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Evaluation

of

Lesotho Agricultural Sector Analysis

Project

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I. Background And Status of The Project

The Lesotho Agricultural Sector Analysis (LASA) Project began in September 1976. Its major purposes were (1) to develop the capacity of the Government of Lesotho (GOL) to implement, update and utilize agricultural sector analysis and (2) to establish a long-term institutional relationship between a U.S. University and Lesotho's Ministry of Agriculture (MOA).

The LASA project was funded jointly by the Economics and Sector Planning Division (DS/AGR/ESP), the Africa Bureau, Colorado State University (CSU) and the Government of Lesotho through a Cooperative Agreement with Colorado State University (dated 30 September, 1976) and Pro-AG between AID/Lesotho and the Government of Lesotho (dated 12 May, 1977). The Cooperative Agreement mechanism represented a new approach to project implementation for AID. It was intended as a flexible mechanism through which each of the groups involved in a project would provide part of the funding for the project and would have a voice in the project management and implementation. It was recognized that some of the specific objectives of the project might change over time and that such changes could be made by mutual agreement of the groups involved in the project. Similarly it was recognized that the timing of project activities and priorities would occasionally be changed. The Cooperative Agreement was designed to be flexible enough to allow such changes without major revisions in the Agreement itself.

In the original Cooperative Agreement the LASA project was to be carried out in three phases:

Phase I: 9-1-76 to 6-30-77 - A startup period which included developing a library on agriculture and planning in Lesotho and training of Basotho participants at CSU.

Phase II: 7-1-77 to 1-31-78 - Establishment of the LASA field office, conducting an Agricultural Sector Review in Lesotho, continuation of participant training and development of a scope of work (SOW) for Phase III.

Phase III: 2-1-78 to 8-31-80 - Conducting an Agricultural Sector Analysis in Lesotho and completion of the Basotho participant training program.

Phase II of the project did not begin until September 1977, due to a delay in obtaining housing for the CSU field staff. Delays were also experienced in carrying out the Agricultural Sector Review which was finally completed in late 1978. Phase III of the project therefore did not get underway until the fall of 1978, roughly six months behind schedule.

Some of the delays experienced by the project were unavoidable. Initially, for example, it simply took more time than anticipated to obtain housing for the CSU field team. Other delays were the result of changes in project priorities or intentional decisions to postpone activities until Basotho staff were available to work jointly with the CSU team. It is important to point out in this regard, that the timing as outlined in the various agreements was predicated on assumed levels of Basotho participation and these levels were never met. Regardless of the reasons, these delays were not critical to the success of the project. Phase II was completed early enough to allow sufficient time to complete the main objectives of Phase III.

An evaluation of the LASA project was carried out in June, 1978. (1) The evaluation team expressed concern that the agricultural sector review of Phase II came to be viewed as a formal contractual commitment that impeded other activities and competed for the extremely scarce GOL staff time.

It recommended, however, that the review be completed with greater emphasis placed on policies, programs and projects then was true of the initial draft which they reviewed. The first evaluation team found that the graduate training program was proceeding more or less on schedule except for the difficulties encountered in completing thesis research once students hold returned to Lesotho. It concluded that this problem would not be solved unless returning students were assigned to research positions for a period of time or possibly sent back to the United States for two or three months to complete their thesis. The team also recommended that higher priority be given to in-country formal and informal remedial courses designed to prepare students for graduate study abroad.

(1) Evaluation Report on the Lesotho Agricultural Sector Analysis Project. Revised 7-27-78 by Whittle, Fletcher and Suttor.

In general, it recommended that CSU adopt the strengthening of the GOL's capabilities for sector planning and policy analysis as its central mission. This would involve making analysis an integral part of the planning Unit's responsibilities. The evaluation team suggested that preparation of the agricultural section of the Third Five Year Plan be a major activity for Phase III of the project. In July, 1979, the Ministry of Agriculture requested that the LASA project be continued for two years beyond its August 1980 completion date. Specifically, the MOA requested continued assistance in training, agricultural policy analysis, statistics and special studies, work with the National University of Lesotho, and CSU on-campus support for training and other project activities.

Formally, the MOA request must eventually be approved by the Ministry of Finance. Members of the MOF's Central Planning and Development Office (CPDO) felt that a careful review of the LASA project would be desirable before acting on the MOA's request. As a result a joint review of the project's status was carried out by the MOA, MOF, AID, and CSU in December, 1979. AID/Lesotho also requested that a special evaluation of the project be carried out by an AID funded team in January 1980. This report presents the findings of that team based on interviews held in Maseru during the period January 21 to February 1, 1980.

II. Discussion of Issues

The Evaluation Team held discussions and reviewed materials related to five aspects of the LASA project. These are:

1. Training;
2. Special studies
3. Planning information;
4. Institutionalization of agricultural planning;
5. Development of a long-term relationship between CSU and the GOL

Nearly all of the activities of the LASA project can be related to one of these five areas.

A. Training

The LASA project carried out four different types of training: graduate training, formal in-country training, informal remedial training, and on-the-job training.

Graduate Training: By August 1980 eight students will have completed all, or most, of their course work for a B.S. or M.S. degree in the United States (Annex A). All but two of these students will have studied at CSU. One will have studied at Michigan State University and another at Ball State University. The number of students receiving training in the United States was about the number expected. Several of the students interviewed felt that they needed more time to study in the United States than they were allowed. Initially the time limit was nine months which was subsequently relaxed to twelve months at the students' insistence and which was supported by CSU faculty. Following further evaluation and recommendations by the LASA team, the MOA agreed to let students remain abroad until their degrees were completed.

The students interviewed also noted that they would have liked to have taken more courses that would be of a more applied nature than those required by the degree programs. Colorado State University is responding to this felt need by starting a new one-year non-degree program to provide foreign students with a more flexible program with more applied courses. Although the training may be more useful, the students will not receive a graduate degree from this program.

In general, the LASA project did an excellent job in the area of graduate training. It was able to fund training programs for everyone the Ministry of Agriculture and Ministry of Finance were able to release and who were qualified for training in the U.S. This Evaluation Team was extremely impressed with the special efforts CSU staff made in tailoring special studies to meet individual student needs. The attention each student received was almost unique among such university programs.

Formal In-Country Training: Two formal courses were offered in Lesotho. One was on agricultural production economics, the other on applied statistics. Approximately 12 students were enrolled in each course. Although the student performance in these courses was good, regular attendance was extremely difficult for most of the participants. The LASA team concluded that the cost of this type of training exceeds the benefits. As a result, no further courses were taught after 1978 and none are planned for the future. The Evaluation Team concludes that the LASA team was correct in this judgment. Any future efforts at formal in-country courses should be directed towards junior level technicians and taught at the end of the working day to assure better attendance. In general, CSU's performance in this area was good at their judgment not to place high priority on formal in-country training after 1978 appears to have been justified.

Informal Remedial Training: A tutorial program was offered for students who were to undertake training in the United States. Tutorial programs were offered in calculus, algebra, micro and macro-economics. These programs appear to have been well received and an important factor in the excellent academic performance of the students enrolled in U.S. graduate programs.

On-the-job Training: This type of training is difficult to quantify. It was the general feeling of the MOA staff members interviewed that some of this type of training took place but not as much as they would have liked or expected from the LASA team. In general, this type of training appears to have been highly correlated with the degree to which the LASA team was involved in the day-to-day activities of the MOA's Planning Division. Since this type of involvement was rather limited, the on-the-job training also was viewed as limited. Basotho staff were unable to devote the expected amount of time to the sector analysis and policy analysis activities which were the main focus of the CSU team.

Conclusions Related to Training: The Evaluation Team believes that, in general, the LASA team carried out a very effective training program. Nearly all of the short-comings in the training program were due to factors beyond the LASA team's control. There were not enough qualified candidates who could be released for training in the United States. Those candidates who were released could not be released for long enough periods to complete all of the training that may have been needed or desirable. The work load of persons participating in formal courses taught in Lesotho made regular attendance difficult; the CSU staff had to repeat classroom presentations and, as a result, devote more time than expected to present such courses. The informal remedial training appears to have been very well received and very effective. The only area in which the LASA team was not particularly effective was on-the-job training. The LASA team was not as directly involved in the day-to-day activities of the MOA's Planning Division as the MOA would have liked. The LASA team felt that participation in the day-to-day problems of the MOA was either not consistent with the obligations of the Cooperative Agreement or an effective use of their time and talent. The Evaluation Team concludes that the LASA team was better prepared and more inclined to provide academic

and graduate level research type training rather than the on-the-job training which the Basotho felt was needed. Due to the small staff and heavy work load of the Planning Division, the Basotho simply were not able to devote enough time to the type of on-the-job training that the LASA team was prepared to give while, on the other hand, the LASA team was not prepared to provide on-the-job training through direct involvement in the day-to-day problems of the Division. The Evaluation Team faults the LASA team for this position and suggests that a more flexible attitude given the difficult circumstances facing the Planning Unit staff would have shown a greater sensitivity of these problems and would have proven more productive in the final analysis.

B. Special Studies

The LASA team has produced over forty research reports, discussion papers and special papers related to agricultural development in Lesotho. (Annex B). The subjects of these papers range from farm labor and migration to agroclimatic hazards and risk perception. Included in these papers is the LASA Research Report No. 2 entitled, "Lesotho's Agriculture: A Review of Existing Information." This report is the agricultural sector review produced during Phase II of the LASA project.

Another fiften or so reports are in various stages of completion, most of which are scheduled to be done by June 1980, and an additional 8-10 are planned. These reports cover topics such as the resource base of the Mosotho farmer, resource distribution, cropping trends, and drought probabilities.

Several types of questions were raised by the Evaluation Team concerning the special studies completed by the LASA team. These questions were related to the quality of the reports, the topics selected, their usefulness, and timeliness. Most of the reports were jointly authored. Approximately fifty percent of the reports list one or more Basotho as joint authors.

In general, the reports available are of high quality and well presented. They vary in their level of difficulty ranging from rather general discussion papers to highly technical reports. Most of the reports were reviewed carefully prior to release. This process may have delayed their release somewhat but probably contributed to their overall quality.

The original LASA project paper outlined five major problem areas which were to be emphasized in the agricultural sector review and related work. These were:

(1) Land and water conservation and reclamation
(2) Manpower
(3) Livestock
(4) Marketing
(5) Crop production and risk management

The LASA team did some work in each of these areas. Major attention was given to land and water resources, manpower, crop production and climatic

risks. Three studies were related to marketing. No major reports were released on livestock although the LASA team worked jointly with members of the MOA Planning Division on a livestock study.

The timeliness of the LASA reports is difficult to assess. The Evaluation Team's general impression was that many of the reports were completed three to six months after they would have had their maximum impact. Nonetheless, initial drafts of the reports and the information collected for the reports probably were available early enough to be of some value in program or policy decisions. The work done by the LASA team probably would have been more timely if the team or the MOA had been better able to anticipate problem areas or work needed two to four months in advance. The LASA team does not appear to have been very effective in putting together policy or program papers in a one to two week period. Most of the major reports prepared by the LASA team required from two to four months to complete. LASA team members usually were involved in several activities simultaneously rather than devoting full time to a single study topic. A number of the studies completed by the LASA team seem likely to be of an enduring nature in the sense that they are baseline studies which will be used over a long period of time. Thus even if they were not available precisely when needed in the past, they will be used frequently in the future. This is particularly true of some of the work done on weather, manpower and water resources.

The overall usefulness of the special studies prepared by the LASA team is a matter of judgment and opinion. Several of the persons interviewed by the Evaluation Team felt that the reports usually were of high quality, that many were a bit too academic in nature, and that they frequently gave too little attention to current policy or program problems. There is the general feeling that the LASA studies reflect the interests and backgrounds of the LASA team members rather than the priorities and problems faced by the MOA. There is little evidence that the major reports were read widely by the Basotho members of the MOA's Planning Division. The major reports appear to have been used primarily by expatriates working in Lesotho. A large portion of the nearly 400 copies of the LASA agricultural sector review (Research Report No.2) distributed went to expatriates and international organizations (Annex C). Several persons interviewed noted that the reports prepared by the LASA team did not appear to be related in any systematic way and that it was particularly difficult to see how they could be put together as an agricultural sector study. In other words, that the studies seemed likely to be of limited usefulness in producing the agricultural sector analysis called for in Phase II of the LASA project.

Conclusions Related to Special Studies: The Evaluation Team concludes that the major reports published by the LASA project have been of very high quality; although some of these reports have been very general in nature, most have been specifically related to agriculture in Lesotho. A number of expatriates and Basotho classified the LASA reports as being too academic. ..... There are several reasons for this. Some of the reports were of a very general nature. Others were too technical to be easily understood by decison makers. Finally, very few of the reports included much discussion of policy and program alternatives. They simply presented the facts and

analysis with very little attention to the policy or program implications.

This problem was noted by the 1978 Evaluation Team with respect to the initial draft of the agricultural sector review. Nonetheless, the LASA team did not substantially alter the review to give more attention to policy and program alternatives.

There are several reasons for the lack of policy or program content in many of the LASA reports. First, many of the major reports are primarily research reports designed to provide better information about a particular problem or aspect of agriculture in Lesotho. Secondly, the CSU team has intentionally been reluctant to discuss policy and program alternatives in studies in which there was little active participation by the Basotho. Thus, when the CSU team was involved in policy and program formulation the results were presented in papers and reports other than those published by the LASA project. Finally, the CSU team attempted to limit its involvement in many of the routine day-to-day activities of the Planning Division. Thus it had a reduced role in many of the policy and program decisions made by the MOA.

The Evaluation Team concludes that, although some of the reports would have had more impact if available at an earlier date, many of the major reports will continue to be useful sources of information for several years. The major reports were not of the type that have immediate policy or program implications. Thus the timing of their release is of less importance than for reports analyzing specific programs or policies under immediate consideration.

The Evaluation Team saw no evidence to suggest that the LASA team outlined an agricultural sector analysis to be completed during Phase III of the project and then proceeded to undertake special studies that would contribute to such an analysis. The approach taken appears to have been that of responding to special requests from the MOA to study various problems and of working on topics of personal interest that might eventually prove to be useful for such an analysis. There are two reasons why this approach was taken. First, the CSU team did not feel that an agricultural sector analysis would be worthwhile without substantial inputs from the Basotho members of the Planning Division. Second, the MOA did not feel that it could give agricultural sector analysis high priority with its limited staff. Given the situation which existed in the Planning Division such an analysis was not given high priority by either the CSU team or the Basotho members of the Planning Division. Therefore no framework was provided to focus the work of the LASA team. Studies of immediate interest to the MOA and those considered by individuals to be important were undertaken even though they were not necessarily related to providing an overall view of Lesotho's agricultural problems and development potentials.

Very little systematic progress was made towards the completion of an agricultural sector analysis during 1979 primarily because of the apparent mutual agreement between the LASA team and the MOA that this was not to be a priority activity. This was consistent with the 1978 Evaluation Team's recommendation that high priority be given by the LASA team in helping to

develop the Third Five Year Plan. The Cooperative Agreement was flexible enough to allow this change in emphasis. The CPDO, however, felt that the LASA team should have carried out a more active program to complete an agricultural sector analysis which would provide a framework for the Third Five Year Plan for agriculture. The Evaluation Team believes that this difference in opinion could have been minimized and the LASA team's reports would have been more productive if there had been better communications and closer working relationships between the MOA, the CPDO and the LASA team.

The fact that an agricultural sector analysis has not yet been completed should not distract from the fact that a number of excellent studies have been completed by the LASA team. Nor is it too late to undertake at least an expanded agricultural review to relate the studies completed during 1979 and to present the policy and program implications. The Evaluation Team recommends that this be done.

C. Planning Information

The LASA project carried out three types of activities related to the improved information basis for agricultural planning. First, it assisted in several field surveys. Second, it undertook to pull together and analyze existing data on particular topics such as labor utilization and weather. Third, it established an agricultural planning library.

The results of the field surveys and analysis of existing data are, or will be reported in the special studies already discussed. The value of these activities depends primarily on the usefulness of the resulting reports.

The development of the library began during Phase I of the LASA project and was continued during Phase II. The original LASA project library has now been merged with the MOA collections. The combined facility now contains the most complete and accessible collection of material on agricultural planning in Lesotho. It is used extensively by civil servants, contractors, consultants and researchers.

The Evaluation Team believes that the LASA team did an outstanding job of collecting materials for and establishing an agricultural planning library in Lesotho. The team notes, however, that the library is still not adequately housed. It is recommended that the MOA give high priority to developing a system of integration for their several collections into some form of national agricultural library (or library system) and that LASA participate actively in this process so that future plans are clear before August, 1980. This would require further expansion of the collection, cataloging the materials and providing adequate facilities and librarian services. The team believes that such an effort would be well worth the cost.

D. Institutionalization of Agricultural Planning: This was one of the two major objectives of the LASA project, the other being training. The two are both part of the process of improving the nation's capacity to carry out

agricultural planning and project analysis.

During the three year period from the end of 1976 to the end of 1979, the MOA's Agricultural Planning Unit was upgraded to an Agricultural Planning Division and its professional staff increased from three to ten persons. In addition, the average level of training of the staff was increased and several persons trained at CSU moved from the Planning Division to closely related jobs elsewhere in the Government.

The Evaluation Team believes that considerable progress has been made by the GOL with the support of the LASA project towards the insitutionalization of agricultural planning in Lesotho. This was particularly true during 1979. The LASA team's assistance in preparing a reorganization plan for the MOA's Planning Unit was of major importance in establishing the new Agricultural Planning Division. The staff of the new division needs to be enlarged and a training program needs to be maintained. Nonetheless, the foundation for a strong planning division has been laid and it appears likely that the full structure will be developed in the years ahead. The LASA project has been an important part of this effort.

E. Development of a long-term Relationship between CSU and the GOL:

The Evaluation Team believes that, even if the LASA project in its present form is not continued, that some type of longer term training relationship should be maintained by the GOL with CSU. A number of CSU's staff now have professional interests in and working knowledge of Lesotho. Similarly, the Basotho trained at CSU have developed personal, professional and academic ties with CSU. The development of the new one year non-degree program at CSU should provide additional means to provide special training to meet needs of the Basotho as they have been defined during the life of the project.

In general, the Evaluation Team believes that the LASA project has been successful in establishing a basis for a long-term training relationship between CSU and the GOL.

III. Recommendation For Future LASA Activities

The Evaluation Team found little support for extending the LASA technical assistance project it its present form. The MOA has not been able to devote as much manpower as originally anticipated to fully achieve the project's objectives. Nor does it appear likely to be able to devote much manpower to agricultural sector analysis activities during the next two years. Thus, while it is still needs training support, the MOA now feels a need for a different type of technical assistance than that provided by the current CSU resident team. The Evaluation Team accepts this conclusion but notes that the GOL still needs a general framework for determining the types of programs and policies needed to promote agricultural development in Lesotho. In short, although the GOL may not have the manpower to devote to agricultural sector analysis, such as analysis is still needed. The CPDO is particularly aware of this need. One alternative that has been suggested is for the LASA team to devote its full attention during the February to August 1980 period to completing studies now in progress and preparing an expanded agricultural sector review. This review would summarize the results of the LASA team's research as well as other information that has become available during the past 18 months. The Evaluation Team believes that such a document should be produced. It believes, however, that the LASA Team will not have enough time or resources to fully analyze the existing data by the termination date of the present Cooperative Agreement. It is estimated that approximately $100,000 will remain unexpended at the end of August 1980. (Annex D) The Evaluation Team recommends that the termination date of the Cooperative Agreement be extended for an additional year in order to allow the LASA team to carry out agricultural policy and program analysis at CSU, provide TDY assistance to Lesotho, and to continue support to on-going student training (Annex E).
Beyond this, the Evaluation Team believes that any additional USAID assistance for increasing the capacity of the GOL to carry out Agricultural policy, program and project planning should be based on a comprehensive plan developed jointly by the MOA and MOF based on the experience gained from the LASA project.

IV. Lessons Learned From LASA Project

Perhaps one of most valuable contributions an evaluation team can make is to identify specific lessons learned in reviewing the performance of any particular project. This evaluation team offers the following points for future consideration as a result of the review of the LASA project.

- During project design, more attention should be given to establishing a realistic plan for counterpart personnel. The PROAG called for six Basotho to work with the LASA project, which is very over-optimistic in retrospect. It would seem that a more realistic goal could have been established during project design.

- However, once agreement has been reached it is essential that the host government honor their commitment to assign the agreed upon numbers of personnel unless unusual circumstances develop. This commitment must be viewed most seriously by government.

- USAID personnel should be alert to potential differences regarding project implementation between the host government agency and the contractor. The probability of success can be significantly enhanced if USAID takes the initiative to negotiate differences and, if necessary, modify the contract agreement. If modification is necessary, it is important that these changes be well documented so that misunderstandings can be minimized.

- In order to avoid conflicts over different perceptions related to project output, it is essential that workplans be developed for specific periods of time and that project reviews be conducted to determine progress made on workplans. Workplans should be agreed on by all parties and all parties should participate in reviews.

- Key terms should be defined as precisely as possible. For example, the term "sector analysis" is still subject to a wide range of interpretations more than three years into the LASA project. If the project designers are unable to precisely define a key term, project managers and implementors should strive for more precise definition as the project unfolds.

- If a project has a substantial training component, as LASA does, it would be important to reach agreement with the host government on the assignment of students upon

completion of their training. It would seem realistic that a specific period of service related to project activities be a condition of scholarship acceptance. The period of service could be tied to the length of training involved.

Students selected for advanced training in certain fields should be given special tutoring if required. LASA provided special intensive assistance in mathematics to Basotho students who were scheduled for graduate training in economics. This proved to be a critical to their success at CSU and other U.S. universities.

ANNEX A

Students Receiving Training Abroad Under LASA

	a. Present Position b. Former Position	Dates of Training in U.S.	a. Institution b. Advisor	a. Degree, date b. Specialty	Comments
oeshoe	a. Permanent Secretary (Cabinet) b. Chief Planning Off. Planning Unit/MOA	8/76-8/77	a. Colorado State b. Jerry Eckert	a. M.Sc., 5/80 b. Agr. Economics	Tech. Paper: The Administration and Development of Agricultural Planning in Lesotho. Degree completion delayed due to administrative responsibilities in Planning Unit after return. Intensive tutoring throughout time in U.S.
ıkoana	a. Director, Cooperative Crop Production Program b. Planning Officer Planning Unit/MOA	8/76-8/77	a. Colorado State b. Jerry Eckert	a. M.Sc., 5/80 b. Agr. Economics	Tech. Paper: An Economic Analysis of Technology Options in the CCPP. Degree completion delayed due to administrative responsibilities in CCPP after return. Intensive tutoring throughout time in U.S.
	a. Acting Director Bureau of Statistics b. Chief Agricultural Statistician, Bureau of Statistics	1/78-8/79	a. Colorado State b. Forrest Walters	a. M.Sc., 12/79 b. Agr. Economics	Thesis: An Improved Sample Design for Agricultural Surveys in Lesotho. Coursework tailored to provide concentration in agric. statistics. B.Sc. in Mathematics, no tutoring necessary.
loli	a. Planning Officer Marketing Section Planning Divn/MOA b. Marketing Inspector Ministry of Agric.	6/78-6/79	a. Colorado State b. Forrest Walters	a. B.Sc. 8/79 b. Agr. Marketing	Had a three year Diploma in Agric. Business Management from Natural Resources College, Zambia for which allowed 2 years transfer credit. Completed two years work in 12 months. International Marketing School (CSU) provided core training in Mktg. 6 credits special studies on mktg. policy upon return to Lesotho.

	a. Present Position b. Former Position	Dates of Training in U.S.	a. Institution b. Advisor	a. Degree, date b. Specialty	Comments
oofolo	a. (Will be) Section Head Policy Analysis Section Planning Divn/MOA b. Planning Officer Planning Unit/MOA	6/78-6/80	a. Michigan State b. Carl Eicher Glenn Johnson	a. M.Sc., 6/80 b. Agr. Prodn. Economics	Int'l Marketing School at CSU included by special arrangement with MSU to provide practical marketing exposure after need was identified by MOA. Limited pre-departure tutoring in calculus.
Motsomai	a. (Will be) Section Head Research & Statistics Section, Planning Divn. Min. of Agric. b. Planning Officer Planning Unit/MOA	6/78-5/80	a. Colorado State b. Melvin Skold	a. M.Sc., 6/80 b. Agr. Economics	Masters degree technical paper expected to focus on analysis of cropping patterns in Lesotho. Two months intensive math, stat., and economic principles at Economics Institute, Boulder, Co. Pre-departure tutoring in basic mathematics and algebra.
Nchapi	a. Planning Officer Agriculture and Rural Development Section Central Planning/MOF b. Same	6/78-5/80	a. Colorado State b. Ron Wykstra	a. M.Sc., 6/80 b. Economics	Masters degree Technical paper expected to focus on labor utilization in Lesotho's agriculture. Two months intensive math., stat., and economics principles at Economics Institute, Boulder, Co. Pre-departure tutoring in math, algebra and calculus.
apetla	a. Planning Officer Agriculture & Rural Development Section Central Planning/MOF b. Same	6/79-5/81(?)	a. Ball State b. Unknown	a. M.Sc., 6/81 b. Economics	Thesis topic not yet selected. Two months intensive math., stat., and economics principles at Economics Institute, Boulder, Co. Pre-departure tutoring in mathematics and algebra.
ane	a. Marketing Inspector Marketing Section Planning Divn/MOA b. Same	10/79-6/82	a. Natural Resources College, Zambia b. N/A	a. Diploma, 6/82 b. Agriculture	One year of three funded by LASA at special request of Permanent Secretary/MOA. (Cost ca. $2,200/yr.)
	a. (Will be) Marketing Officer, Marketing Section Planning Divn/MOA b. Research Technician Research Divn/MOA	10/79-6/82	a. Natural Resources College, Zambia b. N/A	a. Diploma, 6/82 b. Agriculture	One year of three funded by LASA at special request of Permanent Secretary/MOA. (Cost ca. $2,200/yr.)

The following is a partial list of written materials appearing during the life of the project in which LASA effort has been involved, either as author, co-author, participant or as instructor/guide. It is presented primarily because it emphasizes the range of topics over which our efforts have been spread as well as their practical nature. While each item appears under a major heading, obviously many of them have broader usage. Items nearing completion are also included to indicate the complete range of analytical pieces available for integration.

General Overview

1. "Lesotho's Agriculture: A Review of existing Information", LASA Research Report No. 2, October 1978, Eckert, Wilken, K. Leathers, R. Leathers. (Includes the following chapters: General Economic Overview, Physical Resources, Human Resources, Migration and Employment, Land Tenure, Crops Subsector, Livestock Subsector, Conservation)

Decentralization

2. "The Spatial Context for Integrated Development in Lesotho", LASA Discussion Paper No. 4, January 1978, Wagner.

3. "Inventory of Data Available for Districts with Special Reference to Thaba Tseka District", July 1979, Wilken, Moyo and Mokhoto.

4. "Decentralization: Existing Policies and Strategies", May 1979, Wilken.

5. "Spatial and Regional Analysis of Lesotho: Proposal for a Seminar", April 1978, Wilken.

   (Note: Preparations are underway for this Seminar/Workshop on District (Regional) Planning. Activity is being led by Matsiea Morojele and Gene Wilken and is planned for March 1980).

6. "Characteristics of Regional Agroclimates of Lesotho and their Global Analogs", (forthcoming-May 1980), Wilken.

   (see also items 35, 36, 37)

Employment

7. "The Future of Basotho Migration to the Republic of South Africa", LASA Research Report No. 4, September 1979. Eckert and Wykstra

8. "The Use of Capital and Labor in Conservation Division Construction Work", Consultant Report by Wykstra to USAID/Maseru. (Forthcoming as LASA Research Report, December 1979), by Wykstra, Eckert and Dawson.

9. "Farm Labor in Lesotho: Surplus or Scarcity?", LASA Discussion Paper No. 5, September 1978. Wykstra

10. "Manpower in the Economy of Lesotho", LASA Discussion Paper No. 7, forthcoming, December 1979, Wykstra.

11. "Lesotho's Employment Challenge: Scenarios to the Year 2000", (forthcoming as LASA Discussion Paper, November 1979), Eckert and Wykstra.

(See also items 1, 16)

Third Five Year Plan

12. "A Schedule of Activities for Completion of the Agricultural Chapter of the Third Five Year Plan", annotated flow chart, November 1978. Moshoeshoe and Eckert.

13. Ministry of Agriculture response to CPDO on issue of "self-sufficiency" as the possible principle theme of the Third Plan, December 1978, entire Planning Unit.

14. "Agricultural Project Planning and Implementation in Lesotho: An Evaluation of the Second Plan Experience with Suggestions for Improvement", report based on 3-month analysis, May 1979, Ken Leathers, Roxy Leathers, P. Fanana, W. Laurence-Jones, J. Merriam, M. Mothepu, P. Devonald.

15. Agricultural chapters for FYP III, both volumes, several drafts, May-September 1979, entire Planning Division.

16. "Possible Employment Impacts of the Third Five Year Plan", (forthcoming as LASA Discussion Paper, December 1979), Eckert and Mohapi

Village-Based Resource Management

17. "Profile of Basotho Farmers", LASA Discussion Paper No. 8, includes: Part I - Images of Basotho Farmers, Part II - Are the Basotho Subsistence Farmers, Part III (with Martin Fowler) Progressive Farmers in Lesotho, November 1979, Wilken.

18. "Village-Based Resource Management and Development in Lesotho: A Preliminary Review of Traditional Institutions and Development Possibilities", February 1979, Wilken

19. "Agroclimatic Hazards and Risk Perception in Lesotho: A Preliminary Review", paper presented to the International Geographical Union, 1978 Regional Conference, Working Group on Perception of the Environment, Ibadan Nigeria, July 1978, Wilken.

20. "The Resource Position of the Mosotho Farmer" (forthcoming LASA Discussion Paper, December 1979), Eckert, Tribble, Leathers and Mohapi.

21. "The Distribution of Land and Livestock Resources Among Rural Basotho", (forthcoming, possible as LASA Research Report, January 1980), Tribble and Eckert.

Cropping Subsector

22. "On the Need of Improved Cropping Guidelines to Support on-going Agricultural Programs", report of a Special Committee to the DPS(T), October 1978, K. Leathers, Fanana, McKee, Powell, Leyritz.

23. "Cropping Trends in the 1970s: A Rationalization of Lesotho's Crop Statistics", (forthcoming LASA Discussion Paper), Eckert, Molise and K. Leathers.

24. "Crop Budgets for Dryland Crops under Different Levels of Technology in Lesotho", (draft in circulation), K. Leathers and Fanana.

25. Field survey of farmers fertilizer use practices and fertilizer awareness, July-August 1978, M. Qacha and Eckert.

26. "Rainfall as a Determinant of Acreage and Yield in Lesotho's Agriculture", (forthcoming in 1980, LASA Research Report), Eckert and Leathers.

27. "The Economics of Dryland Crop Production in Lesotho (in three parts)--Part I, Technology Selection in Lesotho Agriculture" (in draft), P. Fanana, K. Leathers, F. Matsinyane, T. Motseki and M. Borotho; Part II, The Economics of Land Use Policies for Agricultural Sector Development", (forthcoming LASA Research Report in early 1980), P. Fanana and K. Leathers; and Part III, "Resource Requirements for Viable Village-Based Agricultural Production Strategies", (forthcoming LASA Research Report, early 1980), P. Fanana, M. Phakoana, K. Leathers and others.

(See also items 1, 20, 21)

Land Tenure

28. Internal review of possible implications of 1979 Land Bill, prepared for Honorable Minister of Agriculture, November 1978, Eckert.

29. Land Tenure Chapter (co-authored) in Analysis and Suggested National Policy (Green papers) by D.R. Phororo, February 1979, Phororo and Eckert.

30. "An Annotated Bibliography on Land Tenure in Lesotho",(forthcoming as LASA Special Bibliography No. 2 in January 1980), Eckert.

(See also item 1)

Institutional Development

31. "An Internal Analysis of the Functioning of the Planning Unit, Ministry of Agriculture", prepared on request of the Permanent Secretary, 40 pp., February 1978, Eckert and Moshoeshoe.

32. "A Functional Reorganization of the Planning Unit", 30 pp., November 1978, Eckert, Mosebo, Moshoeshoe, Morojele, R. Leathers, Madland. (Report is gradually being initiated)

(See also procedural portions and philosophy of items 12 and 56)

Environmental Analysis

33. "Agroclimatology of Lesotho", LASA Discussion Paper No. 1, April 1978, Wilken.

34. "Environmental Hazards and Crop Failures in Lesotho: A Preliminary Evaluation", October 1978, Wilken.

35. "Lesotho Growing Seasons: Determination of First and Last Probability Dates for Five Frost Levels by District", (forthcoming, March 1980), Wilken.

36. "Preliminary Determination of Average Heat Units in Lesotho, by District", (forthcoming June 1980), Wilken and Colleagues from HydroMet Branch.

37. "Drought Probabilities in Lowland Lesotho - A First Estimate", (forthcoming 1980), Wilken and Eckert.

38. "Rainfall Oscillation in Lesotho and the Possibility of a Drought in the 1980s", (forthcoming, January 1980), Eckert and Morojele.

(See also items 1, 6, 19)

Marketing

39. "Crop Marketing in Lesotho 1968-1978", terminal report of David C. Tarbox, (awaiting release), September 1979. Edited and refined by K. Leathers, Lawrence-Jones and Hansen.

40. "A Case Study of Lesotho's Produce Marketing Corporation", practical paper as part of Independent Study for B.Sc. by Liako Moahloli, assisted by K. Leathers, R. Leathers and Eckert, August 1979.

41. "Egg Marketing Study", (forthcoming, December 1979), Moahloli, R. Leathers, Miller.

Nutrition

42. "Resource Guide for Nutrition Planning in Lesotho", LASA Discussion Paper No. 6, October 1978, Anderson.

(See also item 1)

Agricultural Information Systems

43. "The Supply of Data for Agricultural Administration and Development Planning", LASA Discussion Paper No. 2, January 1978, Eckert.

44. Improved questionnaires and tabulation forms for annual agricultural production surveys and for 1980 Census of Agriculture. K. Leathers, Eckert and others on Agricultural Statistics Working Group.

(See also items 3, 23)

Conservation

45. "An Economic and Policy Analysis of Soil-Water Problems and Conservation Programs in the Kingdom of Lesotho, October 1979. Nobe and Seckler.

(See also items 1, 8)

Macro Analysis

46. "Lesotho's Second Five Year Development Plan for Agriculture: An Economic Policy Analysis", May 1978, K. Leathers and Mosebo.

47. "An Interdependency Analysis of the Lesotho Economy Emphasizing Agriculture: Preliminary Estimates", (Discussion paper forthcoming, early 1980), K. Leathers and others.

Library Development

48. "Bibliography for Planning and Development in Lesotho", LASA Research Report No. 1, August 1977, Wilken and Amiet.

49. "Second Bibliography on Planning and Development in Lesotho", LASA Research Report No. 5 (in press), B. Eckert, Bolls, Leballo, Motéleng and Wilken.

50. "Extension in Lesotho: Bibliography of Materials Available in Maseru", LASA Special Bibliography No. 1, February 1979, R. Leathers and Leballo.

(See also item 30)

Resources

51. "Components of an Approach to Fuel Savings in Lesotho", report aimed at more efficient petrol utilization by MOA, July 1979, Eckert and K. Leathers with MOA Heads of Divisions.

52. "Expected Economic Impact of Constrained Fuel Supplies on Lesotho's Agriculture", special report to DPS(T), August 1979, K. Leathers.

LASA Project Documents (Milestone documents only)

53. "Annual Administrative Report for the Lesotho Agricultural Sector Analysis Project 9/1/76 - 9/30/77", LASA Administrative Report No. 1, October 1977.

54. "Annual Administrative Report for the Lesotho Agricultural Sector Analysis Project 10/1/77 - 9/30/78", LASA Administrative Report No. 2, October 1978.

55. "Present Situation and Prospects", document prepared for the LASA Internal Review of February 23, 1978. CSU Field Team.

56. "Scope of Work for an Agricultural Sector Analysis", prepared for the LASA evaluation at the start of Phase III (May 1978). Prepared by DPS(T), Planning Unit, and CSU Field Team.

57. "Annual Administrative Report for the Lesotho Agricultural Sector Analysis Project 10/1/78 - 9/30/79", LASA Administrative Report No. 3 (in press).

58. "An Interim History of LASA", special abbreviated progress report prepared for the Tripartite Review, November 1979.

Routine Distribution List for LASA Papers in Lesotho

(Add specific additions to list as desired for individual papers)

TITLE:

Discussion Paper No._____ Research Report No._____

Government of Lesotho

The Honourable Minister Lerotholi
Dr. D.R. Phororo, FAO Rome
Mr. A.M. Monyake, P.S. Finance
P.S. CPDO
Mr. C. Ntsane, P.S. Agriculture
Ms M. Moshoeshoe, P.S. (Cabinet)
Mr. M. Phakoana, CCPP
Mr. M. Phoofolo, Michigan State University
Mrs. Mothepu, Agric. Section CPDO
Mr. Mochebelele, Chief Conservation Officer
Mr. O. Selikane, Chief Range Division
Mr. E. Molise, Chief Crops Officer
Mr. Khetsi, Chief Extension Officer
Mr. L. Mokhachane, Agricultural Information Officer
Ms. N. Jonathan, Nutrition & Home Economics
Mr. T. Moeketsi,
Mr. J. Kao, Director Livestock Services
Mr. G. Mochochoko, Director BASP
Mr. M. Khalikane, Dep. Director BASP
Mr. V. Rose, Senior Advisor BASP
Mr. K. Younger, Principal, Lesotho Agric. College
Mr. Tesfa Guma, Planning Unit
Mr. William Laurence-Jones, Planning Unit

District Agricultural Coordinators(10)
Project Director, Thaba Tseka Project
Project Director, Khomokhoana Project
Project Director, Phuthiatsana Project
Mr. Seth Bekerman, Farming Systems

David Mosebo, Planning Unit
P. Fanana, Planning Unit
Peter Devonald
Fred Winch, BASP
Mrs. Liako Moahloli, Marketing
Ms Yolisa Zeka, Planning Unit
Mr. L. Mohapeloa, Planning Unit
Mr. L. Lekholoane, Planning Unit
Mr. Mohapi, Planning Unit
Mr. Hansen, Marketing

Mr. Ramotete, Planning Unit
Mr. Duke Miller, Marketing
Mrs. M. Morojele, (Chief Planning Officer)

Mrs. Masholungo, CPDO

Mr. Giri, BOS
Mr. Borotho, BOS

John Gay, NUL

Martin Fowler

USAID

Frank Correl, Director
Ken Sherper, Asst. Director

LASA/CSU Maseru

Gene Wilken
Ken Leathers
Roxy Leathers
Jerry Eckert
Romie Tribble

Libraries

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University of Botswana, Pvt. Bag 0022
Gaborone, BOTSWANA

Librarian
REDSO/EA
Nairobi, KENYA

World Bank Planning Team
(Attn: Bill Waldor)
CPDO

Project Budget

AID obligations for the first three years of the project, through September 30, 1979, totaled $1,409,000 of which $1,018,900 was formally budgeted by line item in the Cooperative Agreement. Total expenditures for the same period were $900,485. This left an unspent balance of $118,055 against the formally budgeted amount and an unexpended balance of $508,515 against total obligations. Almost all the underspent amount occurred during the first two years of the project during which $600,597 was spent against a budgeted level of $708,182.

This carryover was due largely to lower than anticipated usage of professional staff and consultants, which reflects the decision taken early in the second year to significantly reduce or elimanate the teaching of graduate courses in Maseru by on-campus project support faculty. At the time, it was expected that the savings would be reallocated to policy and program related TDY visits by campus support personnel. However, operational constraints within the MOA have prevented all but a nominal use of CSU personnel for such purposes.

With the close out of the field team in Maseru plus the completion of degrees by students and their return to Lesotho, anticipated expenditures during the period 10/79 through 8/80 will be $318,400. Thus at the end of August 1980, total expenditures should be $1,309,000 against an obligated amount of $1,409,000. Unexpended balance will closely approximate $100,000.

Table 1
Colorado State University
Cooperative Agreement No. AID/ta-CA-1
LASA Project Budget
Fund 33-1771-1523

Items	Expenditures 9-1-76/ 9-30-77	Expenditures 10-1-77/ 9-30-78	Expenditures 10-1-78/ 9-30-79	Total Expenditures	Total Budget 9-30-79	Balance Remaining
Salaries						
Home Office-CSU:						
Project Management	990.00	$ 8,784.73	$ 11,626.26	$ 21,400.99	$ 42,000.00	$ 20,599.01
Professional Staff	40,492.02	20,845.98	30,025.35	91,363.35	54,700.00	(36,663.35)
Consultant Staff	2,400.83	-	-	2,400.83	-	(2,400.83)
Other Consultants	506.42	626.22	1,854.32	2,986.96	26,100.00	23,113.04
Secretarial	5,221.53	7,660.90	9,427.50	22,309.93	27,600.00	5,290.07
GRA	4,063.64	(.01)	1,628.63	5,692.26	-.	(5,692.26)
Sub-Total	53,674.14	37,917.32	54,562.06	145,154.32	150,400.00	4,245.68
Field Office-Maseru:						
Professional Staff	7,376.49	79,861.31	88,263.77	175,501.57	211,400.00	35,898.43
Secretarial	906.61	10,019.02	11,403.00	22,328.63	12,500.00	(9,828.63)
GRA	276.36	6,775.01	10,149.75	17,201.12	14,500.00	(2,701.12)
Sub-Total	8,559.46	96,655.34	109,816.52	215,031.32	238,400.00	23,368.68
Total Salaries	62,233.60	$ 134,573.16	$ 164,378.58	$ 361,185.64	$ 388,800.00	$ 27,614.36

(Continued)

Table 1 (Continued)

Items	Expenditures 9-1-76/ 9-30-77	Expenditures 10-1-77/ 9-30-78	Expenditures 10-1-78/ 9-30-79	Total Expenditures	Total Budget 9-30-79	Balance Remaining
Fringe Benefits-10.64%						
On-Campus	$ 4,507.76	$ 3,473.06	$ 4,990.97	$ 12,971.79	$ 16,000.00	$ 3,028.21
Off-Campus	881.33	9,563.75	10,604.46	21,049.04	23,800.00	2,750.96
Total Fringe Benefits	5,389.09	13,036.31	15,595.43	34,020.83	39,800.00	5,779.17
Overhead (Indirect Costs)						
On-Campus-30%	19,678.73	13,907.90	26,275.01	59,861.64	42,700.00	(17,161.64)
Off-Campus-15.2%	1,435.00	16,364.86	16,212.77	34,012.63	43,500.00	9,487.37
Total Overhead	21,113.73	30,272.76	42,487.78	93,874.27	86,200.00	(7,674.27)
Travel-Transportation						
JE R Travel-Per Diem	12,510.48	15,346.28	20,817.05	48,673.81	100,300.00	51,626.19
Shipping & Storage	885.70	30,421.20	5,915.27	37,222.17	52,500.00	15,277.83
Payment in Lieu of Auto Ship	6,000.00	-.	-.	6,000.00	-.	(6,000.00)
Total Travel & Transp.	19,396.18	45,767.48	26,732.32	91,895.98	152,800.00	60,904.02
Allowances						
Post Differential-10%	855.95	9,356.01	8,521.73	18,733.69	23,800.00	5,066.31
Educ./Utilities/Rent	-.	4,743.42	9,549.07	14,292.49	8,200.00	(6,092.49)
Total Allowances	855.95	14,099.43	18,070.80	33,026.18	32,000.00	(1,026.18)
Other Direct Costs						
Workmen's Compensation (9-12%) & Insurance	-	10,255.20	10,776.58	21,031.78	35,400.00	14,368.22
Campus Equipment/Supp/ Passports/Medical	4,502.81	3,688.00	4,528.18	12,718.99	31,500.00	18,781.01
Total O.D.C.	4,502.81	13,943.20	15,304.76	33,750.77	66,900.00	33,149.23
SUB-TOTAL - (TAB) DS	$ 113,491.66	$ 251,692.34	$ 282,569.67	$ 647,753.67	$ 766,500.00	$ 118,746.33

Table 1 (Continued)

Items	Expenditures 9-1-76/ 9-30-77	10-1-77/ 9-30-78	10-1-78/ 9-30-79	Total Expenditures	Total Budget 9-30-79	Balance Remaining
Commodities						
Vehicles/Transp. Equip.	$ 371.50	$ 14,461.80	$ (116.45)	$ 14,716.85		
Other Equip./Supplies	2,268.16	13,399.28	12,589.22	28,256.66		
Library Development	5,216.00	4,265.26	3,380.43	12,861.69		
Total Commodities	7,855.66	32,126.34	15,853.20	55,835.20	58,700.00	2,864.80
Participant Training/Support						
Salaries	7,920.00	7,070.00	23,558.42	38,548.42		
Travel	4,964.76	7,055.15	11,302.06	23,321.97		
Academic/Other	1,434.98	8,018.16	14,860.22	24,313.36		
Total Participant T&S	14,319.74	22,143.31	49,720.70	86,183.75	67,800.00	(18,383.75)
Local Office Support						
Add/Less Advance to Field Office Account*	10,000.00	(10,000.00)	-	-	-	-
Advance for Revolving Fund Field Office **	-.	10,000.00	5,000.00	15,000.00	-.	-.
Total Office Support	10,000.00	1,186.25	9,886.11	21,072.36	35,900.00	14,827.64
Local Construction***	90,000.00	-.	-.	90,000.00	90,000.00	-.
SUB-TOTAL - AFRICA BUREAU	$ 122,175.40	$ 55,455.90	$ 75,460.01	$ 253,091.31	$ 252,400.00	$ (691.31)
TOTAL CSU FUNDING FROM AID	$ 235,667.06	$ 307,148.24	$ 358,029.6[illegible]	$ 900,844.98	$ 1,018,900.00	$ 118,055.02
CSU Contribution (Overhead foregone)	$ 31,133.10	$ 26,648.84	$ 31,973.64	$ 89,755.58	$ 89,755.58	-.
TOTAL PROJECT COSTS	$ 266,800.16	$ 333,797.08	$ 390,003.32	$ 990,600.56	$ 1,108,655.58	$ 118,055.02
AID's Share of Total Costs	88.3%	92.0%	91.8%	90.9%	-	-

*Advance to Field Office for start-up expenses.
**For operating expenses, Rand and U.S. Dollar accounts. Not project funds--advanced by CSU State funds.
***For local housing construction for field party families.

WORK PLAN

Lesotho Agricultural Sector Analysis Project

February 1, 1980 - August 30, 1981

Objective:

To complete the present research program covering Lesotho's agricultural sector, its past, present and potential future, and to relate these results fully to major current issues of agricultural policy, program design and long-term development strategies for the sector.

Probable Outputs:

1. A completed agricultural sector analysis tailored to current development issues.

2. An in-depth analysis of the dynamics of Lesotho's farm households, prepared for use as a key determinant of policy.

3. Preliminary assemblage and analysis of regional data in support of regional planning and development efforts.

4. A monograph on concepts and practical problems of institution building - the lessons from Lesotho.

5. A book length analysis of employment problems and issues in Lesotho leading toward an overall employment strategy for agriculture.

Introductory Note

The term "sector analysis" means many things to different people. These varying definitions are often precisely articulated leading to very definite expectations as to content, methodology and format. No given product can meet everyone's expectations.

We propose below an outline of an agricultural sector analysis for Lesotho. The outline does not follow the standard format entirely. Instead we have tried to emphasize those issues which currently dominate agricultural development efforts in the country, and which seem to be those of enduring concern to planners. While it may not be obvious in each section of the outline policy and program implications will be explicitly drawn wherever possible.

Finally, work on this effort has not progressed as was planned in June of 1978, primarily due to revisions of project emphasis mandated by MOA during Phase III. Therefore to complete an adequate analysis - one which will underpin planning and policy analysis in Lesotho for some years - will require intensive efforts extending beyond August 1980. Following the outline is a schedule of activities indicating what will be completed before and after August 30, 1980 and how these efforts fit together to support the final products identified above.

Probable Outline of an Analysis of the Agricultural Sector in Lesotho with Implications for Planning and Policy

I. LESOTHO'S DEVELOPMENT ENVIRONMENT - THE MACRO SETTING

A. On Being Surrounded by South Africa

1. Price determination by RSA
2. Monopolization of marketing channels by RSA
3. Constraints and benefits arising from Custom's Union and Rand Monetary Agreement
4. Drain on male labor supply

B. The Structure of Lesotho's Economy

1. GDP, GNI and economic growth since Independence
2. Components of national product
3. Trade patterns and balance of payments
4. Employment - its regional and sectoral distribution, wages, trends
5. Population, food balances, consumption levels and nutritional deficiencies

C. Agricultural Resources for Development

1. Soils
2. Water
3. Climate
4. Manpower

II. AGRICULTURE DURING THE 1970'S - AN OVERVIEW

A. Introduction and Description of the Data Base

B. Cropping Trends (acreage, yield, regional differences)

C. Livestock Trends (livestock numbers, production)

D. Marketing (quantities of produce, inputs)

E. A Brief Review of Agricultural Development Projects and Programs

F. Effects of the Mine Wage Increase

G. Overall Sectoral Progress During the 1970's

III. THE CROPPING SUBSECTOR

A. Determinants of Acreage

1. Climate
2. Tillage power
3. Incentive structure

B. Determinants of Yield

1. Climate, soils
2. Input utilization, timing of operation
3. Incentive structures

C. A Critical Examination of Dryland Crop Agronomy in Lesotho

D. Variability in Cropping and Its Economic Meaning

E. Economic Analysis of Dryland Farming

1. Alternative technologies compared
2. Alternative cropping patterns
3. Emphasis on resource requirements, productive potential and contributions to national agricultural objectives

F. An Evaluation of Alternative Mechanization Policies (examines wide spectrum to identify most appropriate technology for Lesotho's conditions).

G. Implications of the 1979 Land Act

IV. LIVESTOCK

A. Determinants of Present Productivity Levels

B. A Critical Examination of Current Livestock Husbandry Systems

C. Economic Analysis of Alternative Husbandry Systems

D. Regional Implications

V. MARKETING

A. Description of Marketing Policies and Programs

1. During the 1970's
2. The situation as of 1980

B. Technical Analysis of Marketing Activities

1. Input supplies
2. Product markets

C. Analysis of Current Marketing Policy Issues

1. Distribution of beneficiaries
2. Government vs. the private sector
3. Alternative uses of pricing policy
4. Marketing margins

VI. EMPLOYMENT AND THE AGRICULTURAL SECTOR

A. Quantification of the Employment Challenge Facing Lesotho's Agriculture

B. Labor Relationships in Agriculture

1. Labor use by crop and activity
2. Seasonal peaks and surpluses
3. Off-farm employment

C. Fundamental Principles for Rural Employment

D. An Agricultural Employment Strategy

VII. REGIONAL RESOURCE DIFFERENTIALS FOR DECENTRALIZED PLANNING

A. Synopsis of MOA Policy and Intent for Regional Development

B. Regional Resource Differentials

C. The Case for Decentralization

D. Village Management of Resources

1. Existing patterns
2. Evaluation of alternative forms
3. Economic factors affecting village resource management

VIII. THE ECONOMICS OF THE FARM HOUSEHOLD - IMPLICATIONS FOR POLICY

A. Resource Position of Household and Differentials Therein

1. Land
2. Livestock
3. Labor, Management

B. Sources of Income and Relative Incentives

C. The Household Life Cycle as an Explanatory Tool

D. Identifying Target Groups for Agricultural Development

IX. GOVERNMENT ROLES IN AGRICULTURAL DEVELOPMENT

A. Description of Organization of MOA and Institutional Constraints

B. Major Agricultural Programs

C. The Experience with Projects

D. Other Agencies in Government with Roles in Agricultural Development

X. LOOKING TOWARD THE FUTURE: LONG-RANGE PRIORITIES AND STRATEGIES

A. Summary of Development Constraints (drawn from previous chapters)

B. The Long-Term Environment for Planning

C. Objectives for Long-Range Planning

D. Subsectoral Strategies

1. Cropping
2. Livestock
3. Agricultural business

E. Program Options and Actions Needed for Success

F. Implied Developments in the National Economy

Work Plan for Completing Research Outlined Above

I. LESOTHO'S DEVELOPMENT ENVIRONMENT - THE MACRO SETTING

A. On Being Surrounded by South Africa

- Basic work done, partially presented in ASR
- Some further data collection (5-7/80): JE, KL, RL
- Preliminary draft for discussion with CPDO (7/80): JE
- Final writing (10-11/80): JE, KL-input

B. The Structure of Lesotho's Economy

- Basic data collected. Refinements expected from CPDO (IBRD team) (7/80)
- Additional data to be collected on regional aspects of employment: JE, and food balances and nutrition: GW (3-7/80)
- First draft (6-7/80): JE, GW
- Refined draft (10-11/80): JE, GW

C. Agricultural Resources for Development

- Basic work done and partially presented in ASR
- Analysis for regional differentials (2-7/80): GW
- Chapter draft (11/80): GW, JE

II. AGRICULTURE DURING THE 1970'S - AN OVERVIEW

- Production data collection nearing completion, 1978/79 data not yet available and will need correction (3/80): JE
- Marketing data collection (2/80): RL
- Effects of mine wages to be drafted as discussion paper (2/80): JE
- Sectoral progress during 1970 - adapted from Third Five Year Plan (4-5/80): JE
- Draft for review by (7/80): JE

III. THE CROPPING SUBSECTOR

A&B to be based primarily on regression analysis of 1970 crop statistics.

- Data refinement (2-3/80): JE, KL
- Regressions with rainfall)3-4/80): JE
- Soil moisture estimation model (9-11/80): GW, JE
- Integration of soil moisture, rainfall and temperature (12/80-2/81) GW, JE

C. A Critical Examination of Dryland Crop Agronomy in Lesotho

- Draft section for review by Farming Systems and Research Divisions (5/80): JE

D. Variability in Cropping and Its Economic Meaning

- Preliminary assessment of crop losses due to climatic factors - complete: GW
- Data collection on price variability (2/80): RL
- Integration of risk perception, risk avoidance strategies, empirical data on risks (9-12/80): GW, JE

E. Economic Analysis of Dryland Farming

- First draft based on linear programming analysis (3/80): KL
- Definition of additional questions to be asked of data and model (2-4/80): JE, KL
- Collect additional data if needed (4-6/80): JE
- Refined first draft into circulation (5-7/80): KL, JE
- Application of model to additional policy issues (9/80-2/81): JE, KL

F. An Evaluation of Alternative Mechanization Policies

- Same as E above

G. Implications of the 1979 Land Act

- Land tenure bibliography complete (3/80): JE
- Analysis of implications (10/80 and 1/81): JE, KCN

IV. LIVESTOCK

A. Determinants of Present Productivity Levels

- Data collection in conjunction with FAO Review Team (3/80): JE

B thru D: Analysis to include the following separate efforts:

- Analysis of grazing management component of livestock systems (3-4/80): KL
- Collection of complete set of project documents and livestock analyses (3-7/80): JE
- Analysis of livestock sectoral dynamics reviewed in preliminary fashion by Livestock Division (8/80): JE
- Drafting of chapter (10-11/80): JE

V. MARKETING

A. Description of Marketing Policies and Programs

- Draft to be complete (3/80): RL

B. Technical Analysis of Marketing Activities

- Data collection on flows and volumes (2/80): RL and (3-6/80): JE

C. Analysis of Current Marketing Policy Issues

- Development of issues to be analyzed with MOA (7-8/80): JE
- Analysis of current issues with policy recommendations (9-10/80): RL and 1-2/81): JE

VI. EMPLOYMENT AND THE AGRICULTURAL SECTOR

A. Quantification of the Employment Challenge Facing Lesotho's Agriculture

- Done

B. Labor Relationships in Agriculture

- Partly drawn from economics of dryland farming, drafty by (3/80): KL
- Partly from analysis of labor components of BASP baseline survey (2/80-3-81): RT, RW
- Assembly and analysis (11/80-3/81): RW, JE, RT

C. Fundamental Principles for Rural Employment

- Drafted by (12/80): JE, RW

D. An Agricultural Employment Strategy

- First draft in circulation in Lesotho by (7/80): JE
- Refined draft using BASP data and Tribble thesis by (3/81): JE, RW, RT

VII. REGIONAL RESOURCE DIFFERENTIALS

A. Synopsis of MOA Policy and Intent for Regional Development

- Draft to P.S. for comments by (6/80): GW

B. Regional Resource Differentials

- Climatic data computerized by (3/80): GW
- Analyses of agroclimatic regional differentials (3-7/80): GW
- Assembly and tabulation of other data by regions (3-7/80): GW, JE
- Analysis of implications for regional planning (9-12/80): GW
- Regional planning seminar/workshop (4 or 5/80): GW

C. The Case for Decentralization

- Draft for review by P.S. (5/80): GW, JE

D. Village Management of Resources

- Preliminary conceptualization (3-5/80): GW, JE
- Data collection on existing systems (4-6/80): GW
- Analysis and writing (1-3/81): GW

VIII. ECONOMICS OF THE FARM HOUSEHOLD

A. Resource Position of Household and Differentials Therein

- Partially drafted, to be completed by (4/80): JE, KL, RT
-

B. Sources of Income and Relative Incentives

- Data collected, analysis to be started (4-6/80): JE

C. The Household Life Cycle as an Explanatory Tool

- Conceptualization (2-4/80): JE, GW, KL, RT
- Further data collection (5-6/80): JE, GW
- All household studies in MOF computer to be duplicated in CSU (6/80 and 9/80): GW, JE
- Full development of life cycle hypothesis (9-12/80): JE, KL
- Application to policy issues (1-3/81): JE

D. Identifying Target Groups for Agricultural Development

- Drafting (12/80-1/81): JE

IX. GOVERNMENT ROLES IN AGRICULTURAL DEVELOPMENT

A. Description of Organization of MOA and Institutional Constraints

- Organization chart to be cleared with MOA (6/80): JE

B and C. Preliminary hypotheses and structure to be developed from evaluation of projects and programs in Second Plan (4/80): JE
- Discussions with technical divisions (5-7/80): JE
- Review of draft w/divisions (7/80): JE
- Final drafting (2/81): JE

D. Other Agencies in Government with Roles in Agricultural Development.

- Interviews to be conducted (5/80), draft to be circulated (6/80) and refined (7/80): JE

X. LOOKING TOWARD THE FUTURE

This chapter is a summary, integration and application of all findings from the above work. As such it will be the principal activity during (1-3/81). We will develop a thumbnail sketch of the future environment for development in Lesotho including identification of major development priorities by April 10, 1980 for the arrival of the Multidonor Agricultural Sector Evaluation Mission. A more detailed elaboration will be ready by July for the Donor's Conference on Agriculture.

XI. MISCELLANEOUS

A. Assist and coordinate the close-out of the LASA project in Maseru, in consultation with USAID/ Lesotho and the GOL (7-8/80): JE

B. Return to Maseru to collect GOL comments and critique on draft of documents (6/81): JE

C. Final revisions and editing (7-8/81): JE, GW

D. Publication, distribution (9/81): CSU

XII. MONOGRAPH ON INSTITUTION BUILDING - THE LESSONS FROM LESOTHO

- Outline prepared, concepts discussed (2/80): JE, RL
- Assembly of notes from Lesotho experience (3/80): RL and (7-8/80): JE
- Drafting (5-6/80): RL and 9-10): JE, RL