>-AAPATZ</li> </ul>	
<ul style="list-style-type: none"> <li>-Institute of Engineers</li> <li>-American Marketing Association</li> </ul>	

-East African Society of Paramitology/ Protozoology -American Society of Tropical Veterinary Medicine -British Society of Immunology	
-Tanzania Veterinary Association	
-Center for Europeen Policy Studies -The Royal Economic Society -The Society for the History of Technology	-Tanzania CCM Members in Belgium -Members of Parish Council in Brussels -Britain-Tanzania Society

### The Gambia

#### Men

Professional	Civic
-Gambia Institute of Engineers -African Association of Political Science -African Academy of Sciences	
-Intitute of Food Technology -Institute of MBA Executives -Association of Freelance Consultants	

### Togo

#### Women

Professional	Civic
-International Womens' Lawyers Association -Society for Human Resource Management	-Consumer Defense Association -Anti-Drug Association
-Association of Foreign Language Teachers	-Soroptiniss International -Non-Violence in Democracy -G2D -Democratic Womens' Association
	-Nutrition Education
-AAMD -AECT	-Association for Promotion and Environment -Rural Women Assistance Association

**Men**

Professional	Civic
-Groupement Professionel des Petroliers -Syndicat de Cadres des Banques	-Village Development Committee
-Togolese Institute of CPAS -American Institute of CPAS	- Lions Club
	-Youth Association for Rural Development
-Association Togolaise de la Recherche Scientifique -ASAE -ASCE	
-American Physical Society -Los Alamos Natl Laboratory -Oak Ridge Natl Laboratory -Paul Scherier Institut	
-Association des Cadres de l'Agriculture du Togo	
-CORAF	
	- Association Togolaise de Bien Etre Familial
-Ordre National des Medecins -American Public Health Association	-Club St Jean de Dieu
-Afgrad	
-Togolese Medical Association -Oklahoma Public Health Association	-Village Development Committee
-American Public Health Association -National Medical Association of Togo	

**Tunisia**

**Men**

Professional	Civic
-TIPS (Tunisia) -ACM (US) -IEEE (US)	

**Uganda**

**Women**

Professional	Civic
-Women Engineers, Technicians and Scientists in Uganda (WETSU)	-District Council (Mpigi) -District Constitutionnal and Disciplinary Committee -Entebbe Golf Club
-Center for Basic Research	
-Uganda Women Medical Doctors -Uganda Pediatric Association	-Association of Uganda Women Medical Doctors -Uganda Women Efforts to Save Orphans
-Uganda Veterinary Assnociation -American Public Health Association	
-Uganda Society of Agronomy -Uganda Academy of Science -University Women Association -American Society of Agronomy	-Mothers Union -Improve Christian Families

**Men**

Professional	Civic
	-Maracha General Transport Cooperative Society
-Society for International Development	

-AIMME -CIMM -CMM	-Gisorora Twubake Association
-Professional Consultants -Uganda Economic Association	
-ICET -ASCD -IPRA -UTA	-PTA B.R.P. School -B.O.G.
-Uganda Fisheries Officers Association -American Fisheries Society	-R.C.
-Adult Education Association -Transdential Meditation	
-African Association for Public Administration and Management -Organization for Social Science Research in Eastern and Southern Africa	
-Uganda Medical and Dental Surgeons Association	
-Bohnisch Physical Sty -Institute of Electronics and Electrical Engineers -Uganda National Council of Science and Technology -Uganda Institute of Professional Engineers -Uganda Academy of Science	-Rotary Club -UNESCO clubs
	-Association of Management Consultants of Uganda
-Uganda Economic Association -Nigerian Economic Association	-National Council of Sports -Boy Scouts -PTA
-Uganda Medical Association -Afrad Association of Dermatology	
-National Council for Science And Technology	
	-Resistance Council Chairman

-Uganda Fisheries Society -Hydrobiological Society of Eastern and Southern Africa -American Fisheries Society	-Lions Club International of Jinja
-Association of Social Workers	
-Uganda Veterinary Association	
-Uganda Veterinary Association -American Animal Science Society -International Goat Association	
-Uganda Society of Architects (USA) -Architectural Association of Kenya	-Rotary Club of Kololo -Kampala Club -Bugolobi Bunnallow Village RCI
-Uganda Statistical Society -Uganda Economics Association -African Economics Research Consortium (AERC) (Kenya) -American Statistical Association (ASA) (USA) -Royal Economic Society (UK)	-Secretary for Finance
-Uganda Mathematical Society -American Mathematical Society	-Red Cross (Uganda)
-Soil Science Society of Africa -Soil Science Society of America -International Soil Science Society -American Society of Agronomy (ASA)	
-Management Services (UK) -Association of Uganda Management Consultants	-Amuka Development Association
-NED/INTERMAN Network for Entrepreneurship Development (Switzerland)	
	-Uganda Red Cross Society

**Zaire**

**Men**

<b>Professional</b>	<b>Civic</b>
-Association Zairoise des Biologistes -Wildlife Society -Ecological Sty of America	
-African Sociologists -Zairian Sociologists -American Sociologists	-Elders Community Association
-Societe Chimique du Zaire -American Chemical Sty -Anciens du CNRS	
-Dartmouth and Tuck School Alumni Association	-Local church in Spain
-ADIZE -Ghana Institute of Management and Public Administration	-Malandji Cultural Center

**Zambia**

**Women**

<b>Professional</b>	<b>Civic</b>
-Zambian Association for Children and Adults with Learning Disabilities -Luena Shade Special Education Committee	-Zacid (Youth Project)
-Zambia Agricultural Science Association	-Lions Club International
-Agricultural Science Association of Zambia -American Society of Agronomy -Crop Science Society of America	-Sigma Xi

**Men**

<b>Professional</b>	<b>Civic</b>
	-Church

-Soil Science Society of Zambia -African Soil Science Society -Soil Science Society of America -International Soil Science Society	
-Zambia Geographical Association -OSSREA	-Trinity Church
-Engineering Institution of Zambia -Computer Society of Zambia -Physics Association of Zambia	
	-Rotary Club -Community Service
-Engineering Institution of Zambia	
-Public Policy Analysis and Management Assn of Zambia -Organization for Social Science Research in Eastern Africa -African Studies Association	-Milk Purveyors Association of Zambia -Chelston Anglican Congregation Council
-Zambia Dental Association -International Association for Dental Research -Federation Dentaire International	
-Economics Association of Zambia	-Marriage Encounter
-Economics Association of Zambia	
-Bar Association	
-Economics Association of Zambia	-Fatima Secular School
-American Physical Society -American Association of Physics Teachers	
-Zambia Institute of Planners	
-College Principals Association	

**Zimbabwe**

**Women**

Professional	Civic
-International Auditors	

**Men**

Professional	Civic
	-PTA
-Forum for Democratic Reform -Missourians Against Apartheid	-Mabelreign Neighborhood Watch
-International Accountants	-Neighborhood Watch
-Geographical Association of Zimbabwe -Kappa Delta Phi	-PTA
-Immunology Society of Zimbabwe -South African Pharmaceutical Society -International Union of Pharmacology	-Consumer Council of Zimbabwe
-Geographic Association of Zimbabwe -Association of American Geographers	-Zimbabwe Childrens' Literature Foundation -Groombridge School Management Council
-Zimbabwe Economic Society -African Association of Political Science -East and Southern African Technology Policy Studies Network	-Chivardeze Soccer Club

**ANNEX 11**

**BIBLIOGRAPHY**

## ANNEX 11

### BIBLIOGRAPHY

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## **ANNEX 12**

# **RELATED FINDINGS FROM OTHER IMPACT STUDIES**

## ANNEX 12

### RELATED FINDINGS FROM OTHER IMPACT STUDIES

As part of its analysis of AFGRAD data, the MSI study team reviewed a set of impact evaluations of training programs to determine whether any of these studies reflected similar findings or were a hasty or comparison with the current data. A complete bibliography of the studies reviewed is found in Annex 11.

The study team agreed with the conclusion of Fillies (1992) that training should not be evaluated against criteria or objectives not originally established. As discussed in Section I of this report. Objectives for individual phases of AFGRAD, as well as original USAID mission objectives for each participating country, have evolved over the 30 years of the project. MSI agrees with Dillies that impact evaluation is possible if the cumulative total of training is expected to have specific impact. In the case of AFGRAD, there exists a critical mass of alumni over time, in particular institutions and sectors which makes the study of their contributions to African development enlightening.

In comparing data from the present evaluation with that of other studies, there are a few major points to be made. The previous AFGRAD evaluation of 1,508 alumni completed in the mid-1980s offered these relevant findings:

- # A larger percentage of more recent alumni (20.2%) responded to the questionnaire than did those who had completed their degrees in earlier years. This is consistent with the findings of the present evaluation.
- # The previous study reported an alumni repatriation rate of 89%. The current data, when extrapolated for equivalency of comparison, reveals a similar rate.
- # Women made up only 9% of alumni overall in the previous study. This figure rose to 14.4% for the later phases of AFGRAD. The percentage of women has risen over time to 24.5% for AFGRAD III. This is consistent with the previous study's prediction that careful targeting by AAI and USAID would yield higher proportions of female scholars as time went on.
- # Eighty-five percent of alumni were satisfied with their training and 85% were working in their fields of study. Forty percent had remained in the public sector. A higher proportion of francophones (16.6%) than anglophones (9.7%) had moved to the private sector. These findings are similar to those of the current study which reveals a more pronounced shift into private sector.
- # In terms of innovation, 60% of alumni had been involved in policy revisions and 46% in the initiation of new services. The current study shows a higher rate of innovation and change, but this may be a factor of the nature of the questions asked originally, rather than an increase in alumni influence. (Robes and Horn, 1984)

A recent study of all USAID training participants in Cameroon for the last 30 years produced these results of interest to the ABROAD analysis:

- # Most participants attributed work performance improvement to their training.
- # Eighty-one percent had introduced changes into their work environments.
- # Most had spent an average of 12 years with their current employer, indicating a low job turnover rate. This finding is closely related to economic and institutional conditions in the countries and cannot be reliably compared Africa-wide. In some cases, low turnover is good (e.g., where institution-building was the objective for the training). In others, turnover may be due to economic restructuring involving the public sector which may be totally beyond the individual's ability to influence the outcome.
- # Sixteen percent of the participants studied were women, with a small percentage of those from the private sector.
- # Participants experienced problems with isolation from advances in their fields once they returned to their professional environments. They voiced an interest in maintaining contact with colleagues they met during training. There was considerable support for networking opportunities and interest in being called upon by USAID to take part in consulting and research activities. (Tejeda, et. al., 1993)

On the networking point, Gillies found in the Kenya training evaluation (1991) that participants believed that an accurate alumni directory was critical to maintaining their ties with each other over time.

While the intersecting findings from these other studies may appear limited, it should be noted that none of these, including the present study, had similar scopes of work. Thus, where findings are similar, they are interesting, but not truly comparable. The study team has included them to provide additional perspective for the reader and not actually to supplement the basic findings of this an evaluation. Interested readers are encouraged to read the studies listed in the bibliography for their own content and insights on long-term training in Africa and elsewhere.