

UNITED STATES GOVERNMENT

memorandum

DATE: April 8, 1981
REPLY TO: Merrill B. Asay, Project Manager, USAID/Banjul
ATTN OF:
SUBJECT: Soil and Water Conservation Management 635-0202
USDA/SCS PASA
TO: Joel Schlesinger, AFR/DR

Attached for information is a copy of the evaluation of the SWMU Project prepared by D. H. Schaer, DS/AGR. You will have received Mr. Moser's commendation to Dave (Banjul 632).

This evaluation is the basis for the changes in project personnel. A PIO/T giving the new job description is being prepared.

Please check the cable, Banjul 816, in which a request was made to repeat the information regarding the evaluation to USDA/SCS. Arnold Snowden has received a letter from Jerry Hammond dated March 24 which indicates he has not received the message.

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

OPTIONAL FORM NO. 10
(REV. 7-78)
GSA FPMR (41 CFR) 101-11.6
5010-112

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SUBJECT: SOIL AND WATER MANAGEMENT PROJECT EVALUATION,
635-0202. PASA AG-GM-0202-1-78

SECSTATE WASHDC
ACTION: AMEMBASSY DAKAR
AMEMBASSY BANJUL

UNCLASSIFIED BANJUL _____

AIDAC

FOR: AFR/DR JOEL SCHLESINGER PASS TO JERRY HAMMON, USDA
AND RON JONES, OICD

1. AS A RESULT OF THE VERY EFFECTIVE EVALUATION OF SOIL AND
WATER MANAGEMENT UNIT CARRIED OUT BY DAVID SCHAEER, DR/ARD,
THE GOTG AND USAID AGREED TO CHANGES IN PROJECT IMPLEMENTATION
STRATEGY. MAJOR CHANGES WERE THAT THE PRESENT LEVEL OF TECHNICAL
ASSISTANCE SHOULD BE REDUCED DUE TO PAUCITY OF AVAILABLE GAMBIAN
TECHNICIANS OVER NEXT TWO YEARS. / SCS PASA TEAM TO BE REDUCED FROM
THREE (3) TO ONE (1) WITH A SECOND PERSON TO BE ADDED ONCE THE
GOTG MEETS CERTAIN CONDITIONS SPECIFIED IN THE EVALUATION REPORT
CONCERNING PROVISION OF NECESSARY STAFF AND LOCAL BUDGET SUPPORT.
GOTG BELIEVES THESE CONDITIONS WILL BE MET BY JULY 1981. JOB
DESCRIPTION/TEAM LEADER UNCHANGED. NEW JOB DESCRIPTION FOR
SECOND TEAM MEMBER BEING PREPARED. EMPHASIS IN THIS POSITION
IS ON TRAINING. IT IS PROPOSED THAT CURRENT TEAM LEADER SNOWDEN

USAID:MBASAY:AMTAMOSER:da 3/16/81

AID REP:TAMOSER

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Classification

OPTIONAL FORM 153A
(Formerly FS-413A)
January 1975
Dept of State

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CLASSIFICATION

OPTIONAL FORM 153
January 1975
Dept of State

CONTINUE IN THE TEAM LEADER POSITION AND THAT TEAM
MEMBERS RATCLIFF AND NESSMITH RETURN TO PARENT AGENCY
UPON COMPLETION OF PRESENT TOURS IN JULY.
2. EVALUATION AND PROPOSED NEW AGREEMENT ARE BEING
FOUCHED.

PIPER

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Classification

OPTIONAL FORM 53A
(Formerly FS-413A)
January 1975
Dept of State

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OPTIONAL FORM 53A
January 1975

2/26/81
D. H. Schaer
AID/W
AFR/DR/ARD

EVALUATION OF THE SOIL AND WATER
MANAGEMENT UNIT (SWMU) PROJECT - 635-020
THE GAMBIA

SUMMARY/CONCLUSIONS/RECOMMENDATIONS

As previously agreed upon, Dr. David H. Schaer, AID/Washington, was requested to evaluate the Soil and Water Management Unit Project. Discussions were held with appropriate persons, a complete study of the files was completed, and visits were made to the Yundum area facilities, the Mixed Farming Center at Kanjibat and the Sintet village project site.

The following summarizes the evaluation report:

Review of Project to date

1. The original project design is still sound, appropriate, attainable, high priority, and fully justified. No major changes in the project design are required at this time.

2. The original implementation plan is behind schedule by about 12-18 months due primarily to a one year delay in arrival of the SCS/PASA team, difficulties in forming and staffing the SWMU, and the inability to locate and send participants for long term training in the U.S.

3. Although it is too early to measure the project's technical or development impact, good progress toward the purposes has been made by temporarily forming the SWMU at Yundum, assigning approximately 10 technical staff, the provision of vehicles, equipment and supplies, and the execution of work plans. As a result, the PASA team is in the process of training 8 conservation specialists in actual field practices and are accomplishing soil survey work. A few soil conservation practices are in place on Mixed Farming Centers and villages in 3 locations. Work on plant data and a technical guide is going well.

Problems to date

The main problem to date has been establishment of a permanent functional SWMU with adequate positions, grades, budget, etc. and assignment of adequate numbers of sufficiently trained and experienced staff to benefit from the U.S. technical assistance. Along with this is the fact that the above staff require 3-4 years of U.S. training to reach the B.S. degree level and to date none have left to begin training.

The delay in project start up and discovery that participants would need 4 years instead of 2 years to reach the B.S. degree level and return has led to budget constraints. Delay and inflation now make technical

assistance and training more costly and the original project budget underestimated training costs by at least \$ US 250,000. The project has not made enough tangible progress to be in a strong position to go to AID/Washington for additional funds at this time. However, with the proper modification of technical assistance and other inputs, the original project purposes can be attained within a minimally delayed time frame.

Recommendations/Solutions

1. The U.S. technical assistance should be scaled down to two full time PASA team specialists by July 1981. The Team Leader would be the Senior Advisor to the Gambian Head of the SWMU. The second specialist and additional consultants would be responsible for the interim field work and increased training of MANR officials and agricultural assistants. It is felt that this combination would be able to maintain progress until such time as sufficient numbers of trained Gambian staff are available to benefit from an increased level of long term U.S. technical assistance (subject to availability of funds).

2. The SWMU should be formalized as soon as possible. If it is not done in the 1981/1982 Approved Budget Estimates then it should be established temporarily (perhaps in the DOA) with a full complement of staff (see Attachment I) by September 1, 1981 and formalized in the MANR in the estimates by July 1, 1982. The arrival of the second specialist should be conditional upon formalization of the SWMU.

3. The following participants should be provided by MANR and sent for long term training by USAID:

- a) Two-2 year by 6/30/81
- b) Two-3 year by 6/30/81
- c) Four-4 year by 8/15/81

This is critical to decisions in 1982 regarding funding and project continuation.

4. Short term in-country training provided by the SWMU/PASA team should be increased immediately. At least two short courses (or their equivalent) at Yundum College should be provided annually and general training courses for MANR officials and agricultural assistants should be carried out twice each year.

5. In order to carry out the above recommendations, USAID and the GOTG/MANR should formalize their working relationships for the next year with a formal agreement further clarifying respective responsibilities.

SOIL AND WATER MANAGEMENT UNIT

STAFF AND BUDGET NEEDS

<u>Number of Employee</u>	<u>Positions</u>	<u>Civil Service Grade</u>
1	Director in Training	17
1	Executive Officer	10
1	Typist	4/5
3	Drivers	4
1	Messenger	3
1	Principal Conservation Officer	15*
1	Senior Conservation Officer	14*
6	Conservation Officers	13*
<u>10</u>	Conservation Assistants	6
25		
	Salaries	80,000
	Other support costs	<u>72,000</u>
	Total annual budget	D152,000

*Grade with B/S degree - staff to include two people with B/S degree and six people that can get B/S degree with university training or equivalent.

1 March 1981

SWMU PROJECT EVALUATION

I. Evaluation of progress toward attainment of the objectives/purposes of the project.

Section 1.1 Evaluation Methodology

a) The reason for this evaluation is that the project is at a critical stage in its implementation. The Life of Project is 10 years with 3 phases:

I - 3 years

II - 2 years

III - 5 years

At this time Phase I is completing its 2nd year and USAID/G and the GOTG have anticipated the need for some adjustments in implementation. An evaluator was requested via cable (Banjul 2298, dated 28 August, 1980) to review the project's progress towards design objectives along with GOTG response to mission suggestions, and then delineate the project's implementation course.

b) This evaluation follows the evaluation plan outlined in the project paper on page 97-98 and more specifically the plan in Section 5.1 of Project Agreement 635-78-2, page 4 dated 20 March, 1978.

c) Based upon the following exchange of letters:

Moser/Jagne, 26 January 1981

MA/3854/(9), 6 February 1981

Dr. D. B. Komma was identified as the GOTG coordinator to work with Dr. D. H. Schaer to evaluate the SWMU project. The GOTG assistance and support was excellent and very much appreciated.

Discussions were held with the following individuals/organizations:

Mr. Alieu Jagne, MANR

Dr. D. B. Komma, MANR

Mr. Reuben Thomas, DOA

Mr. Sampo Ceesay, DOA

Dr. Dennis Carayol, DAHP

Mr. Robert McEwan, DO Forestry

Mr. Sidi Sanneh, Rural Development Project

SWMU GOTG Staff

Samuel H. W. Davis, Director in training

John S. Fye, Professional staff member

M'bemba A. Danso, Professional staff member

U.S. and others

Thomas A. Moser, AID Representative
Tony Funicello, AID Program Officer
Merril B. Asay, AID Agriculture Officer
Marc Madland, AID Range Management Officer
John Dalton, FAO
Arnold Snowden, SWMU, USDA/SCS/PASA
Harvey Nessmith, SWMU, USDA/SCS/PASA
Ivan Ratcliff, SWMU, USDA/SCS/PASA

A complete study of the following documents was completed:

Project files 1975 to date
UK/ODM/LRD Study No. 22 (1972-1975)
UK/ODM/LRD Report No. 12 (1975)
SWMU Project Paper and Agreements
Contractual and sub-obligating documents
Financial records and accounts
Reports (PASA team) July 1979 to date
GOTG budget estimates 1979/80/81

Visits were made to the Yundum area SWMU and other facilities, the Mixed Farming Center at Kanjibat, and the Sintet village project site.

d). The following specific analyses were completed and are on file at USAID/G:

1. Consistency and appropriateness of project design at this point in time.
2. Implementation time frame.
3. Budget.
4. Organization (MANR).
5. Project Inputs.

Section 1.2. The project inputs consist of U.S. technicians and consultants, long and short term training, commodities (vehicles, equipment and supplies), housing construction, provision of office facilities, and GOTG staff.

Three U.S. technicians arrived in July 1979 (about 1 year later than planned) and moved into housing in November 1979. Two consultants (30 days each) have been provided to date. Vehicles have been adequate to date. Commodities and equipment arrivals required one year for delivery, but are now about 90% complete. Office facilities took longer than anticipated to acquire but are now being used. Modifications are required to accommodate increased staff.

Provision of adequately trained and experienced GOTG staff has been difficult. The eight Gambians assigned to the SWMU arrived between August and October, 1979. In January 1981 two (2) more were assigned, one of whom has a B.S. degree in Agronomy from the U.S. and selected as the SWM Director in training. The problem of provision of Gambian staff relates directly to the need to formally establish the SWMU in the GOTG Approved Budget Estimates, thus giving Government Service stability to the positions and budget. A proposal to formally establish the SWMU did not materialize in the 1980/1981 estimates and a more explicit proposal has been put forward for approval in the 1981/82 estimates. (See Attachment I)

Special mention is made here regarding staff availability and training. The Project Paper assumed 8 participants would be available within the first year and would require 2 years each to reach the B.S. level in the U. S. None have departed to date and it is estimated that potential candidates will require 3-4 years to attain B.S. degrees. Lack of staff has reduced the amount of on-the-job (OJT) training and no other short term (course type) in-country training has taken place.

Housing construction was completed 4-6 months later than anticipated and cost 15-20% more than budgetted. The result was that U.S. technicians and families stayed in hotels for 4 months.

Section 1.3. Progress towards outputs, goals and purposes

a). The Project Paper recognizes that after only 2 years it is difficult to measure (quantify) progress. Never the less, good progress has been made by temporarily forming the SWMU at Yundum, assigning approximately 10 technical staff, the provision of vehicles, equipment and supplies, and the execution of work plans. As a result, the PASA team is in the process of training 8 conservation specialists in actual field practices and soil surveys work was completed in two villages.

A few soil conservation practices are in place on Mixed Farming Centers (MFC's) and villages in 3 locations. Work on plant data and a technical guide is going well.

b). The outputs, goals, and purposes are stated below as a point of reference and a detailed progress report is included as Attachment II.

1) Outputs: End of Project status:

- a) Unit under Gambian direction comprising 10-15 trained specialists.
- b) Soil/water technical manual printed and adopted by MANR.
- c) Appropriate soil/water management training courses in operation within MANR training program.
- d) Village planning and action process developed and documented in training aids and technical manuals.

2) Goals:

- a) Halt/reverse environmental deterioration due to inadequacy of traditional agricultural/pastoral methods.
- b) Increase/stabilize production of food/forage wood/cash crops; reduce susceptibility to drought, other weather variations.
- c) Improve insitutional capability of GOTG to deliver educational, technical material services to rural population.

3) Purposes:

- a) Establish a soil and water management unit within Ministry of Agriculture and Natural Resources.
- b) Develop technology for improved agriculture/pastoral methods consistent with Gambian abilities and resources.
- c) Train Gambian soil and water management specialists and Agricultural assistants to functional levels of competence in developing solutions to soil and water problems.

c) Based upon analyses in Section 1.1 it was determined that the original project design is still sound, appropriate, attainable, high priority, and fully justified.

II. Identification and evaluation of problem areas or constraints which may inhibit attainment of the project objectives/purposes.

Section 2.1

a) The main problem to date has been establishment of a permanent, functional SWMU with adequate positions, grades, budget, etc. and assignment of adequate numbers of sufficiently trained and experienced staff to benefit from the 3 man team of U.S. technical assistance.

The delay in project start up and discovery that participants need 4 years instead of 2 years to reach the B.S. degree level and return, has now led to budget constraints. Delay and inflation now make the project more costly. The original project also underestimated the training costs by at least US \$250,000.

b) The U.S. technical assistance was provided as a 3 man team from the outset of phase I. As a result there was no Gambian unit head or B.S. level counterparts. This put a heavy load on the team with regard to forming the SWMU in the Gambian context. To this end they have performed in an outstanding manner, but the result has been under utilization of their technical skills. Although the MANR has put forward a request for formal establishment of the SWMU for approval in the 1981/82 Budget Estimates, it appears that the under utilization of the current U.S. team might continue for some time.

c) The importance and difficulty of getting 8 qualified Gambians into 4 years of long term training is now recognized and plans are being made to correct the problem. However, it remains a delaying factor of serious proportions. It will be important to analyze the training pipeline in the future to assure return and overlap with the technical assistance element.

d) Virtually no short term in country (course type) training has been carried out to date for MANR and interested officials or Agricultural Assistants (extension personnel). During the evaluation it became clear that there was wide interest and support for the SWMU but few understood exactly the role it would play in development. Short term training and increased information would strengthen the project.

e) The usual start up problems of housing office space, transport, equipment and supplies, etc. were also present. The GOTG, SWMU, PASA team, and USAID/G are to be commended for their patience and cooperation in resolving these problems.

III. Assessment of how such information may be used to overcome such problems:

Section 3.1: Although the project is delayed 12-18 months and budget constraints are evident, the project has not made enough tangible progress at this date to request additional funds. However, with the proper modification of inputs, the project purposes can be achieved within about 2 years of the

original time frame. That is, Phase I and Phase II would end about CY 1985 as opposed to CY 1983.

Section 3.2: The following are specific conclusions and recommendations which flow from the evaluation:

a) Conclusions

1) The original project design is still sound, appropriate, attainable, high priority and fully justified. No major change in the project design are required at this time.

2) The original implementation plan is behind schedule by about 12-18 months due primarily to a one year delay in arrival of the SCS/PASA team, difficulties in forming and staffing the SWMU, and the inability to locate and send participants for long term training in the U.S.

3) Although it is too early to measure the project's technical or development impact, good progress toward the purposes has been made by temporarily forming the SWMU at Yundum, assigning ten technical staff, the provision of vehicles, equipment and supplies, and the execution of work plans. As a result, the PASA team is in the process of training 8 conservation specialists in actual field practices and are accomplishing soil survey work. A few soil conservation practices are in place on Mixed Farming Centers and villages in 3 locations. Work on plant data and a technical guide is going well.

b) Recommendations

1) The U.S. technical assistance be scaled down to two full time PASA team specialists by July 1981. The Team Leader would be the Senior Advisor to the Gambian Head of the SWMU. The second specialist and additional consultants would be responsible for the interim field work and increased training of MANR officials and agricultural assistants. It is felt that this combination would be able to maintain progress until such time as sufficient numbers of trained Gambian staff are available to benefit from an increased level of long term U.S. technical assistance (subject to availability of funds).

2) The SWMU should be formalized as soon as possible. If it is not done in the 1981/82 Approved Budget Estimates then it should be established temporarily (perhaps in the DOA) with a full complement of staff (see Attachment I) by September 1, 1981 and formalized in the MANR in the estimates by July 1, 1982. The recruitment of the second specialist would be conditional upon formalization of the SWMU.

3) The following participants should be provided by MANR and sent for long term training by USAID:

- a) Two - 2 year by 6/30/81
- b) Two - 3 year by 6/30/81
- c) Four - 4 year by 8/15/81

This is critical to decisions in 1982 regarding funding and project continuation.

4) Short term in-country training provided by the SWMU/PASA team should be increased immediately. At least two short courses (or their equivalent) at Yundum College should be provided annually and general training courses for MANR officials and agricultural assistants should be carried out twice each year.

5) In order to carry out the above recommendations, USAID and the GOTG/MANR should formalize their working relationships for the next year with a formal agreement further clarifying respective responsibilities.

6) It is recommended that a standard reporting format for the PASA team be utilized. This format would permit the USAID/G project manager to compare progress with work plans in a timely manner. This will become more important as USG/GOTG cooperation increases. Short (1-2 page) monthly reports are recommended, with technical reports attached as needed. Special reports and a final report would be separate as agreed upon by USAID/G and the GOTG.

SUGGESTED FORMAT
USDA/SCS/PASA
MONTHLY REPORT

SWMU Project
No. 635-0202
PASA No. _____

Period covered _____ to _____
Submitted by _____

- I. Activities during period covered.
- II. Problems encountered
 - A. What is being done about them by SWMU
 - B. What others should do to help solve the problems.
- III. What activities will be taking place during the next reporting period.
- IV. Other
- V. Special/technical/informational attachments.

7) It is recommended that some basic information materials be prepared ASAP to explain the project and its contribution to the development process. Things such as the brochure "Conservation and the Water Cycle", a simple slide presentation, a five-minute radio presentation, etc. should be available as needed to promote progress toward the basic purposes of the project.

8) Observational short term 3rd country or U.S. training should be seriously considered. This can be short courses for specialists or an opportunity to familiarize high level planners with the wisdom and future benefits from soil and water management. This is especially important during the formational years of the GOTG policy with regard to the SWMU. The USDA/SCS could easily arrange an appropriate observational trip for key Gambian officials as agreed upon by USAID.

IV. Evaluation to the degree feasible of the overall development impact of the Project.

As a point of reference for an impact evaluation at some future date, the following pages of the project paper should prove useful.

Page 60 - Section 5, "A Word about Progress"

Page 97 - 98 Section 1-3, Evaluation and Baseline Data.

SOTL AND WATER MANAGEMENT UNIT

STAFF AND BUDGET NEEDS

<u>Number of Employee</u>	<u>Positions</u>	<u>Civil Service Grade</u>
1	Director in Training	17
1	Executive Officer	10
1	Typist	4/5
3	Drivers	4
1	Messenger	3
1	Principal Conservation Officer	15*
1	Senior Conservation Officer	14*
6	Conservation Officers	13*
<u>10</u>	Conservation Assistants	6
25		

Salaries	80,000
Other support costs	<u>72,000</u>
Total annual budget	152,000

*Grade with B/S degree - staff to include two people with B/S degree and six people that can get B/S degree with university training or equivalent.

SOIL AND WATER MANAGEMENT PROGRESS REPORTJANUARY, 1981

By Arnold Snowden, Team Leader

USDA/SCS/PASA Team

1) Training Gambian Staff

The Gambian staff capability to perform soil and water management technical services is significantly improved as a result of training provided. It is decided to postpone the short course for introduction of Soil and Water Management Technology and Methodology to inform other MANR officials. The current schedule and workload of the SWMU staff is too full to achieve beneficial results.

The preparation of the PIO/P's for university training for the Gambian staff proceeding on schedule. All staff members have completed their physical examination and six members have received their SAT and TOEFL scores. All staff members have provided substantiating data of their education levels. Several members do not have original transcripts to certify their education. They are working to get the needed documents. Drafts of the PIO/P's will be completed next quarter.

The Gambian staff was provided basic training in conservation planning and plant ecology while gathering data on cropland, rangeland, and woodland and studying basic concepts in the classroom. Recognition and evaluation of erosion problems on cropland and treatment alternatives were studied. Conservation management problems on rangeland and woodland were studied and class exercises of management and treatment practices were applied. The staff has had field training in evaluating conservation problems, selecting applicable alternatives, and recording decisions. They have been trained to apply inventory procedures and to read and understand aerial photography used in conservation planning. They can use land capability units from a soil map to assist them in selecting suitable treatment alternatives.

Gambian staff members received field and classroom training in the mechanics of making detailed soil surveys. The training included, soil mapping techniques, soil-plant correlation, pedon description, soil chemistry, soil classification and the use of the universal soil loss equation (USLE). Profile ranges and characteristics were further refined for existing series.

Aerial photos at a scale of 1:10,000 were received for four selected project areas. The staff received photograph interpretation training and applied this training using a stereoscope to place match lines and index the project photos.

Photo transects were completed in Sapu area by the staff.

The three soil scientist trainees have assisted in training other SWMU team member trainees in basic soil science principles.

2) Soil Surveys

Trainees investigated an area of about 100 hectares near Brikama and established mapping units. They then proceeded to produce a soil map of the area on a photographic base with a scale of 1:25,000. During the course of the survey they observed and described kinds and amounts of inclusions within the several mapping units. On completion of field mapping they developed

a narrative description of the units, placed them into Land Capability Units and described the capabilities and limitation for various agriculture uses.

A detailed soil survey (1:25,000) was completed in the Sintet watershed. Mapping units were described in detail. Further field work should be completed on 1:10,000 scale photos to have adequate detail for conservation planning. Plans have been developed to complete soil survey at Basse, Sapu and Farafeni by mid April 1981.

Reconnaissance soil survey was conducted in the Alohungari watershed.

3) Data from Soil Surveys

Basic soil survey data has been assembled into a descriptive legend as field mapping and observations have been conducted. This data includes basic soil characteristics and their ranges, e.g. ph, color texture, structure, depth, consistency and special features as they are observed.

4) Soil Handbook

A soil handbook is being assembled and includes the descriptive legend, identification legend and first draft of series descriptions as they have been observed (but not yet mapped).

5) The Gambia Soil Classification System

Those series which have been mapped have been classified to family level of soil classification using Soil Taxonomy as the guide to classification.

6) Plant Selection for Conservation Treatment

Eight grass species were tested in the SWMU Yundum office compound. The evaluation failed to indicate any species that show promise for erosion abatement. Other species have been ordered from the United States and a partial shipment has arrived. Agreement with officials of the Department of Animal Health and Production has been arranged to plant and evaluate grass species this spring. If some of them show promise, larger plots will be planted at YBK after the summer rain starts.

7) Vegetation Production Data by Soil Group

Vegetative production data are being gathered while training activities are conducted in the field. Production data are being assembled on as many soils as possible. Woodland production data will be gathered during March and April. Crop production data is available from production records at the mixed farming centers. This data will be assembled and should give enough information to group soils into treatment groups.

8) Conservation Treatment

Contour farming has been initiated at Sintet and Alohungari villages and has been accepted by the farmers. Two fallow fields were plowed at Sintet and four fields at Alohungari. Both villages practice continuous cropping and both have serious erosion problems. At Sintet, the soil was so dry that the oxen couldn't pull the plow and only six ridges were made. This is a good illustration for plowing at the end of the wet season, while soil moisture is still present. This area is a slope of less than 1% with annual cover of grasses and weeds estimated at 2500 pounds per acre. Although the lines are short distances from the field above them, water filled the first two water furrows and ran into the third. It is hoped that information from the field trials at Somita and Kanjibat will show the best way to manage crop residues. Crop residues are presently being grazed, burned, or carried off for hay or fencing.

9) Conservation Field Trials

Conservation field trials were done in cooperation with the Department of Agriculture mixed farming centers (MFC) at Somita and Kanjibat. The trials were planning to test contour farming, crop residue management, and conservation cropping systems. The contour farming appears to have stabilized erosion on both trial areas at the MFC's. Approximately four tons of maize residue were returned to the soil at Kanjibat and three tons at Somita. Groundnuts will be planted in 1981. One-half of the area will be planted to groundnuts on the maize bed and the other half will be rebedded and planted to groundnuts on the new beds over the residue.

10) Conservation Plans

A conservation plan was written on the Alohungari village erosion problems. Plans for two other villages are being prepared. Sintet village is in the process of making decisions and Ndemba Jola village is in process of evaluating their erosion problems.

11) Conservation Practice Standards and Specifications

The format for practice standards and specifications selected is similar to that used by the USDA Soil Conservation service. Practices for contour farming conservation cropping system, strip cropping and crop residue management have been written in first draft.

12) Technical Guide

The technical guide is scheduled to be in draft format next quarter. Data are being obtained during the SWMU field exercise. These data are to be assembled and analyzed for use in the technical guide.

13) Soil and Water Management Program

The summation of training accomplished and data gathered by the SWMU staff is adequate for identifying elements of the SWMU program. Significant progress is being made in all five items of program development.

- A. Better training for Gambian staff
- B. Support data for technology and methodology
- C. Technical guide and conservation practice standards and specifications
- D. Soil surveys for conservation planning
- E. Rough draft soils handbook

Suggested Agreement FormatI. The Agreement

This agreement sets forth the understandings, rights, and responsibilities of the Parties to the agreement with respect to the project described in Section II below.

II. The ProjectSection 2.1 Definition of the Project Goals and Purposes:A. Goals

1. Halt/reverse environmental deterioration due to inadequacy of traditional agricultural/pastoral methods.
2. Increase/stabilize production of food forage/wood/cash crops; reduce susceptibility to drought, other weather variations.
3. Improve institutional capability of GOTG to deliver educational, technical material services to rural population.

B. Purpose

1. Establish a soil and water management unit within Ministry of Agriculture and Natural Resources.
2. Develop technology for improved agriculture/pastoral methods consistent with Gambian abilities and resources.
3. Train Gambian soil and water management specialists* and agricultural assistants to functional levels of competence in developing solutions to soil and water problems.

Section 2.2 U.S. and GOTG Obligations and Responsibilities:

In order to accomplish the project purposes the respective parties will provide the following:

A. USG:

1. Technical Assistance - See Scopes of Work -Annex A.
 - a. Long term 132 person months
 - b. Short term 12 person months

* This means specialists capable of planning a Gambian Soil and Water Management program and agricultural assistants capable of assisting the specialists by informing farmers about the benefits of the program.

2. Training

a. Long term, out of country

- (1) Two - 2 years (B.S.)
- (2) Two - 3 years (B.S.)
- (3) Four - 4 years (B.S.)

b. On the job training (OJT) in-country

- (1) One (1) Director in Training
- (2) Two (2) B.S. level counterparts
- (3) Six (6) Conservation Officers
- (4) Ten (10) Conservation Assistants
- (5) Selected Agricultural Assistants (DOA)
- (6) Other (as need arises)
 - (a) Special project linkages
 - (b) Contingency and unforeseen opportunities

c. Short term in-country

- (1) Intensive courses - Yundum College
 - (a) Instructors and materials
 - (b) Two 1 hour courses/day for 4 months each year
 - (c) Example topics: Soils, plants, conservation
- (2) General training courses - Provided by SWMU
 - (a) Two 1 week courses for MANR officials
 - (b) Two 30 day courses/year for agricultural assistants
 - (c) Instructors and materials
 - (d) Examples topics: Soil and Water Management Principles

d. Short term, out of country (U.S. and third country)

1. Specialists

2. Observation

3. Commodities

a. Two vehicles

b. Field equipment and supplies

c. Training materials

4. Housing - US Technicians

a. Construction of 3 houses

b. Maintenance/Repair

c. Generators

d. Security

e. Furnishings

5. Contingencies

B. The GOTG will:

1. Officially establish the SWMU in the MANR. The unit will be considered established when it appears in the GOTG Approved Estimates with 25 positions and the corresponding budget in Annex B.

2. Officially assign the levels of staff in Annex B to the SWMU. All staff to be reviewed for experience and educational levels by the Director of the SWMU and recommended for approval by the Permanent Secretary prior to placement.

3. Provide the following numbers and levels of personnel for training from Staff identified in Annex B:

a. Long Term - out of country (U.S. Univ. B.S. Level)

(1) Agricultural Science Disciplines

(a) 2 Agronomists

(b) 2 Soil Scientists

(c) 2 Agricultural Engineers

(d) 1 Range Management

(e) 1 Forester

(2) Time frame

- (a) Two - (2 year) by 6/30/81
- (b) Two - (3 year) by 6/30/81
- (c) Four (4 year) by 8/15/81

b. On-the-job training (OJT) in-country

- 1) One (1) Director in training
- 2) Two (2) B.S. level counterparts
(These are also participants for long term training)
- 3) Six (6) Conservation Officers
- 4) Ten (10) Conservation Assistants

- 5) Selected Agricultural Assistants (DOA)

c. Short term in-country

- (1) Intensive course - Yundum College
 - (a) Approximately 30 candidates
 - (b) All facilities
- (2) General courses - Provided by SWMU
 - (a) 10 MANR officials - 2 one/week courses/year
 - ((b) 60 Agricultural Assistants for 30 day course
(30 AA's X 2 course)
 - (c) All facilities

d. Short term out of country - U.S. and Third Country
(as agreed upon)

4. Provide the following general support:

a. Office facilities, operation and maintenance

- (1) Space for 20 persons by 9-30-81
(About 200 M²)
- (2) Space for 30 persons by 1985 date
(About 300 M²)
- (3) Up country facilities as work begins

b. Vehicles

(1) One vehicle

(2) Operation/Maintenance/Repair for 3 vehicles

c. Land

(1) Housing - 3 lots

(2) Office facilities - about 600 M²

d. Utilities (Office and 3 Residences)

III.. Financing (\$ US 00)

<u>-Life of Project Budget</u>	<u>AID</u>
A. Personnel (Technical Assistants)	1,329
B. Training	753
1. Long Term (Participant out of country)	
2. Short Term (Participant out of country)	
3. Other (in-country)	
C. Commodities	150
D. Housing U.S. Technicians	285
E. Contingency	
Total	<u>2,517</u>

The annual operating budget from the GOTG for operations of the Unit is estimated to be Dalasis 150,000. An accumulation of this annual amount over a 5-year period will be equivalent to \$350,000.

IV. General Implementation Procedures

A. In order to implement the project in a timely manner, detailed annual work plans will be jointly developed (SWMU/PASA Team) and agreed upon in writing by USAID/G and the GOTG. This will be done within 30 calendar days of the beginning of the GOTG fiscal year.

B. The annual work plan will include at a minimum the following:

1. What will be done - (Tasks/Activities)
2. How it will be done (Method)
3. Who will do it (Responsibility)
4. How long it will take (Time Frame)
5. How much/many resources it will take (Cost)

Non-Obligating Pro-Ag Funding Summary

(\$U.S. 000)

	78-2	79-1	79-1A1	791A2	79-1 Total to date	Total to date 78-2 79-1 w/Amends
1. Personnel	566	68			68	634
2. Training	96	165	40	55	70	166
3. Commodities	100	18			18	118
4. Construction	-0-	-0-			-0-	Const. } O.C. } 285
5. Other Costs	190	-0-	40	55	95	
	<u>952</u>	<u>251</u>			<u>251</u>	<u>1,203,000</u>

V. All other provisions of prior agreements remain in effect.

Scopes of Work Annex A.

SOIL AND WATER MANAGEMENT UNITSTAFF AND BUDGET NEEDS

<u>Number of Employee</u>	<u>Positions</u>	<u>Civil Service Grade</u>	
1	Director in Training	17	
1	Executive Officer	10	
1	Typist	4/5	
3	Drivers	4	
1	Messenger	3	
1	Principal Conservation Officer	15*	
1	Senior Conservation Officer	14*	
6	Conservation Officers	13*	
<u>10</u>	Conservation Assistants	6	
25			
	Salaries		80,000
	Other support costs		<u>72,000</u>
	Total annual budget		152,000

*Grade with B/S degree - staff to include two people with B/S degree and six people that can get B/S degree with university training or equivalent.

SCOPE OF WORK
USDA/SCS/PASA TEAM
SWMU PROJECT
THE GAMBIA

In February 1981 an interim evaluation was completed and a major recommendation was that based on approximately two (2) years of experience, USAID/G and the GOTG should modify the technical assistance mix slightly. It is proposed that the team be reduced from 3 to 2 long term professionals and supplemented with consultants with special skills as required.

The project purposes remain the same. The main modification is to slow the input of long term technical assistance until it can be absorbed and utilized more efficiently by sufficient numbers of adequately trained and experienced Gambian staff.

The basic skills required of the team are the following:

- 1) Soil Science
- 2) Plant Science
- 3) Agriculture Engineering
- 4) Crop Science
- 5) Plant Ecology
- 6) Range Conservation
- 7) Training and Information

During the next 12-24 months, work will continue on the following elements of the project:

- 1) Training
 - a) Unit Director
 - b) B.S. level counterparts when available
 - c) OJT - Range Conservationist officers and Assistants
 - d) Basic courses at Yundum College in soil and plant science and water management and conservation.
 - e) General courses for agricultural assistants and familiarization courses for selected MANR officials in the Principles of Soil and Water Management.
- 2) Development of supporting data for technology and methodology

- 3) Development of a technical guide and conservation practice standards and specifications
- 4) Soil surveys for conservation planning
- 5) Rough draft of a soils handbook

Because 6-8 Gambians will be studying in the U.S. to receive their B.S. degrees, it was decided to strengthen the in-country element at this time. One of the team members should have training skills in addition to a soils/plant science background.

Based upon the above, the following are illustrative job descriptions for two long-term professionals and a mix of consultants. It is written with the assumption that the current team leader will serve another 24 months and the second man and consultants will be tailored to the team leader's skills.

TEAM LEADER

This person must be administratively and professionally operational. He will have the responsibility for organizing the Gambian and U.S. technicians into an effective functioning unit while training the Gambian Director of the SWMU. The team leader must also be experienced in administration, personnel management, and planning and provide basic engineering skills until sufficient Gambian staff are trained in the U.S. and return (a minimum of 2-3 years).

TEAM MEMBER

Given the above it is recommended that the second man be strong in soil science with skills in plant science, conservation and training. This person should be energetic and flexible as it will be necessary to accomplish a variety of tasks such as OJT of Gambians in the field to make soil surveys, conservation plans and reorganization and treatment of erosion problems and teaching and coordinating course work in soil and water management at Yundum (Gambia) College and the MANR Training Unit.

CONSULTANTS

About 1 person month/quarter (3 months) are anticipated during the next 2 years. The actual mix will depend on the skills of the two long term professionals. It is probable that services will be needed in soil science for additional soil survey work, development of the technical guide and soil classification and soil interpretations.

A second area of services will be plant science, plant ecology and/or range conservation to help with actual planning at the village level, the management of vegetation and plant residues and development of the technical guide.

One of the most important short term needs will be in development of training aids, materials and information. Short course instructors will be an important augmentation to the team.