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**AUDIT OF
THE GAMBIA AGRICULTURAL RESEARCH
AND DIVERSIFICATION PROJECT**

Audit Report No. 7-635-90-08

May 23, 1990

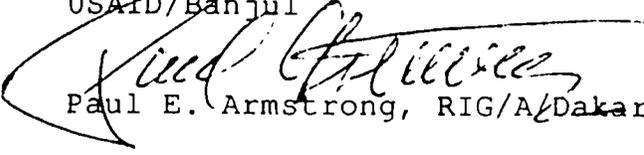
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OFFICE OF THE REGIONAL INSPECTOR GENERAL FOR WEST AFRICA

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May 23, 1990

MEMORANDUM FOR: Jimmie M. Stone, Representative,
USAID/Banjul

FROM: 
Paul E. Armstrong, RIG/A/Dakar

SUBJECT: Audit of The Gambia Agricultural
Research and Diversification Project
No. 635-0291
Audit Report No. 7-635-90-08, dated May
23, 1990

Enclosed are five copies of the subject report.

We have reviewed your comments on the draft report and included them as Appendix 1 to this report. Recommendations Nos. 1, 2, 4 and 5 are resolved and will be closed when appropriate actions are completed. Recommendation No. 3 is not yet resolved. Please respond to this report within 30 days, indicating any actions planned or already taken to implement the recommendations.

I appreciate the cooperation and courtesies extended to my staff during the audit.



The Gambia

**AUDIT OF
THE GAMBIA AGRICULTURAL RESEARCH
AND DIVERSIFICATION PROJECT**

EXECUTIVE SUMMARY

The \$18 million Gambia Agricultural Research and Diversification (GARD) project was initiated in June 1985 when A.I.D. and the Government of The Gambia signed a grant agreement, the purpose of which was to:

- . test and adapt improved crop and livestock technologies to meet farmers' needs; and
- . expand and diversify The Gambia's agricultural economy.

To accomplish the above purpose, the project's strategy focussed on:

- . producing research results relevant to the needs of farmers and consistent with The Gambia's agricultural policies and priorities;
- . extending those results to the farmers by promotional campaigns and effecting linkages between agricultural research and extension; and
- . institutionalizing an agricultural research management system.

Technical assistance was provided by the University of Wisconsin, Madison, under a five-year contract with A.I.D. that began in January 1986. A.I.D.'s assistance to the project will terminate in June 1992. From inception through September 1989, project expenditures totaled \$8.6 million.

After four and one-half years, the project has made very limited progress towards accomplishing its purpose. The audit showed that:

- . an agricultural research management system was not fully operational;
- . research facilities were not adequately equipped and maintained;

- . impact of A.I.D.-financed agricultural promotion campaigns could not be assessed; and
- . a broadly effective linkage between agricultural research and extension services was not achieved.

GARD's financial controls were seriously deficient resulting in ineligible contractor billings, idle project equipment, inaccurate and unreliable inventory records. To make matters worse, instances of fraud were uncovered in the procurement area including non-existent vendors and fraudulent reimbursements of claims. We referred these irregularities to the Regional Inspector General for Investigations, Dakar, whose inquiry confirmed our findings and resulted in the dismissal and possible criminal prosecution of a GARD employee.

Given these disturbing conditions, it appears unlikely that the project will accomplish its purpose in the remaining two years of its life. Maintaining the status quo would serve no useful purpose and will almost certainly perpetuate the implementation problems. Therefore, we believe that USAID/Banjul should redirect the project and modify its strategies to focus on activities and objectives which it can reasonably expect to accomplish during the remaining two years of the project. This report makes five recommendations for USAID/Banjul's actions.

A draft of this report was provided to USAID/Banjul for comments. The Mission's response was very positive and encouraging. They shared our concerns with the project's unsatisfactory progress and substantially agreed with our conclusions. We also benefited from the Mission's clarifications and their suggested changes to some of the audit recommendations. For the most part, we have accepted those suggestions and have revised the report accordingly.

Office of the Inspector General

Office of the Inspector General
May 23, 1990

**AUDIT OF
THE GAMBIA AGRICULTURAL RESEARCH
AND DIVERSIFICATION PROJECT**

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AUDIT OF
THE GAMBIA AGRICULTURAL RESEARCH
AND DIVERSIFICATION PROJECT

PART I - BACKGROUND, AUDIT OBJECTIVES AND SCOPE

A. Background

The Gambia, a small, impoverished and densely populated country in West Africa, has a predominantly agricultural economy with groundnuts as the principal foreign exchange and revenue earner. Plagued with chronic balance of payment deficits, rapid population growth and food shortage, the country has low nutritional standards and a declining per capita income.

In order to foster economic growth, and achieve food self-sufficiency, the Government of The Gambia (GOTG) has assigned a high priority to agricultural development. On June 29, 1985, the GOTG signed a grant agreement with USAID/Banjul to implement the Gambia Agricultural Research and Diversification (GARD) project. The project purpose is to test, generate, adapt and promote the adoption of improved crop and livestock technologies that meet farmer's needs, and to expand and diversify The Gambia's agricultural economy.

The above purpose is to be accomplished by:

- establishing an Agricultural Research Management System (ARMS) to set research priorities responsive to farmers' needs;
- training Gambians in various agricultural disciplines;
- supporting on-station research activities;
- expanding on-farm research and extension; and
- promoting pilot projects.

The University of Wisconsin, Madison (UW) provides technical assistance, administrative and logistical support to the project under a five-year, \$13.4 million collaborative agreement with A.I.D., signed in January, 1986. The University of Michigan and Virginia State University also participate in the project under subcontracts with UW.

A.I.D authorized \$18 million to finance the project, which is to terminate on June 30, 1992. As of September 30, 1989, A.I.D. had obligated \$9.9 million, and had accrued expenditures of \$8.6 million. The GOTG agreed to provide \$1.5 million to the project principally for local personnel, research and promotion costs (See Exhibit 1).

B. Audit Objectives and Scope

The objectives of this performance audit were to (i) determine the extent to which the project was achieving a desired level of results; (ii) identify factors inhibiting satisfactory progress; and (iii) determine the adequacy of controls over locally-incurred project expenditures and A.I.D.-financed project equipment.

The scope of work included, but was not limited to: (i) a review of project documents and financial records at the USAID, GARD and GOTG offices in Banjul; (ii) visits to project sites to review implementation; (iii) inspections of A.I.D.-financed commodities, equipment and construction activities; and (iv) interviews with cognizant USAID/Banjul, GARD, and GOTG officials. To evaluate facilities and infrastructures critical to the project's success, we inspected all three research laboratories involved with the project, visited two of the six research program sites, and examined A.I.D.-financed equipment and supplies in the project's warehouse.

We performed compliance and substantive tests of local currency expenditures for the three months ended September 30, 1989, covering approximately 6 percent of the reported expenditures of \$1,390,385. Based on this review, an expansion of our sample base to include additional items over an extended period was deemed necessary. In addition, we examined a judgmental sample of approximately 48 percent of the A.I.D.-financed equipment, inspected project construction work and reviewed related engineering reports.

The audit was conducted principally in Banjul and other secondary locations in The Gambia (Yundum, Sapu and Kanifing) from November 6, 1989 through January 12, 1990. It was made in accordance with generally accepted U.S. Government auditing standards and, accordingly, included tests of the accounting and other project records and such other auditing procedures as considered necessary in the circumstances.

Wherever necessary in this report, the Gambian currency (Dalasis) has been translated to U.S. dollar at the exchange rate of 8 Dalasis = \$1.

**AUDIT OF
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PART II - AUDIT RESULTS AND RECOMMENDATIONS

A. Findings and Recommendations

1. The Project's Efforts To Establish An Agricultural Research Management System Have Had Limited Success

A.I.D.'s project strategy was to create a strong infrastructure for agricultural planning and research in The Gambia, a strategy that was to be accomplished by institutionalizing an Agricultural Research Management System (ARMS). When fully established and operational, ARMS would prioritize agricultural research; institute procedures for designing, reviewing and funding research programs; and enforce GOTG's agricultural policies.

ARMS was to function through a ten-member oversight committee, the National Agricultural Research Board (NARB), served by a technical secretariat of Gambian experts in research, planning and administration. In order to strengthen ARMS' financial decision-making process, the project was to design and implement a Program Budget System (PBS) to plan and allocate resources for agricultural research based on available facilities, personnel and funds. So critical was ARMS to the project's success that USAID/Banjul required it to be operational by June, 1988 as a condition precedent for further A.I.D. assistance.

Between 1987 and 1989, GOTG took a series of actions which created the framework for ARMS. In November 1987, NARB was established and produced a policy paper in March 1989, defining the conceptual framework for agricultural research in The Gambia. It also reviewed and approved a research plan for 1989-90 which allocated resources to agricultural research consistent with The Gambia's agricultural policies and priorities. In June 1988, the GOTG notified USAID/Banjul that ARMS was established and operational. Furthermore, GOTG incorporated the PBS as an integral component of ARMS.

While the above actions constituted commendable steps towards establishing ARMS, further progress has virtually

ground to a halt because of significant operating problems. The technical secretariat through which ARMS was to function, has not been permanently staffed two years after its formation. So far, it has been staffed only on a part-time basis by an expatriate (the GARD Chief of Party) and a temporarily assigned Gambian national. The PBS, an integral component of ARMS, has been operating entirely with the help of expatriate personnel provided by the GARD project because no Gambian national was appointed by GOTG to work with, and eventually manage, the system. Moreover, ten professional positions within The Gambia's agricultural research establishment are currently vacant, seriously impairing the proper functioning of ARMS. According to USAID/Banjul, six of the ten vacant positions are absolutely essential even for a marginally effective ARMS.

Besides shortage of personnel to implement ARMS, the system is not fully codified and documented. Consequently, there is no comprehensive written manual with procedures and guidelines on planning, approving and implementing research projects and achieving an effective linkage between research and extension activities.

While USAID/Banjul acknowledged the need to compile and document a fully codified manual to implement ARMS, the staffing problem has proved intractable with no solution in sight. The Mission has repeatedly urged GOTG to recruit staff to implement ARMS. GOTG, on its part, has made extensive efforts to locate and recruit technical and administrative personnel. But a shortage of qualified manpower and unattractive GOTG pay scales have resulted in the vacant staff positions. Moreover, under pressure from international lending agencies, the GOTG was obliged to reduce public spending and prune its civil service payroll.

As a result of GOTG's inability to provide key personnel and the lack of a comprehensive written manual, the ARMS has not been fully effective and operational. Also, we doubt whether a strong infrastructure for agricultural planning and research can be established in The Gambia if key functions continue to be performed by expatriates and if a technical pool of Gambian nationals is not in place to implement ARMS when A.I.D. assistance terminates in June, 1992. Therefore, unless USAID and GOTG mutually agree to assign the highest priority to this project element, the Mission should abandon this institution-building strategy as unattainable.

Recommendation No. 1

We recommend that the A.I.D. Representative, Banjul:

- a. either require the Government of The Gambia (GOTG) to recruit, within a specific time-frame, professional and administrative personnel to implement the Agricultural Research Management System (ARMS) or, after consultation with GOTG, redirect funds earmarked for ARMS to other mutually agreed-upon activities; and
- b. require the technical services contractor to compile and codify, within a specific time-frame, a comprehensive manual containing procedures and guidelines to implement GOTG's agricultural research policies and achieve an effective linkage between research and extension activities.

Management Comments

In response to our findings in the draft audit report, USAID/Banjul and the GARD technical services contractor provided RIG/A/D additional information and documentation on the actions taken and progress achieved by the project towards establishing ARMS, and we have revised the report as appropriate.

In response to Recommendation No. 1(a), the Mission stated that it will continue to urge the GOTG to recruit the necessary personnel. However, should GOTG be unable to resolve the staffing problem, the Mission plans to consolidate the project's limited success in this area and deemphasize the institution-building component in the remaining two years of the project's life.

The Mission concurred with Recommendation No. 1(b), and instructed the GARD technical assistance contractor to compile a comprehensive manual that will codify and document policies, procedures and guidelines for implementing an agricultural research management system for The Gambia.

Office of Inspector General Comments

The Mission's response adequately addresses Recommendation No. 1, which we consider resolved. It will be closed upon receiving Mission's confirmation and reviewing appropriate

documentary evidence that the planned corrective actions have been completed.

2. The Project Focus Needs To Be Redirected And Modified In Order To Accomplish Its Purpose

The project's purpose was to develop and promote technologies beneficial to Gambian farmers and to expand and diversify the country's agricultural sector. To accomplish this, the project financed a broad infrastructure of research facilities, promotional campaigns, and the services of a Research/Extension Liaison Officer (RELO) to facilitate linkages between research and extension. We inspected research facilities, evaluated the promotional campaigns and determined the extent to which the project had achieved a linkage between research and extension.

Research facilities

We inspected five research facilities which included the agronomy, soils and seeds laboratories and the horticulture and animal traction research units. Of those installations, the seeds laboratory and the horticultural research unit were in satisfactory operating condition. The soils laboratory was not functioning because of a lack of equipment and technical personnel. The agronomy laboratory was in an extremely dilapidated condition and devoid of any research activity--equipment was lying idle and the premises were rat-infested and strewn with debris. At the animal traction site, there was no evidence of any activity, the five animals procured for research were missing and no information was available of their whereabouts.

While USAID/Banjul agreed that research facilities needed to be upgraded, they stated that the soils laboratory has not functioned because of shortage of personnel and planned to assign an expatriate technician to this facility by June 1991. The Mission did not consider the agronomic laboratory to be critical to the project's success and therefore excluded this facility from A.I.D.'s assistance. Concerning the animal traction unit, the Mission stated that no research was conducted during the dry season, which accounted for the lack of activity and the absence of animals procured for research. Moreover, the Mission plans to discontinue the animal traction program except for on-farm promotional campaigns.

We believe that USAID/Banjul's explanations are reasonable. We note, however, that the agronomy laboratory received some A.I.D.-funded project equipment. Moreover, the GARD project has conducted and will undoubtedly continue to conduct major

research programs in testing and improving crop and livestock technologies requiring the use of the entire research infrastructure in The Gambia. Therefore, unless all research facilities are properly equipped, well maintained and adequately staffed, the quality of research may be impaired and, consequently, the project will be unlikely to develop and promote meaningful research results.

Promotional Campaigns

To disseminate results of research to Gambian farmers, the project financed several promotional campaigns by the GOTG Department of Agricultural Research (DAR), and two private voluntary organizations -- the Catholic Relief Services and Save the Children Foundation. Our review showed that reports on those campaigns were neither systematic nor standardized, conditions that do not facilitate a meaningful assessment of their effectiveness. For example, while some reports contained information on the number of varieties promoted and of farmers and villages involved, none provided data on the adoption rate of promoted varieties. In our opinion, a promotional campaign plan that includes guidelines on information gathering, interviewing, reporting and analyzing objectively verifiable indicators would considerably enhance the quality and impact of GARD's promotional efforts. Such a plan should be established by the project without delay.

Linkage Between Research and Extension

To facilitate linkage between GOTG research and extension services and ensure that promising innovations reach farmers rapidly, the GARD project recruited a Research/Extension Liaison Officer (RELO) in March, 1986. The audit showed that after three years of the RELO's assistance, a broadly effective linkage had not been established and extension activities linked to the GARD project were not fully effective because of institutional problems in GOTG's Ministry of Agriculture.

Based on our inquiries, the problems are: lack of systematic communication between researchers and extension agents; inadequate GOTG support to extension personnel; insufficient allocation of resources and consequent poor quality of research; and failure to focus on principal targets of opportunity.

Consequently, efforts made by the GARD project to establish linkage between research and extension have not produced the

degree of impact on farmers envisioned by the project planners. In fact, in an interview with the audit team, the RELO acknowledged that because of the above structural deficiencies in the Gambian agricultural research establishment, the gap between research and extension is now even wider than it was when he commenced his duties three years ago.

Conclusion

After four and one half years of operation and expenditures of \$8.6 million, the GARD project has made a very modest and limited progress in achieving its purpose of developing and promoting agricultural technologies. Accomplishment of project purpose was hampered by serious implementation problems, such as poor research facilities, inadequately planned promotional campaigns and failure to establish a broadly effective linkage between agriculture and extension. In addition, serious disagreements have surfaced in recent years between USAID/Banjul and the GARD technical services contractor, the University of Wisconsin. USAID/Banjul has repeatedly stressed the importance of producing concrete research results, and maintained that the GARD project should take a leadership role to demonstrate the feasibility of increasing farmer productivity and income by concentrating on a limited number of activities. The University of Wisconsin, on the other hand, has emphasized that institution building should be the primary focus of the project. This conceptual difference between A.I.D. and the contractor may have had a negative effect on project implementation.

As a result of the above implementation problems and the conceptual differences between USAID and the contractor, it appears unlikely that the project will accomplish its purpose in the remaining two years of A.I.D. assistance.

Chapter 13 of A.I.D. Handbook 3 recognizes that the social, administrative and economic factors affecting a project are somewhat unpredictable and subject to change. Therefore, A.I.D. policy encourages adjustment of project designs and implementation methods to maintain their effectiveness and relevance under changing conditions.

We believe, therefore, that USAID/Banjul should re-examine the project's focus and implementation plan based on a realistic assessment of existing conditions, available resources and on hindsight. Thereafter, A.I.D. should modify its implementation plan to focus on objectives and

activities which it can reasonably expect to accomplish during the remaining two years of the project.

Recommendation No. 2

We recommend that the A.I.D. Representative, Banjul, in conjunction with the Government of The Gambia (GOTG) and the University of Wisconsin:

- a. develop a plan to upgrade the project's research facilities to a functional level within a specific time-frame;
 - b. institute comprehensive guidelines for conducting promotional activities including linkage with the GOTG extension service, private voluntary organizations and the private sector;
 - c. develop a standardized report format for promotional campaigns that includes sufficient information to assess their impact on farmers, such as rate of acceptance of improved technologies, increases in acreage cultivated and yields of crops planted; and
 - d. modify the project to concentrate on a limited number of clearly-defined, measurable and attainable objectives within a two-year time-frame with an emphasis on farmer-level results; and deobligate programs funds earmarked for those activities that are determined unworkable.
-

Management Comments

USAID/Banjul agreed that research laboratories were in unsatisfactory condition, but pointed out that the agronomy laboratory did not receive financial assistance under the GARD project. They further stated that the animal traction program would be discontinued under a planned revision of the project. The Mission agreed with audit findings on The Gambia's extension services and the lack of a broadly effective linkage between research and extension. They stated that extension activities would be strengthened to focus on priority items. Finally, the Mission agreed to our recommendation to modify the project and will take appropriate action to redirect project activities -- an action that it stated will result in a significant reduction in A.I.D.'s financial assistance to the GARD project.

Office of Inspector General Comments

We view USAID/Banjul's response as very positive. The Mission shares our concerns and has accepted our recommendation with minor modifications with which we concur. Recommendation No. 2 is considered resolved and will be closed upon receiving USAID/Banjul's confirmation and reviewing appropriate documentary evidence that the recommended actions have been completed.

We do not concur with the Mission's assertion that project funds were not used to support the agronomy laboratory. We observed A.I.D.-financed research equipment in this laboratory, a situation which reinforces the findings presented in a subsequent section of this report on inadequate controls over project equipment.

3. Accounting And Management Controls Of The Technical Services Contractor Over Project Expenditures Need Strengthening

We reviewed the local currency expenditure reports, accounting records and related internal controls of the GARD project's technical services contractor, the University of Wisconsin (UW). The audit showed ineligible costs billed by the contractor to A.I.D., financial irregularities and fraudulent procurement practices by project personnel.

Unsubstantiated Salary Costs

Section H. 4(7) of the contract between A.I.D. and the University of Wisconsin required the contractor's overseas employees to work a minimum of 40 hours a week. However, UW maintained a work schedule of 36.5 hours per week because the project's office closed 3.5 hours early on Fridays. According to the UW Chief of Party, overseas staff compensated for the lost time by working outside the office (e.g., at home) during evenings and weekends. But there were no supporting payroll documents such as time cards or attendance sheets, nor any other reliable control mechanism which could substantiate that the lost time of 3.5 hours per week was in fact made up. Moreover, no authorization was obtained by the contractor from A.I.D. for deviating from normal working hours.

Therefore, we believe that the contractor's payroll costs relating to overseas employees should be adjusted to reflect a 36.5 hour work week. Exhibit 2 computes the unsubstantiated payroll costs which total \$125,740. This cost should be disallowed by A.I.D. and recovered from the contractor.

Fraudulent Claims

A project employee, responsible for local procurement, fraudulently obtained reimbursements for at least 41 purchase transactions between December 1, 1988 and November 30, 1989. This was done by submitting false claims for cash reimbursement for purchases already paid for by the project. A control failure in the disbursement cycle allowed certain local vendors to be paid without proper receiving documentation. Exhibit 3 itemizes the fraudulent claims reimbursed by the project which totaled Dalasis 62,204 (\$7,775). Information concerning this fraud was referred to the Regional Inspector General for

Investigations, Dakar, whose inquiry has so far resulted in the employee's dismissal and possible legal action by the project. The amount of false claims totaling \$7,775 should be disallowed by A.I.D. and recovered from the contractor.

Fraudulent Procurements

A comparison was made of prices paid by the GARD project for ten supply items to price quotations independently obtained by the audit team from two local vendors. For seven of the ten items, the quotations were substantially lower than the prices paid by the project--ranging from 18 per cent for tires to 300 per cent for fuel filters (See exhibit 4).

Perplexed by this disparity, we attempted to locate one of the vendors (Santa Yalla Spares Shop) whose price was substantially higher than the quotation obtained by us. Much to our surprise, we did not find any business by that name. We referred this matter immediately to the Regional Inspector General for Investigations, Dakar, whose inquiry has so far identified four fictitious vendors including Santa Yalla (See Exhibit 5).

Based on the above, we conclude that the employee responsible for local procurements made legitimate purchases and then produced false invoices from non-existent vendors showing substantially higher prices to pocket the difference.

Per information supplied by the GARD project to USAID/Banjul, the amounts paid to the four fictitious vendors, less the amount included in the fraudulent claims listed in Exhibit 3, totaled \$53,470 (Exhibit 5).

In a letter to USAID/Banjul dated May 15, 1990 GARD officials took exception to the auditors' conclusions and suggested that a further study and analysis be made before making any recommendation for disallowance.

We note GARD's position and will defer a final determination until current investigations conducted by the RIG/I/Dakar are complete. In the meantime, we are recommending that the amount of \$53,470 be questioned until a final resolution of the matter.

Duplicate Reimbursement of Employees' Local Transportation Costs

Local project employees were paid a monthly transportation allowance based on their grade levels. In addition, some

were provided free transportation to and from work in A.I.D.-financed project vehicles. Vehicle operating costs were reimbursed by A.I.D. under the terms of the contract. Thus, in effect, the contractor obtained duplicate reimbursement of employee transportation costs from A.I.D. by claiming both the transportation allowance paid to employees and the costs relating to employee transportation in project vehicles. Exhibit 6 computes the local transportation allowance which totals Dalasis 23,040 (\$2,880). This amount should be disallowed by A.I.D., and recovered from the contractor.

Conclusion

In our opinion, the above deficiencies and financial irregularities resulted from lax internal controls over local expenditures and non-compliance by the University of Wisconsin with the terms of its contract with A.I.D. Furthermore, inadequate monitoring of the project's expenditures by USAID/Banjul allowed these problems to occur. The contract required the University of Wisconsin to institute adequate controls and maintain proper accounting records. It also required the Mission to provide the contractor with written instructions, including accounting, vouchering and reporting procedures. The audit showed that the above requirements were not complied with. Consequently, fraudulent schemes by a GARD employee were successfully perpetrated, and non-allowable costs totalling \$136,395 were reimbursed by A.I.D. to the contractor.

Recommendation No. 3

We recommend that the A.I.D. Representative, Banjul:

- a. recover \$136,395 from the University of Wisconsin for non-allowable costs made up as follows:

Unsubstantiated Salary Costs (Exhibit 2)	\$125,740
Fraudulent Claims (Exhibit 3)	7,775
Duplicate Reimbursement of Employees' Local Transportation (Exhibit 6)	<u>2,880</u>
Total	<u>\$136,395</u>

- b. question \$53,470 paid by the project to four fictitious

vendors (Exhibit 5) pending completion of an inquiry by the Regional Inspector General for Investigations, Dakar;

- c. require that local employees with responsibilities for project assets and cash be bonded; and
- d. in coordination with the A.I.D. Office of Financial Management, Washington, consider suspending further transfer of funds under a Letter of Credit to the University of Wisconsin pending a satisfactory resolution of the non-allowable costs (\$136,395) and the questioned costs (\$53,470).

Recommendation No. 4

We recommend that the A.I.D. Representative, Banjul, require the University of Wisconsin to establish, within ninety days from issuance of this report, comprehensive written procedures and an internal control structure that: (i) safeguards assets and funds of the project against loss from unauthorized use or disposition; and (ii) facilitates preparation of accurate and reliable financial reports.

Management Comments

The Mission agreed with our findings on the fraudulent claims, fraudulent procurements and duplicate reimbursement of employees' transportation costs, and instructed the University of Wisconsin in writing to observe a 40-hour work week. It also agreed on the need for improved controls over project expenditures.

However, the Mission believes that the University of Wisconsin's arguments challenging our finding on the unsupported salary costs of \$125,740 merit consideration. The University maintained that its expatriate staff worked a minimum of 40 hours per week. As evidence, it stated that each staff member is required to sign a Monthly Leave Report, which constitutes proof of hours worked and is a part of the University's internal control structure which has been examined and approved by its cognizant Federal audit agency. The University therefore believes that it is in compliance with the working hours clause of the GARD contract and denies incurring any unsubstantiated salary costs.

In response to our findings on internal control deficiencies, the Mission stated that a University of Wisconsin internal auditor recently reviewed the GARD project and designed procedures for improving internal controls over local expenditures that would correct the deficiencies identified in this audit.

Office of Inspector General Comments

We do not consider Recommendation No. 3 resolved because the University of Wisconsin has not provided sufficient evidence that a 40-hour week was worked by its expatriate personnel assigned to the GARD project. In our opinion, the Monthly Leave Report (see Exhibit 7) is merely a statement of employees' sick leave and vacation time and cannot replace time sheets or attendance records as evidence of hours worked. At a minimum, daily attendance records such as a register, along with time sheets or time cards signed by the employee and approved by his supervisor constitute acceptable documentary evidence of hours worked. We see no reason to change our recommendation and maintain that these costs be recovered.

Recommendation No. 4 is resolved, and will be closed upon receipt of evidence that adequate controls over project expenditures have been designed and implemented.

4. A Comprehensive Project Inventory Management System Needs To Be Established

Non-Expendable Property Management System

A.I.D. acquisition regulations (AIDAR 752-245-71) require A.I.D.-financed projects to establish a system for receipt, utilization, maintenance and custody of non-expendable property.

Mission officials acknowledged that such a system was never established for the GARD project. A review of the project's inventory records showed that a comprehensive non-expendable property register identifying each piece of equipment and its cost, location and date of acquisition was not established. Such a register is essential for conducting a meaningful physical inventory and safeguarding project equipment. In addition, the audit identified several errors in record-keeping. Although we examined 48 percent of the project's equipment and no evidence of irregularities came to our attention, we determined that existing inventory records were inadequate and unreliable, and A.I.D.-financed equipment were therefore vulnerable to misuse, loss and theft.

Unused Project Equipment

A.I.D. Handbook 15 requires that A.I.D.-financed project equipment be effectively used and surplus items transferred to other projects, or otherwise disposed of by A.I.D.

The audit showed that 26 items, procured for \$25,892 in 1987, were never utilized for project purposes and have been idle for two years. These items, listed in Exhibit 8, include refrigerators, freezers, and agricultural equipment. They were, for the most part, identified during our inspection of project facilities.

GARD officials explained that some of the idle equipment were not suited to Gambian agricultural conditions, others could not be used because of lack of trained personnel and the rest were never used because the project over-estimated its asset requirements. We believe that inadequate oversight by USAID/Banjul, inefficient procurement planning and an ineffective inventory management system resulted in unnecessary procurements and consequent waste of A.I.D. funds totaling \$25,892.

Conclusion

A sound inventory management system is essential for efficiently utilizing, maintaining and safeguarding project property and equipment. Such a system should be established by the project without further delay.

Recommendation No. 5

We recommend that the A.I.D. Representative, Banjul, require the University of Wisconsin to:

- a. institute procedures and establish inventory records for receiving, utilizing, maintaining and safeguarding project equipment in accordance with A.I.D. Acquisition Regulations;
 - b. perform a periodic physical inventory of all A.I.D.-financed non-expendable property; and
 - c. identify and dispose of idle project equipment in accordance with A.I.D. regulations.
-

Management Comments

USAID/Banjul stated that the University of Wisconsin has proposed an inventory management system for the GARD project. The Mission will review the system for conformity with A.I.D. guidelines prior to granting its approval.

Office of Inspector General Comments

Based on the Mission's response, we consider Recommendation No. 5 as resolved. It will be closed upon receiving from the Mission: (i) a copy of the approved inventory management system; (ii) evidence that the physical inventory has been performed; and (iii) evidence that idle equipment has been identified and disposed of in accordance with A.I.D. regulations.

B. Compliance and Internal Controls

Compliance

The Government of The Gambia (GOTG) did not satisfy an important condition precedent to the project Grant Agreement with A.I.D because an agricultural research management system was not established and fully operational. Also, there was no evidence that GOTG is providing its agreed upon contribution of \$1.5 million to the GARD project. (See Other Pertinent Matters)

The University of Wisconsin (UW) did not prepare its expense reimbursement reports in accordance with terms of its contract with A.I.D. Consequently, salary and employee transportation costs were overbilled by \$125,740 and \$2,880 respectively. In addition, UW did not establish a project inventory management system as required by its contract agreement with A.I.D.

We limited the review of compliance to issues raised in this audit.

Internal Controls

The last two compliance exceptions described above also have internal control implications. Lax internal controls by the University of Wisconsin over project expenditures resulted in ineligible costs totalling at least \$136,395 billed by UW to A.I.D., and financial irregularities perpetrated by project personnel. Fraud was uncovered in the procurement area and referred to the Regional Inspector General for Investigations, Dakar, whose inquiry has so far identified four fictitious vendors and resulted in dismissal of a project employee.

The University of Wisconsin did not institute a project inventory management system. Consequently, property records were inaccurate and unreliable and 26 items of equipment procured for \$25,892 were idle for two years.

The review of internal controls was limited to the matters discussed in finding numbers 3 and 4 of this report.

C. Other Pertinent Matters

A.I.D. Handbook 1, Supplement B requires all A.I.D.-financed project equipment, construction sites and buildings to highlight U.S. Government's financial assistance by prominently displaying A.I.D. emblems. With the exception of some project vehicles and library equipment and materials, this requirement was not adhered to. Since The Gambia receives assistance from several donors, U.S. assistance should be publicized by displaying A.I.D. emblems wherever appropriate.

Under the terms of the Grant Agreement, GOTG was obliged to contribute the equivalent of \$1.5 million to the GARD project. However, we noted that no reliable reporting mechanism was in place to measure GOTG's contribution, a deficiency that should be immediately addressed by USAID/Banjul.

AUDIT OF
THE GAMBIA AGRICULTURAL RESEARCH
AND DIVERSIFICATION PROJECT

PART III - EXHIBITS AND APPENDICES

**AUDIT OF
THE GAMBIA AGRICULTURAL RESEARCH
AND DIVERSIFICATION PROJECT**

Summary of Budgeted and Actual Project Expenditures
(in \$000's)

	<u>BUDGETED</u> (6/29/85 - 6/30/92) (NOTE 1)			<u>ACTUAL</u> (6/29/85 - 9/30/89)	
	<u>A.I.D.</u> <u>COMMITMENT</u>	<u>GOTG</u> <u>COMMITMENT</u>	<u>PROJECT</u> <u>TOTAL</u>	<u>A.I.D.</u> <u>EXPENDITURES</u>	<u>GOTG</u> <u>EXPENDITURES</u> (NOTE 2)
Technical Assistance	\$4,673	0	\$4,673	\$2,683	
Training	3,797	0	3,797	744	
Vehicles	317	0	317	678	
Other commodities	683	0	683	589	
Construction	110	0	110	191	
Local Operating Costs	1,146	981	2,127	1,336	
Other Costs	4,722	561	5,283	938	
Indirect Costs	<u>2,552</u>	<u>0</u>	<u>2,552</u>	<u>1,414</u>	
Total	<u>\$18,000</u>	<u>\$1,542</u>	<u>\$19,542</u>	<u>\$8,573</u>	

Note 1: Commitments as required in the Grant Agreement over the life of the project.

Note 2: Actual GOTG contributions were not available.

AUDIT OF
THE GAMBIA AGRICULTURAL RESEARCH
AND DIVERSIFICATION PROJECT

Computation of Unsubstantiated Salary
Cost from January 1, 1986 to September 30, 1989

Calculation of Proration Factor

Required Work Week (Hours)	40.0
Documented Work Week	36.5
Unsupported Hours/Week	3.5
	x 52
Annualized Unsupported Hours	<u>182</u>
12 Staff Meetings/Year	<u>(42)</u>
Net Unsupported Hours/Year	<u>140</u>
Total Required Hours/Year (52 weeks x 40 hours)	<u>2,080</u>
Unsupported Hours as a % of Total	<u>6.73%</u>

Calculation of Basis and Recovery

Salaries

Long Term Technical Assistants	\$470,078	
Research Associates	140,777	
Short Term Advisor	<u>217,934</u>	
		828,789.00
Benefits		281,779.00
Allowances		<u>372,247.00</u>
Sub Total		1,482,815.00
Overhead (26%)		<u>385,532.00</u>
Total Basis		1,868,347.00
Proration Factor		<u>6.73%</u>
Total Unsupported Costs		<u>\$125,740.00</u>

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AUDIT OF
THE GAMBIA AGRICULTURAL RESEARCH
AND DIVERSIFICATION PROJECT

List of Fraudulent Claims
December 1, 1988 to November 30, 1989

<u>Purchase Order Number</u>	<u>Item Purchased</u>	<u>Duplicate Payment (Dalasis)</u>
0340	Auto Parts	5,200.00
8403	Auto Parts	273.00
8402	Auto Parts	1,023.00
8401	Auto Parts	413.00
8400	Auto Parts	1,281.50
8339	Supplies	1,860.00
8335	Auto Parts	730.00
8263	Auto Parts	638.06
8262	Auto Parts	8,131.20
8183	Auto Parts	748.00
8152	Auto Parts	247.00
7940	Auto Parts	836.50
7892	Auto Parts	3,023.00
7880	Auto Parts	410.00
7878	Auto Parts	394.50
7754	Auto Parts	382.80
7720	Auto Parts	815.90
7697	Auto Parts	387.00
7695	Auto Parts	494.00
7686	Auto Parts	659.70
7666	Auto Parts	3,325.00
7602	Auto parts	465.18
7444	Auto Parts	9,250.00
7413	Auto Parts	793.75
7412	Auto Parts	1,271.50
7411	Auto Parts	1,339.30
7410	Auto Parts	957.50
7394	Auto Parts	394.75
7318	Auto Parts	192.50
7317	Auto Parts	55.60
7314	Auto Parts	443.00
7298	Auto Parts	728.00
7154	Auto Parts	901.25

<u>Purchase Order Number</u>	<u>Item Purchased</u>	<u>Duplicate Payment (Dalasis)</u>
7036	Auto Parts	269.80
7029	Auto Parts	327.85
7007	Auto Parts	2,911.00
7000	Auto Parts	210.50
4910	Auto Parts	3,069.00
3943	Auto Parts	3,925.00
3333	Tape Measures	1,900.00
3331	Office Supplies	<u>1,525.00</u>
	Total	Dalasis <u>62,203.64</u>

Note: At the exchange rate of Dalasis 8.00 for \$1.00, false claims amounted to \$7,775.

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AUDIT OF
THE GAMBIA AGRICULTURAL RESEARCH
AND DIVERSIFICATION PROJECT

Examples of Inflated Pricing
(Dalasis)

<u>Item</u>	<u>Price Paid</u> <u>by Project</u> <u>(Note 1)</u>	<u>Average</u> <u>Test Price</u> <u>(Note 2)</u>	<u>Project</u> <u>Overpayment</u>	<u>Percent</u> <u>Overpayment</u>
Oil Filter (L/S 468)	120	45	75	166.7
Fuel Filter (505)	60	15	45	300.0
Contact Set (505)	60	30	30	100.0
Battery Terminal	15	10	5	50.0
Tire (7.50 x 16)	1,950	1,650	300	18.2
Inner Tube (7.50 x 16)	250	150	100	66.7

Note 1: Above prices were obtained from vendor invoices and purchase orders in the University of Wisconsin's accounting records.

Note 2: Above prices represent an average of two price quotations independently obtained by the auditors from local vendors in Banjul.

AUDIT OF
THE GAMBIA AGRICULTURAL RESEARCH
AND DIVERSIFICATION PROJECT

List of Non-Existent Project Suppliers

1. Santa Yalla Spares Shop
2. M. S. Taal
3. Langlow Products, Limited
4. A. A. Lee

Note: A.I.D. has reimbursed the University of Wisconsin approximately \$58,300 for invoices from these four suppliers. We have already recommended that \$4,830 of this amount be disallowed because they are included in the list of fraudulent claims (Exhibit 3), leaving net questioned costs of \$53,470.

AUDIT OF
THE GAMBIA AGRICULTURAL RESEARCH
AND DIVERSIFICATION PROJECT

Computation of Duplicated Employee Transportation
Allowances January 1, 1986 to February 28, 1989

PERSON MONTHS OF DUPLICATED TRAVEL ALLOWANCE PAYMENTS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1986	0	0	3	4	4	11	17	21	21	22	24	24	151
1987	31	32	34	35	34	33	34	35	35	35	23	22	383
1988	23	23	23	20	20	20	21	20	20	20	20	20	250
1989	25	25	23	24	24	27	27	27	28	28	28	28	314
1990	27	27											54

TOTAL	106	107	83	83	82	91	99	103	104	105	95	94	1,152

USAID RATE PER MONTH 20.00

TOTAL DALASIS 23,040.00

Note: At the Exchange Rate of Dalasis 8.00 for \$1.00,
duplicate reimbursements amounted to \$2,880.

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AUDIT OF
THE GAMBIA AGRICULTURAL RESEARCH
AND DIVERSIFICATION PROJECT

SPECIMEN DOCUMENT PROVIDED BY THE UNIVERSITY OF
WISCONSIN IN SUPPORT OF QUESTIONED PAYROLL COSTS

(name and signature deleted by RIG/A/D)

MONTHLY LEAVE REPORT

Name: _____

Month: Oct. Year 89

<u>Day</u>	<u>Vacation</u>	<u>Sick Leave</u>	<u>Day</u>	<u>Vacation</u>	<u>Sick Leave</u>
1			17		
2	<u>1</u>		18		
3	<u>1</u>		19		
4			20		
5			21		
6			22		
7			23		
8			24		
9			25		
10			26		
11			27		
12			28		
13			29		
14			30		
15			31		
16					
TOTAL USED				<u>2.</u>	<u>—</u>

Employee Signature _____ Date 24 Oct 89

Record vacation and sick leave in half-day increments
(.25 to .75 = .50; .75 to 1.25 = 1 day)

AUDIT OF
THE GAMBIA AGRICULTURAL RESEARCH
AND DIVERSIFICATION PROJECT

List of Idle Project Equipment

<u>Quantity</u>	<u>Description</u>	<u>Location</u>	<u>Cost</u>
8	Refrigerator	Kanifing	\$4,280
12	Freezer	Kanifing	5,460
1	Cone Seeder	Yundum	2,323
1	Planter	Yundum	1,764
1	Power Tiller	Sapu	3,615
1	Rotary Tiller	Sapu	4,236
2	Reaper Harvester	Sapu	<u>4,214</u>
			<u>\$25,892</u>

Note: The above items were procured from May through December, 1987.

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UNITED STATES GOVERNMENT

memorandum

DATE: March 29, 1990

REPLY TO
ATTN OF: Jimmie M. Stone, AID Representative, USAID/Banjul

SUBJECT: Draft Audit Report of the Gambia Agricultural Research and
Diversification Project (GARD) No. 635-0219

TO: Paul E. Armstrong, RIG/A/Dakar

Attached is the Mission's response to the subject draft Audit Report. It is comprised of three sections:

- Detailed Narrative Response
- Executive Summary
- Attachments A through G

Please note that we have taken the liberty of re-drafting the Executive Summary to better reflect the information we provide in the detailed narrative statement. We request that you consider using all, or any parts of our re-draft in the final Executive Summary.

Also transmitted for your information and consideration is a separate response from the prime contractor, the University of Wisconsin.

We appreciate the collaborative spirit of your staff and look forward to working with you in quickly resolving the formal findings.

cc: Mr. John Rowe, Chief of Party (UW)
GARD Project, Yundum

USAID/Banjul's Detailed Narrative Response to Draft Audit Report of the
Gambia Agricultural Research and Diversification Project (GARD) 635-0219

The Mission compliments the Auditors for identifying the weaknesses in the GARD project and recommending corrective measures. The Mission has no basic disagreement with the substantive recommendations. However, we suggest certain modifications in order to balance and strengthen the narrative. Furthermore, we suggest some points where RIG might make some changes in the text of the report both to make it more consistent throughout and to clarify some of the terminology and project concepts, so that the reader might avoid possible misinterpretation.

The Project Purpose and End of Project Status

In the Mission's view, if one statement of objectives (purposes) were used throughout, the document would be strengthened in consistency. We suggest the following wording:

"The objectives of the GARD project were to test and adapt improved crop and livestock technology to meet farmers needs and expand and diversify The Gambia's agricultural economy. The strategy to be employed was: first, the system must produce results which are relevant to the needs of its clients: farmers, extension workers and policy makers; second, these results must be extended and utilized by the clients; and third, the entire process must be institutionalized within the GOTG such that it can be sustained after the conclusion of the project."

This wording appears as the purpose statement of the Project Paper and captures the strategies to be employed. In the draft Audit Report, objective statements appear on page ii of the Executive Summary, on page 2 and on page 16.

The draft Audit Report's statement that the project design was overly ambitious is borne out by a reading of the four purpose level end-of-project-status (EOPS) indicators spelled out on page 1 of the Logical Framework contained in Attachment C of the Project Paper:

(1) "Production constraints identified and removed by appropriate technologies." Unfortunately, the project design left it to the imagination of the implementors to define just what would constitute an objectively verifiable indicator of this EOPS. How many production constraints? How many appropriate technologies? And how do we know when a constraint has been removed?

(2) "Increased use by farmers of improved varieties of seed and labor saving devices." How many farmers would have had to use how much of how many varieties of improved seed and labor-saving devices to verify that this purpose level indicator had been achieved?

(3) "Employment of improved horticultural practices." The same questions apply here.

(4) "Reduce farmer vulnerability to erratic rainfall by means of animal and crop activities most appropriate for zone and resource limitations." This EOPS is probably neither achievable nor verifiable.

Turning from examination of the EOPS indicators to the project purpose statement in the project paper logframe, we would like to point out that the achievement of purpose (objective) level impact depended, inter alia, on the assumption that "agricultural input delivery systems are improved and extension service strengthened by other projects." The Mission had very few means within the GARD project to achieve improvements in input delivery systems. We did use the PL-480 Title II (Sec. 206) program to this end, but definitive success in this endeavor is at least one year in the future. Nearly all observers agree that the other-donor project which was intended to improve the extension service has not succeeded to date. In summation on this point, given the lack of definition of the end of project status and the failure of critical assumptions to materialize, it is true that the purposes (objectives) of the GARD project may not be fully met. Nevertheless, the Mission's concern for achieving at least part of the project purpose and end of project status was endorsed by the mid-term evaluation of January 1989 and has been expressed in numerous written and oral directives to, and commentaries for, the prime contractor and the GOTG.

We consider it important to show in the final Audit Report what the project purpose level expectations were, in order to appraise the likelihood of any clear-cut project conclusion. The Mission is by no means satisfied with the progress to date in achievement of project purpose, ill-defined though it is. However, we believe our emphasis on purpose level achievement is consistent with the Development Fund for Africa (DFA) legislation. (DFA was not in place when the GARD project was designed, in the Title XII collaborative mode, with the University of Wisconsin. This was not a "cooperative agreement" as stated on page 2 of the draft Audit Report).

What the project is expected to achieve, would, we believe, be clarified in the Report by laying out the expected output level achievements since they are, by and large, more susceptible to objective verification and, in theory, should produce purpose-level results.

Audit Recommendation No. 1 - The Agricultural Research Marketing System
The first output was to be an effective Agricultural Research Management System (ARMS). The Mission believes the final report will be accurate if it shows the National Agricultural Research Board (NARB) as a prominent element of the ARMS. The actual structure of the ARMS was left only partly designed in the Project Paper, since it was to be the product of consultations by the University of Wisconsin and ISNAR, with the GOTG and

A.I.D. The NARB, and its structure and responsibilities, were also left to be determined by later consultations.

The Permanent Secretary of Agriculture formally advised USAID/Banjul on June 27, 1988 that the NARB had been established and that it had begun to function (see Attachment A). The Mission's understanding was that the NARB, as constituted, was a board of directors and not a management unit. At the technical level, the NARB was to be supported by its technical secretariat which is temporarily headed by the Director of the Department of Agricultural Research (DAR). The technical secretariat will be staffed by a research planner (not yet appointed). In our view, the Board should set priorities, review research programs, recommend levels of research project activities, recommend funding for individual entities in the research system and monitor research.

The impression given on page six of the report is that the NARB is co-terminus with the research system. We believe this to be incorrect. Consistent with the above, we believe the report could be clarified by noting that the NARB is a Board of Directors working at a fairly high level of generality on research policy at the top of the ARMS.

Other elements of ARMS are the various departments, first among them the DAR and the Department of Livestock Services, which conduct and disseminate agricultural research in The Gambia. These are the functioning elements of the ARMS. The extension service is not administratively part of ARMS. When the NARB was inaugurated the Mission concluded that ARMS was functioning. An immediate judgment on how well it was functioning was not then required, but was to be a subject of the mid-term evaluation, scheduled at that time (July 1988) within a year.

The Mission believes the draft report is only partially correct when, on page 6, it describes the failures of NARB (meaning ARMS) to perform a wide range of functions. Our review of available documents (Attachment B) shows that procedures for planning, implementing and analyzing and reviewing research results do exist and are put in practice. The minutes of NARB meetings show review and approval procedures being followed and NARB screening of research proposals against a set of established priorities. Department of Agricultural Research (DAR) Work Program and Budget documents show procedures being followed, based on NARB policy. A March 30, 1989 memo from the Director of DAR provides the forms, instructions, and schedules for submission and review of research proposals using the new Programming and Budgeting System (PBS) introduced by GARD. PBS is the core of the system because it provides the details -- time frame, staff and financial resources -- needed for a research project and subjects proposed projects to scrutiny in a competitive framework.

The weaknesses of ARMS are two: First, as the audit rightly points out, the system is not fully codified. The researcher has no complete statement of what is involved, year after year, in getting a project

approved or of what constitutes success. Second, in part as a result of the lack of codification, the system's linkage to extension is weak. In consequence research results might be useful but they may not reach farmers in numbers sufficient to show measurable purpose-level results.

In view of the foregoing and of the documents provided at Attachment B, the Mission proposes changes in the narrative of the final report, as follows:

On page 6 we propose substituting the following text for the main paragraph (which begins "NARB was established ---" through to page 7, the end of the second paragraph ending with "research management system."

"NARB was established in November 1987 and began to function as a policy level body for the Agricultural Research Management System (ARMS). NARB, with the aid of its temporary technical secretariat, has produced a general policy paper and has established a set of general research priorities. Research procedures for planning, implementing and analyzing research results are found in staff memorandums from the Director of DAR and in a Planning and Budgeting system (PBS) developed under GARD auspices which requires researchers to provide detailed information on such matters as time-frames, staff, and financial resources."

Despite the establishment of ARMS, the project is having difficulty achieving its purposes at the farm level. This is because the system is not fully documented with complete guidelines for the entire system. A fully articulated set of linkages with extension organizations is not an integral part of the system as it now exists. This is essential for the achievement of project purposes since it is by working with extension organizations and farmers that the loop is closed, giving researchers first hand-information on production constraints and farmers first-hand access to new technologies to reduce those constraints.

On page 8 we propose the following text be substituted for the paragraph immediately preceding the recommendation:

"After four and one half years of operation the GARD project has created and partially institutionalized a research system which has had modest success in systematizing agricultural research. Nevertheless, with about two years left in the project the system is not having the desired impact at the farm level. Unless the USAID, GOTG and the Contractor pay careful attention to consolidating and documenting the institutionalization of a system that completes the linkage with extension workers and farmers, the project is unlikely to achieve its purposes."

GARD project personnel have been working with individual researchers and task force members since the beginning of the project to establish procedures for planning and implementing, analyzing, and utilizing

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research results. Much of this effort is reflected in the Planning and Budgeting System which is documented. The contract team can institutionalize a sound research system with linkages to the farms by working with the DAR to produce a procedures manual that would describe all of these functions in detail. Research procedures exist but are not fully codified and the research system will benefit by their systematic documentation.

In summary on this point, ARMS exists in basic form but it is not completely documented and is not functioning well. The first evaluation of the project, published in January 1989, noted that the project had made considerable progress in establishing approved procedures for selecting and analyzing research activities, but added that significant improvements were still needed in the implementation of research projects. It noted the perception that research services activities do not respond adequately to constraints faced by Gambian farmers. It found that the research program had not produced an immediate impact upon farmers and that the project's relations with extension and development organizations needed to be strengthened. We believe that the substance of these points is still valid. To repeat, the Mission endorses the central theme of the draft Audit Report that the project is unlikely to meet its purpose level objectives, as stated in the Project Paper, unless these weaknesses are corrected.

The Mission believes progress toward correcting the weaknesses of the project are being made. The mid-term evaluation, in compiling the achievements of the project through mid 1988, noted that research programs increasingly reflected GOTG assessments of research priorities and that the internal review process for selecting and designing research projects had been strengthened. It noted the substantial number of research personnel that had received either short term training or long term training, the training of researchers in the use of computers to increase the timeliness and quality of analyses, and the PBS. The evaluation noted that in 1988 the NARB had instructed the Director of DAR to draft for NARB's review an overall research policy statement and guidelines for the ARMS system, and it noted the functioning of a research unit in DAR and the Department of Livestock Services. The evaluation also noted promising promotional activities.

The NARB made inputs to the mid-term evaluation and has recently established research priorities, using data from the revitalized statistical unit. It is set to review this year's research results. We believe that the extensive training accomplished by the GARD project is a potentially significant step towards creating the kind of institution envisioned by the Project Paper. Seventeen Gambians are in academic training and some 175 short-term training opportunities have been taken up by project personnel. Institution building, of course, usually is a long term, iterative process. At present we see ARMS as operating well below the level of efficiency we hope to reach.

Given our view that the principal elements of ARMS are basically in place and need to be completely documented, strengthened and fine-tuned, and taking into account the need to continue to strive for purpose level achievement in the context of the GARD project, we urge that the Audit Report consider that achievement of limited institutional objectives is attainable but that assignment of the highest priority to this project element is not warranted. We believe that there exists a constructive middle ground, between the language of the draft Audit Report and the status quo, which would emphasize consolidation of the achievements of institution building to date through codification and consolidation of the basic ARMS-NARB-DAR structure with first priority on producing purpose-level results through the linkage with extension workers and farmers. Beyond this the Mission intends to deemphasize institution building.

In the consolidation phase of institutionalization the Mission believes that a good test of success will be whether the recipient agency will be able to carry out the component procedures of the system. To this end, USAID/Banjul will focus project resources so that the GOTG has these abilities. We expect, by the beginning of the final year of the project, that the project's Gambian counterparts will be responsible for development and implementation of the following:

- a. Up-dating the annual farmer constraint report;
- b. The annual work and financial plan;
- c. A computer maintenance and training plan;
- d. A vehicle maintenance plan;
- e. The monthly progress and planning report;
- f. Quarterly financial reports of GOTG funds;
- g. The final Annual Progress Reports;
- h. Publishing of Annual Research Reports.

From now until the project termination, USAID/Banjul will use the above to measure success in the ARMS portion of the project. To carry this approach further, we propose a minor change in recommendation 1B as follows:

Recommendation 1B, page 9: "Instruct the contractor to prepare (with USAID/Banjul concurrence) for NARB approval, within a specific timeframe, a manual that documents the existing agricultural research management system, as budgeted and staffed, that includes linkages with extension workers and farmers and contains guidelines and procedures to implement the Government of The Gambia's agricultural research policies efficiently and effectively."

In this regard, a letter has been sent to the GARD contract Chief of Party communicating these instructions (for a copy, see Attachment C). If RIG/A agrees with this action, recommendation 1B could be closed upon issuance of the final report.

Audit Recommendation No. 2 - Research Facilities

With reference to the section on Operation and Maintenance of the Agricultural Research Facilities, the Mission shares the draft Audit Report's dissatisfaction with operation and maintenance of research laboratories. In this light, we hope the RIG/A will take into account some of the following Mission observations: The laboratory of most concern is the soils laboratory. Good soil tests contribute greatly to the accuracy of research results. The Mission and the contractor have been anxious to upgrade the capability of the soils laboratory since the beginning of the project but have been stymied by the inability of the GOTG to place the proper technical staff. This bottleneck was broken in December 1989 by appointment of a trained chemist. Project recommendations now being followed will result in the upgrading and effective functioning of the soils laboratory by mid-1991, following assignment of an expatriate GARD technician to the laboratory.

The GOTG's agronomy laboratory has been out of commission for a long time and has not been included in the GARD project framework for funding or other support. It is regrettable that the laboratory is not functioning but it is not critical to the achievement of project objectives. We do not envisage any GARD financing for that laboratory.

The draft Audit Report refers to the animal traction unit at Yundum, near the headquarters of the DAR. The auditors' visit coincided with a period of inactivity for traction animals in The Gambia. After the groundnut and rice harvest in November, they are released to graze. Caretaker personnel unfortunately did not know the exact whereabouts of the animals that belong to the unit. The animals were purchased by the Ministry of Agriculture (GARD purchased some animals for other locations) and may be approaching the end of their useful life, given the high rate of attrition for livestock in The Gambia.

Animal traction in The Gambia is quite prevalent among farmers and, we believe, has probably reached the stage where its incidence will increase in parallel with an increasing scarcity of farm labor. In other words, farmers do not fail to respond to the technology. Rather, they have already responded to the technology and need little further inducement. As the GARD project is focussed on a smaller number of activities, animal traction will be dropped as a distinct GARD-financed activity, except in the context of active on-farm promotional campaigns. Consequently, the Audit Report might be modified to reflect the foregoing. Specifically, concerning the statement on page eleven that begins with: "However unless...."and ends "with ...livestock technologies," should be changed to read as follows: "However unless basic research facilities are --- will not be possible. Failing this, the GARD project will be less able to accomplish ---."

In view of the foregoing, we asked that recommendation 2A exclude the agronomy laboratory. As noted, we do not anticipate funding either equipment or technical assistance for this marginal laboratory.

Part two of the draft Audit Report refers to operation and maintenance facilities. Considering this, we also suggest that recommendation 2C require termination of project assistance for research facilities as opposed to research activities.

Audit Recommendation No. 3 - Extension and Promotion

With reference to part 3, "Extension activities and promotion campaigns ---", we believe the report, particularly in this section, would be strengthened by avoiding the impression that the GARD project is intended to "create an extension network," or that it is to create or expand an extension service. Mission and GARD personnel have worked to establish a habit of cooperation and coordination between research and extension, especially in the context of promotional activities (not "pilot projects"). We have never included as a function of the GARD project the establishment or strengthening of an extension service per se, but rather the firm entrenchment of a mutually beneficial, cooperative working environment between the two GOTG services. Trained Research Extension Liaison Officers (RELOs) are to work towards this objective.

Although there are institutional and structural difficulties in creating this linkage, it is nevertheless true that GARD project personnel and GOTG researchers are regularly in contact with extension personnel and, since the beginning of the project, have worked with extension personnel on farms in The Gambia with Gambian farmers in various phases of research from farm trial plots to demonstration activities. Such activities are detailed in the Trent report (Attachment D). For a variety of reasons, these efforts have not had the purpose level impact that was expected when the project was designed. This is most likely because communications between researchers and extension agents are not easy, systematic or habitual; extension personnel are poorly supported by the GOTG; research efforts are probably spread too thinly and fail to focus on the principal targets of opportunity; and research results are of poor, if improving, quality. The GARD project is making efforts to resolve these shortcomings.

In the interest of accuracy, we suggest that the sentence on page 13 in the middle of the page which begins with: "However, after three years of activity..." should be modified to read: "However, after three years of activity, a broadly effective linkage had not been established and extension activities linked to the GARD project were not fully effective." This suggestion recognizes that a marginally effective extension service does perform some extension activities, and that A.I.D., through GARD seeks to strengthen linkages between extension and research activities, and, more importantly, to link the farmer to this process.

It is possible that the auditors were not shown some information reported either by the Department of Agricultural Research and Save the Children Foundation on promotional campaigns that are funded by the GARD project, or by CRS promotional campaigns which are not funded by, but are

coordinated with, the GARD project. Reports from CRS and Save the Children are at Attachment E. The Save the Children Foundation OPG will be formally evaluated shortly. The evaluation is expected to provide additional information noted by the draft Audit Report to be unavailable at the time of the audit, e.g. varieties of crops, number of farmers.

After review of the material attached, some change of perspective may be in order. At a minimum, we suggest that the reference to the extension program near the bottom of page 14 refer instead to the extension linkage and, in view of the material available from Save the Children and CRS, indicate that the GARD project has shown "modest results" rather than "no tangible results."

At the top of page 15, in the concluding part of the narrative preceding the recommendations, the reference to "coordination between the GOTG and the GARD management" may be out of place since there is no reference to this lack of coordination earlier in the section. In the final sentence at the top of the page we would suggest this wording: "Without a strengthened effort to link GARD with the extension program --- very few farmers in The Gambia will benefit from the results of agricultural research."

Audit Recommendation No. 4 - Project Design and Implementation

We also suggest some minor changes in the recommendations of this section. First, we would suggest folding recommendation 3A into 3B - thus eliminating 3A and giving the new 3A the following new wording:

"Institute comprehensive guidelines for conducting promotional activities involving the extension service, NGO's, and the private sector that should include information gathering and interviewing and reporting of results."

The GARD project has not been designed to upgrade the extension service directly, but through strengthened liaison activities. Consequently, the Mission recommends that recommendation 3C be changed to 3B and modified to read as follows:

"Intensify in-country training for extension workers in the context of promotional campaigns."

This change would preserve the substance of the recommendations while recognizing that the GARD project's direct financial responsibility to the extension service is marginal to the total extension program. At the same time, the intention of the new wording is to strengthen the effort to build research and extension linkages without leaving the impression that the GARD project will undertake major formal training programs for extension workers. The change substitutes "promotional campaigns" for "pilot projects." We believe the term: "promotional campaigns" accurately describes the project's activities and plans. The project seeks to promote innovation rather than to sponsor pilot projects.

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As mentioned earlier, we believe the objective statement at the top of page 16 could be changed to conform to the purpose statement used throughout the Project Paper.

In order to reflect what we believe the situation to be, the Mission suggests a change in middle of the second paragraph on page 16, the second sentence (which begins "The audit showed") to read as follows: "The audit showed that an agricultural research management system was not producing purpose level results." This thought has been elaborated above. The remainder of the sentence would remain the same.

On the subject of the GOTG's spotty record in providing qualified project personnel, we believe the audit should note that the Mission and the GARD project have repeatedly tried get the GOTG to supply the key personnel. As the project becomes more focussed, we believe that about six positions are critical to the functioning of the ARMS as it is now constituted. The six are contained in Attachment F. The list of vacant positions in Exhibit 2 of the draft Audit Report is, we believe from experience, beyond the means of the GOTG to fill. The list is excessive for a research system in a small country like The Gambia.

With respect to the GOTG's commitment under the Project Agreement to provide funds sufficient to finance an increasing proportion of operational costs for research under the project towards the goal of financing one hundred percent of such costs by the beginning of the final year of the project, USAID/Banjul intends to use a benchmark procedure validated by quarterly expenditure reports which will be formalized in a Project Implementation Letter (PIL). The formulation of the appropriate levels of operational costs to be borne by the GOTG will be done during joint GOTG, Contractor and USAID/Banjul reviews of annual work and financial plans. This review takes place in May annually.

The Mission fully accepts and recognizes the need to redirect the implementation of the GARD project. We intend to use the pending (April 1990) PIO/T and contract amendment process to effect necessary changes. A significant decrease in life-of-project funding is anticipated.

As noted earlier in the report, most of the output level objectives spelled out in the logical framework of the project have been or are being achieved. Related to output Number 1, ARMS is functioning (if not optimally) and the contractor will be asked to concentrate on consolidating the system and improving its effectiveness, inter alia, by documenting the procedures and responsibilities of the various elements. The GOTG once again will be requested to provide key project personnel, particularly for the technical secretariat of the NARB. The GARD project will now focus on inter-disciplinary on farm research that is most likely to benefit large numbers of farmers in the short term, particularly drawing upon linkages with international and regional agricultural research centers. Related to Output Number 2, the GARD project has already greatly improved library facilities at Yundum and Sapu. Related

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to Output Number 3, after a trial period, the decision was made not to use farming systems research extension teams and to opt for farmer constraint analyses, working with NGOs and increased on-farm research.

The GARD project's most lasting achievement may prove to be training which appears as Output Number 4. Training objectives have been met as planned. All of the long term training that the project was designed to provide is now underway and the project is engaged in a wide variety of in-country and short term training for both research and extension personnel, as noted on page 5.

Output Number 5, related to promotional programs for promising innovations emerging from agriculture research, is the output that needs most to be strengthened if the purpose level objectives of the project are to be realized in satisfactory degree. Despite the fact that there have been promotional efforts in rice and cowpeas as well as the CRS and Save the Children promotional activities linked to or financed by the GARD project, work in this area will be intensified and focused on priority interventions under the terms of the contract amendment to be negotiated in April 1990.

We concur with the suggestion to modify the implementation plan to focus on objectives which we can reasonably expect to accomplish. Based on the foregoing review of output achievement, the Mission has concluded that the best course of action is to adjust the project through implementation mechanisms rather than through a complex redesign of the project. Consequently, we believe, recommendation 4A could best be changed to indicate that A.I.D. should "redirect" the project rather than "redesign" the project. Following this line of action, under recommendation 4C we ask that the word "deobligate" be deleted and that the words, "reprogram and/or deobligate" be substituted.

Audit Recommendations Nos. 5, 6 and 7 - Accounting and Management

With reference to unsubstantiated salary costs, the Mission notes that the University of Wisconsin will set forth its position which we believe merits consideration. Regardless of the outcome, the USAID/Banjul has instructed the contractor to extend the official in-country work-week to a full 40 hours (see Attachment G).

USAID/Banjul concurs with the substance and recommendations of the audit directed to improving the project accounting and management procedures and practices.

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AUDIT OF THE GAMBIA
AGRICULTURAL RESEARCH AND DIVERSIFICATION PROJECT

Executive Summary

The Gambian Agricultural Research and Diversification (GARD) project was initiated in June 1985 with an \$18 million grant agreement between A.I.D. and the Government of The Gambia (GOTG). The project objectives were to test and adapt improved crop and livestock technology to meet farmers' needs and expand and diversify The Gambia's agricultural economy. The strategy was first, to produce results relevant to the needs of farmers, extension workers and policy makers, second to extend these results to the clients and third to institutionalize the process.

To assist the Gambian Government in project implementation, A.I.D. signed a five-year technical assistance contract with the University of Wisconsin, Madison, in January 1986. The GARD project is to terminate in June 1992. As of September 30, 1989, A.I.D. had accrued expenditures of \$8.6 million for all project activities.

The audit objectives were to determine the extent to which the project was accomplishing its purposes; identify factors inhibiting satisfactory progress; determine the reasonableness of locally-incurred project expenditures; and evaluate the adequacy of controls over A.I.D. financed project equipment.

After four years the GARD project has improved the way research is planned, budgeted, implemented, analyzed and reported. Interaction between research and extension agencies has begun. There is a need to increase this interaction further in order to build a systematic linkage with farmers. Unless a successful effort is made to structure the research program and apply technical knowledge through this linkage, the purposes of the project will not be achieved.

The project may be overly ambitious. Assumptions made in the Project Paper concerning the availability of human and financial resources from the GOTG have proved unrealistic because the GOTG was unable to provide the required human and financial resources. The assumption that the extension and input delivery system would be strengthened by other projects did not materialize. Assignment of new A.I.D. and contractor personnel after two years of implementation, together with the advent of the Development Fund for Africa legislation, led to disagreements between the Mission and the contractor on the relative emphasis to be placed on institutionalization as opposed to near term delivery of technology to the project clients. A mid-term, external

evaluation in January 1989 noted progress in institutionalization and at the same time cited weaknesses in reaching farmers with research results. The recommendations of the assessment underscored the need for progress in the latter effort and helped clarify the issue.

Successful agricultural research depends on well-equipped, properly maintained and adequately staffed research facilities. The audit team inspected the agronomy, soils and seeds laboratories, a horticultural unit, and an animal traction farm. Of the five installations visited, only the seeds laboratory and the horticulture unit were in satisfactory operating condition. The soils laboratory, a basic requirement for reliable research, was not functional. Recently the GOTG appointed a trained chemist to be the laboratory manager, the contractor sent a short-term advisor and is now in the process of nominating a long-term advisor. The agronomy laboratory was totally defunct and derelict. However, it is not included in the scope of the project since it is not basic to the research system. The animal traction unit appeared to be moribund, but we were informed that project funding for animal traction will henceforth be limited to its use in promotional campaigns.

One year after the mid-term external evaluation, the audit showed that the agricultural research management system had not been fully documented and adequately linked with extension systems; operation and maintenance of research facilities were deficient; and promotional campaigns were showing only modest results.

Controls exercised by the University of Wisconsin over project expenditures and equipment were deficient. This resulted in ineligible costs billed to A.I.D., unused project equipment, inaccurate and unreliable inventory records, and questionable procurement practices. In addition, a project employee fraudulently obtained duplicate reimbursements for several purchases. We referred this case to the Regional Inspector General for Investigations, Dakar, who has initiated an inquiry.

Given the current rate of progress, or the lack of it, it appears unlikely that the project will accomplish all of its purpose-level objectives in the remaining two years of its life. It is apparent that the project was overly ambitious. Also, disagreements between the USAID and the technical services contractor may have had a negative impact on project implementation.

Therefore, we believe that USAID/Banjul should redirect the project to focus on activities which it can reasonably expect to accomplish during the remaining two years of the project. This report makes six recommendations for USAID/Banjul action.

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