

9310236⑥
PD-AAC-838-C1

Action Memorandum

August 30, 1976

TO : AA/TA, Curtis Farrar

THRU: TA/PPU, John Gunning *by C.F.*

FROM: TA/AGR, Leon F. Hesser *L.F.H.*

3

67p

Problem: Approval is needed for the Agricultural Sector Analysis Project in Lesotho which is part of the TA/AGR/ESP Expanded Program of Economic Analysis.

Background: At the request of OSARAC and the government of Lesotho (GOL) a scope of work has been developed for an agricultural sector analysis in Lesotho. This project has been developed over a period of several months by staff in AID/OSARAC, AFR/DR, and TA/AGR/ESP. Most recently a team including representatives of AID/REDSO, AFR/DR, SER/CM, GC/C, Colorado State University (CSU), and TA/AGR/ESP made a trip to Lesotho to complete the documentation and negotiations for the project. All parties were in favor of the project of sector analysis and training to enhance the capacity of the GOL to design, implement, and utilize agricultural sector analysis in development planning. The Government of Lesotho has approved the Africa Bureau's recommendation that Colorado State University be selected to implement the project. A Memorandum of Understanding has been negotiated with Colorado State University.

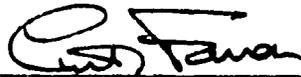
In brief the project would be carried out over a four year period. A staff of three CSU technicians would be stationed in Lesotho to carry out the training and agricultural sector analysis activities. This staff would be supplemented with a number of short-term technicians to handle specific training activities and special problems of the sector analysis work. The total cost of the program is estimated to be \$2,060,800. Funds for the program would be provided as follows:

TAB	\$1,136,900
AFR	287,300
CSU	259,900
GOL	376,700
Total	<u>\$2,060,800</u>

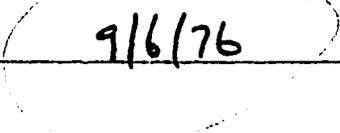
PROP 09/06/76

The attached activity paper including work plan and budget (Tab A) was presented to the Agricultural and Rural Sector Planning Committee on August 24, 1976. The committee reviewed this favorably. A copy of the minutes of the meeting are attached. (Tab B). AFR/DR has sent the attached action memorandum to Stanley S. Scott for approval. (Tab C)

Recommendation: We recommend that this project be approved and that the Contracts Office be requested to prepare a Cooperative Agreement with Colorado State University to implement the project, with an initial TO funding of \$444,000.

Approved: 

Disapproved: _____

Date: 

Attachments: a/s

Agricultural and Rural Sector Planning Committee
Minutes of Meeting
August 24, 1976

Attendees: TA/AGR, L. Hesser
AFR/DR/ARD, H. P. Peterson
PPC/PDA, D. McClelland
TA/AGR/ESP, W. Merrill
LA/DR, R. Misheloff
TA/AGR/ESP, W. Hicks

The primary purpose of the meeting was to review the Agricultural and Rural Sector Planning Committee for the Lesotho Sector Analysis. The documents distributed to the Committee members before the meeting included: 1) the Activity Paper for the Lesotho Sector Analysis, 2) Memorandum of Understanding between the Government of Lesotho, AID, and Colorado State University, 3) the Project Agreement and 4) the Cooperative Agreement.

R. Misheloff pointed out that Phase III in the activity paper was vague and not well specified. This is because Phase III will implement the program designed in Phase II. However, at the end of Phase II (approximately January 1978), a one week seminar/workshop will be held in Lesotho with participants from relevant AID offices: OSARAC, AFR/DS, TA/AGR/ESP, REDSO/E; relevant government of Lesotho offices: MOA, CPDO; University personnel and other interested donors. The purpose of this workshop is to review, evaluate, and approve recommendations of the Phase II report. The Phase III activities will have to be approved by AID and the GOL before work can commence on them.

Everyone at the meeting was in general agreement that the project should be implemented as soon as possible subject to a careful review of proposed Phase III activities at the end of Phase II (approximately January 1978).

ACTION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR FOR AFRICA

FROM: AFR/DR, Steve Klein

PROBLEM:

a. Your approval is requested to authorize \$287,300 from the Africa Bureau's Project Support funds for the Lesotho Agricultural Sector Analysis Project.

b. Your approval is requested for a procurement and source waiver from AID Geographic Code 000 (U.S. only) to Code 935 for procurement of \$100,000 in construction materials.

Discussion: On June 29, 1976, Princeton Lyman, AFR/DR, sent an Information Memorandum to your office (Attachment A) to inform you of the status of the Lesotho Agricultural Sector Analysis (LASA) activity. Since that memorandum the following actions have occurred. Colorado State University has been selected to implement the LASA activity. The Government of Lesotho TAB/AG, OSARAC and AFR/DR participated in and concur with this selection. In August a team with representation from TAB/AG, CM/COD, SER/CM, Colorado State University, OSARAC and AFR/DR visited Lesotho to work out the final details for implementation of LASA. Based on that visit LASA was extended to a four-year activity, with the first-year being a start-up period for the University including the on-campus training for two Basotho. See the revised activity paper (Attachment B) for additional details. The contractual arrangements have been worked out with SER/CM, GC/C, the University and the GOL. These arrangements include a ProAg (Attachment C), signed between AID and the GOL, a Cooperative Agreement (Attachment D) signed between AID and Colorado State University and a Memorandum of Understanding (Attachment E), signed between AID, the GOL and Colorado State University.

The Steering Committee for the TA/AGR/ESP Expanded Program of Economic analysis has approved the LASA activity (Attachment F) and TA/AGR, ESP has prepared an Action Memorandum for the Assistant Administrator for TAB (Attachment G) to approve funding for LASA. The total cost of the program is estimated to be \$2,060,800. Funds for the program would be provided as follows:

TAB	\$1,136,900
AFR	287,300
CSU	259,900
GOL	<u>376,700</u>
Total	\$2,060,800

\$101,000 of the Africa Bureau's funds would be obligated during the TQ. This would cover participant training in the first-year (\$101,000) and construction of 3 senior staff housing (\$90,000)

The Africa Bureau's contribution to LASA would fund the participant training, commodities and some budget support on a decreasing basis over the life of project. For additional discussion on the budget for LASA, see Attachment A, pages 24-32.

The source and procurement waiver is requested for the construction of the senior staff housing. Justification for the waiver is in Attachment H.

Recommendations:

1. That you authorize \$287,300 from the Africa Bureau Project Support funds for the LASA Project.

Approved: _____

Disapproved: _____

Date: 9/6/76

Clearance: AFR/DR, WWLeake _____ AFR/DR, CWard _____
AFR/ESA, OCylke _____ Info: TA/AG, LHesser

Drafter: AFR/DR, HPPeterson:jm 9/1/76

WAIVER AND APPROVALS

I. WAIVER AND APPROVAL REQUIRED:

A. Procurement source and origin waiver from AID Geographic Code 000 (U.S. only) to Code 935 for procurement of construction materials.

II. JUSTIFICATION FOR SOURCE WAIVER FOR CONSTRUCTION MATERIALS:

Construction materials will be used in building three (3) staff houses for the AID/Colorado State University technicians. The construction material is estimated at \$100,000. Although it is not expected that all of the construction material will be procured from South Africa, a waiver is requested for full estimate cost. This is necessary because the fixed amount reimbursement method will be used, making the distinction between procurement sources difficult, if not impossible.

Materials such as sand, steel sheets, roofing, window frames, plumbing fixtures, etc. are normally imported from South Africa or the United Kingdom. For the most part, these are manufactured to standards (sizes, threads, unit of measures, etc.) different from and incompatible with U.S. specification. Similarly, electrical materials and supplies are 220 volts, 50 cycle, contrary to stand U.S. specifications. It is essential that facilities be constructed using fixtures and materials for which replacement parts and service facilities are readily available in Lesotho.

It would not be practical to purchase U.S. items in small quantities needed when private dealers in Lesotho are equipped only to service and repair equipment made in South Africa and the U.K. Moreover, U.S. delivered prices would substantially exceed prices for compatible items procured in South Africa. The long leadtime required to procure from U.S. sources could also delay project implementation if construction housing for AID-financed technicians was delayed. The severe shortage of housing in Lesotho makes it imperative that construction begin at the earliest possible date.

ACTIVITY PAPER FACT SHEET

		Date of Distribution 18 August 1976	
1. Country/Regional Entity/Recipient Lesotho/AFP/Ministry of Agriculture		2. Status: New: <u>xx</u> Revision#: _____	
3. Activity Number	4. Cooperating Organization	6. Estimated Initial/Final Obl. FY <u>76 TO</u> FY <u>80</u>	
5. Short Activity Title Lesotho Agricultural Sector Analysis		7. Est. Date of Initial Obl. (YYYY) <u>76 Sept</u>	8. Est. FY of activity completion <u>1980</u>
9. Estimated Total Cost (SGOO or equivalent. \$1 =) <u>2,060.8</u>			
	First Year <u>70</u>	Second Year <u>77</u>	All Years
TAB Total	---	153.9	1,136.9
Total ATN	101.2	253.7	1,421.2
Host Govt.	--	75.3	376.7
Cooperating Organization(s)			259.9
TOTAL			2,060.8

10. Activity Purpose(s)

1. To develop the capacity in the GOL to implement, update and utilize sector analysis as a planning tool in evaluating alternative strategies for economic and social development in the agricultural sector.
2. Long-term relationship with university, department, and personnel.

11. TAB/AGN Clearance:

Signature _____

Title & Date _____

12. Bureau Clearance:

Signature _____

Title & Date _____

ABBREVIATIONS USED IN PROPOSAL

AID	U. S. Agency for International Development
AFR/DR	Office of Development Resources, Africa Bureau AID.
ALL	AID Lasa Leader
AP	Activity Plan
ASA	Agricultural Sector Analysis
ASR	Agricultural Sector Review
BAM	Africa Bureau LASA Monitor
BLT	Basotho LASA Team
CPI	Critical Point Indicator
CPDO	Central Planning and Development Office
EPEA	Expanded Program of Economic Analysis
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GOL	Government of Lesotho
LASA	Lesotho Agricultural Sector Analysis
MAL	Mosotho LASA Leader
MCA	Ministry of Agriculture, Cooperatives and Marketing
MOF	Ministry of Finance
OSARAC	Office of Southern Africa Regional Activities Coordination
PIO/T	Project Implementation Order/Technical
PP	Project Paper
PPT	Project Planning and Tracking System
RD	Regional Director of OSARAC
SOW	Scope of Work
TA/AG/ESP	Technical Assistance Bureau/Office of Agriculture/Economics and Sector Planning Division
U	University
UT	University Team
UTL	University Team Leader

I. INTRODUCTION

Lesotho Agricultural Sector Analysis

The Lesotho Agricultural Sector Analysis (LASA) is a four year Research/ Technical Assistance Grant funded activity. The total activity cost is approximately \$1.95 Million. LASA is one of the first sector analysis activities to be implemented under the TAB/AG World Wide project 931-11-190-236, Expanded Program of Economic Analysis (EPEA).

LASA has two purposes. The first purpose is to develop the capacity of the Government of Lesotho (GOL) to implement, update, and utilize sector analysis as a planning tool in evaluating alternative strategies for economic and social development in the agricultural sector. The second purpose is the establishment of a long-term institutional relationship between a U.S. university department and its personnel, and Lesotho's Ministry of Agriculture, Cooperatives and Marketing (MOA) and the Central Planning and Development Office (CPDO) in the Ministry of Finance (MOF). A series of activity outputs will lead to the achievement of these purposes. As a result of LASA, a minimum of 6 Basotho personnel currently employed by the MOA and the CPDO will receive academic degrees in Agricultural Economics or related fields. In the first phase of the LASA activity two Basotho trainees would receive on campus instruction and a comprehensive search of relevant literature would be performed by the University LASA team in the U.S. and Great Britain. In Lesotho a similar search would begin under the direction of the Lesotho LASA Team Leader. In Phase II of LASA an Agricultural Sector Review (ASR) will be prepared jointly by University personnel and appropriate personnel from the GOL. The ASR will analyze the existing data base in order to address some of the immediate policy needs of the GOL for programming in the Agriculture Sector. Based on information gained in Phase I and II including the priorities of the GOL, data needs, and level of analytical skills available in Lesotho, an agricultural sector analysis (ASA) will be jointly prepared during Phase III by personnel from the U.S. University and the MOA and CPDO. In addition, an Agricultural Library will be established in the MOA. It is planned that Phase I will last 10 months and Phase II approximately 6 months and Phase III 33 months.

The aims of LASA are to coordinate the ASR in Phase II and the ASA in Phase III with the formal training of Basotho. This coordination will maximize the in-country practical application of the tools and analytical techniques taught the Basotho personnel and minimize their time spent in the U.S. for pure classroom instruction. The curriculum for the MS program will be developed in Phase III by participating university personnel and will be individualized as much as possible to take into account the background of the Basotho and the need of the GOL for an ongoing sector analysis capacity.

The inputs needed to achieve the above purposes and outputs are approximately 19.5 manyears of U.S. technicians, 16-18 manyears of Basotho technicians, up to 110 manmonths of participant training in the U.S. and 1000 volumes for the Agricultural Library. The commodities include 11 calculators, 3 rough terrain vehicles, 3 typewriters and miscellaneous supplies. See Annex A for the detailed log frame of the LASA activity.

Design Requirements for the LASA Activity

The design requirements for sector analysis activities as stated in the EPEA are stated simply as a Project Paper type document. In preparation of this proposal, the design team made judgments as to which components of a P.P. are appropriate for the LASA activity and which can be omitted. For example, a benefit/cost analysis for the LASA proposal would at best be an intellectual exercise and would not provide any additional decision criteria for reviewers of the proposal. Hence it is omitted. A philosophy of the proposal is to allow as much flexibility as possible in the implementation of LASA but to be as explicit as feasible regarding the style, priorities and outputs of implementation. Obviously, the success of LASA will depend upon the proper selection of the University and University personnel and the commitment of the GOL and the University to sector analysis as a planning tool. The importance of this selection is recognized and senior level GOL officials participate in the final selection of the implementing University.

Philosophy of the Cooperative Agreement

With respect to University selection, it is appropriate to briefly discuss the basic premise of the TAB/AG project for Expanded Program of Economic Analysis. The concept behind the project is that each institution involved in sector analysis, i.e., the host government, USAID and the participating university, have goals which may be satisfied by a sector analysis activity. Thus, if the individual institutional goals are recognized and accepted by all, then, through a collaborative style of implementation and compromise, each institution will be committed to the successful completion of the sectoral analysis for the mutual benefit of all. The philosophy of this collaborative style implies that each activity in the LASA will be jointly planned, implemented and evaluated.

II. ACTIVITY BACKGROUND

Lesotho, a small mountainous country entirely surrounded by the Republic of South Africa, is a nation of 1,130,000 people and 30,350 square kilometers. Only 13 percent of its land, or about 900,000 acres (.8 acres per capita), are arable. This arable land occurs in the lowlands on the western and southern borders and the mountain valleys. The remainder is best suited for grazing.

Agriculture is Lesotho's most important sector in terms of addition to G.N.P. and employment. Lesotho's 1971/72 GNP of R48.45 (R1 = \$1.16) was derived from agriculture 41.4 percent, public services 15.9 percent, trade 16 percent, housing 14.2 percent, and all other sectors 12.5 percent.

Of the 1973 estimated labor force of 450,000 (290,000 men and 160,000 women), approximately 200,000 (175,000 men and 25,000 women) were employed in South Africa; 21,000 (16,000 men and 5,000 women) found wage labor in Lesotho; and the remainder worked in agriculture. Thus, 49 percent of the labor force were employed in

agriculture, 35 percent of the men and 81 percent of the women. In the domestic labor force, 92 percent were agricultural workers (82 percent of the men and 96 percent of the women).

Corn, wheat, sorghum, wool and mohair are Lesotho's major agricultural products. According to the agricultural censuses of 1950 and 1970, 1970 grain yields were 43 to 75 percent of their 1950 levels. However, the reliability of these estimates is questioned.* Grain production was estimated to have declined 40 percent, from 313,000 metric tons to 191,000 metric tons. These declines are hypothesized to result from migration of the male agricultural labor force to South Africa, loss of the land base through erosion, and increased population pressure on the land.

Approximately 175,000 Basotho men are employed in South Africa, leaving the women, young boys, and old men in their families to farm their lands. This may have reduced the quantity, the technical knowledge and decision-making authority of those actually farming. It has been hypothesized that the women plant crops simply to maintain the tenure of their husbands over the land. It is obvious to any observer that planted crops are frequently not maintained. The impacts of the loss of the male labor force on enterprise mix, decision making, technology selection, and production requires detailed analysis in order to identify alternative crops or technologies better suited to the social and physical constraints induced by migration of the male labor force. There is also a need to investigate the feasibility of introducing alternative crops which provide economic returns sufficient to retain the male labor force or which would provide substantial income should the male labor force return involuntarily.

Crop yields are also thought to be falling as a result of severe erosion, which has been recognized as a major problem in Lesotho since the 1930's. About half the cultivated areas and a large but unknown proportion of mountain pastures have been affected to some degree by erosion. Overgrazing of uplands and cultivation of marginal lands with a fragile soil-type subject to seasonally intense rains are major causes of erosion. GOL has initiated a major effort to stabilize the land resource base including the Thaba Bosiu project which is partially funded by A.I.D. However, little research has been carried out to determine economically feasible conservation techniques or to identify alternative organizations of agriculture which will conserve the land base and are compatible with the social and economic organization of rural Lesotho.

Lesotho's population is estimated to be increasing 2.2 percent per year. Since 1936 it has grown from .664 million to 1.100 million, reducing arable land base from 1.4 acres per person to .76 per person. Increased cultivation of marginal lands, particularly hillsides and more intensive grazing of mountain pastures reducing yields and increasing erosion has been the result. Between 1950 and 1970, according to the Agricultural Census, the fallow period appears to have declined from once in four years to once in ten years, thus reducing the naturally obtained fertility

*The 1950 Census is considered to be highly inaccurate by the GOL

of the soil. Yet only 16 percent of Basotho farmers have ever used fertilizer. In 1975, about 8,000 tons of fertilizer were imported. Research is required to determine the social and economic feasibility of increasing productivity of the current extensively farmed grain crops in order to reduce the cultivation of marginal lands and of the introduction of intensive cash crops which could substitute for the grains and provide an equivalent income from a smaller land area.

Livestock, particularly cattle, remain the central focus of Basotho agriculture. In this society, cattle are not just economic goods, but a source of prestige, influence, and a means of saving. As a result, cattle are held rather than sold, resulting in overgrazing and erosion. According to one report, because of uncontrolled breeding and shortage of feed, the productivity of the national herd for draft and dairy purposes has declined. There is a need to assess alternative management practices and to assess means for commercializing livestock production within social and economic constraints.

The overriding problem confronting Lesotho's agricultural development is lack of professional and financial resources. The MOA has a Basotho professional staff of less than 40 including three economists. GOL's recurrent expenditures for agriculture in 1974/75 was only R1.6 million, 9 percent of total GOL expenditures. This severely limits the capacity of GOL to staff and fund its programs. The problem has been exacerbated by the large number of projects funded by international and bilateral donor agencies.

Although GOL and MOA are abundantly aware of these problems, to date they have lacked the resources to adequately analyze them, and to design appropriate strategies. Some biological and physical research has been initiated, particularly on irrigation, variety trials, and management practices. In spite of a limited research base, projects have been initiated which individually address these problems. Some national and project-related data have been generated. There is a real need for economic analysis which considers technical, managerial and social constraints inter alia and assesses alternative sector-wide strategies for overcoming them.

In spite of the lack of analysis of alternative development strategies, Lesotho has initiated development planning. The first Development Plan 1970/71 - 1974/75 was published three years after British Protectorate status had ended. This plan was admittedly preparatory and exploratory had the overall objective of laying the foundations for economic independence and development. Major emphasis was placed on generating the knowledge necessary to future development through studies of the natural resource base, tourism potential, industrial development, public services, and agriculture. Statistical services were to be substantially strengthened. The immediate targets of the First Plan were:

- a five percent per annum increase of C.D.P.
- to achieve a marked increase in agricultural productivity

- promotion of non-agricultural development, particularly labor intensive, small-scale industry.
- creation of 10,000 to 15,000 new jobs.
- preparation leading to exploitation of Lesotho's water and mineral resources.
- to place the educational system under government control directed toward social and economic development.
- to end external dependence of the government's recurrent budget.
- restructuring of the public sector to achieve economic and a development orientation.
- localization of the civil service within the constraint of manpower availability.
- improvement of social services.

In spite of the fact that Lesotho had never before undertaken development planning, many of their targets were achieved. It is highly probable that G.D.P. did grow 5 percent per annum, at least in money terms. Through exercising discipline and restraint, the government was able to eliminate dependence on the United Kingdom for its recurrent budget. The civil service was reorganized and substantially localized; social services were expanded; and the educational system nationalized. Only in two sectors was less than satisfactory performance achieved: non-agricultural employment and agriculture.

~~It~~ did not prove possible to increase non-agricultural employment by the targeted 12,000 to 15,000 jobs. Because less industry was established than anticipated, about 6,000 new jobs were created. It must be recalled, however, that even this represents an increase of perhaps 25 to 50 percent of non-agricultural employment.

There is some evidence that agricultural productivity may have increased during the First Plan period. However, this may only reflect improved moisture conditions rather than a secular shift in productivity. In all probability, the target of increased productivity was not achieved as there was little change in agricultural technology or enterprise mix.

The Second Five Year Plan 1975/76 - 1979/80 is currently in preparation. Tentative goals include economic growth, social justice, maximum domestic employment, and economic independence. Targets include a very substantial increase in agricultural production and productivity. The new plan demonstrates Lesotho's continuing commitment to achieving rapid economic development while carefully maintaining equity of income.

Both the First and Second Development Plans encompass a project approach to development. Because of lack of professional manpower, the plans are little more

than compilations of project outlines with overall targets which were not rationalized in terms of project outputs. Efforts made to determine the feasibility of achievement of targets or to identify inconsistencies among targets or to determine manpower constraints to implementation were hampered by lack of data. No long term analysis and extremely little micro-short term analysis has been undertaken to serve as a foundation for Lesotho's overall and agricultural development.

The Development Plans' limitations are clearly caused by the lack of trained and experienced manpower. Agriculture sector plans are drawn up in two offices: the Planning and Evaluation Office of MOA and the Agricultural Division of CPDO. Below is a table summarizing their professional manpower.

	MOA	CPDO
Assigned positions	6	-
Filled positions	1	4 <u>1/</u>

In addition to the above, there are two recent B.A. graduates associated with the planning office of Tloa Baso Project. All of these economists are young and relatively inexperienced. Moreover, undergraduate education alone is an inadequate preparation for undertaking sector assessment.

The primary purpose of this activity is to strengthen the capacity of GOL to undertake agriculture sector planning and development by reducing the manpower and social science analysis constraint, outlined above. More specifically, at least six Basotho economists will be trained to the M.S. level and simultaneously, together with American technicians, prepare an analysis of the agricultural sector which will serve as a background for policy and for developing a foundation for a long term strategy for development of the rural sector.

Because Lesotho is a relatively small country which only recently became fully independent, there are only a few technical experts in the world with substantial knowledge of Lesotho. GOL has found itself relying on foreign technical experts who have little initial knowledge of Lesotho, her people, resources, and goals. Moreover, after this knowledge is attained, the experts frequently leave. A purpose of this activity is to develop a core of American scientists with a long-term interest and knowledge of Lesotho. This will assist Lesotho in two ways. It provides GOL access to a group of social scientists from which to draw upon when needed and makes it possible for Basotho to study abroad at an institution where there exists knowledge of their educational needs.

Through observation of Lesotho's development and planning experience, LASA also provides the U.S. institution and professionals the opportunity to contribute to international understanding of development processes.

1/ Includes senior FAO advisor - The three remaining staff are Basotho holding recent B.A. degrees in economics.

Because Lesotho's traditional tenure system is communal, there is little variation in household farm size and the small variation that does exist is correlated with family size. According to the 1970 Agricultural Census, 83 percent of farm households operated 7.9 acres or less and only 3 percent hold 15 acres or more. The lowest 20 percent of rural household own 14 percent of the cattle and control 8 percent of the land compared to the upper 20 percent's 26 percent of the cattle and 37 percent of the land. Because members of poorer families are more likely to go to South Africa to seek employment and to invest their savings in cattle, the distribution of cattle ownership and income are more equitable than the distribution of land. The lowest 20 percent receive 16 percent of total income and the upper 20 percent earn 26 percent. Essentially these income distribution estimates indicate that the rural agricultural population is equally poor. The estimated total household income in Lesotho is R137, R87 from agriculture and R100 from off-farm employment. Among the four regions of the country rural household income varies between R161 and R199. Assuming a conservative rural household size of 4.5 persons, rural per capita income is R42 or approximately \$50. Quite clearly, any activity designed to increase agricultural incomes in Lesotho will be directly responsive to AID's congressional mandate to utilize its resources to assist the poor majority.

Women are a major beneficiary of this activity. Because 60 percent of Lesotho's male labor force is employed in South Africa, a majority of Lesotho's domestic labor force is female. Of the total domestic labor force of 275,000, 160,000 or 58 percent are women. It is estimated that 155,000 women and 99,000 men are available for work in agriculture. If, as a result of this activity, agricultural programs and policies are redirected and agricultural incomes increase, women will be certain to gain.

Women will also benefit directly from LASA as the initial tentative list of trainees includes 3 women employees of GOL.

III. PROJECT DESCRIPTION

Lesotho Agricultural Sector Development

The LASA will be implemented in three phases. Phase I (10 months) is a start up period in which the University will begin to gear up for the LASA activity in Lesotho. In addition two of the Basotho trainees will complete the on campus portion of their training and return to Lesotho with the University Team at the beginning of Phase II. The primary activity in Phase I is a review of previous publications and research documentation relevant to the agricultural sector of Lesotho. In Lesotho the Basotho Team Leader will supervise a search of the relevant literature available in country while the University will be responsible for literature in the United States and England. Volumes for the library will be acquired based upon this literature search and an annotated bibliography of required readings for the LASA Team will be prepared. During Phase I housing for the University staff resident in Lesotho will be constructed. Commodities required for the LASA activity will be purchased and shipped to Lesotho by the University. OSARAC will acquire these commodities which require local procurement. The aim of Phase I activities is to insure that when the University Team arrives in Lesotho at the beginning of Phase II the necessary infrastructure and information is in place. At the end of Phase I TAB/AG/ESP will review the results

of the Phase I literature search.

At the end of Phase II (approximately January 1978), a one week seminar/workshop will be held in Lesotho with participants from relevant AID offices: OSARAC, AFR/DS, TA/AG/ESP, REDSO/E; relevant GOL offices: MOA, CPDO; University personnel and other interested donors. The purpose of the workshop is to review, evaluate and approve recommendations of the Phase II report. The report will be jointly prepared by the Basotho trainees, other GOL officials, and the U.S. University technicians. The report will consist of three separate but related components. Each component must be separately approved before Phase III activities can commence. The three components of the Phase I report are: 1) a curriculum for the training of the Basotho which must result in an academic degree for each at the end of the project; 2) the Agricultural Sector Review; and 3) the detailed scope of work for the Agricultural Sector Analysis.

The three components of the Phase I report are discussed separately below but it must be emphasized that they are intimately inter-related both in conception and implementation.

A. Curriculum for Basotho Participants

The details of the curriculum must be described in the Phase II report based upon needs identified in the ASR, the on campus experiences of the two Basotho during Phase II, the backgrounds of individual Basotho trainees, their preferences and abilities, need to develop the total capacity for sector analysis in the GOL from the Basotho participants as well as the U.S. curriculum of the selected University. The two constraints under which the curriculum must be planned are the admission, grade, and course requirements of the University department offering the degree and that the degree given must be the same as the MS degree given by the institution to U.S. and foreign students currently enrolled on campus.

The criteria presented here are intended to guide the development of the curriculum. Within this set of criteria, the University and GOL Phase I participant are allowed maximum flexibility in curriculum design.

A major aim of the curriculum is that it should minimize the time spent in the U.S. for Basotho trainees and maximize its relevance to GOL problems. To achieve this aim the University technicians working on the ASA will also present formal courses to Basotho participants in Lesotho for which graduate credit will be given. The theory, analysis and tools taught to the Basotho should be equivalent to those taught on campus. The application of the subject matter to real world situations should be coordinated with the ongoing ASA. The purpose of this system is to develop the ability to apply the knowledge learned in the classroom through participating in the ASA. The problems associated with library facilities, textbook availability, computer facilities and classroom space must be identified and addressed during the Phase I activities.

The university and departmental requirements with respect to admissions, residency, classload, and thesis must be addressed in the curriculum.

description. Although some flexibility might be feasible with respect to residency and admission requirements of the University, in general the same standards which apply to students on campus must also apply to the Basotho participants.

Remedial course work for particular Basotho should be included in the curriculum. Many of the Basotho will require remedial work in quantitative skills, statistics, and economic theory. The courses themselves will be of a more intensive nature that should maximize student-professor contact. This, along with working together on the ASA using issues, data, and practices relating to Lesotho, should provide sufficient stimulus to the Basotho to catch and perhaps surpass their peers taking the same course work in the U.S.

After all Basotho LASA trainees have returned from the U.S., a specialized course project development, design and analysis will be presented. It is envisioned that personnel from TA/AG or AFN/DR as well as University staff will be utilized as instructors for this course. Each of the Basotho will be expected to design a minimum of one agricultural project. These projects will be submitted to the GOL for approval and then to interested donors for implementation. It is possible that these projects could be related to or part of the thesis topics of the individual Basotho.

The focus will be on individualizing the curriculum to the specific needs of the GOL and the background and preferences of the individual Basotho participants. Those developing the curriculum will be aware of the professional experiences of the Basotho trainees and attempt to utilize their background and experiences in the curriculum.

It is emphasized that the individual skills developed by the curriculum must be coordinated in such a manner that at the end of the activity, the GOL will have a group of Basotho who can function together as a sector analysis team. This implies that the theory and tools of analysis must be relevant to the state of the arts and the problems currently existing in Lesotho. Without such awareness on the part of the University and Basotho participants, much of the benefit of the ASA will be lost after the project is completed. A second implication of the team concept is that all Basotho should not specialize in the same areas of study. Although the specifics will have to be established in Phase I, some more obvious areas of specialization include rural sociology, econometrics, micro-theory, macro-theory, farm management, livestock, marketing, and resource conservation. In general, it is expected that the specialized minors of the Basotho might be taught while at the University campus with the more general and remedial courses included in the Lesotho portion of the curriculum.

The University courses taught in Lesotho will be open to other GOL personnel on a university credit and non-credit (audit) basis. The size of classes, relevant prerequisite training and GOL job related need for specific skills will be the major criteria utilized in determining the participation of individual Basotho.

In addition to the Basotho seconded to the LASA activity and the Basotho participating in the Lesotho portion of the curriculum, funding for five additional Basotho to receive academic training in the U.S. at the selected university or other universities in the EPEA set of cooperating institutions.

This second set of five Basotho would not necessarily work on the ASA. The level and types of training given to this set of participants will be designed to fill the most critical, high priority skill needs in the Agriculture Sector identified during the LASA activity for which appropriate Mosotho participants can be identified.

B. The Agricultural Sector Review

The ASR is a multiple purpose activity. One purpose is to provide the University participants with an introduction to Lesotho problems, priorities and personnel. At the same time, it will give the GOL an opportunity to evaluate and gain confidence in the selected University. Thus, it will serve as a foundation for the long-term relationship between the two institutions. It will also provide the university personnel a chance to evaluate the resources available to the GOL for sector analysis. With close collaboration between the two institutions, an effective and feasible curriculum for the training of the Basotho trainees should be designed by mutual involvement in reviewing the current state of knowledge regarding the agricultural sector.

The major purpose of the ASR, however, is to provide a document utilizing existing data which is program-oriented and contains specific recommendations on strategy and programs relating to the immediate needs of the GOL, AID, and other donors. The ASR will determine current gaps in data, knowledge, and analysis which impinge upon the planning strategy of the GOL. Thus, in identifying the need for data and analysis, the ASR will provide preliminary agricultural sector programming alternatives and make preliminary recommendations with respect to potential growth paths in the near future (3-5 years). In providing these recommendations, the ASR will clearly and explicitly analyze the inter-relationships and linkages between the major problem areas in the agricultural sector, identified below, to avoid piecemeal solutions and programs addressing these problems.

A more detailed scope of work (SOW) for the ASR is found in Annex C of this proposal and while other problem areas might be identified in the ASR, the following problem areas/constraints are critical to all facets of agricultural development in Lesotho and must be explicitly and independently covered in the ASR component of the Phase I report. The following problem areas are not presented in a priority order.

1. Land and Water Conservation/Reclamation

Given the obvious, serious problem and the checkered history of donor/GOL experiences, and AID's current involvements, it is clear that any set of alternatives involving land, crops and livestock must have conservation relationships structured at the outset and not treat conservation as an afterthought, as a unique subject in isolation or as a normal result of existing management practices.

2. Manpower

The unique nature of the rural labor force in Lesotho is due to the large number (50-70%) of able-bodied adult males employed outside the country. As strategy alternatives are analyzed, it is essential to assure that manpower issues are considered. This may represent one of the most difficult variables to deal with in a sector study, but it is clearly one of the most important issues affecting implementation of programs/projects. Among key issues needing review to assure that the study is sensitive to and tempered by an understanding of manpower problems are (a) evaluation of the real significance of rural income as an alternate to outside employment, (b) a clear understanding of the decision-making process on the farm and the role of women in such processes, (c) an analysis of the place for capital as a substitute for missing labor, and (d) implications of the alternatives proposed on total labor requirements and peak labor needs. It is essential at the outset that alternatives analyzed be explained in relation to the need to bring men back into the local labor pool, to better utilize the existing labor force or to recommend wholly new combinations of capital and labor.

In the context of manpower issues, the alternatives analyzed must also take account of needs for low, middle, and technical level skills. Given Lesotho's small secondary school output, these factors must be carefully weighed to assure that the alternatives can really be implemented. Dependency on outside technical help must also be weighed, costed, and analyzed in terms of the effect on the growth of local capacity.

3. Livestock

In the Lesotho environment, both physical and cultural, livestock (primarily cattle, sheep and goats) is not a separate issue but is wholly co-involved with any alternative to be reviewed. No use of the land resource base can be realistically considered until the place and role of livestock has been dealt with. The overall size and composition of the livestock component of any alternative as well as proposed modification in the management systems have far-reaching implications for other issues such as government policy, national and local implementation capacity, conservation, labor force, skills required and education (as herd boys may be freed for school). These factors, together with the sociological implications of such change, must be included in any realistic recommendations for action.

4. Marketing

Alternatives analyzed must take into account and be sensitive to the relationship between Lesotho and South Africa vis-a-vis types of crops, agro-industrial development, cost/subsidy issues, etc. Such

analysis must reflect Lesotho's desires and relate to the real opportunities available within the local trading area and farther afield. Analysis must also realistically appraise the needs and expectations for capital, for distribution and marketing outlets and for institutions. The relationship and role of the private sector to the changes considered and to the problem of internal transport must also be considered. Experience of the GOL in rural access roads or tracks is highly relevant and should be noted in analysis of marketing needs.

5. Crop production and risk management

The variable climate of Lesotho tends to increase the risk of individual farmers in Lesotho. This risk causes serious constraints to the adoption of new crops or new technology for existing crops. If Lesotho is to exploit the South African market, then the risk to an individual farmer must be incorporated into recommendations not only from the economic point of view, but also the technical aspect. The goal is not only to determine crops or technology which will generate greater economic returns, but also one which allows the farmer to manage his risk and uncertainty in a rational manner. The three areas of economic risk, technological risk and uncertainty regarding climate as they are viewed by the farmer in the traditional environment must be integrated into any set of recommendations relating to yield increasing technology or differing land use patterns.

C. The Scope of Work for the Agricultural Sector Analysis

The Scope of Work (SOW) for the ASA is the third component of the Phase II report. The SOW will include the methodology, substance, data needs and analysis, and timing of the ASA. It will allow for periodic evaluations of work performed during the ASA and maintain sufficient flexibility in order that mid-course modifications can be implemented in the SOW based upon the recommendation of the evaluations.

It is critical to coordinate the timing of short-term University personnel in Lesotho with the course and thesis work of Basotho trainees in Lesotho.

It is also expected that when sufficient advance notice is possible and when the subject matter fits in with the ASA that some of the short-term, high priority studies required by the GOL will be accommodated in the SOW. This should partially compensate the GOL for the loss of personnel during the LASA activity.

The SOW will be based upon information generated by the ASR. In addition to addressing in depth the major problems identified above, the ASA will explicitly identify, collect, and analyze the data required for the study.

While the LASA personnel will have primary responsibility for the substance and timing of the SOW, the priorities in the agricultural sector are the responsibility of the GOL. These priorities in terms of goals for the Agricultural Sector are constraints, within which the ASA will be prepared, if its recommendations are to be relevant. The methodology and level of analysis will be appropriate to the Lesotho context.

Phase III: The Agricultural Sector Analysis

Phase III is intimately related to Phases I and II. The same Basotho and U.S. participants will implement in Phase III what they jointly designed in Phase II. The details of Phase III Scope of Work will be contained in the Phase I report. The terms of reference for both the curriculum and the ASA are in the section dealing with Phase I above and Annex B.

The objectives of the ASA are to present and analyze alternative strategies and programs for the agricultural sector. Based on this analysis, a set of these alternatives will be identified which will generate the optimum growth path for the near future (three-five years), given current knowledge conditions and constraints. It should also assess, inter alia, the broad consequences and requirements (manpower, investment, etc.) of this growth path in light of different policies and programs for the longer term (three to ten years). These policy and program alternatives should be analyzed to show required inputs and expected outputs for each; the analysis must include careful cost data and a full examination of cost effectiveness. The study's recommendations will be based upon this assessment and analysis.

The ASA will generate project recommendations including estimated costs for the projects which will coincide with the overall strategy and program recommendations of the ASA within the priority goals established by the GOL.

While the specific detailed structuring of the ASA is expected to be developed in the Phase I activities involving the GOL, the University, and OSANAC, the GOL has already listed a number of points on which they need information from the ASA. These are set forth in section C and D at ANNEX B.

Figure 1, Schedule of LASA Participants, presents the phasing of participants throughout Phase I, Phase II and Phase III. This timing coordinates both the training and analysis aspects for Phase III.

The general strategy envisioned for the ASA is that during Phase II data needs will have been identified for the ASA. During the first tranche of short-term University TDYs, survey questionnaires will be developed

and enumerators employed to collect the required data. During their absence, the Basotho personnel in Lesotho will continue to work on data collection activities under the supervision of the University team leader and his full time staff. During the second TDY visit of University personnel in Phase II, the data analysis will commence and will continue after their departure by Basotho trainees supervised by the full time staff. On the third TDY the results of the analysis will be written up and recommendations for alternative strategies, papers and projects for the Agricultural Sector will be prepared. The recommendations will include phasing of programs within the general sector strategy.

Simultaneous with the above activity will be the teaching and advising of the Basotho participants/students. The necessary remedial course work will commence during Phase II. Techniques of data collection and basic economic theory will be included in the early part of the general curriculum. The second part of the curriculum will include analytical skills and advance theory. Project design and specialized courses and research techniques for thesis will be emphasized during the last part of the curriculum.

Variations in the above theme of analysis and training will undoubtedly occur due to individual differences in backgrounds and interests of the basotho trainees, priority problems arising in the Agricultural Sector, developments in the ASR and ASA and other unforeseen events which will impact upon the Phase III activities. However, fundamental changes will not be accepted without prior approval of the GOL, the University, and AID.

It is expected that the ASA will include recommendations to the GOL for continuing the agricultural sector analysis, biological, economic, and social research needs, and proposals for increasing the institutionalization of sector analysis in the GOL's development planning process.

The ASA will be approved by the GOL, the University, and AID. The approval procedure will be included as part of the agenda of the Conference at the completion of Phase II.

D. The Lesotho Agricultural Library

As part of the process of increasing the capacity of the GOL to do sector analysis, the LASA will establish an agricultural library in the MOA. It is envisioned that the library will contain volumes on all topics relevant to the agricultural sector in Lesotho. The contribution of the LASA to the agricultural library, however, will be related to subjects relevant to the curriculum of the Basotho and to the ASA.

The library will not only serve as a resource for the Basotho trainees during their course work in Lesotho, but also as a source of information relating to the planning in the agricultural sector of Lesotho for interested Basotho and expatriates. It is envisioned that a twin of the LASA contributions to the library in Lesotho will be established in the U.S. University as a resource for campus activities related to LASA.

An initial selection of volumes will be generated by the review of literature for the ASK Phase I. From this review of literature, a required reading list for all LASA participants will be established. The volumes on that list will be the beginning of the library. Additional volumes will be identified during the LASA study. The GOL will provide space and librarian services.

E. The Long Term Institutional Relationship

One purpose of the LASA activity is the establishment of a long term post LASA institutional relationship between the MOA in the GOL and the selected University Department. The nature and form of this relationship obviously will depend upon the personalities and institutions involved in the LASA activity. Components of this relationship might include additional participant training in other fields, seminars on development problems of Lesotho, assistance to the GOL in project design implementation and evaluation, support for the National University of Lesotho, Short courses designed for Lesotho problems taught either in Lesotho or in the U.S., etc. The actual structure of the relationship must await the evolution of LASA. Funding, if required for those or other components of the relationship will be considered toward the end of Phase III. It is possible that AID/AFR, Title XII or other donors would be appropriate sources of funding that should be explored by the GOL and the University.

F. Institutionalizing Sector Analysis Capacity in GOL

In addition to providing the GOL with a cadre of trained manpower for analyzing the agricultural sector and a complete agriculture sector analysis which can be used by the GOL as a foundation from which the process of sector analysis can be built upon and expanded as conditions in Lesotho change over time, the LASA contains additional features which enhances the success probability of institutionalizations to process.

One constraint in LDCs which often hampers the sector analysis process is that of data collection capacity. LASA has addressed this constraint in two ways. It has budgeted funds for training and utilizing

enumerators in the MOA. These enumerators will provide the MOA with the capacity to collect data required by the GOL in its future programming needs. Secondly, LASA will fund indigenous institutions at the National University of Lesotho to do nation-wide surveys for specific problems on a contract basis. These two avenues of data collection should provide the GOL with a broad range capacity in data collection responsive to the variety of data needs inherent in an ongoing sector analysis process.

A second feature of LASA which will aid the institutionalizing process of sector analysis in the GOL is the budgeting procedure. LASA will provide the necessary infrastructure required for a sector analysis unit in the GOL. In addition, the recurring costs of this unit will be phased into the GOL recurring budget so that at the end of life of LASA, the GOL will be financing the unit from its own resources.

IV. IMPLEMENTATION

A. Administrative Arrangements

In order to assure that each of the institutional participants in this activity achieves its individual goals and to induce their full commitment, this activity will be designed, implemented and evaluated jointly by GOL, AID, and the selected University. Although AID and GOL necessarily must prepare the initial activity plan, sufficient flexibility is maintained to assure the University a substantial opportunity to participate in the planning of the specific details of LASA.

The University and GOL will jointly share the day-to-day management and operations of the activity while AID will provide general management and guidance. All three parties must approve Phase II plans as presented in the Phase II report and annual plans of work. Evaluations will be carried out jointly by the participating institutions. All plans must be unanimously approved by all three organizations. The responsibilities of the institutions and their employees are shown in Table 1.

Government of Lesotho:

MOA and CPDO

The Permanent Secretary of Agriculture and the Director of the Central Planning and Development Office or their designees will have final authority for representing GOL in LASA policy discussions. They will participate in the final selection of the University and must approve all activity

T A B L E 1
LASA PLANNING AND IMPLEMENTATION

	MOA & CPDO	Masotho Team Leader	Univ. Team Leader	OSARAC	AFR/DS Direc- tor	BUREAU Acti- vity Monitor	TA/ESP Chief	AID Activity Leader	University Director	Planning Committee
LASA activity proposal	A/W	-	-	A/W	A	W	A	W	-	R
PLO/T	-	-	-	-	A	W	A	W	-	-
Co-operative Agreement	A			R	R		A		A	R
Phase Revision Scope of Work	A/S	W	W	A/S	N	N	N	N	N	R
ASR	A/S	W	W	A/S	A	S	A	S	A	R
Curriculum and Phase II Revision Scope of Work	A/S	W	W	A/S	A	S	A	S	A	R
Official correspondence	C	W	W	C		N		N	N	
Travel Docu- mentation & Clearances	C	W	W	C		N		N	N	
Annual Plan of Work	A/S	W	W	A/S	A/S	W	A/S	W	A	R
Annual Reviews	R	W	W	R	R	W	R	W	R	R
Final Review	R	W	W	R	R	W	R	W	R	R

W = work is done A = Approves N = must be notified

plans and reports for GOL. Their clearance is necessary for appointment of all University personnel to the activity as well as GOL participants.

LASA will be housed in MOA and for all administrative purposes will be part of MOA. All Basotho LASA personnel will be temporary or permanent employees of MOA, ultimately responsible to the permanent secretary of Agriculture. Their performance evaluations will be conducted by the MOA following its usual procedures. MOA will be responsible for providing LASA office space, equipment, and supplies.

Mosotho LASA Leader (MAL)

In consultation with AID and the University, the Permanent Secretary of MOA and the Director of CPDO will appoint a Senior Mosotho MOA employee to be the Mosotho LASA Leader. The MAL will share with the University team leader responsibility for day-to-day operations of LASA. He will participate and provide leadership in the preparation of all work plans, administrative reports, and annual reviews. He will consult with the University team leader on management of the joint GOL-University LASA team and will participate in team activities in accordance with his professional skills and interests. Official communication between LASA and GOL will be a MAL responsibility. Official communications and reports will be directed through the MAL for clearance by normal GOL procedures. This assignment will require one-fifth of a manyear annually.

Basotho LASA Team (BLT)

MOA and CPDO will assign a minimum of six GOL current employees to the BLT. These individuals should have experience and responsibilities for agricultural sector planning and should be holders of a BA or BS in economics, agricultural economics, or a related field.

The BLT will be seconded to LASA for the life of the activity. They will work under the joint supervision of the MAL and University team leaders and in collaboration with the University team members. The BLT will participate in planning and carrying out the ASR and ASA. Because they are the most familiar with their long-term responsibilities to GOL, they will participate in curriculum development for their M.S. degrees. During Phase I only the BLT on campus will be active in LASA. In Phase II all, the BLT will devote a minimum of 2/3 time to LASA and full-time thereafter.

The responsibilities of the BLT will increase as they mature professionally. They will have substantive responsibilities and work assignments throughout LASA. This will not only contribute to their training but their intimate knowledge of Lesotho also will enhance the quality of the work.

University

Chairman, Department of Agricultural Economics

The University official having ultimate authority for university participation in LASA will be the Chairman of the Department of Agricultural Economics or Economics. He will nominate the University team leader and team members subject to the approval of GOL and AID. He or his designee will have the University's authority for approval of project plans and reports and will participate in LASA evaluations; when LASA team members are working on LASA related activities in the U.S. they will be supervised by the Department Chairman. The department chairman will visit Lesotho to participate in annual reviews and discussion of plans of work. The University will designate one person as Campus Coordinator. This person will handle all administrative details on campus that relate to LASA activities. The University Budget includes one trip per year to Lesotho for the Campus Coordinator or one trip per year for the MAL to visit the campus.

University Team Leader (UTL)

The University team leader will be nominated by the Chairman and will be cleared by AID and be approved by GOL. The UTL should have extensive administrative and research experience and significant prior experience in an LDC. Although all agricultural economists have some identified specialization, he should be familiar with all fields of the discipline and research methods as well as have a broad understanding of agriculture.

The University leader will share responsibility with the Lesotho Team Leader for supervising and planning the day-to-day activities of the LASA team. He will participate and provide leadership in the preparation of all work plans, administrative reports, and annual reviews. He will consult with the MAL on management of the LASA team and will participate in team activities in accordance with his professional interests and skills. The UTL will remain in Lesotho for life of project.

University Team (UT)

The University team will be selected by the two team leaders with approval of AID, GOL, and, of course, the University. In addition to the team leader, it is anticipated that the team will consist of the following:

Resident Staff

Development Economist with professional training and experience
sociology - life of project
Research Assistant - a Ph.D. student with strong ability,
training and teaching experience in mathematics and
statistics - life of Project
Production Marketing specialist - life of Project
Secretary - 18 months after Field Team arrives

Short Term Staff

Livestock marketing - 1 my
Sociologist - 1 my
Farm management - 1 my
Up to 2 my additional technical and economic
Specialists as needed

The composition of the team may be adjusted at the beginning of Phase II in accordance with the needs specified in the Phase I report, or during Phase I activities if all parties agree.

All team members must have had prior experience in an LDC and demonstrated ability and interest in working with individuals from such countries and a sensitivity to the developmental needs of LDCs.

It is anticipated that all team members will have responsibility for components of the ASR and ASA and will present formal courses while in Lesotho, and supervise Basotho participants while they are in the U.S.

A.I.D.

AID management responsibility will be shared by TA/AGR/ESP, AFR/DR, and AFR/OSARAC. Generally, OSARAC will provide day-to-day field management in order to assure that activity scope and timeliness meets mission and Lesotho needs and LASA specifications.

The AFR/DR will also be concerned with the scope and timeliness of LASA in order to assure that it fulfills AFR objectives and will consult with TA/AGR/ESP on technical management of LASA. TA/AGR/ESP will have responsibility for the technical and bureaucratic management of LASA for AID. AID approval of LASA plans of work and reports will require the approval of all three offices.

OSARAC (RD)

The Regional Director of OSARAC or his designee will maintain field supervision of LASA. He will approve all plans and reports for OSARAC, review annual evaluations, and participate in the preparation and approval of the end of activity review. Appointment of team members will be cleared

by RD or his designee. He will regularly consult with the team leaders and will represent AID in any interim discussions with GOL on the progress of LASA.

AFR/DR

The Director of AFR/DR will appoint a Bureau LASA Monitor (BAM). The BAM will participate in preparing annual plans of work, annual reviews, and end of activity reviews. He will clear the appointment of team members. The Director of DS or his designee will approve work plans and reports for AFR.

In order to incorporate this collaborative style into the pre-implementation steps of the LASA activity the following actions have preceded the submission of this activity paper for final approval.

In early CY 1976 a design team visited Lesotho and prepared a draft activity paper on LASA which was approved in substance by GOL and OSARAC. This proposal was submitted to AFR/DR, TA/AGR/ESP and the EPEA Steering Committee for initial review in April/May. This final draft of the Activity Paper reflects the results of that review. In early May two senior GOL officials visited the U.S. to participate in on campus visits for University selection. Later a senior official from the Lesotho Embassy also participated in university visits. Proposals were received from three institutions and final selection was made jointly by AFR/DR, TA/AGR/ESP, OSARAC and the GOL based upon mutually agreed upon criteria. In late July a final team composed of AFR/DR, TA/AGR/ESP, CM/COD, GC/C, OSARAC and two members of the proposed implementing university visited Lesotho to finalized details of contracting, budgeting, personnel, and implementation of LASA. This final draft reflects the results of that visit.

Procedures for contracting the LASA Activity include three basic documents. The first document is a Pro-Ag signed between AID and the Government of Lesotho. This document details the contributions of the GOL and AID support in addition to that provided in the Cooperative Agreement referred below. The second document is the Cooperative Agreement between the implementing university and AID. The Cooperative Agreement details the contributions and responsibilities of the university and the funding support for the university contributions provided by AID. The third and final document is a Memorandum of Understanding signed jointly by the GOL, the implementing university and AID. This final document states that each institution involved desires to participate in LASA in a collaborative manner. The memorandum of understanding incorporates as annexes, drafts of the Pro-Ag and the Cooperative Agreement and states that all parties to the agreement have read and approves in principle and substance the provisions in each, the memorandum also states, "No change in either the Pro-Ag or the Cooperative Agreement will be made prior to their execution without notice and approval of

such change by all parties to this memorandum of understanding."

The CPIs which must be achieved prior to activity implementation are activity plan approval, university approval, approval of Africa Bureau IQ Funding including waiver for local construction, signing of the Memorandum of Understanding, signing of the Cooperative Agreement, signing of the Pro-Ag and issuance of the PIO/T.

This must be achieved prior to 30 September, because drafts exist for all relevant documents. Provided that speedy approval is given for the LASA activity this date appears reasonable.

TA/AGR/ESP

The Chief, ESP, will appoint an AID LASA leader (ALL). The ALL will maintain technical supervision of the activity, prepare all necessary AID documentation, participate with the team leaders and BAM in the preparation of plans, reports, and reviews. The Chief, ESP or his designee will exercise TA's responsibility to approve plans of work for the LASA and provide supervision to ALL.

The Agricultural and Rural Sector Planning Committee (PC) will review this activity plan and subsequent plans of work and activity reviews to advise TA/AGR and AFR/DS as to whether LASA is consonant with AID and university goals and objectives and the objectives of the Expanded Program of Economic Analysis.

B. Implementation Plan

LASA implementation plan and management indicators (CPI's) are detailed in the annexed PPT and CPI narrative (Annex D). To assure a true collaborative style and to correct inadequacies of the initial activity design, substantial flexibility is maintained in its design. The team leaders will have two opportunities to revise the scope of work within the first seven months of the activity's life. Annual plans of work will be developed throughout the activity giving further opportunity of redirection should it prove necessary. Thus, if AID, GOL, or the University should determine that its goals are not being achieved, there are several formally scheduled opportunities to raise such issues and redirect the activity.

Immediately following arrival in Lesotho at the start of Phase II, the resident staff is to familiarize itself with the local situations and collaboratively with the MAL revise the Phase II scope of work if desired. Completion of the ASR and initiation of the ASA according to schedule is dependent on achieving agreement on the revised scope of work in a prompt and orderly fashion. If agreement is delayed, the arrival of the first group of short-term staff may have to be moved back, endangering the entire schedule of the activity.

Further milestones for the ASR are completion of the micro and macro components of the ASR. They will be presented in an internal LASA report written collaboratively by the short-term staff and BLT. Finally, the curriculum, ASR report, and Phase I Scope of Work must be completed two weeks prior to the January 1978 Workshop to permit adequate review by the workshop participants.

Adequacy of the ASR as a sector planning document will depend on data availability in Lesotho which the design team has only superficially reviewed. If the team finds too many information gaps, the usefulness of the ASR will be accordingly restricted.

Successful completion of the formal training process is dependent on many factors. The curriculum plan will be approved at the Jan., 1978 workshop. It is dependent on having achieved agreement with the U.S. university to permit credit for courses offered in Lesotho and to waive course fees and with all concerned departments to permit the use of team members to teach courses which other faculty normally teach on campus.

Although it has not been fully assessed, it is believed that the BLT will require substantial remedial work due to insufficient previous education in certain subjects, particularly mathematics and statistics.

A key challenge to the LASA team will be the design of curriculum and courses coordinated with ASA activities. This will not be easy, and its success will largely be a function of the professional skills and imagination of the University team. The curriculum's adequacy and success is also an inverse function of the number of short-term requests the BLT and ULT receive from GOL. Since the BLT will be in class 12 hours a week and therefore studying at least 24 hours a week, they will have only a minimum amount of time to devote to unscheduled LASA activities.

Finally, BLT must return from the U.S. by March 1, 1980 if they are to participate in the development planning, project planning, and evaluation course and if each is to complete a project proposal to be included in the ASA. Maintenance of this schedule is dependent on the BLT doing well in their course work in the U.S. and completing their theses prior to March 1, 1980.

The ASR has been scheduled so that the micro economists and sociologist will first conceptualize and design the micro ASA components. Building upon the micro plan, the macro economists will conceptualize their components. Finally, the social/cultural specialist will complete plans for his work that depends upon the micro and macro component

A very tight schedule of field work must be maintained:

Micro: May 1, 1978 - September 1, 1978
Macro: August 1, 1978 - April 1, 1978
Social/cultural: November 1, 1977 - June 1, 1978

Competition for data collection resources will inevitably arise and must be dealt with.

All short-term team members will have only three months in their third TDY to initiate the analysis of the data. Data collection, tabulation, etc., must be completed upon the team's return. Similarly, analysis must be completed when the short-term team members return to write their reports and these team reports must be completed in sufficient time for the team leaders to complete the final report prior to final review of LASA. Any delay in completion of any of these CPI will delay the final completion of LASA. Should any University staff withdraw from LASA (except the data specialists) during its execution, it will be very difficult to maintain the activity's momentum.

Because LASA is collaborative and involves two GOL offices, 3 AID offices, and at least one University department, its management and coordination will be extremely complex. The formal approval processes have been detailed in Table 1 and will not be repeated here. It will be incumbent on the team leaders to assure coordination and communication between all parties. All formal team communications will be cleared with GOL by the MAL and copies sent to all participating agencies: AFR/OSARAC, AFR/DS, TA/AGR/ESP, and the University Department of Agricultural Economics. Similarly, should any of these offices officially communicate with the team, carbon copies should be sent to the other participants.

In order to assure a continuing flow of information about University research activities deriving from LASA, but not integral to it, the University will submit all articles, monographs, and books relating to Lesotho for GOL review. This review is for the purpose of communication and professional criticism.

Coordination and management will be achieved by following the above procedures, and by annually convening a meeting of all institutional participants to conduct an annual review and approve an annual plan of work. In the intervening period, management will primarily devolve to AFR/OSARAC and GOL. The PS of the MOA and the Director of CPDO or their designees will fulfill this responsibility for GOL and the Regional Director of AFR/OSARAC, OSARAC Food and Agriculture Officer, and AID representative in Lesotho will manage the LASA for AID. In addition, the ALL and BAM will devote 10 and 5 percent of their time annually to LASA and other AID/W staff time will total .75 manyears. The estimated AID and GOL cost of managing the LASA is \$156,000 over the four year life of the activity. These costs are estimated as follows:

		<u>(\$000)</u>
AFR/OSARAC	.25 my.	8
AFR/DR	.20 my.	6
TA/AGR/ESP	.25 my.	8
Other AID/W	.20 my.	6
Travel 3 TDY @ \$3,000		<u>9</u>
Total AID.		37
GOL	.25 my.	2
Annual Management Costs		39
Total Management Costs (4 year period)		156

Successful implementation of LASA will depend on timely provision of commodities, particularly housing. LASA will require two senior-level and two junior-level houses. GOL will supply the junior-level houses and AID will build the senior-level houses.

Vehicle support will include 3 rough duty vehicles.

One suggested management arrangement which will be implemented includes establishment of a LASA bank account in Lesotho requiring signatures of the team leader and AFR/OSARAC, and forward funding of the cooperative agreement to permit flexibility in expenditures.

C. Budget

The budget for LASA appears in Tables 3-6 at the end of the activity plan. Total cost of LASA is \$2.06 million, \$1.42 million contributed by AID, \$338,000 from GOL, and \$256 million by the University. Costs of 239 man-months of professional personnel funded by AID total \$853,000, \$35,419 per man-year. This average cost is low, reflecting the utilization of relatively inexpensive short-term staff and data specialists. GOL will contribute 333.5 man-months at a cost of \$288,600, an annual average cost of \$86,600 per man-year. The University will provide 34 man-months of personnel at a total cost of \$108,000 including overhead, an average cost of \$38,300 per man year. Although the six Basotho team members are budgeted for a full three years, it may be necessary that during the first six months of Phase II they devote two thirds time to LASA. In this case the GOL contribution will be reduced 1 man-year or \$4,000.

Commodities to be provided by AID are budgeted at \$54,000 including vehicles, calculators, and typewriters. Vehicles are to be purchased in the United States by the university.

Because of GOL budgetary constraints, AID agrees to assume a portion of administrative and logistical costs. AID will contribute 75% of these costs the first year, half of them the second year, 25% the third year and 0 the fourth year. GOL will pay 25% the first, half the second 25% the third year of the activity and all the fourth year. The distribution of these costs between AID and GOL are shown in Table 2.

It should also be noted that in a cooperative activity such as LASA, no one institution receives the full benefits of the activity. If one assumes that each of the cooperating institutions, the GOL, AID, and the University, receive a third of the total benefits of the LASA activity, then the GOL's contribution of \$.38 million is approximately 40% of the cost of the portion of LASA which benefits Lesotho.

TABLE 2

INCREMENTAL COST TO GOL OF ADMINISTRATION AND LOGISTICS

(\$000)

	FY 1977	FY 1978	FY 1979	FY 1980	Total
AID	16.6	11.90	6.4	--	34.9
GOL					
Administration and Logistics	<u>5.5</u>	<u>11.90</u>	<u>19.1</u>	<u>25.5</u>	<u>62.00</u>
Total	22.1	23.80	25.5	25.5	96.9

TABLE 3

SUMMARY ACTIVITY BUDGET

LASA	FY 1977	FY 1980
		(\$000)
<u>AID</u>		
TAB		1136.9
AFR		287.3
<u>GOL</u>		376.7
<u>UNIVERSITY</u>		259.9
ACTIVITY TOTAL		\$2060.8

TABLE 4

LIFE OF ACTIVITY BUDGET

LASA FY 77-80

TAB CONTRIBUTIONS

(\$000)

	FY 1977	FY 1978	FY 1979	FY 1980
I. PERSONNEL				
A. Field Party				
1. Party Chief	13.7	30.0	30.0	30.0
2. Senior Faculty	11.4	31.5	31.5	31.5
3. Junior Faculty	4.5	18.0	18.0	18.0
4. Senior Res. Assoc.	6.0	--	--	--
5. Res. Assoc.	3.4	5.0	5.0	5.0
6. Secretary 1-B	1.3	5.1	5.1	5.1
	<u>40.3</u>	<u>89.6</u>	<u>89.6</u>	<u>89.6</u>
Salaries	40.3	89.6	89.6	89.6
Benefits (25.64%)	10.3	23.0	23.0	23.0
Post All. (10%)	4.0	9.0	9.0	9.0
Overhead (15.2%)	8.3	18.5	18.5	18.5
	<u>62.9</u>	<u>140.1</u>	<u>140.1</u>	<u>140.1</u>
Sub-Totals	62.9	140.1	140.1	140.1
B. Campus Administration				
1. Director	2.9	5.9	5.9	5.9
2. Coordinator	4.0	10.0	10.0	10.0
3. Secretary 1-B	5.0	10.2	10.2	10.2
	<u>11.9</u>	<u>26.1</u>	<u>26.1</u>	<u>26.1</u>
Salaries	11.9	26.1	26.1	26.1
Benefits (10.64%)	1.3	2.8	2.8	2.8
Overhead (30%)	4.0	8.7	8.7	8.7
	<u>17.2</u>	<u>37.6</u>	<u>37.6</u>	<u>37.6</u>
Sub-Totals	17.2	37.6	37.6	37.6

TABLE 4 (cont)

	FY 1977	FY 1978	FY 1979	FY 1980
C. Short-Term Support Staff				
Faculty	--	25.0	25.0	25.0
Benefits (10.64%)	--	2.7	2.7	2.7
Consultants	--	10.0	14.0	10.0
Overhead (30%)	--	11.3	14.3	11.3
Sub-Totals	--	49.0	56.0	49.0
Total Personnel Cost	80.1	226.7	233.7	226.7
Inflation:				
(6% compounded)	--	13.6	28.9	43.3
GRAND TOTALS (Personnel)	80.1	240.3	262.6	270.0
II. OTHER COSTS				
A. Travel				
1. International Travel	30.0	15.0	15.0	30.3
2. R & R	--	6.0	6.0	--
3. Local Air	--	2.0	2.0	1.4
4. U.S. Travel	.9	.9	.9	.9
Sub-Totals	30.9	23.9	23.9	32.6
B. Per Diem	3.6	9.0	9.0	9.0
C. Shipping and Storage Costs				
1. Household Goods	25.5	--	17.0	25.5
2. Automobile	6.0	--	4.0	6.0
Sub-Totals	31.5	--	21.0	31.5
D. Campus Costs				
1. Office Costs	0.5	2.0	2.0	2.0
2. Typewriter	1.0	--	--	--
3. Shots and Passports	0.4	0.4	0.3	0.1
4. Medical	0.9	--	0.6	0.9
Sub-Totals	2.8	2.4	2.9	3.0

TABLE 4 (cont.)

	FY 1977	FY 1978	FY 1979	FY 1980
E. Household Costs				
1. Education	1.5	6.5	6.5	6.5
2. Guard Service	1.0	3.0	3.5	3.5
3. Curtains	1.5	0.4	--	--
4. Utilities	<u>1.0</u>	<u>4.0</u>	<u>4.0</u>	<u>4.0</u>
Sub-Totals	<u>5.0</u>	<u>13.9</u>	<u>14.0</u>	<u>14.0</u>
GRAND TOTALS (Other Costs)	<u>73.8</u>	<u>49.2</u>	<u>70.8</u>	<u>90.1</u>
TOTAL ANNUAL Costs	153.9	289.5	333.4	360.1

Total TAB Cost for Life of Project = \$1,136.9 thousand.

TABLE 5

LIFE OF ACTIVITY BUDGET

LASA FY 1977-80

AFR CONTRIBUTIONS

Commodities (all to be procured by the Cooperator)

<u>Item</u>	<u>US\$</u>
✓3 Rough Duty Vehicles (Chevrolet Blazer)	\$24,000
✓1 Motor Bike Trailer	2,000
✓1 Programmable Calculator	1,000
✓10 Calculators (Economist Models)	1,500
✓Misc. Library Books and Publications	17,000
✓3 Dictaphones, 1 Transcriber	1,000 1/
✓1 Photocopier	1,200 1/
✓2 Electric typewriters	2,000 1/
Misc. Office Equipment	<u>2,000 1/</u>
Total	\$51,700
Contingency @ 5%	<u>2,600</u>
	\$54,300

1/ Local Procurement.

TABLE 5 (cont.)

Training (all to be managed by the Cooperator)

	<u>TQ</u>	<u>FY 77</u>	<u>FY 78</u>	<u>FY 79</u>	<u>Total</u>
(A) Academic (11)	\$11,200 (2)	\$16,800 (3)	\$16,800 (3)	\$16,800 (3)	\$61,600
(B) Short-Term Training (US)	--	8,000 (2)	8,000 (2)	8,000 (2)	\$24,000
Totals	\$11,200	\$24,800	\$24,800	\$24,000	\$85,600

Local Costs Support (to be handled by USAID/Southern Africa)

(A) Housing (3 Senior Staff) @ \$30,000 ea.

(B) Budget Support to LASA

(US \$)

<u>Item</u>	<u>FY 77</u> ^{1/}	<u>FY 78</u>	<u>FY 79</u>	<u>Total</u>
Trail Bikes	\$ 1,800	--	--	\$ 1,800
Vehicle Oprns.	6,000	6,000	6,000	18,000
Office Supplies	1,200	1,200	1,200	3,600
Computer Use	1,000	2,500	2,000	5,500
Adm. Assistant	2,200	2,200	2,200	6,600
Secretary	1,500	1,500	1,500	4,500
Enumerators	2,400 (2)	3,600 (3)	4,800 (4)	10,800
Per Diem (GOL Staff)	1,800	2,700	3,600	8,100
Driver/Messenger	1,200	1,200	1,200	3,600
Survey Contracts	3,000	3,000	3,000	9,000
Totals	\$22,100	\$23,900	\$24,500	\$71,500
AID Contribution	\$16,600 (75%)	\$11,950 (50%)	\$ 6,400 (25%)	\$34,950
GOL Contribution	\$ 5,500	\$11,950	\$19,100	\$36,550

1/ US FY 77 funding to be shown in GOL FY 77/78 recurrent budget. Following years in similar sequence.

TABLE 5 (cont.)

Summary of all AFR Costs

(000 US \$)					
<u>Category</u>	<u>TQ</u>	<u>FY 77</u>	<u>FY 78</u>	<u>FY 79</u>	<u>Total</u>
1. Commodities	--	\$51,000	\$ 1,100	\$ 2,200	\$ 54,300
2. Training	\$ 11,200	\$24,800	\$24,800	\$24,800	\$ 85,600
3. Local Cost					
(A) Housing	90,000	--	--	--	\$ 90,000
(B) Budget Support	--	16,600	11,950	6,400	34,950
Total	\$101,200	\$92,400	\$37,850	\$33,400	\$264,850
Inflation @ 8%/yr.	0	7,400	6,300	8,700	\$ 22,400
Totals with Inflation Factor	\$101,200	\$99,800	\$44,150	\$42,100	\$287,250

LIFE OF ACTIVITY BUDGET
 LASA FY 1977-1979
 GOL CONTRIBUTIONS
 (\$000)

	FY 1977	FY 1978	FY 1979	FY 1980	Total
Personnel:					
Basotho LASA Team (mm) (\$4060/yr)	12.2 (36)	24.4 (72)	24.4 (72)	24.4 (72)	85.4 (252)
Basotho Team Leader (mm) (\$6960/yr - 33%)	.6 (1)	2.3 (4)	2.3 (4)	2.3 (4)	7.5 (13)
PS/MOA (mm) (\$3740/yr - 8%)	.2 (.25)	.8 (1)	.8 (1)	.8 (1)	2.6 (3.25)
Dir/CPDO (mm) (\$7740/yr - 8%)	.2 (.25)	.8 (1)	.8 (1)	.8 (1)	2.6 (3.25)
Librarian (\$4060/yr)	1.1 (3)	4.1 (12)	4.1 (12)	4.1 (12)	13.4 (39)
Assorted (\$2320/yr)	.6 (2)	2.4 (8)	2.4 (8)	2.4 (8)	7.8 (26)
Overhead (100%)	14.9 ✓	34.8 ✓	34.8	34.8	119.3
Total Personnel (Man-Months)	29.8 (42.5)	69.6 (97)	69.6 (97)	69.6 (97)	238.6 (333.5)
Administration and Logistics	5.5 ✓	11.9 ✓	19.1	25.5	62.0
Houses	40.0 ✓	--	--	--	40.0
Inflation	--	8.2	8.9	19.0	36.1
Total GOL Contributions	75.3	89.7	97.6	114.1	376.7

TABLE 7

UNIVERSITY CONTRIBUTION

LASA Project

FY 77 - 80

(\$000)

I. Salaries	<u>MM</u>	<u>(\$000)</u>
1. Director	7	\$20.5
2. 3 Short-term	6	12.5
3. Secretary 1-B	<u>21</u>	<u>17.9</u>
Sub-Total	34	50.9
Inflation (6%)		3.1
Benefits (10.64%)		<u>5.8</u>
Sub-Total		59.8
II. Training Costs (8 Students @ \$4,000)		32.0
Overhead on Salaries and Benefits		
1. Field Party (10%)		39.5
2. Campus Administration		31.5
3. Short-Term (34%)		41.9
4. On Inflation (34%)		<u>27.7</u>
Sub-Total		140.6
IV. Other Items		
1. Library		10.0
2. Computer		10.0
3. Lesotho Trip (Coord.)		2.5
4. Misc. Services		<u>5.0</u>
Sub-Total		<u>27.5</u>
GRAND TOTAL		<u>259.9</u>

ANNEX A

LOGICAL FRAMEWORK

PROJECT DESIGN SUMMARY
LESOTHO AGRICULTURE

(NOTE: OTHER THAN AN OPTIONAL
FOOTNOTED, DATA USED AS A BASIS
FOR DETERMINING DATA FOR THE FINAL
REPORTS, IT NEED NOT BE RETAINED
OR SUBMITTED.)

Life of Project 77 to 80
From FY 77 to FY 80
Total U.S. FY 4/20/76 1424.2
Date Prepared 4/20/76

Project Title & Number: Lesotho Agricultural Sector Analysis

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATOR	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes: (A-1)</p> <p>to increase the capacity for the GOL to internally respond and rationally plan and program response to the issues of development as they are related to the macro-focus of international trade, institutional considerations and national production as well as the micro-focus of social development, equity for small farmers and the general welfare of its populace.</p>	<p>Measures of Goal Achievement: (A-2)</p> <p>Five-Year Plan whose goals have been rationalized and integrated by trained Basotho personnel through economic and social analysis to identify optimal solutions by assessing alternative strategies and resource allocations.</p>	<p>(A-3)</p> <p>Existence of Plan reflecting increased analytical skills prepared by Basotho personnel.</p>	<p>Assumptions for achieving goal targets: (A-4)</p> <ol style="list-style-type: none"> 1. GOL has commitment to national planning. 2. GOL will make resources available for economic planning.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project: 77 to FY 80
From FY 77 to FY 80
Total U.S. Funding: 1424.5
Date Prepared: 4/20/78

Project Title & Number: Lesotho Agricultural Sector Analysis

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Purpose: (B-1)</p> <ol style="list-style-type: none"> To develop the capacity of the GOL to implement, update and utilize sector analysis as a planning tool in evaluating alternative strategies for economic and social development in the agricultural sector. Long-term relationship with university, department and personnel. 	<p>Conditions that will indicate purpose has been achieved: End-of-Project status. (B-2)</p> <ol style="list-style-type: none"> MOA utilizing sector analysis in formulation of future agricultural policy and programming strategy. University Department of Agricultural Economics and Department personnel with commitment to and knowledge of priorities and problems relating to the development of the agricultural sector in Lesotho. 	<p>3-3)</p> <ol style="list-style-type: none"> Continuing series of analytical papers prepared by Basotho personnel in GOL. Continuing utilization of university department and personnel by GOL after life of project. University publications relating to agricultural sector in Lesotho after life of project. 	<p>Assumptions for achieving purpose: (B-4)</p> <ol style="list-style-type: none"> GOL committed to economic and social development in the agricultural sector. Training to MS level leads to capacity for sectoral analysis. GOL will utilize trained Basotho personnel for sector analysis. Sector analysis is necessary component for planned economic and social development. GOL and university mutually desire long-term institutional relationship.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project: From FY 77 to FY 80
Total U.S. Funding: 1424.5
Date Prepared: 4/20/77

AID 1028-20 (10-74)
SUPPLEMENT 1

Project Title & Number: Lesotho Agricultural Sector Analysis

PAGE 3

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Outputs: (C-1)</p> <ol style="list-style-type: none"> 1. Basotho personnel with M.S. degree in agricultural economics or related fields designed to provide sector analysis capacity in the GOL. 2. Agricultural Sector Review (ASR). 3. General agricultural and rural sector analysis. 4. Basotho trained in the analytical skills of project design. 5. Institutionalization and integration of data collection, data analysis and policy evaluation for the agricultural sector in Lesotho. 6. Agricultural Development Planning Library in Lesotho. 	<p>Magnitude of Outputs: (C-2)</p> <ol style="list-style-type: none"> 1. 6 Basotho with MS degrees. 2. 1 ASR prepared jointly by Basotho and US personnel approved by GOL. 3. 1 ASA prepared jointly by Basotho and U.S. personnel approved by GOL. 4. 6 Projects prepared by Basotho personnel. 5. 1 GOL funded Plan to collect and analyze agricultural data on a regular basis. 6. 1 Agricultural Library located in Maseru, Ministry of Agricultural and Co-operatives 	<p>(C-3)</p> <ol style="list-style-type: none"> 1. Existence of degrees. 2. Acceptance of Phase I report by university, GOL and AID. 3. Acceptance of Phase II report by university, GOL and AID. 4. Projects approved by GOL and/or donor organizations. 5. Agricultural sector data collected and analyzed on a regular basis by Basotho personnel in GOL. 6. Existence of library in MOA 	<p>Assumptions for achieving outputs: (C-4)</p> <ol style="list-style-type: none"> 1. Assigned Basotho personnel have necessary background to be admitted into MS program. 2. Basotho personnel have required ability to successfully complete MS program. 3. Problems in Lesotho agricultural sector can be integrated into university masters program. 4. University selected has capacity to prepare ASR and ASA. 5. Data are available or can be obtained for ASR and ASA. 6. Curriculum includes analytical skills necessary for project design. 7. University selected has commitment and capacity to design and implement curriculum leading to MS degree. 8. AID activity personnel have commitment and ability for necessary guidance.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project: 77 to FY 80
From FY 77 to FY 78: 424.5
Total U.S. Funding: 8720776
Date Prepared: 8/20/76

Project Title & Number: Lesotho Agricultural Sector Analysis

PAC

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Inputs: (D-1)</p> <p>15 man-years of U.S. technicians in Lesotho.</p> <p>15 man-years of Basotho technicians.</p> <p>36-54man-months participant training in U.S.</p> <p>1,000 books for library</p>	<p>Implementation Target (Type and Quantity) (D-2)</p> <p>1 US team leader, 36 months</p> <p>1 US development economist, 36 months (sociology)</p> <p>3 US data specialists, total of 42 months</p> <p>1 US marketing specialist, 12 months</p> <p>1 US labor-manpower-economist, 12 months</p> <p>1 US macro-economist, 12 months</p> <p>1 US sociologist, 15 months</p> <p>1 US farm management specialist, 12 months (livestock)</p> <p>1 US farm management specialist, 12 months, (crops & conservation)</p>	<p>(D-3)</p> <p>American technicians devote 189 man-months to LASA</p> <p>Basotho planners devote 162 man-months to activity</p> <p>Basotho participants spend 54 months outside Lesotho at a university</p> <p>1000 books are available at the Ministry of Agricultural and Co-operatives</p>	<p>Assumptions for providing inputs: (D-4)</p> <p>AID, GOL and a university will provide adequate resources and personnel to implement activity as designed.</p>

AID 1976-22 (1-73)
 SUPPLEMENT 1

PROJECT DESIGN SUMMARY
 LOGICAL FRAMEWORK

PAGE 2

Life of Project
 From FY 77 to FY 80
 Total U.S. Funding \$ 1424.7
 Date Prepared: 4/20/76

Project Title & Number: Lesotho Agricultural Sector Analysis

740

NARRATIVE SUMMARY	SPECIAL REQUIREMENTS / COMMENTS	Basis of Verification	IMPORTANT ASSUMPTIONS
Project inputs: (D-1)	Implementation Period (Type and Quantity) (D-2) 6 Basotho planners, 162-180 months 6 participant trainees, 36-54 months 1000 books related to planning and economics		Assumptions for provided inputs: (D-3)

ANNEX B

ORIGINAL TOR - IASA

TERMS OF REFERENCE

LESOTHO AGRICULTURAL SECTOR STUDY

A. Introduction

Agriculture, due to its direct impact on nearly all citizens, is by far the most important sector in the Lesotho economy. It has not, however, been the subject of a systematic and comprehensive analysis. Thus, while large investments continue to be made, new projects implemented and on-going activities supported, there is uncertainty that these investments are and will be utilized in the most efficient manner to achieve desired ends. Given Lesotho's position as a poor country, her limited resource base, growing population and food deficit position, it seems particularly critical for responsible Government of Lesotho (GOL) officials and interested donors to have up-to-date information on which to make decisions regarding future agricultural investment and development. This sector study should provide that information and the analytical support for alternate courses of action in national development over the next decade.

B. Objectives of the Study

The study should identify the optimum or best possible growth path for the near future (three-five years), given present conditions and constraints. It should also assess, inter alia, the broad consequences and requirements (manpower, investment, etc.) of this growth path in light of different policies and programs for the longer term (three-ten years). These policy and program alternatives should be analyzed to show required inputs and expected outputs for each; the analysis must include careful cost data and a full examination of cost effectiveness. The study's recommendations will be based upon this assessment and analysis. Equally important, the study should be conducted in such a manner, using formal and on-the-job training, as to develop within the GOL a capacity to carry out and update such analyses continually, with lessened dependence on full-time expatriates.

The sector analysis must address several basic and pervasive constraints/issues which impinge upon and influence all facets of agricultural development in Lesotho. These areas should be covered independently in the report but of even more critical importance, their effect on alternatives must be examined. Following, not necessarily in priority order, is a brief discussion of these problems.

1. Land and Water Conservation/Reclamation

Given the obvious, serious problem and the checkered history of donor/GOL experiences, and AID's current involvements, it is clear that any set of alternatives involving land, crops and livestock must have conservati

relationships structured at the outset and not treat conservation as an afterthought, as a unique subject in isolation or as a normal result of existing management practices.

2. Manpower

Due to the unique nature of the rural labor force in Lesotho (about three-fifths of able-bodied adult males work outside the country), it is essential to assure that manpower issues are considered as alternatives are analyzed. This may represent one of the most difficult variables to deal with in a sector study, but it is clearly one of the most important issues affecting implementation of programs/projects. Among key issues needing review to assure that the study is sensitive to and tempered by an understanding of manpower problems are (a) evaluation of the real significance of rural income as an alternate to outside employment, (b) a clear understanding of the decision-making process on the farm and the role of women in such processes, (c) an analysis of the place for capital as a substitute for missing labor, and (d) implications of the alternatives proposed on total labor requirements and peak labor needs. It is essential at the outset that alternatives analyzed be explained in relation to the need to bring men back into the local labor pool, to better utilize the existing labor force or to recommend wholly new combinations of capital and labor.

In the context of manpower issues, the alternatives analyzed must also take account of needs for low, middle, and technical level skills. Given Lesotho's small secondary school output, these factors must be carefully weighed to assure that the alternatives can really be implemented. Dependency on outside technical help must also be weighed, costed and analyzed in terms of the effect on the growth of local capacity.

3. Livestock

In the Lesotho environment, both physical and cultural, livestock (primarily cattle, sheep and goats) is not a separate issue but is wholly co-involved with any alternative to be reviewed. No use of the land resource base can be realistically considered until the place and role of livestock has been dealt with. The overall size and composition of the livestock component of any alternative as well as proposed modification in the management systems have far reaching implications for other issues such as government policy, national and local implementation capacity, conservation, labor force, skills required and education (as herd boys may be freed for school). These factors, together with the sociological implications of such change, must be included in any realistic recommendations for action.

4. Risk and Climate

The variable climate of Lesotho tends to increase risk and cause serious constraints to the adoption of new crops or systems. This issue must be carefully considered as alternatives are developed.

5. Marketing

Alternatives analyzed must take into account and be sensitive to the relationship between Lesotho and South Africa vis-a-vis types of crops, agro-industrial development, cost/subsidy issues, etc. Such analysis must reflect Lesotho's desires and relate to the real opportunities available within the local trading area and farther afield. Analysis must also realistically appraise the needs and expectations for capital, for distribution and marketing outlets and for institutions. The relationship and role of the private sector to the changes considered and to the problem of internal transport must also be considered. Experience of the GOL in rural access roads or tracks is highly relevant and should be noted in analysis of marketing needs.

C. Additional Specific Topics to be Covered

While the specific structure of the study is expected to be the first step in the process and co-involve the contractor, the GOL and OSARAC, the GOL has already listed a number of points on which they need information from the study. These are set forth below and in Section D.

1. The Current Role of Agriculture in Lesotho's Economy.
2. Recent Sector and Sub-sector Growth (Absolute and Relative).
3. The Resource Base of Lesotho's Agricultural Sector.
4. The Institutional and Infrastructure Base (e.g. Input Supply, Marketing, Credit, Extension, etc.)
5. The Technology Base.
6. Manpower for Agricultural Development (Population, Labor, Effect of Health-Education Factor, Trained Manpower).
7. Other Factors (Economic or Non-economic) which Affect the Sector's Possible Development.
8. Future Requirements on Lesotho's Agriculture (Food, Raw Materials, Export Earnings, Employment).

9. Constraints to Sector Growth - Significance and Priority.
10. GOL Plans and Objectives for the Sector - Realism, Desirability (e.g. Macro-economic Considerations) and Alternatives.
11. Role of Donors, Including AID.
12. Current Development Projects - Their Success, Impact, Suitability Given Problems and Possible Replicability.
13. Possible Future Directions for the Rural Sector.
14. Alternative Rural Development Strategies with Implications and Requirements of Each.
15. Suggested Projects and Activities for Donor Financing with Cost Estimates.

In covering the above topics it will be particularly important to discuss income distribution and employment and sociological implications of various alternatives. Also, as noted in Section B, in developing alternatives and recommended strategies, it will be necessary to examine the probable future relationship with South Africa (particularly as an input source and as a market) and the effect of an Independent Transkei. To the maximum extent possible, all analysis should be costed and quantitatively supported.

D. Important Sub-Sectors, Fields and Questions

1. Cropping Patterns and Profitability

With a view to introducing and establishing the most profitable cropping pattern:

- a. Assess the impact of proposals on the land resource base and the needs for conservation-related investments.
- b. Assess market prospects for promising agricultural products.
- c. Estimate the economics of production of these products under alternative farm management and technology assumptions.
- d. Review the present pricing policies (if any) and recommend pricing policies which would be consistent with optimum cropping patterns.

- e. Estimate investment and other means for achieving alternative cropping patterns.

2. Livestock

- a. To establish the best possible development of Lesotho's livestock sector, consider, inter alia, the impact of alternate proposals on the land resource base:
 - the priority which should be accorded to this sector in terms of allocation of resources and cost-benefit response;
 - investment requirements for particular improvement programs;
 - relative priorities and potentialities for such categories of animal production as dairy cattle, beef cattle, sheep and goats; milk vs. meat and wool vs. milk and meat;
 - desirability or not of up-grading animal breeds and introducing new ones;
 - requisite animal disease control measures;
 - range management and development;
 - mixed farming promotion; requisite policies and programs.
- b. Review present animal and animal product marketing and industrial processing activities and suggest improvements which may be necessary (e.g. wool and mohair, processed abattoir, etc.).
- c. Analyze the role of traditional and other existing tenure and animal ownership practices, and the degree of adaptation involved and feasible to achieve various alternative development patterns.

3. Institutions and Policies

- a. Review the credit, subsidy and general fiscal institutional base as it affects agriculture and the rural countryside.
 - . Suggest improvement measures and requirements.
- b. Review existing and proposed marketing institutions and their

capability to facilitate the efficient marketing of agricultural inputs and outputs.

- c. Evaluate the role that the cooperative movement or similar farmer associations could play in agricultural and rural development.
- d. Evaluate governmental and private planning, administration and implementation capacity with special attention to training requirements, both on-the-job and through higher education.

4. Land Tenure and Reform

Analyze the land tenure and land fragmentation problem and consider what measures might be taken which would be consistent with development objectives.

5. Other Technical Issues

a. Capital Substitution

1) Assess the nature and extent of farm mechanization that may be desirable and suitable on the basis of its impact on manpower policy and its technical and economic grounds.

2) Analyze the existing types of machinery used, their suitability and their unit costs.

3) Estimate the investment requirements and cost effectiveness of any type(s) of mechanization which may be proposed and indicate possible sources and methods of finance.

4) Evaluate the implications of mechanization on farming costs under alternative cropping pattern assumptions and farm management models and practices.

5) Review and evaluate GOL experiences in mechanization, especially as related to government-managed services. Evaluate the role of the private sector in mechanization.

b. Irrigated Agriculture

1) Evaluate the scale and potentialities of irrigable areas in terms of alternative combinations of crops and assess cost-benefit relationships flowing from pre-investment and investment needs for such

2) Consider separately the feasibility, technical requirements, impact on manpower and training and cost effectiveness of;

- (i) surface sources of irrigation;
- (ii) underground sources of irrigation.

3) Assess the rate of development and the degree of priority which irrigated agriculture should be accorded vis-a-vis rain-fed agriculture and livestock development.

6. Other-Related Issues

a. Agro-Industries

Identify promising agro-industries which may be established on a viable and profitable basis and make a preliminary evaluation of their investment needs including manpower training and related capital requirements. Also identify possible market outlets for products.

b. The Relationships Between Agricultural Development and Other Development Projects

1) Indicate the role of rural development and its importance and impact on constraints and conditions affecting successful agricultural development.

2) Review present GOL rural development policies and operations.

3) Assess rural development needs and suggest programs corresponding to the alternatives in the area of supporting services and infrastructure.

E. Implementation Method

Some of the above subjects and questions are already under investigation by the Government of Lesotho. To avoid duplication and ensure that the proposed study addresses the priorities of the government, it will be essential for the study to be planned, implemented and carried out in close collaboration and consultation at all stages with the Ministry of Agriculture, Marketing and Cooperatives (which will be the official GOL counterpart office) and the Central Planning and Development office.

A proposed plan of action follows: The activity is conceived as a

review (ASR). This would cover the resource base and an analysis of the critical issues and major alternatives open to Lesotho. The ASR would be of sufficient detail to permit the GOL and OSARAC to formulate their mutually determined agricultural sector programming strategy for the near future. At the end of Phase I a one-week conference would be held in Maseru attended by ASR authors and relevant personnel from AID, the GOL, and possibly other donors. Based on the results of these consultations, the conference would provide guidelines for a detailed scope of work for a Phase II sector analysis and training program. It is expected that Phase I would require about six months and Phase II 18-24 months.

F. Skills Needed

Analytic and training skills will be needed for the study in the following areas:

1. Macro- and Micro-Agricultural Economics
2. Sociology/Applied Anthropology
3. Agricultural Manpower/Manpower Development
4. Conservation, Land Use
5. ~~Accounting~~
6. Livestock Production - both small and large stock
7. Range Management
8. Agricultural Research
9. Agricultural Institutions
10. Agricultural Marketing
11. Agricultural Credit
12. Agricultural Mechanization
13. Rural Roads
14. Statistics
15. Computer Programming

It is expected that a Team Leader and two additional team members will be provided for the full period. The remaining technical skills would come from TDY staff who would remain in Lesotho for periods of two-four months or from individuals available in Lesotho for short-term contracts. Necessary computer analysis would be done in the U.S.

It is essential that the team leader be professionally and technically well-qualified and in addition have a keen and sensitive understanding of the impact of the issues noted in Section B on the

1/ It is expected that most of the team members would be qualified in more than one analytic skill.

technological/economic/social facets of proposed alternates. Especially there is a need for in-depth understanding of social/cultural issues, the necessity to overlay conservation considerations on all analysis, the livestock-crops-land tenure inter-relationships and the fact that all proposals must be related to the overall manpower problem. Skills needed by the three full-term team members are as follows:

1. Macro-Micro-Economics
2. Manpower (including training)
3. Sociology
4. Technical Agriculture
 - a. Crops
 - b. Livestock
5. Administration

It is expected that combinations could be found to assure coverage of these skills by three long-term team members.

ANNEX C

SOW - PHASE I - PHASE II (ASR)

ANNEX C

Scope of Work for Lesotho Agricultural Sector Review

The scope of work presented in this annex is not intended to restrict the ASR and modifications can be made in the field, provided the university team leader, the MAL and OSARAC approve of the change. The methodology and analytical tools employed in the ASR must be no more sophisticated than that which the Basotho personnel will receive during their studies leading to the academic degree.

Outline of ASR

I. Background

A. Annotated bibliography on Lesotho literature

The annotated bibliography will be based on a review of literature available in the U.S., Lesotho and Great Britain. The entries should be cross-referenced by subject matter. From the annotated bibliography, specific entries shall be selected and placed on a required reading list for all LASA participants. Entries included on the required list must be part of both the Lesotho Agriculture Library and the University library. It is expected that both the annotated bibliography and the required reading list will expand throughout the ASR, and LASA participants are responsible for being up-to-date on these reading requirements. It is expected that much of this will be accomplished during Phase I.

B. Annotated List of Past and Present Agricultural and Rural Development Projects in Lesotho

The annotations, less than one page per project, should include pertinent facts about the project. Those facts include project purpose, age of project, probable causes of success and/or failure, number of Basotho participants and counterparts active in the project, cost of project, direct and indirect benefits and other relevant information. This is not intended to be an evaluation, but a central list of projects that have been or are part of development activities in Lesotho. The purpose is to have all LASA participants familiar with these activities. This list will also expand throughout the LASA activity. It is expected that this activity will be partially completed during Phase I.

II. The Agricultural Sector Environment in Lesotho

Section II discusses some of the more important aspects of the environment of the agricultural sector in Lesotho. Based on these environmental considerations, Section II establishes some objectively verifiable facts about the agriculture sector. It is hypothesized that

these facts and thus the environments discussed have causality linkages and intra-linkages to the major problems of the agricultural sector identified in the project description of this project. The ASR is to test this hypothesis and map the causality linkages.

A. Environment

1. Natural Environment

Lesotho is a mountainous country in the temperate zone of the southern hemisphere. It receives a seasonal heavy rainfall pattern and is composed of predominantly duplex soil types in much of its arable land. The implications of this for the agricultural sector are seasonal crops depending upon a variable annual rainfall pattern in a temperate climate. The percentage of arable land is low (13%) with more land, primarily suited for livestock grazing. Due to the topography, the national transportation system is limited and most roads provide access to points outside Lesotho rather than to each other. Finally, the topography, combined with heavy seasonal rainfall and soil types, means that Lesotho's land is very susceptible to erosion.

2. Social Environment

The traditional cultural environment in Lesotho is complex with many individual variations. The society can be characterized as being male-dominated with sex-linked agricultural activities and communal land ownership. The value structure encourages cattle ownership which serves as a prestige factor and a storage of wealth for future generations. For the agricultural sector in Lesotho, this social environment implies private ownership of cattle with common ownership of pasture which has led to over-grazing. This situation has been a cause of serious problems of soil erosion. Since men are responsible for cattle, many of the young boys are used as herders, thus preventing them from attending school. Crop production has a lower priority than livestock. In the past, except for plowing, women, with limited decision-making authority, have been mainly responsible for growing food crops. There are some indicators that this situation is being slowly modified by various forces such as cooperatives and cash cropping.

3. Economic Environment

Two major factors define much of the economic environment in Lesotho. These factors are interdependent. The first factor is the economic and geographical connection with the Republic of South Africa (RSA) which relates the Lesotho economy to the more developed economy

of the RSA. The second factor is the low returns to capital investment in Lesotho vis-a-vis the RSA. The implications in Lesotho of these factors are several. First, the GOL has little fiscal or monetary discretionary power as it belongs to the Southern African Customs Union, and is part of the Rand Currency Area, both of which are dominated by the RSA. Lesotho has little de facto control of factor prices or production output prices and must follow the lead of the RSA or have serious problems with blackmarkets. The GOL also does not have a policy in trade because of the Customs Union. It cannot attract capital investment, nor can it de facto protect infant industries.

4. Resource Availability

Three facts relevant to resources in the Agricultural Sector in Lesotho are little arable land, little employment generating capacity, and increasing population. These factors contribute to marginal land use and decreasing yields. This, in turn, increases the potential for soil erosion. Finally, Lesotho has a growing excess labor force which must seek non-agricultural employment.

5. Institutional Environment

The relevant institutional environment is composed of four major factors: there is a demand for male labor in the mines in RSA; there is an immature administrative structure in the GOL; an active group of international donors and a largely irrelevant educational system. This environment means that, in Lesotho, large numbers of the male labor force (50-70%) currently migrate to the mines in RSA, leaving the females and older males to work on the farms. There are strong indications that the current situation will change due to the political atmosphere and mechanization of the mines. The development program in Agriculture is piecemeal and projectized with little or no economic evaluation of alternatives which would fit the projects into a consistent whole. There is no marketing strategy which attempts to exploit the potential RSA market. In general, there is no data and an embryonic availability of economic analysis for decision-making.

B. The Hypothesis of the ASR

The general hypothesis which the ASR is to test is that all of the various characteristics briefly discussed above are either direct or indirect causes of the major problem areas discussed in the Project Description of this proposal. The ASR, using existing data and relevant analytical techniques, will trace the causal linkages between these characteristics and the problems. It will assess the current GOL policy and programs which are designed to address the problem and

identify gaps in the program. Where relevant, the ASR will identify projects which are based upon fallacious assumptions and/or improper analysis and make recommendations redressing the identified inadequacies.

IV. General Integrated Sector Strategy for Lesotho Agriculture

The ASR should explicitly ascertain the goals of the GOL in the development of the agricultural sector and analyze them for internal consistency. Based on this analysis and information generated from the hypothesis tests of problem causality, the ASR should consider alternative strategies identified for each of the major problem areas, arrive at a proper set of the alternatives based on economic and social criteria and integrate them into a consistent and logical set of feasible solutions. The strategy set should identify programs and, where possible, actual projects. The time frame and phasing of the programs should be a central part of the recommendations which lead to a feasible set of goals. Finally, the ASR should include a priority list of data and studies for the ASA. The criteria for establishing these priorities should be made explicit.

ANNEX D

PPT. LASA

Lesotho

Lesotho Agricultural Sector Analysis 4/3/76

CPI NARRATIVE

1. 8/30/76 LASA Activity Plan Approved by Planning Committee, AID/AFR, and AID/TA. University and University Team Leader Selected.
2. 8/30/76 PIO/T forwarded to Contracts Office.
3. 9/15/76 Cooperative Agreement Signed by AID, GOL, and University.
4. 6/15/77 Annotated Bibliography Completed and Submitted to AID and GOL.
- 4a. 6/20/77 First participants return to Lesotho.
5. 7/1/77 Team Leaders arrive Maseru.
6. 7/15/77 Library bibliography completed and ordered.
7. 8/11/77 Scope of Work revised and approved by GOL, AFR/OSARAC, and AFR/DS, TA/AGR/ESP, and University must be notified.
8. 10/25/77 Micro aspects of ASR completed and reports drafted.
9. 12/10/77 Macro aspects of ASR completed and reports drafted.
- ~~10.~~ 12/15/77 ASR, curriculum and Phase II Revised Scope of Work distributed.
11. 1/16/78 Workshop - Phase II Scope of Work approved GOL, AID, University.
- 1/21/78
12. 2/15/78 Annual Plan of Work Approved.
13. 4/15/78 Remedial Course Work Completed.
14. 5/15/78 Micro Components of ASA Conceptualized Instruments designed and tested, sample drawn.
15. 6/15/78 Intermediate Macro Theory and Statistics Course Completed.
16. 8/15/78 Intermediate Micro Theory and Mathematical Economics Courses completed.
17. 8/15/78 Macro Components of ASA conceptualized instruments designed and tested, sample drawn.
18. 9/15/78 Micro ASA data collected tabulated coded, punched.

19. 11/1/78 Sociology and Sampling Course Completed.
20. 11/1/78 Sociological Components of ASA conceptualized, instruments designed and tested, sample drawn.
21. 1/1/79 2 participants depart for campus.
22. 1/1/79 Advanced micro theory and production economics courses completed.
23. 1/1/79 Micro ASA data analyzed.
24. 1/1/79 Annual Review completed.
25. 2/1/79 Annual Plan of Work approved by GOL, AID, and University.
26. 3/1/79 Econometrics and development theory courses completed.
27. 4/1/79 2 participants depart for U.S.
28. 4/1/79 Macro ASA data collected, tabulated, coded, and punched.
29. 6/1/79 Social ASA data collected, tabulated, coded and punched.
30. 7/1/79 2 participants depart for U.S.
31. 9/1/79 2 participants return from U.S.
32. 9/1/79 Social data analyzed.
33. 10/15/79 Macro data analyzed.
34. 12/1/79 2 participants return.
35. 1/1/80 Annual Review Completed.
36. 2/1/80 Plan of work approved by GOL, AID, and University.
37. 3/1/80 2 participants return.
38. 4/1/80 ASA team reports completed.
39. 5/1/80 Development Planning course and 6 project plans completed.
40. 6/15/80 FINAL ASA report completed.
41. 6/30/80 FINAL ASA report approved and Final Review completed.

