

UNCLASSIFIED
CLASSIFICATION
PROJECT EVALUATION SUMMARY (PES) - PART I

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1. PROJECT TITLE <p style="text-align: center; font-size: 1.2em;">621012800150 ISD-1577</p> <p style="text-align: center;">Disaster Relief-Arusha Region Drought</p>	2. PROJECT NUMBER <p style="text-align: center; border: 1px solid black; border-radius: 50%; padding: 2px;">621-0128</p>	3. MISSION/AID/W OFFICE <p style="text-align: center;">USAID/Tanzania</p>
4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) <input type="checkbox"/> REGULAR EVALUATION <input checked="" type="checkbox"/> SPECIAL EVALUATION		

5. KEY PROJECT IMPLEMENTATION DATES A. First PRC-AG or Equipment FY <u>75</u> B. Final Obligation Expected FY <u>79</u> C. Final Input Delivery FY <u>79</u>	6. ESTIMATED PROJECT FUNDING A. Total \$ <u>2,869,000</u> B. U.S. \$ _____	7. PERIOD COVERED BY EVALUATION From (month/yr.) <u>November 1975</u> To (month/yr.) <u>February 1979</u> Date of Evaluation Review <u>February 8, 1979</u>
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8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
1. That AID and the TanGov review the balance of uncommitted AID funds and noncommitted TanGov funds and determine what portions are to be used for roads, holding grounds and the RTC.	H. Steverson USAID/Director	April 1979
2. That AID and the TanGov determine the need for and location of holding grounds and expedite their construction.	B. Behrens Livestock Mktg. Dev.	April 1979
3. That procurement of commodities for the Range Training Center be completed as soon as possible and that select project vehicles in excess of those needed to maintain the drought roads be transferred to RTC.	R. McCandliss USAID/Arusha	April 1978
4. That the Road Construction Contract Team collaborate with the TanGov to establish a regional maintenance capability as per ProAg Revision 17, in conjunction with the completion of the roads, including surfacing, reworking of unacceptable curves and grades.	R. McCandliss USAID/Arusha	March 1, 1979
5. That AID request the TanGov to fulfill its obligation to provide financial contributions to the Drought Project.	H. Steverson USAID/Director	April 1979
6. That AID withhold funding for future road construction in the Arusha Region until the TanGov commitment and capability to maintain the drought roads is demonstrated.	H. Steverson USAID/Director	April 1979
7. That AID establish a set of baseline information in collaboration with Masai Range Project Staff and evaluate the impact of the drought roads within 2 years after completion of the project.	Bary Hill Asst. Agr Dev. Office, USAID/T.	May 1979

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Project Paper</td> <td><input type="checkbox"/> Implementation Plan e.g., CPI Network</td> <td><input checked="" type="checkbox"/> Other (Specify) <u>TanGov Contribution</u></td> </tr> <tr> <td><input checked="" type="checkbox"/> Financial Plan</td> <td><input type="checkbox"/> PIO/T</td> <td><input type="checkbox"/> Other (Specify)</td> </tr> <tr> <td><input type="checkbox"/> Logical Framework</td> <td><input type="checkbox"/> PIO/C</td> <td>_____</td> </tr> <tr> <td><input checked="" type="checkbox"/> Project Agreement Revision</td> <td><input type="checkbox"/> PIO/P</td> <td>_____</td> </tr> </table>	<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input checked="" type="checkbox"/> Other (Specify) <u>TanGov Contribution</u>	<input checked="" type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	<input type="checkbox"/> Other (Specify)	<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	_____	<input checked="" type="checkbox"/> Project Agreement Revision	<input type="checkbox"/> PIO/P	_____	10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT A. <input checked="" type="checkbox"/> Continue Project <u>as designed.</u> B. <input type="checkbox"/> Change Project Design and/or <input type="checkbox"/> Change Implementation Plan C. <input type="checkbox"/> Discontinue Project
<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input checked="" type="checkbox"/> Other (Specify) <u>TanGov Contribution</u>											
<input checked="" type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	<input type="checkbox"/> Other (Specify)											
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	_____											
<input checked="" type="checkbox"/> Project Agreement Revision	<input type="checkbox"/> PIO/P	_____											

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles) Robert McCandliss, USAID/Arusha; Robert Gilson, Evaluation Officer, USAID/T; Don Reilly, Engineer, REDSO/EA; Helen Soos, Evaluation Officer, REDSO/EA; Lazard Parkipuni, Masai Range Project Co-Director.	12. Mission/AID/W Office Director Approval <div style="text-align: center;"> </div> Typed Name <p style="text-align: center;">Howard L. Steverson</p> Date <p style="text-align: center; font-size: 1.2em;">3/23/79</p>
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MASAI DROUGHT PROJECT

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I. Summary and Recommendations

A. Current Status of Project

The Masai (Arusha) Drought Project was developed as a result of an AID team which surveyed drought conditions in Tanzania during the fall of 1974. The team assessed the severity of the drought and identified activities which could be supported with AID drought assistance. The team benefitted from contacts with AID-funded technicians under the on-going Masai Range and Livestock Development Project which was initiated in 1970. The project was intended to assist the Tanzanian Government in efforts leading to the rehabilitation of the drought, as well as the acceleration of longer-term drought combative development in areas affected by recurrent drought.

The Drought Project was authorized in June 1975 and the Project Agreement was signed in August 1975. The project included three components:

1. Access Roads: The districts of Manduli and Kiteto in the Arusha Region which were most affected by drought were not served by adequate access roads. Thus the project proposed to fund dry weather access roads of about 150 miles in each of these districts, both to facilitate the delivery of relief assistance and rehabilitation, and to accelerate longer-term drought combative development in these areas.
2. Holding Grounds: The marketing of cattle was a major problem during the drought. The establishment of holding grounds to permit adequate grazing prior to marketing, and to organize the cattle for marketing was thought to be an appropriate measure to alleviate this problem during future droughts.
3. Farmer Training Center: Subsequently called Range Training Center. The project was to provide limited assistance to the Range Training Center for which the Arusha Region had already allocated financing, in order to establish an institutional infrastructure for training and outreach activities which would alleviate the severity of future droughts. The RTC would promote the adoption of range management plans at the village level, and improved animal health and production techniques.

The implementation of the holding grounds and RTC components of the project were to be carried out by AID-funded technicians in extension and range management respectively under the Masai Range Project. A separate technical assistance team was contracted for the access roads component of the project. The objective of the roads component was to build the roads as rapidly as possible with U.S. experts, with the TanGov providing labor and limited capital inputs.

The original project life of two years has twice been extended for a total of slightly over three and a half years. The Project has experienced twenty Pro Ag Revisions to date. Given delays in TanGov inputs for the holding grounds and RTC components of the project, it is unlikely that these components of the project could have been implemented over the two year life of project initially established. The status of the project with respect to each component is described hereafter:

Access Roads: The road construction component of this project has been a highly successful operation from the standpoint of physical accomplishments. The original plan for 300 miles of road of low cost and low standard was revised as a result of an evaluation in early 1977 and 410 miles of road will be constructed of a higher standard than originally specified. All of this will be accomplished with no great increase in overall project funding. Clearing and shaping of both the north and south roads has been completed and only 65 miles of surfacing remains to be placed and compacted. The minimum design requirements have been met with the exception of some tight curves on the north road escarpment switchbacks. Major problems encountered on the road component have been (1) the adverse weather conditions caused by unusually heavy rains since the drought broke, (2) lack of maintenance inputs on the part of the TanGov on the completed sections of the road, and (3) delays in the procurement of spare parts and replacement vehicles.

Holding Grounds and Nightstops: This component of the project has not been given sufficient attention. Other than procurement of barbed wire and installation equipment there have been no concrete accomplishments. Meetings were held thru 1977 to attempt to obtain agreement on sites, but the TanGov has encountered numerous difficulties since that time. In February of 1978, it was decided to use the funds allocated for this purpose for other project inputs.

Range Training Center (RTC): Under this component, project funds in the amount of \$111,000 were allotted for procurement of kitchen, classroom and bathroom items, vehicles, field equipment and farm development equipment for the center and \$55,000 for center pilot outreach activities.

To date these procurements and obligations have been only partially accomplished. Approximately \$76,000 was expended for the procurement of commodities and 4,000 for outreach purposes. Most of these procurements were initiated in 1976. Delays in the construction of RTC facilities were responsible for delays in additional procurement and financing for outreach activities. Owing to the expansion of the access roads component of the project, there are insufficient funds for the provision of these remaining inputs. The RTC began both training and outreach activities in October, 1978. Thus it

is too early to evaluate the impact of RTC training on the Masai.

B. Recommendations

The recommendations of the Evaluation Team are as follows:

1. That AID withhold funding for future road construction in the Arusha Region until the TanGov commitment and capability to maintain the drought roads it demonstrated. This recommendation is based on the critical importance of maintenance if the roads are to remain functional. Experience during the implementation of the project has demonstrated the fragile nature of the roads. If ditches are not kept clear, and gravel surfaces maintained, the roads can become impossible after one or two heavy rains. Under such circumstances the roads can disappear after one year. This would result in the loss of all the considerable benefits described hereafter as resulting from the access roads.

(Note: USAID/Arusha expressed disagreement with respect to this recommendation. The disagreement was based on the belief that such a recommendation could result in delays in starting the road component of the Village Development Project. Since the TanGov has stated that funds for maintenance will be available in July, 1979, the Evaluation Team feels that this recommendation can be met without jeopardizing that project.)

2. That AID request the TanGov to fulfil its obligation to provide financial contributions to the Drought Project.

This recommendation derives from the Team's analysis of TanGov contributions in Section IV.F and Annex III. It would be futile to request the TanGov to contribute towards needs which no longer exist, e.g., road construction. However, since the TanGov did not provide labor as planned, (and AID had to provide these inputs), it would seem reasonable to request the TanGov to finance activities which AID could not finance owing to a lack of funds. Therefore the Team recommends: (1) that USAID request the TanGov to contribute approximately \$200,000 (which AID funds financed for TanGov) to the completion of project activities in holding grounds and the Range Training Center components of the project; (2) that the TanGov fulfil its obligation to provide capital costs and a contingency fund for access road construction totalling approximately \$90,000 to upgrade culverts and possible provide a Bailey Bridge. These recommendations would allow for the completion of the project as planned, and are in accordance with page nine of the Pro Ag whereby the TanGov has agreed to finance shortfalls in project funding.

3. That the Road Construction Contract Team collaborate with the TanGov to establish a regional maintenance capability as per Pro Ag Revision 17, in conjunction with the completion of the roads, including surfacing, reworking of unacceptable curves and grades, withdrawal of all equipment to Arusha, and normal reconditioning of equipment.

Maintenance appears to be a serious problem, and is aggravated by the fact that the building of institutional capability was omitted from the project design, in favor of rapid construction. The justification for an additional seven-months increase in the Road Construction Contract was "to establish a regional maintenance capacity." To date, the contractor has not begun to do so. The Team recommends that the contractor utilize the remaining time to finish the construction in collaboration with the TanGov.

4. That procurement of commodities for the Range Training Center be completed as soon as possible and that select project vehicles and equipment in excess of those needed to maintain the drought roads be transferred to RTC.

The RTC component of the project should be completed as soon as possible, with AID funds if available, and TanGov funds if forthcoming. Section VIII No. 7 of the Pro Ag provides that vehicles utilized for construction be assigned to the RTC or Masai Project after the roads are completed.

5. That AID and the TanGov determine the need for and location of holding grounds and expedite their construction.

The holding grounds component of the project should be completed as soon as possible, provided that the need for holding grounds exists, and the TanGov is able to implement this need. Since project funds may not be available, the TanGov may have to finance the holding grounds in accordance with Recommendation 2 above.

6. That AID and the TanGov review the balance of uncommitted TanGov funds and determine what portions are to be used for roads, holding grounds and the RTC, and that these decisions be reflected in project documentation and agreements.

This action is necessary in order to carry out Recommendations 3, 4, and 5 above. The Project Agreements (and Revisions) and other project documentation do not reflect decisions and/or agreements to eliminate or curtail certain project components, such as holding grounds or the RTC. As the project progressed, it appears that the road component became the priority activity, and was expanded to a point far beyond its original scope. Funds were therefore transferred into various budget line items for the sole purpose of

achieving road objectives. These actions and decisions were made arbitrarily without the full knowledge and consent of all parties concerned. Therefore, immediate management attention should be given to outstanding issues related to holding grounds and the RTC. Uncommitted project funds should be reviewed and reserved according to AID and TanGov priorities.

Since the road construction output has already been completed in relation to project outputs, AID and the TanGov may wish to reconsider the use of unexpended funds, especially additional contractor time to establish a regional maintenance capability, which was not an output of the Drought Roads Project.

All final decisions should be properly documented and reflected in Project Agreement Revisions.

7. That AID establish a set of baseline information in collaboration with Masai Range Project staff and evaluate the impact of the drought roads within two years after the completion of the project.

The evaluation of project impact on short term relief efforts and the impact on longer-term development of the area cannot be made at this stage of the project. However, now is the time to organize data collection for the future evaluation of these short term and long term impacts. Accordingly, it is recommended that the USAID Tanzania take steps necessary to assure that data are collected from Masai Range Project personnel to enable future evaluation of the effectiveness and impact on food and medical supplies, emergency movement of cattle and other short term relief efforts (if drought should occur) as well as data for use in longer terms impact analysis of population changes, agricultural development, traffic buildup, health and education access and changes in cattle trekking and marketing patterns.

II. Evaluation Methodology

This evaluation constitutes the final evaluation of the Arusha Roads Project. USAID/T is currently in the process of planning another road construction project within three districts of the Arusha Region and is studying the feasibility of a full scale access roads ~~roads~~ effort in three other regions. Therefore, the primary additional reasons for this evaluation were: (1) to assess accurately the experience gained and problems encountered on the drought roads project, and (2) to offer substantial recommendations which can be applied to future road construction efforts.

The evaluation is based on four days spent in the field divided between the Monduli and Kiteto districts of Masai land; discussions and interviews with Drought Project contract team members, Masai Range Project team members, TanGov officials, and USAID personnel; and reports and documents. Annex VI includes a list of persons contacted by the Evaluation Team. One Tanzanian official attached to the Masai Project was nominated to assist the evaluation team and accompanied the team on the second leg of our field tour and participated in many discussions. One other TanGov official from Comworks nominated to assist and participate in this evaluation was unfortunately not available during this period.

III. External Factors

A. Weather Conditions

It is ironic that during the implementation of this drought relief project the weather has been unseasonably wet. The unusually heavy rains have occurred not only in the normal wet months but also in months normally considered to be dry. These conditions have hampered the actual construction operations in several ways: (1) construction of the roads was often stopped because of wet conditions, (2) access from the site of construction was made extremely difficult and supplies were often delayed, (3) labor and equipment had to be pulled back to rebuild sections of road that were washed out.

B. Border Crossing

The closing of the Kenya border in early 1977 made project procurement more difficult. Access to Nairobi and its supplies of equipment, services, and spare parts was no longer possible. This increased the time and administrative efforts necessary to obtain these items and in some cases held up construction operations.

C. International Problems

Conflicts with Uganda which flared up in 1978 and are still unresolved have had an adverse effect on the TanGov ability to support development projects because of changing priorities for the financial, material and human resources being diverted to the support of military operations. Even if settled promptly, these diversions of resources are likely to effect the ability of the TanGov to finance development for several years.

D. Changes in Project Design

Two Pro Ag Revisions in the spring of 1976 increased funding for

the project in order to finance ground water surveys to make the ERTS imagery component of the ground water development program fully operational, and for an ERTS seminar for twenty Tanzanians to improve their efficiency in interpreting ERTS imagery. These funds were not fully expended, nor are project files clear as to their purpose. The additions of funding appear to be related to an AID/W funded satellite imagery project which required additional funding. These incidences reflect a proclivity to shift funds for the sake of expediency rather than logical linkage to project outputs.

IV. Project Inputs

The reader is referred to Annex II for a summary of proposed and actual project inputs.

A. Road Construction

Inputs for the road construction component of the project were provided on a most timely basis. The technical assistance team consisting of a Chief of Party, a field surveyor/engineer and two mechanic/construction specialists initiated their services on 6 November 1975, less than five months after the project was authorized, and three months after the Pro Ag was signed.

Procurement of heavy construction equipment and other support items was also carried out on a timely basis. Procurement was initiated shortly after project authorization, and construction mobilization was 100% completed by July 1976. The procurement of replacement and spare parts has occasionally been a problem. Delay in issuing an order for two caterpillar engines resulted in a \$2,000 cost increase for those items. An undue delay was also experienced in an order to replace the Chief of Party's vehicle: a request was placed in December 1976, and the vehicle was not ordered until January 1978. To date it has not arrived in country, resulting in excessive maintenance costs for the old jeep. A similar delay was experienced with a spare part order for pick-up trucks. In June 1977, the contract team requested quotations for about 70 spare part items. USAID placed the request in December 1977, and General Motors replied in April 1978. The contractor received the quotation in late May 1978 and placed an urgent order to be airfreighted. USAID ignored the request for air shipment, and ordered the entire list for which quotations had been received from GM, by ocean freight, without informing the contractor. The contractor subsequently placed an order for the balance of the items in the quotation plus some other spare parts (by ocean freight). The order was processed by USAID without a realization that the parts had already been ordered. The first order arrived in

January 1979. The funding and utilization of items in the second order have been transferred to another project. These delays have contributed to recent slippages in road construction.

The procurement aspect of the project has also suffered from port clearance problems, which caused delays. Ultimately project funds were utilized for the payment of port fees for items which should have been cleared by the TanGov.

Storage of commodities has also constituted a problem. According to the Pro Ag, the TanGov was to provide storage for commodities. Since security was inadequate in existing government storage facilities, the contract team decided to store parts at their homes and offices rather than to risk further theft. This arrangement has caused considerable inconvenience, and raises a critical issue with respect to TanGov assumption of responsibility for project equipment.

Subsequent to a mid-project evaluation in early 1977, USAID decided to amend the Pro Ag (Revision 9 dated May 11, 1977) to extend the contract team and the Final Contribution Date for one year, in order to build an additional 110 miles of road (called feeder roads) to logical terminal points in both districts. Additional dump trucks were ordered and a fifth contractor member of the contract team was hired to assist in equipment maintenance. An additional order for equipment was made to support this extension in the contract.

In July 1978, USAID placed additional order for equipment without the clearance of the contract team or the Project Manager. The funding and utilization for some of this equipment have subsequently been shifted to another project, although over \$100,000 continues to be funded under the present project. This action has resulted in unnecessary expenditures and excessive equipment procurement at a late date in the project, and the equipment will arrive just before the end of the project. The action also increased the total number of motorgraders procured for the project to seven, while only five were authorized for the project.

An unplanned AID input has been the funding of local labor. According to the project papers the TanGov was to provide all Comwork staff salaries and local labor (page 16). However, Revision 7 of the Pro Ag dated August 1976 created a new funding category for Local Hire Work Force in the amount of \$35,000, since the TanGov had made inadequate budgetary provisions for local labor. Over \$125,000 has been expended in this category to date with no apparent AID or contractor effort to obtain the required TanGov budgetary commitment.

B. Holding Grounds

Procurement for materials was initiated in two PIO/C's issued in October and November 1976. Approximately \$45,000 was spent on fencing and installation equipment. Until April 1977 the project documentation indicates reasonable progress on plans for the implementation of this component of the project.

Subsequent to that date there is no mention of holding grounds, owing in part to the departure of the first Masai Range Management Project technician who handled this activity. According to the second technician's End-of-Tour report, TLMA (the Tanzania Livestock Marketing Corporation) had no funds to initiate construction, and USAID refused a request for an advance. In June 1978, this component of the project was transferred to the Livestock Marketing Development Project in Dar Es Salaam. This information was apparently not known to USAID. In Pro Ag Revision 18, funds were removed from this category with no explanation. The only explanation obtained by the Evaluation Team is a meeting attended by a USAID Agricultural Project Manager and two members of the construction contract team in February 1978, in which the decision to cease holding grounds activities was taken. The Evaluation Team found no evidence that either the TanGov implementing agency (the Tanzania Livestock Marketing Corporation) or the subsequent AID project manager in Arusha were informed of this decision.

The Evaluation Team has not found evidence or project documentation on which to base the decision to terminate this component of the project. Local officials including the District Development Director of Monduli, TLMC officials, and local Masai Range Project staff believe that marketing of cattle along the newly constructed roads will be encouraged if holding grounds are established. The team recommends that AID and the TanGov determine the need for holding grounds, and that AID management exercise effective follow-up in this component of the project, which is intended to take advantage of the drought roads to deliver greater benefits to Masai herders.

C. Range Training Center

The RTC component of the project provided \$111,000 for commodities and \$55,000 for farmer extension or outreach activities. An initial order for basic commodities for the Range Training Center (referred to as Farmer Training Center in the PP) was initiated in October and November 1976, for a total of \$76,000. This equipment included basic furnishings for the school, including kitchen equipment and office furniture. Some basic furnishings, however, such as classroom furniture have not been procured in view of other demands for project funding. About \$4,000 have been spent on farmer training activities.

Vehicle procurement for RTC has also been inadequate. The Pro Ag provided \$46,000 for AID funds for vehicles for the RTC. The Masai Range Project Extension Advisor responsible for the implementation of this component of the Drought Project requested two jeeps for RTC extension activities. His request was rejected by AID, and one excess property bus was ordered at a considerable savings. The bus is totally inadequate for the road conditions prevailing in Masailand. It is also in a questionable state of repair. Thus it has never been utilized by the RTC. The project also procured two excess property pick-up trucks which cannot function owing to lack of spare parts which are not available in Tanzania. There is no evidence in the file that RTC personnel on the AID staff assigned to RTC concurred in the procurement of excess property vehicles particularly vehicles of a nature different from the vehicles that had been requested. Interviews held by the Evaluation Team confirm that RTC approval was neither requested nor granted. Procurement decision appear to have been made by AID in collaboration with the Road Construction Contract Team, rather than personnel who would utilize the vehicles.

In summary, inputs into this component of the project have materialized late in the life of the project, and may not be provided in their entirety owing to an expansion of the road construction component of the project. The principal explanation for delayed RTC inputs is the delay in the construction of the RTC by the TanGov, originally scheduled for completion in 1976. The RTC was not opened until October 1978, and the library is still under construction.

Thus project inputs (e.g., vehicles and other essential commodities) have not been provided, and appear to be in jeopardy owing to cost overruns and expanded outputs in the road component of the project. The project documentation does not indicate that this change of priorities was officially made, or sanctioned in the form of a Pro Ag Revision. The Evaluation Team recommends that procurement for the commodities be completed as soon as possible, and that select vehicles and equipment ordered for the road construction component of the project, in excess of the number needed to maintain the drought roads, be transferred to RTC. This recommendation is consistent with Pro Ag Section VIII, Special Provision No. 7.

D. Ground Water Development

In March 1976, Revision 3 of the Pro Ag increased project funding by \$61,380 to finance ground water surveys to supplement the ERTS imagery component of the project. Details as to the intended use of this additional component of the project are not well defined in project files, except insofar as it is related to an ERTS contract

funded separately by AID/W. There appears to be little linkage between this ERTS activity and the Drought Project. This addition as well as that described in Revision 4 (discussed below) reflect a proclivity to shift funds for the sake of expediency. Only \$6,000 of these funds were expended for equipment, and \$8,000 for surveys. The remaining funds have been transferred to other categories in the project.

E. ERTS Training Seminars

In April 1976, Revision 4 of the Pro Ag increased project funding by \$35,000 for finance of twenty Tanzanians in the interpretation of ERTS Satellite imagery. The seminar never took place. The funds were shifted to other components of the project.

F. Government of Tanzania Inputs

The Pro Ag provides for TanGov contribution for access roads, Range (Farmer) Training Center; Land; Office and Storage space; Housing and Hard Furnishings for road construction contractors; a Trust Account Contribution for each year of U.S. technical assistance provided by AID; and other contributions as necessary to complete the project.

Actual TanGov contributions are itemized in Annex III. TanGov contributions to access Roads show a shortfall of Shs. 2,265,460, with the TanGov financing Shs. 120,000 for culverts and Shs. 270,200 for skilled operators, drivers and mechanics. This shortfall has resulted in a projected \$150,000 AID project construction for unskilled labor. In addition, culverts and other capital inputs were not provided to the extent agreed to in the Pro Ag. TanGov contribution to the Range Training Center exceeded Pro Ag projections by Shs. 1,796,300, with higher construction costs (attributable in part to a 2-year delay in construction). However, there is a deficit in stock purchases and pasture development.

Other contributions for land, office space, housing and the Trust Fund have been forthcoming as planned, with the following exceptions:

1. Shop support and equipment storage was inadequate;
2. Household furnishings were inadequately provided, and \$20,000 of AID project funds were expended for this purpose;
3. Local transport was not provided, resulting in \$10,000 of AID project funds being expended for this purpose;
4. Port clearance charges for construction equipment totalling \$25,000 were paid by AID.

The shortfall in the TanGov contribution totals over Shs. 600,000. AID has found it necessary to finance portions of this contribution, e.g., recurrent road construction costs, furnishings, and local travel totalling about \$200,000. Therefore, the Evaluation Team recommends: (1) that USAID request the TanGov to contribute approximately \$200,000 (which AID funds financed for TanGov) toward the completion of project activities in holding grounds and the Range Training Center components of the project; and (2) that the TanGov fulfill its obligation to provide capital costs and a contingency fund for access road construction totalling approximately \$90,000 to upgrade culverts and possible provide a Bailey Bridge. These recommendations would allow for the completion of the project as planned, and are in accordance with page 9 of the Pro Ag whereby the TanGov has agreed to finance shortfalls in project funding.

According to the PP the TanGov was also to provide counterparts to U.S. technicians, primarily from Comworks. This provision was not adequately reflected in the Pro Ag, where a general reference is made to the TanGov's provision of "sufficient personnel to effectively carry out the project". Contracts signed by technical assistance staff, however, did provide for counterparts. The Evaluation Team feels that maintenance would not present a problem of the magnitude currently envisaged if adequate counterpart staffing had been built into the project.

A special provision in the Pro Ag relegated maintenance of the constructed access roads as another contribution of the TanGov.

Neither the PP nor the Pro Ag budgeted for this item or specified when the TanGov will begin to exercise this responsibility. By 5 January 1977, the issue arose officially in a memo from USAID/ADO to the RDD in Arusha in which 48 miles of road have been completed, and USAID requested that consideration be given for proper maintenance of these newly constructed roads. In December 1977, and January 1978, the contractor set forth a maintenance plan to the RDD and USAID agreed to finance two months of labor costs until TanGov funds were made available. In February 1978, the TanGov Treasury provided Shs. 1.4 million for maintenance of the drought roads. A workforce spent about one week on the north road and was subsequently diverted to other uses. All maintenance activities ceased and unused funds were returned to Treasury by 30 June 1978, at the end of the TanGov fiscal year. Therefore, in early April 1978, the contractor informed the USAID project manager that future capital construction would be halted, in order to rebuild about fifty miles of road which was impassable owing to damage by rain. This setback delayed construction by nearly six months. Annex V contains a summary of correspondence relating to road maintenance.

V. Project Outputs

A. Access Roads

The road construction component of this project has been a highly successful operation from the standpoint of physical accomplishments. The original plan for 300 miles of low cost and low standard road was revised as a result of an evaluation in early 1977 and 410 miles of road will be constructed of a higher standard than originally specified. All of this will be accomplished with no great increase in overall project funding. Clearing and shaping of both the north and south roads has been completed and only 65 miles of surfacing remains to be placed and compacted. The minimum standards for roadway cross section, grades, culvature and surfacing have been met with the exception of some tight curves on the north road escarpment switchbacks.

According to the Log Frame, the measure of output was the construction of 300 miles of access road (150 for north and south roads respectively) over a 2-year implementation period. Thirty miles were to be built during the first six months. This output measure does not take into account time for mobilization. In fact it took almost a year to complete 30 miles. The full 300 miles was completed three years after the contract team arrived. About 345 miles were completed at the time of the evaluation (early February 1977) leaving an additional 65 miles to be completed by June 30, 1979. (See Annex IV for progress by Quarters.) The measures of output in the logical framework appear to be highly optimistic, and could not possibly be met by the best of contractors since time for mobilization was not taken into account.

The estimated time required for completion of the roads exceed the initial project estimate by 19 months (or about 80%). However, this time includes 110 miles of additional road, authorized by Pro Ag Revision 9 dated May 11, 1977 which is based on the mid-project evaluation conducted in early 1977. The mid-project evaluation also recommended that the road specifications be upgraded to include increased graveling for stabilization and the provision of limited culverts and stone placement. The initial 12 month extension was extended for an additional 7 months in March 1978, for the purpose of establishing a regional maintenance capacity, according to Pro Ag Revision 17. Most of this extension will be needed for the completion of the road. The contract team appears to be devoting little effort to the establishment of a regional maintenance capacity.

The major problems encountered with road construction relate to: (1) excessive rains subsequent to the drought in late 1977; (2) lack of TanGov maintenance of completed roads, requiring about 50 miles to be rebuilt owing to inaccessibility; and (3) problems with equipment maintenance, spare parts and replacement vehicle procurement.

B. Holding Grounds

Although some equipment inputs were procured (and are in storage in Arusha), there has been no progress since April 1977. The Masai Range Project Advisor responsible for the administration of this project component departed at about that time, and TLMC has not carried out plans developed prior to that date. Thus, no holding grounds or night stops

have been established to date. There are no documents in the files indicating that the project was accordingly revised.

C. Range Training Center

The Range Training Center was opened for use in November 1978, about 2½ years subsequent to the date projected in the Log Frame. With the exception of a library (nearly completed) and staff housing (to be built next year), construction has been completed. Some critical AID inputs such as classroom furniture and extension materials have not been procured. In addition, problems in vehicle procurement on AID's part have deprived the RTC from adequate vehicular support as provided in the Pro Ag.

The RTC currently has a staff of four tutors or teachers including an acting principal. The principal-to-be is being trained in the U.S. under the Masai Range Project. The staff has expertise in the fields of animal production, range management, farm management, marketing and pasture production. The staff conduct one to four-week training seminars at the RTC facilities in range management, animal science, dairy production, etc. One training session was held for 30 elected leaders, including village chairmen and council member representing villages in the Arusha Region. Another training session was for 34 village managers selected by RTC extension staff to spearhead range development programs in their respective villages. The RTC also has village outreach activities, with 2 to 7-day extension training sessions in villages conducted by RTC staff.

Insufficient time has elapsed (only three months of operation) to evaluate the quality and appropriateness of the RTC component of the project. Without the 18 month extension of the project, it is unlikely that any of the RTC outputs would have been met during the life of the project. However, TanGov support to the RTC is high, with a Shs. 1.5 million allocation budgeted for 1979/80.

VI. Project Purpose

The project purpose included three distinct components: (1) To increase accessibility to parts of Masailand through road construction; (2) To facilitate the movement of cattle by establishing holding grounds; and (3) To encourage better management of resources in a drought-prone environment by supporting a training center with a field organization/outreach structure.

The first purpose will be met by the end of the project. The Evaluation Team encountered universal enthusiasm and high hopes with respect to the impact of the access on penetration roads on Masailand. The roads will facilitate all future development activities in the area whether emanating from the RTC, TanGov health and education services, private traders, marketing of cattle, private agricultural enterprises, and TanGov development projects. It is also clear that future drought relief activities will be greatly facilitated by the existence of the road. If road maintenance is adequate, and sufficient impetus for development is sustained, the impact of the roads is likely to be dramatic. However, it could also result in social/cultural dislocations, and uneven socio-economic development. The Team recommends that the road be evaluated within two years after the project is completed to assess its various development impacts.

Although holding grounds have not been established or planned the mere existence of the road will facilitate the movement of cattle and promote marketing activities by facilitating trader access to the areas, and probably by creating greater demand for consumer goods among Masai, which appears to be a pre-requisite for expanded marketing.

The RTC component of the program appears to be initiating the types of programs which will improve resource management in Masailand. Improved practices may well mitigate the effects of future droughts: but it must be recognized that periodic droughts constitute a fact of life in Masailand. The achievement of the project purpose over the long-term depends on assumption No. 6 in the Log Frame, that the TanGov continue to support road maintenance as well as RTC and holding ground operations in the area.

VII. Project Goal

The goal of the project is to assist the TanGov in efforts which will lead to rehabilitation as well as an acceleration of longer-term drought combative development in areas seriously affected by recurrent drought.

The aspect of the goal regarding rehabilitation was overtaken by events, that is abundant rains beginning in 1977 which have scarcely stopped since then. The recuperative ability of the land has proven to be remarkable, and complete rehabilitation from the drought has been achieved.

The acceleration of longer-term drought combative development also appears to be becoming a reality. Extension staff, TanGov officials and other technical advisors as well as private traders, have begun to frequent the area with far more regularity.

Increased settlement such as a large commercial farm are already evident along the South road, while a milk collection station has been established along the North road in Monduli Juu.

The Team was unable to assess the measure of goal achievement relating to reduced requirements for relief assistance during future droughts, and the diminution of deleterious impacts of future droughts, since no droughts have occurred recently. It is evident that the delivery of relief assistance will be more economical in future droughts, if the roads are maintained. It is also probable that improved marketing, increased trader presence for both consumer goods and cattle purchases, and improved range management will mitigate effects of future droughts. All of these activities are likely to occur increasingly over the next decade, as implementation of longer-term development projects is facilitated by the road.

VIII. Beneficiaries

The primary beneficiaries of the road and RTC components of the project have been the populations of the Kiteto and Monduli Districts. According to the most recent census (August 1978), there are approximately 180,000 people in these two districts, of which 80% are estimated to be Masai. The ultimate impact of the road upon the lives of these people is as yet unknown, but evidence already available indicates that extension and other services are expanding, that District officials can communicate more readily with Regional officials, and that private commerce and agricultural development are showing signs of expansion. Among the preliminary observations with respect to the impact of the road are the following:

1. Interviews and discussions with several of the Masai project technicians reveal that the road project has allowed them far greater access to and mobility within Masailand. Consequently, they were able to move supplies and equipment in faster and more efficiently. This has resulted in better execution and acceleration of several of the longer term objectives of the Masai Project, i.e., range management planning, dam building, well digging, ground water development, data collection and extension work. Successful completion of these activities are expected to benefit a considerable percentage of the population in Masailand.
2. Field trips and discussions with TanGov and American personnel already reveal road impact at many levels which may be of great benefit to several different groups. These include the Masai as well as TanGov officials and Range Project Personnel. If the roads are maintained the Districts and Regions, for the first time ever, will be able to service most of Masailand on a regular, efficient basis. In the long-term this could mean clinics, schools, cattle dips, veterinary services, markets, holding grounds, and bus service. In periods of drought the road would provide the means to sell and truck cattle and distribute emergency relief assistance.

TanGov officials have also benefitted from the road project. They report the last census undertaken in Masailand was by far most comprehensive and accurate because the roads allowed them greater accessibility and mobility than they have had in the past. The roads have enabled Regional and District officials to service and reach a far larger area and population in Masailand than was previously the case. In the long term the road will benefit the TanGov by facilitating the establishment of villages, village boundaries, range management plans, village offices, etc., in keeping with government villagization and decentralization policy and range management policies. An unplanned benefit of the road may prove to be better control over poachers. The northern road traverses a large section of land bordering on the Ngorongoro Crater which is notoriously known as "no mans land", and has been considered a poaching paradise. Now TanGov officials contend that this area can be regularly patrolled, particularly if settlements along the road increase. Hence the incidence of poaching may be reduced considerably. Long sections of the road, both north and south, traverse areas heavily populated with wild game and of spectacular scenery. Both the country as a whole, and foreign tourists would benefit from the development of this tourism potential. These areas also have mining potential and the roads will enhance the probability of development in this sector. On the private, commercial sector side, indications are that the roads project is already manifesting a positive yet somewhat more individual impact. On the north road the Northern Dairies Ltd. has established a milk collection center at Monduli Juu; charcoal and firewood operations have been opened on both roads; dukas (small stores) are beginning to appear gradually along both roads; and on the south road, two Europeans have already cleared several hundred acres of land for the purpose of establishing a bean seed farm. Since land clearing is only authorized on non-range land, the surrounding range land should not be adversely affected. In fact, this particular land clearing was in a tsetse fly infested area, so land clearance may reduce the natural habitat of the tsetse fly in this area to the point where eradication and control are possible. While this is advantageous for the Masai, it could however decrease areas where wild game can survive.

In conclusion it must be understood that the road maintenance requirement is of critical importance to this project. If the roads are kept open a wide variety of benefits will naturally accrue and will offer the invaluable opportunity of measurable impact on the Masai. If they are not maintained, the roads impact will be of little or no value to anyone with the exception, perhaps, of those Masai whose only desire is to be left alone.

IX. Unplanned Effects

A. Penetration Road Effect

The access to the drought areas made possible by the construction of these roads has resulted in some effects that were unplanned. It remains to be determined whether these effects are all beneficial.

1. Collection of milk is now being facilitated by a collecting station established at Monduli Juu where trucks can load milk brought to this collection point and transport it to Arusha in less than two hours.

2. Agricultural development is now facilitated by the ease of access to the area. Some Masai are growing maize on the north road and a large seed farm of several hundred acres is being developed adjacent to the south road. The long-term effect of agricultural plots on land traditionally used for cattle trekking is unknown, but could be beneficial if land clearing contributes to the eradication of the tsetse fly. On the other hand, this could be the beginning of the end of Masailand as we now know it.

3. Settlement of people and growth of villages is facilitated by the road. New structures are reported at several points along the south road, and some Masai villages have moved closer to the road.

4. Socio/cultural effects due to the increased proximity to different groups are not known. On the north road a village of Sanjo people is quite near the road on top of the western escarpment and easy access down the scarp to the traditional Masai grazing areas if possible. As the road is completed to Loliondo additional traffic from Arusha is expected to use this route rather than the existing route thru the Serengetti which is longer. The effect of this traffic on this previously closed area is unknown.

B. Trained Indigenous Labor

Most counterparts expected to be assigned to the Road Construction Contract Team were not assigned. As a result few TanGov personnel have been trained in administration or management of road construction and/or maintenance operations. The only TanGov personnel trained were already skilled drivers, equipment operators and mechanics employed by Comworks. Thus the project and the unplanned effect of training additional local laborers in all aspects of road construction. Approximately 100 laborers, 50 tractor operators and truck drivers, six foremen and four superintendents have been trained. Some of the best labor

available to the project were unskilled laborers who became operators and even foremen. The number of laborers and tractor operators or drivers was high owing to an overall attrition rate of about 50% over the 3½ year life of the project. Unfortunately these skilled laborers will return to the general labor pool rather than contributing their skills to the TanGov agencies where they could be used on other road projects.

X. Lessons Learned

A. Lack of continuous overall project management on the part of USAID Tanzania has impeded effective implementation of all components of the project. The road component has been implemented by U.S. technical assistance inputs and being the largest project component has been given adequate attention. The holding grounds and nightstops on the other hand have been neglected and are at this late stage of the project not even planned for construction. In fact although sites were selected in mid-1977 there is confusion at this point in time as to where the holding grounds and nightstops are to be built. This experience points out the need for continuous direct hire management of all aspects of projects so that proper attention is given to all necessary inputs. Further evidence of the lack of continuous USAID surveillance is the great number of revisions to the Project Agreement. In all there were twenty revisions to the Pro Ag at the time of this evaluation. In addition the line item allocation of funds were erroneous as in the instance of fund for RTC and holding ground commodities which are shown on the Pro Ag Revision 18 but in fact were diverted early in 1978, without informing concerned TanGov or contract personnel responsible for implementation.

B. Files on this project are inadequate. The regional and central files in USAID Arusha and Dar es Salaam are lacking inadequate documentation of project actions. Management decisions concerning funding charges and project design revisions are lacking. Future projects should document all actions and make distribution of copies to all interested or action officers in AID and the TanGov.

C. AID funds were used to defray costs that should have been provided from the host government. Initially this was done as an expedient until TanGov budgeting could be phased in. Ultimately the AID funds became the only source for these costs. Future projects should assure that host government commitments are realistically achievable and that funds are indeed forthcoming.

D. Some construction equipment and spare parts were ordered so late in the project that they will not be available for use during the project life. The funds expended on this equipment could have been saved and utilized to implement other components of the project.

E. Project commodities were not adequately stored. As a result some were lost or stolen. The project design should have included funds for the establishment of adequate warehousing and control staff within the TanGov agencies involved.

F. Excess property equipment was ordered without the knowledge and full consent of TanGov and U.S. technical assistance personnel who were to utilize the equipment. The equipment could not be maintained and has proven to be useless. Excess property equipment should not be procured without appropriate agreements, or for entities which do not have an adequate maintenance capability.

G. Customs clearance and forwarding of project commodities to point of use was not done by TanGov agencies but was handled by US personnel. Future projects should involve TanGov agencies in performance of these tasks.

H. Reporting requirements were met on the road component of the project but not on the Holding Grounds for Farmer Training Center. Had reports been prepared on these project components, the need for action would have come to the attention of AID management, and corrective measures taken in a more timely fashion. Reporting requirements should be enforced on future projects.

I. The use of autonomous U.S. inputs such as the road building unit on this disaster relief project has proven to be an effective way of achieving physical results in a short period of time at low cost. This was achieved however with no increase in the Regional or District Comworks capability to perform such tasks themselves. Future developmental projects should not lose sight of these differences and should concentrate on the participation and involvement of host government entities in project implementation. It may be more difficult and time-consuming to implement projects in this manner, but both physical results and increased institutional capability can be achieved, if the combined efforts of the donor and the host government are brought to bear on project implementation.

XI. Special Comments

Throughout the evaluation report the critical importance of maintenance and development of institutional capability is accentuated. The Evaluation Team recognizes that the project was not designed to develop TanGov capability, and that recurring critiques with respect to maintenance and institutional building may be unfair. The Team realizes that funding

for this drought project was a result of the severe climatic conditions which affected several parts of Africa in the early 1970's. The Team also acknowledges that when funds of this nature become available, the "strings attached" for their release and utilization tend to be less stringent than is normally the case for development assistance. As a result, project design and implementation often suffers.

In the case of the Drought Project the roads component was hastily designed for the sole purpose of opening up a corridor in Masailand to facilitate and expedite emergency relief types of assistance. As it turned out, the onset of heavy rains ended the drought and eliminated the previous need for emergency relief and resulted in a roads project with greater emphasis on opening up a permanent corridor in Masailand for drought relief. This was a positive development, but unfortunately maintenance and building institutional capability were lacking in the design of the project (with the exception of Revision 17) and in subsequent program documentation and were consequently never developed.

The key lesson to be learned here applies to all AID projects. Development assistance must address the critical need to leave in place a functional capacity to maintain, fund, operate and manage the object of the development effort. In this case it should have been, and on future road projects it must be, to build Tanzanian institutional capabilities for low cost road construction and maintenance at the Regional level and below. This point is not intended to detract from the accomplishment of the Drought Roads Project. The Evaluation Team merely wishes to reinforce the concept that institution building constitutes an integral part of lasting development. This lesson will be all the more poignant if the roads disappear owing to lack of maintenance.

ANNEX I

PROJECT AGREEMENTS

<u>Agreement/Date</u>	<u>Purpose of Agreement</u>
Project Agreement August 13, 1975	To conclude an agreement with the TanGov. Final Contribution Date was June 30, 1978.
Revision 1 September 18, 1975	To provide flexibility in project funding by eliminating contingency funds for specific line items, and establishing an overall contingency fund of \$400,000. A fund for supplemental furnishings for \$26,000 was also created. (The TanGov was to provide furnishings according to the Pro Ag)
Revision 2 January 28, 1976	To shift \$10,000 from contingency to a new line item for travel in East Africa including Kenya, small miscellaneous procurement and short term local hire personnel
Revision 3 March 11, 1976	To increase project funding by \$61,380 to finance ground water surveys to supplement ERTS imagery component of project.
Revision 4 April 2, 1976	To increase project funding by \$35,000 to finance an ERTS Training Seminar, and to shift \$3,500 from Ground Water Development to train 20 Tanzanians in ERTS technology interpretation.
Revision 5 April 23, 1976	To shift \$78,000 from Contingency to Personal Services.
Revision 6 August 25, 1976	To provide a breakdown of funding for the Holding Grounds component of the project.
Revision 7 August 28, 1976	To shift \$35,000 from Contingency to create a new funding category of Local Hire Work Force. (This was a TanGov contribution in Pro Ag.)
Revision 8 March 29, 1977	To shift \$35,000 from ERTS Training Seminar to Commodities for Construction for replacement vehicles and spare parts.
Revision 9 May 11, 1977	To shift \$119,000 from Contingency to Personnel Services to finance a 12-month extension of contract team. Also, Final Contribution Date of project was extended to December 31, 1978.
Revision 10 July 1, 1977	To shift \$49,500 from Other Costs to Personnel Services to finance additional mechanic/road construction specialist for 12 months.

<u>Agreement/Date</u>	<u>Purpose of Agreement</u>
Revision 11 August 18, 1977	To shift \$25,000 from Contingency to Local Hire Work Force.
Revision 12 August 18, 1977	To shift \$10,000 from Contingency to Headquarters Support and Supplies
Revision 13 October 17, 1977	To increase number of dump trucks from 8 to 12
Revision 14 January 19, 1978	To increase number of motorgraders from 2 to 5
Revision 15 February 18, 1978	To provide for purchase of two road rollers; and to extend Final Contribution Date to June 20, 1979
Revision 16 February 23, 1978	To shift \$25,000 from Contingency to Local Hire Labor Force
Revision 17 May 22, 1978	To shift \$60,000 from Access Roads to Personnel Services to extend technical assistance team for an additional six months to June 30, 1979 to assure that regional maintenance component of project is fully in place prior to departure of the team. (Contracts were extended seven months to June 9, 1979.)
Revision 18 August 2, 1978	To shift \$80,000 from Other Costs to Commodities to procure additional heavy equipment, and other shifts within overall funding categories which were neither itemized nor explained.
Revision 19 September 19, 1978	To shift \$100,000 from Commodities to Personnel Services to extend contract services to June 30, 1979, in addition to the \$60,000 provided for this purpose under Revision 17
Revision 20 January 21, 1979	To shift \$10,000 from RTC extension to Headquarters Support to extend local hire personnel to June 30, 1979

FINANCIAL STATUS OF PROJECTAID INFUTS IN 000 U.S. DOLLARS

	<u>Pro Ag</u>	<u>Actual</u>
1. U.S. Technical Services	<u>245</u>	<u>652</u>
2. Commodities	<u>1696</u>	<u>1712</u>
a. Access Roads	1425	1576
b. Holding Grounds	154	46
c. Farmer Training Center	111	84
d. Ground Water Development	61/	6
3. Other Costs	<u>907</u>	<u>516</u>
a. Access Roads Recurrent	797	292
b. Local Hire Work Force	-	150
c. Farmer Training Center	55	37
d. Supplemental Furnishings	-	19
e. Travel - East Africa	-	10
f. Ground Water - Development	551/	8
g. ERTS Training Seminar	352/	-
T O T A L :-	<u>2880</u>	<u>2880</u>

1/ As per Pro Ag Revision 3 dated March 11, 1976

2/ As per Pro Ag Revision 4 dated April 02, 1976

ANNEX III

GOVERNMENT OF TANZANIA CONTRIBUTIONS^{1/}
(in Tanzania Shillings)

<u>Item</u>	<u>Pro Ag</u>	<u>Actual</u>	<u>Balance</u>
A. Access Roads	<u>2,955,660</u>	<u>390,200</u>	<u>-2,565,460</u>
1. Capital Costs	357,000	120,000	-237,000
2. Recurrent Costs	2,106,000	270,200 ^{4/}	-1,835,800
3. Contingency	492,660	0	-492,660
B. Farmer Training Center	<u>1,963,500</u>	<u>3,759,800</u>	<u>+1,796,300</u>
1. Construction of RTC	1,356,600	2,350,000 ^{5/}	+1,934,300
2. Stock purchase and pasture development	606,900	409,800 ^{6/}	-197,100
C. Land for roads, holding grounds, RTC	N.S. ^{2/}	N.A.	-
D. Office Space and Shop Support (42 months)	N.S. ^{2/}	84,000	-
E. Housing, Hard Furnishings Medical Services, Local Transport	N.S. ^{2/}	422,827 ^{3/}	-
F. Trust Fund Contributions (Shs. 21,600 per year of T.A.)	171,200	334,800	-163,600
G. Shortfall in Project Funds	-	-	-
T O T A L :-	-	3,491,627	-605,560

- 1/ See Pro Ag, Page 8 and 9. Data provided by RTC and NEF Contractors.
2/ N.S. is Not Specified in Pro Ag.
3/ Furnishings and Local Transport not provided by TanGov.
4/ Through December 1978. An additional Shs. 30,000 is projected.
5/ Through June 1980.
6/ This figure represents recurrent costs for 1978/79. The Team does not know how much was spent specifically on pasture and stock development.

Quarterly Progress in Access Roads Construction^{1/}

Quarter	North Road	South Road	Total Miles	Cummulative Miles	AID Project Expenditure Local Hire Labor
1. Nov-Dec, 1979	0	-	0	-	-
2. Jan-Mar, 1976	14	8	32	32	-
3. Apr-Jun, 1976	NA	0	0 ^{2/}	32	-
4. Jul-Sep, 1976 ^{3/}	9	22	31	63	1,956
5. Oct-Dec, 1976	11	15	26	89	6,613
6. Jan-Mar, 1977	16	5	21	110	3,413
7. Apr-Jun, 1977 ^{4/}	11	29	30	140	17,244
8. Jul-Sep, 1977	9	21	30	170	7,193
9. Oct-Dec, 1977	15	25	40	210	15,339
10. Jan-Mar, 1978	20	20	40	250	13,693
11. Apr-Jun, 1978	0 ^{5/}	0 ^{5/}	0	250	14,904
12. Jul-Sep, 1978	0	0	0	250	44,234 ^{6/}
13. Oct-Dec, 1978	35	35	70	320	
14. Jan 1-Feb 4, 1979	25	0	25	345	N/A
To be Completed	40	25	65		124,588

^{1/} Data based on Contractor Quarterly Reports.

^{2/} Contractor was waiting for permission to build across railway crossing.

^{3/} Mobilization completed.

^{4/} Pro Ag Revision 9 to extend contract one year to November, 1978 to increase total mileage to 410, and to upgrade quality of road.

^{5/} Contractor rebuilt about 25 miles along each road to permit access.

^{6/} For Quarters 12 and 13.

ANNEX V

SUMMARY OF CORRESPONDENCE RELATING TO MAINTENANCE 1/

- (1) 5 January 1977 (COR/RDD/77/03)
- To : RDD/Arusha
From: Mr. Jack M. Cornelius - USAID/ADO
- Points out provisions of Pro Ag and indicates that 22 miles North and 26 miles South have been completed and that consideration be given to proper maintenance of these newly constructed roads.
- (2) 26 December 1977 (COR/RDD/77/38)
- To : RDD/Arusha
From: Mr. A.M. Powers - Contract Project Manager
- Outlines the need for a maintenance program to start immediately. Suggestions for a program and implementation were made and presented with the project's offer of members of the Roads Project Staff to help.
- (3) 27 January 1978 (COR/RDD/78/03)
- To : RDD/Arusha
From: Mr. A.M. Powers - Contract Project Manager
- Brings up the matter of maintenance again along with the importance of executing the maintenance plan prior to the beginning of the rainy season. USAID agrees to pay 2 months of labor cost until which time Treasury would have released PL-480 money.
- (4) 11 February 1978 Minutes of Meeting
- Outlined usage of 4 million shillings of which 1.4 million shillings were for Drought Roads maintenance. Funds from PL-480 money. Money was allocated for equipment and labor and work was to start immediately.

(5) 3 April 1978

(COR/USAID-T/78-33)

To : Mr. R.S. McCandliss - USAID/AADO
From: Mr. A.M. Powers - Contract Project Manager

- Brought up fact of lack of maintenance activity from the Tanzania Government and that capital construction would be halted to secure the beginning sections of road damaged by the rains.

1/ The Contractor raised the issue of maintenance on numerous other occasions, including at least six times with the Prime Minister and numerous times with the RDD and AID staff.

ANNEX VI

PERSONS CONTACTED DURING EVALUATION

U.S.A.I.D.

Robert S. McCandliss - USAID/Arusha
William A. Miller - Controller USAID/T

Government of Tanzania

Mr. Hosea Talawa - Reg. Dev Dir/Arusha Region
Mr. M. Gadi - Dist. Dev Dir/Monduli
Mr. Lazaro Parkipuni - Masai Range Dev. Project
Mr. George Itangare - Actg. Dir Range Training Center (RTC)
Mr. Magohe - Tanzania Livestock Marketing Company (TLMC)
Mr. Michael Syokkino - TLMC, Monduli & Kiteto Districts
Mr. Kisiglia - TLMC, Dar es Salaam
Mr. Ferdinand Lyaruu - RTC
Mr. Joseph Lendiy - RTC
Mr. Steven Kisipan - RTC
Mr. Conchella - Tanzania Livestock Marketing Corporation

Masai Range Management Project

Pershing Vance - Project Director
James Hedrick - Extension Advisor
Colby Hatfield - Anthropologist
Robert Vorhis - Hydrogeologist
Albert Martin - Range Management
Robert Booth - Water Engineer

Road Construction Contract Team

Alex Powers - Chief of Party
Hank Eng - Engineer
James Cerny - Mechanic
Jack Ivie - Construction Specialist
James Mizelle - Construction Specialist