

I. PROJECT IDENTIFICATION

1. PROJECT TITLE: **LIVESTOCK MARKETING AND DEVELOPMENT** *6210122/43*

2. PROJECT NO. (M.I.I. 1095.2): **621-11-130-122**

3. RECIPIENT (specify): **United Republic of Tanzania**

4. LIFE OF PROJECT: BEGINS FY **1974**, ENDS FY **1980**

5. SUBMISSION:  ORIGINAL **March 8, 1974**;  REV. NO. \_\_\_\_\_ DATE \_\_\_\_\_

APPENDIX ATTACHED:  YES  NO

CONTR./PASA NO. \_\_\_\_\_

II. FUNDING (\$000) AND MAN MONTHS (MM) REQUIREMENTS

A. FUNDING BY FISCAL YEAR	B. TOTAL \$	C. PERSONNEL		D. PARTICIPANTS		E. COMMODITIES \$	F. OTHER COSTS \$	G. PASA CONTR.		H. LOCAL EXCHANGE CURRENCY RATE \$/S 7.1393 (U.S. OWNED)			
		(1) \$	(2) MM	(1) \$	(2) MM			(1) \$	(2) MM	(1) U.S. GRANT LOAN		(2) COOP COUNTRY	
										(A) JOINT	(B) BUDGET	(A) JOINT	(B) BUDGET
1. PRIOR THRU ACTUAL FY	-	-	-	-	-	-	-	-	-	-	-	-	
2. OPN FY 74	1038	892	177	96	99	45	5	988	213	-	5	667	
3. BUDGET FY 75	956	808	135	133	136	10	5	941	211	-	5	667	
4. BUDGET +1 FY 76	818	784	126	19	24	10	5	803	150	-	5	667	
5. BUDGET +2 FY 77	578	528	78	-	-	45	5	528	78	-	5	347	
6. BUDGET +3 FY 78	495	490	72	-	-	-	5	490	72	-	5	347	
7. ALL SUBO. FY	515	510	69	-	-	-	5	510	69	-	5	694	
8. GRAND TOTAL	4,400	4,012	657	248	259	110	30	4,260	793	-	30	3,389 <sup>2/</sup>	

9. OTHER DONOR CONTRIBUTIONS

(A) NAME OF DONOR	(B) KIND OF GOODS SERVICES	(C) AMOUNT
International Development Association	Livestock Development Loan	\$18.5 million

III. ORIGINATING OFFICE CLEARANCE

1. DRAFTER: Arnold Moeller, AFR/DS; <i>OK for</i> Mark Winter, REDSO/EA; <i>OK for</i>	XXXX Oleen Hess, USAID/T; <i>OK for</i> Frederick Machmer, AFR/ESA	DATE: March 8, 1974
2. CLEARANCE OFFICER: Jack Francis, <i>OK for</i> Richard Podol, <i>OK for</i> Vernon C. Johnson, <i>OK for</i>	TITLE: Program Officer <i>OK for</i> Assistant Director <i>OK for</i> Director <i>OK for</i>	DATE: March 8, 1974

IV. PROJECT AUTHORIZATION

1. CONDITIONS OF APPROVAL

See Page 2, attached

- 1/ Includes Subsector Analysis Study.
- 2/ Includes \$960,000 spread over first three years for infrastructure development.
- 3/ Funds made available from USAID Trust Fund - non-add.
- 4/ Includes contract participant training.

See page 106, Africa Program and Project Data Book, FY 1974 Congressional Presentation

11. SIGNATURES

NAME OF	SIGNATURE	DATE	BUR. OFF.	SIGNATURE	DATE
AFR/ESA	Edwin W. Lofthouse	2/24/74	AFR/AA	Donald Brown	3/8/74
AFR/ESA	Burton Gould	2/24/74	GC/AFR	Thomas A. Muntzinger	3/8/74
AFR/DS	Princeton Lyman	2/26/74	AA/AFR	Samuel C. Adams, Jr.	3/8/74
AFR/DP	Robert Huesmann	3/2/74	PPC/DPRE	Frank Kimball	3/8/74
			AA/PPC	Philip Birmingham	3/8/74
APPROVAL AND THE OFFICE DIRECTOR'S SIGNATURE			QC APPROVAL AND THE OFFICE DIRECTOR'S SIGNATURE		
DATE: _____			DATE: 5/12/74		
			Deputy Administrator		

PROJECT NO. 621-11-130-122	SUBMISSION <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> REVISION _____	(Number) DATE 3-3-74	PAGE 2 of 2 PAGES
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**IV. PROJECT AUTHORIZATION (continued)**

**1. Conditions of Approval**

This project is approved for a period of four to seven years subject to the following conditions:

- a. A thorough evaluation of the project design and implementation will be carried out approximately 30 months after initiation of the project.
- b. An amended PROP will be submitted for review by the Administrator, within 36 months after the initiation of the project, which reflects the results of the project evaluation.

UNITED STATES GOVERNMENT

# Memorandum

TO : Mr. Edwin W. Lofthouse, Tanzania Desk Officer      DATE: March 11, 1974  
AFR/ESA, AID/Washington

FROM : Jack H. Francis, Program Officer  
USAID/Tanzania

SUBJECT: Livestock Marketing Development PROP

Enclosed are two copies of the Livestock Marketing Development PROP which is essentially the same as you took to Washington with you, except for numerous minor changes. We have added one section at the end of the PROP justifying the selection of a university contractor for the project. We hope that this justification will be sufficient, but if something else is required please let us know. Regarding selection of a university contractor, a point not written in the PROP concerns the Masai project. Our very preliminary thinking is that we may want to change contractors for the Masai project, possibly using the same university or university consortium which is selected for the Livestock Marketing project. If appropriate, you may wish to raise this point in the several meetings you will undoubtedly be attending along the tortuous PROP approval route.

We would appreciate you keeping us informed of AID/W's reaction to this PROP and how long you feel it will take to get the document approved. We will begin preparing the ProAg and the PIOs so that we can move ahead immediately after the PROP is approved.

By the way, the map (Annex VII) is the only copy we have. Please make copies and send them to us along with copies of the PROP.



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## NONCAPITAL PROJECT PAPER (PROP)

### LIVESTOCK MARKETING AND DEVELOPMENT

621-11-130-122

#### SUMMARY:

This project is designed to assist the Government of Tanzania to establish an effective livestock development and marketing system in Tanzania. Over the proposed seven-year life of project, the U.S. will provide technical services, participant training, commodities and other costs financing. Total U.S. assistance is projected to be approximately \$4.4 million.

#### BACKGROUND:

The United National General Assembly has designated Tanzania as one of the 25 least developed nations of the world. As might be expected, agriculture is the leading sector, accounting for about 90 percent of the employment and about 40 percent of the GDP (1971). Within agriculture, subsistence farming provides over half the value of total output, with beef production, including subsistence, approximately 11 percent. Agricultural exports (about U.S.\$176 million in 1971) amount to about 60 percent of total exports, with the livestock industry supplying 4-5% (U.S.\$8 million in 1971) of the agricultural total.

However, livestock 1/ production is not achieving the production potential provided by a beef herd of approximately 10 million head, a climate with generally adequate rainfall for national pasture, and extensive range and grassland areas (somewhat over 60 percent of total land area is suitable for livestock production although the presence of tsetse flies currently keeps a large area underutilized). While there are several problems on the production side 2/, including inadequate nutrition, high disease and parasite infestation and low levels of management, a serious constraint to a more efficient industry is a poorly developed marketing system 3/ which reduces the incentives and opportunities for producers to market their cattle (commercial marketed offtake is about 3 percent). This is a particular problem for the estimated 250,000 owners of the traditional herd who lack the "know-how" or opportunity to market their few animals at incentive prices.

The Government of Tanzania (TanGov) has recognized the immediate and long run importance of obtaining additional output from the livestock industry, thus more effectively utilizing the available resources, and has embarked

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1/ Livestock in this paper will be synonymous with beef cattle unless otherwise noted.

2/ See the Livestock Subsector section of Annex I.

3/ See the Livestock Marketing section of Annex I.

on a strategy to increase production and offtake from both the commercial and the traditional livestock sectors in order to provide additional domestic and export supplies of livestock products. External financial and manpower support provided by the UNDP, the IDA and AID is being combined with domestic resources (\$17,360,000 in the Second Five Year Plan--1969-1974) in a number of livestock sub-areas. As indicated below the proposed United States assistance under this project is an important and integral part of the overall strategy, addressing key problems in the production-marketing chain and closely complementing and reinforcing other donor and TanGov projects (especially the IDA Phase II Livestock Development Project). 1/

The proposed project is also highly consistent with the earlier decision by the USAID Mission in Tanzania to concentrate on the livestock subsector because of the serious but judged solvable problems, TanGov interest, acknowledged U.S. expertise in the field and the belief that development resources provided by the U.S. could have a significant impact on livestock development. The Livestock Marketing and Development Project is an important component of the emphasis and complements other USAID projects in the livestock subsector which include: Masai Livestock and Range Management (621-11-130-093), Research on Sterility Methods of Tsetse Fly Control (931-17-130-030-72), and Tsetse Fly Eradication (Loan 621-H-016). Additional support is provided through the relevant components of the two Agricultural Support Loans (621-H-015 and 017). Together these projects amount to a sizeable effort to facilitate and stimulate the development of the Tanzanian livestock industry.

#### THE PROJECT:

The USAID/Tanzania livestock subsector goal is: to assist the Tanzanian Government achieve its objective of self-sufficiency and an exportable surplus in the livestock subsector, to the direct benefit of 125,000 traditional and small producer families through improved earnings 2/ and more than 1,500,000 urban and non-cattle producing rural consumers through improved nutrition from an adequate beef supply at an equitable price.

The purposes of this proposed project are:

1. To establish an effective livestock marketing system in Tanzania through the Tanzanian Livestock Marketing Company (TLMC);
2. To implement the Range Management and Water Development aspects of the IDA Livestock Development Project, Phase II;

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1/ A complete description of the IDA Phase II Livestock Development Project is contained in Annex II.

2/ There are approximately 250,000 cattle-owners in Tanzania. It is believed that reaching 50 percent of this number will be a significant accomplishment.

3. To improve the financial/accounting/management operation of the LIDA (Tanzanian Livestock Development Authority) 1/; and
4. To provide a comprehensive livestock subsector analysis.

To accomplish the above purposes the project will provide development grant assistance as follows:

	<u>U.S.\$000</u>
1. A Direct Hire Project Manager (Technical Support Funded)	
2. A nine-man contract team (six in the TLMC, two in the Phase II Unit and one in LIDA)	\$3862.0
3. Participant training (degree) in the United States for 10 staff members of the above organizations and observation training for 11 staff members from the TLMC	248.0
4. Commodities	110.0
5. Other Costs	30.0
6. Livestock Subsector Analysis Team	<u>150.0</u>
Total DG Cost:	\$4,400.0.

Project implementation will extend over seven years and consist of three phases. The first phase, lasting approximately one year, will involve the arrival of all contract team members, orientation, the development of appropriate work plans, the departure of a number of degree participants, the conduct of the livestock subsector analysis and varying technician involvement in the development activities of the project. The second phase will extend for four years. During this period all physical development will be completed, extensive on-the-job training of staff will be provided, the technicians provided to the IDA Phase II Unit will finish their responsibilities and depart, as will the project advisor working with LIDA, and all participants will return. In year three an intensive evaluation of the project will be conducted. The final phase (two years) will be focused entirely on the TLMC and will involve the turn-over of complete operational responsibility for the marketing system to Tanzanian staff. Details of these phases are found in the Project Implementation section of this PROP.

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1/ The law establishing LIDA is currently before Parliament. Passage is expected in March 1974.

The consequences of these activities will be an expansion of beef production and additional beef supplies for domestic production or export, through higher market prices and more efficient marketing services, improved incomes for thousands of traditional cattle owners and an improved information base on which to plan future livestock development activities. The overall effect will be more rapid rural development in line with the TanGov's emphasis on rural areas.

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PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK (GOAL)

Project Title & Number: Livestock Marketing and Development, 621-11-130-122

<u>Narrative Summary</u>	<u>Objectively Verifiable Indicators</u>	<u>Means of Verification</u>	<u>Important Assumptions</u>
<p><b>Program or Sector Goal:</b></p> <p>To assist the Tanzania Government achieve its objective of self-sufficiency and an exportable surplus in the livestock subsector, to the direct benefit of 125,000 traditional and small producer families <sup>1/</sup> through improved earnings and more than 1,500,000 urban and non-cattle producing rural consumers through improved nutrition from an adequate beef supply at an equitable price.</p>	<p>Measures of goal achievement.</p> <ol style="list-style-type: none"><li>1. Domestically produced livestock products are available in adequate supply, at reasonable prices and are properly marketed and distributed to meet total national demand.</li><li>2. Export value of meat, live animals, and hides raised from U.S. \$11.7 million in 1972 to over U.S.\$18 million in 1985.</li><li>3. Increased incomes for 125,000 cattle producing families. Comparative relationships of 1972 and current year prices of live cattle and retail meat prices.</li><li>4. Commercial marketing of production from extensive grazing ranches increases from 40,000 to 150,000 <sup>2/</sup> head annually and for the traditional herd from 270,000 to 400,000 head by 1985.</li></ol>	<ol style="list-style-type: none"><li>1. TanGov livestock marketing and meat processing data.</li><li>2. Foreign trade statistics for meat, hides and live animals.</li><li>3. Recorded prices of live cattle and retail meat.</li><li>4. DIPC and TLNC records and reports.</li></ol> <p>Veterinary Department slaughter inspection records.</p>	<p>Assumptions for achieving goal targets.</p> <p>The TanGov continues to emphasize livestock subsectors. Essential financial manpower and policy issues will be resolved by the TanGov in order to secure appropriate inputs, guidelines and incentives for increased production/marketing of livestock by Tanzania producers.</p> <p>The system for internal pricing, marketing and distribution of livestock and meat products functions properly, provides adequate incentives for increased production/marketing, and through higher market prices and more efficient marketing services results in increased incomes for 125,000 cattle producing families.</p> <p>The current annual offtake (318,000) plus the projected increased annual offtake (85,000) will be realized with the income distributed among the 250,000 traditional livestock producers, primarily the 125,000 of these the project is to reach &amp; affect.</p> <p>The TanGov policy of satisfying local consumption demands prior to export, and of considering producer incentive and consumer purchasing power in pricing policy continues.</p> <p>Baseline data is available and verifiable or new data can be collected which will allow meaningful comparisons with future available data.</p>

<sup>1/</sup> There are approximately 250,000 cattle-owners in Tanzania. It is believed that reaching 50 percent of this number will be a significant accomplishment.

<sup>2/</sup> A large portion of this increased offtake will be immatures purchased for fattening additive to the offtake from the production/breeding herd from ranches.

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**PROJECT DESIGN SUMMARY**  
**LOGICAL FRAMEWORK (PURPOSE)**

**Project Title & Number: Livestock Marketing and Development, 621-11-130-122**

<u>Project Purpose</u>	<u>Project Status by End of FY 1980</u>	<u>Means of Verification</u>	<u>Important Assumptions</u>
1. To establish an effective and efficient livestock marketing system in Tanzania.	1a. The Tanzania Livestock Marketing Company (TLMC) established, fully staffed with trained, competent Tanzanian manpower & discharging its assigned duties.	1. Expert technical evaluation.  TLMC records including staff and funding.  Comparison of producer and retail prices at current and baseline levels.	Competent manpower will be assigned to the Livestock Marketing Company and the on-service training and participant training program will provide appropriate essential training to upgrade competence and performance.  The purchase, renovation or development of the markets, stock routes and holding grounds will be timely and they will be properly maintained and managed to assure good service to producers.
	1b. Three large, ten medium and 124 small livestock markets in operation with adequate facilities.	On-site inspection.	
To implement the Range Management and Water Development aspects of the IDA Livestock Development Project Phase II.	1c. 4,500 kilometers of stock routes and 27 properly developed holding grounds in use.	Contractor reports.	TanGov will provide necessary financial, logistic, manpower and policy support.  IDA supported Livestock Development project, Phase II is implemented on schedule.
	1d. Annual commercial market off-take increased from the current 350,000 animals to over 500,000 animals.		
	1e. Producers share of wholesale or retail value of meat increased.		
	1f. Grading and pricing structure relating live-weight to carcass value and providing adequate incentives to producers in operation.		
	1g. Market news service established.		
	2a. Twenty two Ujamaa Cooperative ranches, eleven parastatal ranches, four District Development Corporation ranches established under Phase II Project are utilizing appropriate range management procedures.	2. Project reports.  Expert technical evaluation.  On-site inspection.  Technical activity reports.	

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK (PURPOSE)

Project Title & Number: Livestock Marketing and Development, 621-11-130-122

<u>Project Purpose</u>	<u>Project Status by End of FY 1980</u>	<u>Means of Verification</u>	<u>Important Assumptions</u>
	2b. Water development completed on above ranches		
	2c. See 1c above.		
	2d. Water points developed every 25 kilometers along stock routes.		
	2a. Tanzanian staff able to plan and monitor necessary range management and water development work without foreign technical assistance.		
3. To improve financial/accounting/management operation of the LIDA <sup>1/</sup> (Tanzania Livestock Development Authority).	3a. Tanzania Livestock Development Authority operating at a profit. 3b. Tanzanians occupying all positions in financial/accounting and management areas.	3. LIDA records. Expert technical evaluation. On-site inspection. Contractor reports.	LIDA becomes a statutory agency by Act of Parliament and has adequate financial support.
4. To provide a comprehensive livestock subsector analysis.	4a. Results of study have been and are being utilized in planning new livestock subsector development activities.	4. Expert evaluation.	Study will provide recommendations which are politically and otherwise feasible in the Tanzanian environment.

<sup>1/</sup> Law establishing LIDA is currently before Parliament. Passage is expected momentarily.

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**PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK (OUTPUTS)**

**Project Title & Number: Livestock Marketing and Development, 621-11-130-122**

<u>Narrative Summary</u>	<u>Objectively Verifiable Indicators</u>	<u>Means of Verification</u>	<u>Important Assumptions</u>	
<b>Outputs:</b>	<b>Magnitude of Outputs:</b>			
<b>1. Livestock Marketing</b>				
1a. Trained staff.	1a. 200 Tanzanians receive on-the-job training; 17 Tanzanians complete US-financed training (6 degree; 11 observation).	1. Direct observation.  TLM records.	TLMC is properly staffed and can adjust service charges to remain self reliant financially and will provide appropriate services.	
1b. Trained market teams.	1b. 13 market management teams are functioning effectively and operating at a total of 137 market sites with 2,600 market days per year.	Project records.  Project technical evaluations.  Contractor reports.		
1c. Trained buying teams.	1c. 13 buying teams covering the entire nation and buying an estimated 300,000 head for customers.	Technical activity reports.		
1d. A national livestock marketing policy.	1d. Policy articulated, understood and implemented.	On-site observations.		
1e. National livestock marketing system.	1e. National livestock marketing system developed and implemented.	Appearance of marketing news in media and publicised at markets.		
1f. Plans, budgets, operating procedures, analyses, etc. relevant to TLMC operations.	1f. Prepared as required.			
1g. Marketing news service established.	1g. Marketing news available through news media and at all livestock markets.			
<b>2. Range Management &amp; Water Development</b>				
2a. Trained staff.	2a. 2 Tanzanians complete US-financed training; (all degree) a to be determined number received on-the-job training.	2. Project records.  Project technical evaluation.  Contractor reports.  Technical activity reports.  On-site inspection.		TanGov will make available necessary financial and manpower resources for project operation.  TanGov will provide suitable staff for training.

**PROJECT DESIGN SUMMARY**  
**LOGICAL FRAMEWORK (OUTPUTS)**

**Project Title & Number: Livestock Marketing and Development, 621-11-130-122**

<b><u>Narrative Summary</u></b>	<b><u>Objectively Verifiable Indicators</u></b>	<b><u>Means of Verification</u></b>	<b><u>Important Assumptions</u></b>
<p>2b. Range Management plans.</p> <p>2c. Water Development plans.</p> <p>2d. Advice on range management, and water development programs.</p>	<p>2b. A plan for each ranch (37), for each holding ground (27) and as required for the stock routes.</p> <p>2c. Same as above.</p> <p>2d. As required.</p>		
<b><u>3. Financial/Management Assistance to LIDA</u></b>			
<p>3a. Trained staff.</p> <p>3b. Financial procedures, (financial reporting, etc.).</p> <p>3c. Management procedures (organizational structures, staffing patterns, etc.).</p> <p>3d. Functional/operational descriptions for management personnel.</p> <p>3e. Financial and management analyses/plans/recommendations for subsidiary companies.</p> <p>3f. Day-to-day advice on all aspects of authority operation.</p>	<p>3a. 2 Tanzanians completed US-financed training (all degree); on-the-job training provided as appropriate.</p> <p>3b, c, d, e, f. To be determined by contract technician according to needs of LIDA and to be outlined in annually revised PIPs and technician work plans.</p>	<p>3. LIDA records.</p> <p>Project evaluations.</p> <p>Contractor reports.</p>	<p>LIDA will become a statutory corporation by Act of Parliament.</p>
<b><u>4. Livestock Subsector Analysis</u></b>			
<p>4a. Completed study.</p>	<p>4a. Major report with supplementary reports as necessary.</p>	<p>4. Physical observation.</p>	<p>TanGov will cooperate fully in the preparation of such a study.</p>

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK (INPUTS)

Project Title & Number: Livestock Marketing and Development, 621-11-130-122

<u>Narrative Summary</u>	<u>Objectively Verifiable Indicators</u>	<u>Means of Verification</u>	<u>Important Assumptions</u>
<u>Inputs:</u>	<u>Arrivals:</u>		
<u>1. U.S.</u>			
<u>a. Technical Assistance</u>			
<u>Personnel</u>			
a1. Project Manager (1) Direct Hire funded under separate project.	On board	AID/TanGov Project Agreements and PI)/T.	Timely availability of AID TanGov funding and manpower.
a2. Contract \$3,862,000			
(1) Field & Training Adv. (1) 7 man years	1st quarter FY 75	Annual Project budgets.	Timely supply of qualified technicians by contractor.
(2) Economist (Marketing) (1) 6 man years	2nd quarter FY 75	Direct observation.	
(3) Range Development Adv. (1) 6 man years	2nd quarter FY 75	Project technical evaluations.	
(4) Livestock Marketing Officers (3) 19 man years	1 - On Board 1 - 2nd quarter FY 75 1 - 2nd quarter FY 75		
(5) Financial & Mgt. Adv. (1) 3 man years	On Board 1st quarter FY 75	Mid-project AID evaluations.	
(6) Range Mgt. Speclst. (1) 4 man years	1st quarter <sup>o</sup> FY 75	Contractor reports.	
(7) Water Development Specialist (1) 4 man years	1st quarter FY 75	Technician activity reports.	
<u>b. Commodities</u> \$ 110,000			
10 four-wheel drive vehicles (70,000)	5 vehicles year one 5 vehicles year four	Procurement and shipping documents.	Timely supply and shipment in accordance with procurement documents.
Contractor demonstration/training commodities for technicians (40,000)	Commodities as required.	Receiving and utilization reports. On-site observation. Project activity reports.	

PROJECT SWITCH SUMMARY  
LOGICAL FRAMEWORK (INPUTS)

Project Title & Number: Livestock Marketing and Development, 621-11-130-121

<u>Narrative Summary</u>	<u>Objectively Verifiable Indicators</u>	<u>Means of Verification</u>	<u>Important Assumptions</u>
<b>Inputs:</b>			
c. <u>Other Costs</u> \$ 30,000			
d. <u>Participant Training</u> 248,000	Participants in training. Trainees working in job after return.	PIO/T documentation. Academic reports. Staff assignments.	TanCov provides suitably qualified credit dates on timely basis.  TanCov utilizes returned trainees in project activities.
10 Long Term (academic) (206,000)			
11 Short Term practical and conceptual study tours. ( 42,000)		Evaluation of on-the-job performance.	
e. <u>Livestock Sub-sector Analysis</u> 150,000		PIO/T. Direct observation.	
Total USDC \$4,400,000			
<b>2. Govt. of Tanzania</b>			
Personnel, financial and logistic support \$2,500,000		Project Activity reports. Direct observation.	Adequate annual TanCov Budget (TanCov, TLNC, LIDA, etc.) and timely release of budgeted funds.
Infrastructure Development \$ 960,000		TanCov Budget.	
<b>3. Other Donor \$2,439,000</b>			
IDA credits for marketing sub-project.	Marketing sub-project physical development completed as stated under inputs.	Project activity reports. Contractor reports. TLNC reports. IDA reports. Direct on-site inspection. Annual technical evaluation.	IDA credits released on timely basis and IDA Loan Phase II project implementation proceeds on schedule.
Physical Development and Project Management Unit under IDA Loan Phase II Project.			

## PROJECT RATIONALE

### INTRODUCTION

As indicated in Annex I the livestock industry in Tanzania 1/ is not achieving its potential. From a national herd totalling some 10 million head, total offtake (including commercial slaughter, home consumption and deaths), is about 1 million (estimate based on hide sales) with approximately one-third passing through official market channels. The value of beef offtake in 1971 was about US\$50 million or approximately 11 percent of total agricultural production. Of agricultural exports, processed beef, live cattle, hides and skins amounted to approximately US\$8.0 million or 4.5% in 1971. For a nation where agriculture provides a livelihood for some 90 percent of the population and where approximately 23 percent of the land area is used for cattle grazing with another 40 percent in idle range and bush, largely due to tsetse fly infestation, and where an increasingly urbanized, increasing monetized economy is demanding increasing quantities of meat (from 1967-72; the demand for meat in the Dar es Salaam market grew at a rate of 36 percent per annum), the importance and potential impact of increasing the amount of livestock marketed is highly significant.

To serve the purposes of raising offtake, increasing producers' incomes, providing ample quantities of meat at reasonable prices for urban and low-income consumers, raising export quantities of meat and livestock (due to rapidly increasing demand and slowly increasing supply, export volume decreased from 97,000 head in 1966 to 36,000 head in 1971) and allowing the livestock sector to make a greater contribution to the Tanzanian economy, positive action on a number of fronts is required. It is not the scope of this project to address all the problem areas. Rather the inputs are selectively provided to solve the key marketing constraints and to support the IDA Phase Two Livestock Project. 2/ In addition, funding will be provided for a livestock subsector analysis in FY 1975 in order to fill existing information gaps in the more broadly defined livestock subsector (including sheep, goats, pigs, etc.).

### TANCOV EMPHASIS

An important consideration in the decision to support this project is the demonstrated interest of the Tanzania Government in the livestock subsector. A total of \$17,350,000 or approximately 20 percent of Government agricultural

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1/ Livestock refers to cattle for beef production and excludes sheep, goats, swine and dairy animals.

2/ See Annex II for a complete description of the IDA Phase II Project.

development expenditures was allocated in the Second Five Year Plan, 1969-1974 to the livestock subsector.

At the same time the TanGov recognized in 1972 that the restriction on retail meat prices enacted in 1967 were a disincentive to marketing and production while encouraging consumption. (During 1967-1971 beef prices decreased relative to other sources of animal protein, i.e., fish and eggs.) In 1972, therefore the retail price of meat was removed from the price control ordinance, which requires legislative action for a price change, and placed under the executive order authority of the Ministry of Agriculture. Thus, this Ministry now has the power to set and control retail prices under a simplified procedure and can set prices based on production cost information. In addition, the wholesale prices of the top three carcass grades of livestock have been completely exempted from price controls, i.e., hotels and restaurants can express a demand for highest quality meat by a willingness to pay higher prices. The result of these changes has been an increase in meat prices from 35 to 50 percent in 1972, depending on urban location and cut of meat, and approximately 12 percent in 1973.

The higher prices since 1972 (from 45 to 62 percent) and more efficient marketing services through establishment of the marketing company will accrue in direct benefits to the livestock producers. This will be enhanced through the expected reduced marketing costs, cesses, taxes, and decrease in the number of middle men. The increased income from increased prices (45 to 62 percent) and the expected increase in the number of animals marketed (85,000 animals producing 11,000 metric tons of meat) will be distributed primarily among the 125,000 effective livestock producers (one half the 250,000 traditional producers in the national herd) with some benefits to the other 125,000 marginal producers

This is borne out since of the 10,000,000 animals in the national herd only about 300,000 animals will be encompassed in the NACO, DDC and other commercial operations. The commercial operations basically have the management capability and herd size to market their own animals without the Livestock Marketing Company/Project, although they will benefit from an efficient national marketing system.

The average price to the traditional producer prior to the price increase averaged T.Shs. 2.25 to 2.50 per kilo, hot dressed weight. The price increase results in about T.Shs. 3.00 per kilo, hot dressed weight, to the traditional producer. The projected increased animal offtake of 85,000 animals by the end of the project is estimated to produce 11,000 metric tons of dressed meat at T.Shs. 3.00 per kilo. The annual benefits from this to the traditional producers will be T.Shs. 33,000,000. On this basis, assuming the producer realizes 20 percent of the average 53 percent price increase, the current animal offtake which will continue will return T.Shs. 123,573,000 to the traditional producers.

Therefore, it is estimated that the total annual income to the traditional producers of the national herd, current and projected increased offtake valued at the increased prices, will amount to T.Shs. 156,573,000. Of this amount T.Shs. 57,714,000 accrues from the projected increased offtake and the recent price increases.

It is estimated that of the 125,000 effective producers, 10 percent (12,500) own 50 percent (5,000,000) of the animals; that 90 percent of the effective producers (112,500) own 40 percent (4,000,000) of the animals; and that the 125,000 marginal producers own 10 percent (1,000,000) of the animals. On this basis it is estimated the producers will benefit respectively:

<u>Number Producers</u>	<u>T.Shs. Previous Income</u>	<u>T.Shs. Increased Offtake/ Prices Income</u>	<u>T.Shs. Total Income</u>	<u>T.Shs. Income Per Producer</u>	<u>U.S. Dollar Equivalent</u>
12,500	49,429,000	28,856,000	78,285,000	6,263	877.
112,500	39,544,000	23,084,000	62,628,000	557	78.
<u>125,000</u>	<u>9,886,000</u>	<u>5,774,000</u>	<u>15,660,000</u>	126	18.
250,000	98,859,000	57,714,000	156,573,000		

Between 1951 and 1970 slaughter for urban consumption increased 9 percent while urban population increased 6 percent. Between 1967 and 1972 slaughter for the Dar es Salaam market increased 36 percent while the urban population increased 10 percent. The increased price of meat in 1972 and 1973 did not noticeably decrease the demand for meat by local consumers. Although further increases in the cost of meat could affect demand somewhat a substantial continuing increased demand by local consumers is expected. Furthermore, the supply to satisfy local demand is assured since TanGov policy is to satisfy local consumption demand before export is permitted, thereby limiting export to the surplus over local demand.

This does not reflect in estimated increased shilling returns to the producers from decreased marketing costs (cesses/fees) and transportation costs. The average fees currently vary from T.Shs. 2.00 to T.Shs. 22.00 per head. The rail transportation per head to TPL in Dar es Salaam costing T.Shs. 43.00 from Shinyanga and T.Shs. 73.00 from Mbeya, and lesser amounts from closer points, will be largely eliminated with establishment of the slaughter houses at Shinyanga and Mbeya. Some of these savings should be passed on to the producers.

The fact that Tanganyika Packers Ltd. (TPL), with encouragement from the Tanzanian Government, has introduced a grading system for cattle purchase and is currently developing a new structure, are other signs that the "climate" is becoming more and more conducive to a marketing and production effort.

The final positive element is the TanGov agreement to consult regularly with the IDA on its pricing policies in respect to the production, processing and marketing of beef cattle with the objectives of: (1) encouraging the production and export of beef products; (2) ensuring the financial viability of the beneficiaries; and (3) ensuring a reasonable allocation of investment resources in beef cattle and other sectors. Combining these objectives with the Minister of Agriculture's authority to raise prices based on cost information, it appears that incentive returns to producers are very likely. The proposed USAID project will assist the TanGov in collecting necessary data on which to review and adjust marketing and price policy structure.

#### USAID EMPHASIS

Another major consideration in proposing assistance in livestock marketing and development is the focus of the USAID program in Tanzania.

The USAID effort in Tanzania is already concentrated in the livestock and food crops subsectors of the agricultural sector. These are the areas in which USAID/Tanzania has been historically involved and where, because of the importance of providing basic foods in the least developed countries and the U.S. expertise in livestock and food crop production, it is believed the U.S. development impact will be most significantly felt. Other projects in the livestock subsector which this project will complement and facilitate are: Masai Livestock and Range Management (621-11-130-093), Research on Sterility Methods of Tsetse Fly Control (931-17-130-030-72), and Tsetse Fly Eradication (Loan 621-H-016).

The objective of the Masai project is increased quantity and quality of livestock meat projects. By concentrating on eight Ranching Associations in Masailand, it is intended to increase the annual herd offtake from 7% in 1970 to 12% in 1980 on the eight fully activated associations, with thirteen other associations in various stages of development toward this objective. Effective marketing channels are of crucial importance in this effort.

The two tsetse fly control and eradication projects address the major factor noted herein concerning the distribution of cattle in Tanzania-- the tsetse fly, the vector responsible for trypanosomiasis in cattle and sleeping sickness in humans. The centrally funded tsetse fly research project in Tanganyika and the loan for tsetse fly clearance and control equipment in the West Lake Region are aimed at a reduction in the more than 60% of the land area of Tanzania affected by the tsetse fly. New ranches, assisted by this project, will be established in some of these areas.

It would have been useful to have a detailed analysis of the livestock subsector before beginning any or all of these projects as well as the Marketing and Development Project. However, it is USAID judgement that

a subsector analysis would and will confirm the value of certain of these projects as experimental efforts to address key problems which, if successful, will have a much wider application. The Masai and Tsetse Research Projects fall in this category. Other projects, Tsetse Clearance and Livestock Marketing and Development, are providing some of the equipment and infrastructure necessary for the development of the livestock industry irregardless of whether it follows a traditional or commercial pattern of development. This proposed Livestock Marketing and Development project in particular fills an important infrastructure gap.

In conclusion, the above projects, including the proposed Livestock Marketing and Development project and relevant components of two Agricultural Support Loans (621-H-015 and 017), are mutually reinforcing and address the objective of increased and improved livestock production and marketing in Tanzania. Together they offer a significant input aimed at key and quite obvious constraints on the livestock subsector.

#### RELATIONSHIP TO OTHER DONOR PROGRAMS

The major donor in the livestock subsector is the IDA through a Phase II Livestock Credit (1973) which provides funds to implement six closely interrelated sub-projects intended to improve the production, marketing and processing sections of the livestock industry. Specific sub-projects are:

1. Ujamaa and Corporate Ranches
2. The NACO Ranches Expansion
3. The Tanzania Livestock Marketing Company Limited (TLMC)
4. The Tanzania Meat Processing Company Limited
5. Tsetse Fly Clearance and Development Unit
6. Technical Assistance

The AID project emphasizes and provides technical assistance to the marketing sector, primarily through the TLMC which has full responsibility for developing the marketing services and utilizing the infrastructure provided by the IDA Credit. The Range Management and Water Development component of the proposed USAID assistance will play an important role in the effective establishment of the IDA-funded ranching elements as well as supporting the physical development aspects of the marketing project. Because the proposed Tanzania Livestock Development Authority will have responsibility for the entire livestock subsector, the Financial/Management Specialist will be in a position to affect all aspects of the IDA Project.

Thus all elements of the proposed AID assistance are closely linked with the IDA financed projects. The technical assistance provided by the AID financed technicians will help make the infrastructure provided through the IDA credit productive and of benefit to the Tanzanian economy. AID's particular emphasis is on the marketing element which links production with marketing and distribution and which is most important to the traditional producers who lack commercial outlets.

Other donor assistance to the livestock subsector is provided by the UNDP/FAO in disease-free area and pre-slaughter cattle feeding and Dutch AID in cold storage for food distribution and retailing. While the relationship of the AID inputs to these efforts is less direct it is obvious that there are reinforcing aspects.

#### EMPLOYMENT, EQUITY AND OTHER CONSIDERATIONS

The creation of approximately 300 jobs in the Livestock Marketing Company, 2,500 jobs in the NACO/DDC ranches, and 750 in the other companies/activities to be established represents the most direct employment effect of the USAID project and the larger IDA financed effort. In addition, more productive self-employment opportunities will be available for about 1,400 persons in 700 families on Ujamaa ranches, and approximately 4,000 families will be assisted through loan funds available to the first eight registered ranching associations in the Masai Livestock Project. This permanent employment will be supplemented by the temporary or casual labor which will be required in widely scattered locations during the physical development of stock routes, water points, etc. No accurate estimate of the man years required can be made.

The less direct employment effects of the project, the marketing element in particular, will also be significant. The production of the additional 85,000 head which the project expects to extract annually from the traditional herd by year 12 will require additional labor. Again the quantity cannot be estimated but the magnitude of the increase (25 percent over current marketings) would imply a substantial amount.

An analysis of the IDA Phase II project on equity grounds shows a bias toward commercial or large scale beef enterprise versus traditional cattle production. The investments in NACO and DDC ranches (40% of total project costs) clearly benefit large scale operations. The nine percent for Ujamaa Ranches will directly affect a substantial number of traditional cattle producers although the ranches themselves will be fairly large. The 21 percent project investment in meat processing facilities will benefit the commercial enterprises with their higher average cattle grades but the majority of the offtake passing through the facilities will come from the traditional sector. Thus, the benefits are perhaps equally divided. The livestock marketing component (12%) provides the greatest benefits to the small producer and traditional herdsmen because the larger commercial producers have greater opportunities for self marketing due to a larger volume and regularity of quantity and quality of supply. Also, of the quantities to be handled, the largest proportion comes from the traditional

sector. The final two items included for IDA financing, technical services (6%) and price contingencies (12%), can presumably be divided proportionally to the other investments. If the above percentages are then totaled, it shows that approximately 62 percent of the investments will benefit large scale operations versus 38 percent for traditional producers.

The reasons for the bias are clear. To meet the rapidly increasing urban and rural demand for beef and to increase exports in line with TanGov policy, it is essential to commercialize marketing and to a degree production. Results can be obtained more quickly from commercial production and require less technical inputs (which are in short supply in Tanzania) than would an effort directed solely at the thousands of traditional producers. Also the past experience of the IDA in this type of bankable operation was also undoubtedly a factor.

Perhaps a viable project aimed primarily at the traditional producer, which would have produced the same growth in production and benefits to the economy in approximately the same time span as the IDA project, could have been developed. However, because of a lack of data, little available experience in obtaining production increases from the traditional sector, trained manpower limitations and organizational/logistical difficulties in reaching the small producers it seems unlikely. Thus the current IDA project, which has substantial inputs benefitting the traditional sector, may be a reasonable compromise. The AID bias toward the traditional producer through the marketing component provides additional balance to livestock development activities in Tanzania and helps ensure the development of infrastructure elements vital to any subsequent production effort involving only the traditional sector.

In this regard it is not likely that current IDA activities will set the pattern for future development of the livestock industry in Tanzania. In general no large resettlement schemes on tsetse cleared areas are underway due to financial costs and the lack of extreme land pressure in the majority of existing areas. At least in the short-run, extensive ranching is the easiest way for the TanGov to utilize the areas. This notwithstanding, the TanGov originally proposed a greater emphasis on Ujamaa type ranches in the Phase II project but for reasons of inexperience on the part of the Government with this type of organization and in getting the small producer to accept a technical package of improved practices, the number was reduced. It seems certain, if the Ujamaa ranches are successful in Phase II, that the TanGov will insist on additional emphasis on this type of organization in any future projects.

The AID financed livestock subsector analysis will evaluate the alternatives available to the livestock industry and hopefully will provide an in-depth analysis of the traditional sector that can be used as a basis for future programs. Data and information generated will be very important to the

preparation of a Third IDA Livestock Project which is to put greater emphasis on involving the traditional producer, including the development of mixed enterprises.

### ECONOMIC CONSIDERATIONS

The overall economic return for the entire IDA Phase II Livestock Development Project, including the TLMC, the meat processing plant and the ranching component (excluding the AID input), was calculated to be 35 percent, using shadow prices of labor and foreign exchange and the international rather than the domestic value of production. With costs and benefits valued at market prices the rate of return was 14.2 percent. Other alternatives which increased investment costs or decreased revenues produced rates of return ranging from 25-32 percent. If the AID costs (\$2.8 million) are included, the rate of return drops to about 30 percent.

For the economy, the project would generate, at full development, about US\$1.9 million of tax revenue annually and, in addition, the parastatal companies would have annual net income of about US\$2.7 million which could be utilized by Government. It is also projected that at full development the project would increase net foreign exchange earnings from exports of canned beef by over US\$6.0 million annually.

Thus on a macro or aggregate project basis the Phase II Project, which the AID inputs will support, appears to provide a good economic return and offers the Tanzanian Government a method of earning additional foreign exchange while also increasing domestic beef supplies.

The marketing sub-project was calculated in the IDA analysis to have a financial rate of return of 18 percent (excluding the AID input). If the AID input to the marketing company is included (approximately \$4.4 million) the return is reduced by about 6.0 percent. As could be expected the rates of return are sensitive to the charges levied and the number of cattle passing through the facilities. For example, if the purchase charge is lowered by 20 percent, the rate of return, including AID costs, is reduced to about 9 percent. If the number of cattle entering the stock route and marketed by the TLMC is 15 percent less than projected the rate of return is reduced by approximately 8 percent. Because the original IDA analysis was based on reasonable charges for TLMC services and only moderate growth over a nine year period in cattle marketed from the traditional sector, it is USAID/Tanzania judgement that the calculated rate of return will be achieved. Nevertheless, given the importance of the marketing component to the traditional sector, it would also seem that the project remains worthwhile even if the actual rate of return proves to be lower than originally projected.

### ENVIRONMENTAL CONSIDERATIONS 1/

On balance, the environmental impact of the proposed AID project and the IDA Phase II Development Activities is highly favorable. Under the marketing element and other allied IDA Phase II sub-projects approximately 2,100 square miles are to be developed or only 0.6 percent of Tanzania's total land area and about 1.1 percent of the presently unused area. In general, the project sites are located in areas suitable and best used for grass production due to light, easily erodable soils and inadequate or irregular rainfall. As can be seen from the map (Annex VII) the development sites do not seriously threaten wildlife concentration areas nor are migratory routes impeded. In fact, wildlife populations may benefit through improved water supplies, reduced fire hazards, lower disease incidence, and better grazing as management is introduced into range areas. The clearing of tsetse from certain areas will involve the application of insecticides but the materials to be used have been thoroughly field tested, have a short stable life and are virtually non-toxic to animals and fowl in the concentrations employed. Removal of tsetse flies also lessens the threat of human sleeping sickness. Properly managed cattle movements combined with vaccination programs, quarantine and animal health services should also reduce the spread of animal diseases.

It is concluded that the specific activities of this USAID project and the related projects in livestock development under the IDA Phase II have a definite beneficial effect on the environment, with many specific desirable actions and no foreseen significantly undesirable or hazardous effects.

### POSSIBLE IMPEDIMENTS TO PROJECT SUCCESS

There are two areas where serious problems might occur. The first is in the attitude of the small cattle owner toward the sale of additional livestock. If cattle are viewed as a source of wealth rather than a means to secure income, which in turn can be used to acquire desired goods and services, then improving marketing channels may have little effect on the number of animals offered for sale. While a clear verdict is not yet in, there is some evidence that producers are responsive to price, i.e., higher prices bring forth additional animals which in turn indicates that cattle are viewed as a source of income. When TPL raised prices in the Arusha area they soon had more cattle than they could transport and handle on short notice. Similarly in the Masai Project there has been willingness to market excess animals. Nevertheless an important responsibility of the TLMC will be to determine "why producers market cattle" and to devise or adjust marketing programs accordingly.

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1/ See Annex III for greater detail.

The second possible impediment is the ability of the Tanzanian economy to provide required manpower. As has been pointed out elsewhere, trained Tanzanian manpower is in short supply 1/ particularly in selected areas such as livestock production and management. The various organizations involved in the IDA project and the AID project will require, almost universally, additional staff. Undoubtedly there will be difficulties in recruiting the type of people required, especially at senior and intermediate staff levels. The expectation is that expatriate project staff will bear a heavy load until participants return from training and are operationally active, i.e., the latter half of the project. However, it is believed with the proposed training that by the end of the project sufficient staff of suitable training and ability will be in place to enable continued successful operation of the organizations established. 2/

For lower level staff, recruitment should not be difficult but extensive in-service and on-the-job training will be required.

#### AID INPUTS

Direct management and monitoring responsibility for the project within AID will rest with a Direct-Hire Project Manager located in the Food and Agriculture Division. It is expected that the same officer will also be responsible for the Mahai Livestock Development Project, the Tsetse Eradication effort and all other USAID projects directly related to livestock development in Tanzania. This concentration of responsibility in a single individual will facilitate inter-project coordination and increase the chances of success for each project. Technical services under the project will be provided through a contract with an appropriate U.S. institution. The first participants will be handled directly by AID, to enable early departure, with subsequent participants handled by the contracting institution. Commodity procurement will be handled by AID. Projected U.S. financed local costs are minimal and will be met from Trust Funds. A brief description of each component follows:

#### TECHNICAL SERVICES

(\$3,862,000)

A total of nine contract specialists will be provided. Six technicians, including a Field Marketing and Training Advisor (FMTA) (Marketing Program Coordinator), a Livestock Marketing Economist, a Range Development Advisor and three Livestock Marketing Officers (LMOs) will be assigned to the Tanzania Livestock Marketing Company (TLMC) (approximately 39 man years)

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1/ See PROP for Agricultural Manpower Development (Tanzania) September, 1973, for the most comprehensive description.

2/ See Annex VI for a complete discussion of project training.

Two technicians, a Range Management Specialist and a Water Development Specialist, will be posted in and form a key part of the IDA Phase II Project Management Unit (8 man years). The remaining specialist, a Financial and Management Advisor, will be provided to the Tanzania Livestock Development Authority (3 man years). (See Annexes V and VII for job descriptions and chart showing location and relationships of organizations mentioned). To support the contract, funding is provided for a local hire secretary to be officed with the FMTA.

A single contractor will be expected to supply the entire contract staff and for administrative purposes will designate an overall contract team leader, with responsibility for general contract matters within Tanzania. However, the FMTA will have supervisory and coordination responsibility for the livestock marketing program and those contract members assigned to TLMC.

Six of the technicians will be headquartered in Dar es Salaam with the Livestock Marketing Officers initially located in Arusha, Shinyanga and Dodoma. One of the LMOs may move to Mbeya in the later stages of the project. (See following two tables titled "Project Staffing" and "Personnel Funding").

#### PARTICIPANT TRAINING

The project provides U.S.\$248,000 for participant training to help alleviate the serious trained manpower shortage and to facilitate successful project implementation. Academic professional training in the U.S. is scheduled for 10 candidates in the fields of Agricultural Economics including Marketing and Market Management (5), Range Management (2), Agricultural Engineering (1), Business Administration/Economics (1), and Financial Management/Economics (1). These participants will return to key positions in the TLMC (6), the Ministry of Agriculture (2) and LIDA (2). Conceptual study tours in the U.S. are proposed for 3 groups totalling 11 people. The first group is for a top level management team consisting of the TLMC General Manager, the Chief of TLMC Field Operations and the TLMC Marketing Officer. The second two groups of four each would consist of the TLMC Senior Market Management Officers and senior Cattle Buyers for the four zones that are to participate. (See Annex VI for schedule of training and complete justification for numbers of participants).

#### COMMODITIES

(\$110,000)

Commodity inputs will be as follows:

Vehicles: Five four-wheel drive carryall type vehicles are required for field use by TLMC staff. Each Zonal Livestock Marketing Officer will be assigned one vehicle to help meet staff and equipment transportation

requirements in his zone. The Range Development Advisor to the TLMC will need a vehicle on a continuing basis to assist with the development of stock routes and holding grounds throughout the country. The final vehicle will be assigned to the FMTA and the Agricultural Economist located in the TLMC headquarters and the Financial and Management Technician assigned to LIDA for use in day-to-day activities and particularly for the considerable field work which will be required to develop an effective organization. Replacement of the five vehicles is projected for year four of the project. The cost of 10 vehicles is budgeted at \$70,000.

Training Materials: An important element of contract staff responsibilities will be to provide on-the-job, formal and informal job-training primarily to marketing, holding grounds and buying teams. Our best estimate of the value of the materials to be used in the training activities is US\$40,000. Actual quantities and prices will be developed by contract team members after their arrival.

OTHER COSTS

(\$30,000)

To facilitate project operations, the contractor over the life of the project will be provided a total of \$30,000 to purchase miscellaneous items, such as periodicals, books, emergency office supplies, small commodities, and other items as necessary. The annual work plans, to the extent possible, will include how and for what these funds will be used. It is recognized, however, that these funds are made available for use to help facilitate project activity and their use cannot always be planned for.

SUBSECTOR ANALYSIS

(\$150,000)

A contract team will be provided to conduct a comprehensive livestock subsector analysis. Funding is provided for approximately 30 man-months of services. Exact composition of the team and whether it will be composed of short or long term personnel has not been determined. (See following table titled "Summary of AID Project Funding").

LOCAL COSTS

Local costs to be financed will be met from Trust Fund payments made by the Government of Tanzania into the AID Trust Fund account. Only a small amount of local supplies and equipment and other items will be provided. The estimated value over the life of the project is T.Shs. 210,000 (approximately \$30,000).

PROJECT STAFFING

	<u>Fiscal Year</u>						
	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
1. Project Manager (Direct Hire) <u>1/</u>	-----						
2. Field Marketing Training Advisor	-----						
3. Economist	-----						
4. Range Development Advisor	-----						
5. Livestock Marketing Officer <u>2/</u>	-----						
6. Livestock Marketing Officer	-----						
7. Livestock Marketing Officer	-----						
8. Financial and Mgt. Advisor	-----						
9. Range Mgt. Specialist	-----						
10. Water Development Specialist	-----						
11. Secretary (Local Hire)	-----						

1/ Also Project Manager for other projects in the livestock subsector. Not funded under this project.

2/ Funded under an existing contract until the middle of Year Two.

PERSONNEL FUNDING 1/

<u>Specialist</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Field Marketing Training Advisor	45,000	45,000	50,000	50,000	55,000	55,000	60,000
Economist	30,000	40,000	44,000	44,000	49,000	49,000	40,000
Range Development	17,500	35,000	39,000	39,000	43,000	43,000	47,000
Livestock Marketing	-	34,000	39,000	39,000	43,000	43,000	47,000
Livestock Marketing	17,500	35,000	39,000	39,000	43,000	43,000	47,000
Livestock Marketing	17,500	35,000	39,000	39,000	43,000	43,000	47,000
Financial Management	40,000	40,000	44,000	11,000	-	-	-
Range Management	40,000	40,000	44,000	44,000	11,000	-	-
Water Development	40,000	40,000	44,000	44,000	11,000	-	-
Secretary (Local Hire)	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>	<u>4,000</u>	<u>4,000</u>	<u>4,000</u>
Total	250,500	347,000	385,000	352,000	302,000	280,000	200,000

\* Grand Total \$3,862,000

\* Note:

New estimate of professional services cost is : 76,400 per man year over the life of the project or a total of technician services of \$3,838,000 plus \$24,000 for secretary totaling \$3,862,000.

1/ 10% estimated increase every two years.

SUMMARY OF AID PROJECT FUNDING

<u>Item</u>	<u>FY 74</u>	<u>FY 75</u>	<u>FY 76</u>	<u>FY 77</u>	<u>FY 78</u>	<u>FY 79</u>	<u>FY 80</u>	<u>Total</u>
Contract & Technical Services	<u>1/</u> 742,000	<u>2/</u> 808,000	<u>2/</u> 784,000	<u>3/</u> 528,000	<u>3/</u> 490,000	-	510,000	\$3,862,000
Participant Training	<u>4/</u> 96,400	<u>5/</u> 132,400	<u>6/</u> 19,200	-	-	-	-	248,000
Commodities	<u>7/</u> 45,000	<u>8/</u> 10,000	<u>7/</u> 10,000	45,000	-	-	-	110,000
Other Costs	5,000	5,000	5,000	5,000	5,000	5,000	-	30,000
Subsector Analysis	<u>150,000</u>	-	-	-	-	-	-	<u>150,000</u>
<b>Total</b>	<b>\$1,038,400</b>	<b>955,400</b>	<b>818,200</b>	<b>578,000</b>	<b>495,000</b>	<b>515,000</b>	<b>-</b>	<b>4,400,000</b>

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- 1/ Funding for first 13 months of contract.
  - 2/ Funding for 15 months.
  - 3/ Funding for 12 months.
  - 4/ 8 Long-term and 3 Short-term (1 month each).
  - 5/ 2 new Long-term and 8 Short-term (2 months each), 8 continuing.
  - 6/ 2 continuing.
  - 7/ Five 4-wheel drive vehicles plus \$10,000 training commodities.
  - 8/ Training commodities.

TANZANIA INPUTS

AID expects the TanGov and concerned Tanzanian parastatals to be responsible for the following services and costs in support of the project:

A. Human Resources:

1. Tanzania Livestock Marketing Company (TLMC)

One General Manager  
One Chief of Field Operations  
One Veterinarian  
One Chief Development Officer  
One Administrative Officer  
Four Zonal Managers  
Thirteen 5 man market management teams = 65 people  
Twenty-seven holding grounds and stock teams = 81 people  
Thirteen Buying Teams = 65 people  
Physical Development Teams = 12 people  
Office Administrative and Accounts Staff = 6 people  
Laborers; herders, etc. as required

2. Livestock Development Authority (LIDA)

The implementation committee appointed to formulate the organization, functions and responsibilities of LIDA has presented its report to the Minister of Agriculture for consideration by the Ministry, the National Cabinet and the Parliament for enactment of legislation to establish the authority, possibly by March, 1974.

Therefore, the following organizational inputs are assumed and will be officially documented when LIDA is established:

One General Manager  
One Auditor  
Five Service Division Heads  
-- Administration  
-- Financial  
-- Marketing  
-- Technical  
-- Procurement

Supporting staff - full complement to be determined. (LIDA covers all livestock projects thus only a percentage of the total can be attributed to the TLMC and/or the USAID funded Financial and Management Advisor).

**3. IDA Phase II Project Management**

**One Project Manager  
Supporting Staff**

**B. Costs Associated with Project Staff:**

1. Trust Account payment @ T.Shs. 21,600 per man year provided.
2. Office space and normal administrative support (secretarial, furniture, supplies, office equipment) at local standards.
3. Operating and repair costs for project - provided vehicles, vehicles procured under the IDA Credit (2) for use of Project Management Unit staff and locally provided vehicles.
4. Housing, hard furnishings and utilities for project staff.

**C. Costs Associated with Project Operations:**

1. Repair and replacement costs for AID-provided commodities.
2. Initial operating capital for TLMC operations.
3. Participants for external and internal training.
4. Support for local staff working on the project according to local standards (salary, housing, office space, travel, allowance, etc.).

	<u>Unit Cost</u>	<u>No.</u>	<u>Yearly Estimates Total</u>
Trust Account Payment	\$3,130	9	\$ 28,170
Office Equipment and Supplies	100	9	900
Senior Staff Salaries <u>1/</u>	5,000	10 <u>2/</u>	50,000
Junior Staff Salaries	1,000	200 <u>3/-</u>	200,000
Vehicles - repair and operation	2,000	5	10,000
Travel and Allowance for Local Staff	-	-	22,000 <u>4/</u>
Housing Costs	4,000 <u>5/</u>	9	<u>36,000</u>
Yearly Total			\$ 347,070
For seven years operation			\$2,429,490 <u>6/</u>

1/ Includes participants.

2/ Includes six TLMC staff, three LIDA staff and one Project Management Unit staff.

3/ Less than actual projected members of junior staff to allow for vacancies and phased build-up.

4/ An estimate based on costs of \$200 for senior staff and \$100 for junior staff.

5/ Estimated value of \$300 per month plus \$400 for furnishings and utilities.

6/ Does not include initial equity capital provision of \$960,000 made by NAPCO to TLMC.

NOTE: Not included are value of land provided for stock routes and holding grounds, general overhead costs of motor pool or office administration and other costs associated with Tanzania Government Ministries or parastatals with or in support of the project.

OTHER DONOR INPUTS

A. Direct - IDA

1. Credits for Physical Development of TLMC Operational Infrastructure	= \$ 2,400,000
2. Credits for contracting TLMC Chief Accountant	= <u>39,000</u>
Total	= \$ 2,439,000

B. Indirect - IDA Related (Not included in Project Total)

1. IDA Phase II project activities other than TLMC	= \$16,000,000
2. UNDP/FAO provided members of Phase II Project Management Unit	= 80,000
3. Dutch Assistance in Development of retail trade channels for meat and other food products	<u>NA</u>
Total	= \$16,080,000+

PROJECT IMPLEMENTATION

GENERAL

A United States Institution or firm will be employed as a contractor to provide the technical services. All staff involved (except the Direct Hire Project Manager) will fill operational positions with AID providing salaries and the TanGov contributing T.Shs. 21,600 per man year to a USAID Trust Fund to be used, at least in part, to support project operations. Annex V contains job descriptions and qualifications requested for the nine professional contract personnel.

PROJECT MANAGEMENT AND COORDINATION BETWEEN AID, THE CONTRACTOR, AND TANGOV ORGANIZATIONS 1/

The overall USAID coordination and supervision will be through the Project Manager who will be an AID Direct Hire employee funded outside the project. The Project Manager is responsible for USAID management, supervision, coordination, monitoring and documentation. He will be the direct contact

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1/ See Annex V for additional discussion of these topics.

with the Contract Team Leader and through the F&A Office and USAID he will provide the necessary link with the contracting institution. The Project Manager will also represent USAID in official contacts with Ministry of Agriculture and parastatal officials in all matters relative to the project, its implementation, its progress or its problems.

#### WITHIN THE CONTRACT 1/

The Field Marketing and Training Advisor (FMTA) assigned to TLMC and based in Dar es Salaam will be the Project Team Coordinator of the live-stock marketing team directly responsible to the General Manager TLMC for the marketing project activities carried out by the contract marketing team members assigned to the TLMC. He will jointly with the General Manager (TLMC) or his designee supervise the marketing team members. He will also serve as the primary contact between the USAID Project Manager and the contract marketing team on implementation matters concerning the livestock marketing program.

The contractor will assign the FMTA or one of the other contract staff (not a marketing team member) as contract representative or overall contract team leader directly responsible for a conduct of all contract or administrative/support matters vis-a-vis USAID and home institution requirements, i.e, leave records, personnel evaluations, etc. He will also serve as the direct contact between the USAID Project Manager and all contract staff on direct contract matters. The team leader will be responsible for maintaining close liaison and staying informed of the activities of all contract staff assigned to the marketing team, the Phase II Project Management Unit, and LIDA.

#### ANNUAL WORK PLANS

To assist in implementation, the AID Project Manager, in cooperation with the Contract Team Leader and the staff assigned to the marketing company, the IDA Phase II Management Unit and LIDA, will prepare a detailed implementation schedule which will be kept up-to-date.

In addition the Contract Team Leader in conjunction with the FMTA (if not one and the same) will be expected to coordinate the preparation of annual detailed work plans for the AID provided contract staff to the TLMC. The Project Management Unit and the LIDA contract staff will also be expected to each provide detailed work plans. Such annual work plans will be approved by the appropriate TanGov or parastatal institution and be in sufficient detail that AID project management can determine and measure project progress.

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1/ See Annex V for additional discussion of these topics.

DETAILED IMPLEMENTATION SCHEDULE

The following implementation schedule sets forth the ideal. It is in detail for the first year of the project and increasingly less specific in the latter years of project operation. Once the PROP is approved more precise dates for a number of the actions will be possible. Further precision will be provided by the annual up-dated detailed work plans to be submitted by contract staff.

*6/18/75  
approx 6 months  
slip time*

	<u>FY 74</u>		
	<u>Time Frame</u>		<u>Responsible Agencies</u>
PROP prepared	Feb.	1974	AID/USAID/TanGov
PROP approved	Mar.	1974	AID
Project Agreement signed	Apr.	1974	USAID/TanGov
PIO/T providing contract staff prepared/issued	Apr.	1974	USAID/TanGov/AID
PIO/Cs for vehicles issued	Apr.	1974	USAID/AID
Selection of first participants and preparation and issuance PIO/Ps	May	1974	USAID/MinAg
Contract for Services agreed to/issued	June	1974	AID
Houses identified for Incoming Project Staff	June	1974	USAID/TanGov
	<u>FY 75</u>		
Three in-country Specialists transferred to new contract	July	1974	Contract/AID/USAID
Team Leader, Range Management Specialist and Water Development Specialist arrive	July	1974	Contract/AID/USAID
Work plans developed	July-Aug.	1974	Contract/Parastatals
First five degree participants depart	Aug.	1974	USAID/TanGov

FY 75 - cont'd

<u>Action</u>	<u>Time Frame</u>	<u>Responsible Agencies</u>
First five degree participants depart	Aug. 1974	USAID/TanGov
First group of observation participants depart	Aug. 1974	USAID/TanGov
Preparation and issuance of PIO/Cs for commodities	July-Aug. 1974	Contractors/USAID/Parastatals
Additional three team members arrive	Oct. 1974	Contract/AID/USAID
Project Agreement and PIO/T signed	Nov. 1974	USAID/TanGov
Three degree participants depart	Dec. 1974	USAID/TanGov
Additional participants selected	Jan. 1975	Contract/USAID/Parastatals
Annual project evaluation	June 1975	Contract/USAID/Parastatals

FY 76

Annual work plans developed	July-Aug. 1975	Contract/Parastatals
Two degree participants depart	Aug. 1975	USAID/TanGov
Two observation training groups depart	Aug. 1975	USAID/TanGov
ProAg and PIO/T signed	Nov. 1975	USAID/TanGov
Annual Evaluation	June 1976	Contractor/USAID/Parastatals
First degree participants return	June 1976	TanGov/USAID

FY 1977 - FY 1980

Unless modified by the results of the annual evaluations and the special evaluation to be conducted in FY 1977, implementation will continue more or less as in FY 1976. As participants return the contract staff will be increasingly involved in in-service training. By project phase out, FY 1980, trained and experienced Tanzanian personnel will be available to carry out duties previously performed by project staff.

CONTRACTOR SELECTION

After due consideration USAID proposes that the contract for this project be with a university in the intermountain/range cattle area of the Western U.S. This area generally encompasses Texas, New Mexico, Oklahoma, Utah, Colorado, Wyoming, Montana and Idaho. The reasons for our recommendations are:

1. USAID, through the assistance provided in livestock marketing by Mr. Hugston Elijah, Agriculture Materials and Services, Project 101, has learned that much of the success of livestock marketing in Tanzania depends on livestock management/husbandry while the animals are in the marketing channel. The major method of livestock movement is by trekking the animals over stock routes with rest periods in holding grounds, because transportation is not available or cannot operate in the areas concerned. Therefore, livestock marketing in Tanzania is more than buying and loading livestock on trucks or rail for movement to slaughterhouses, etc. It's a combination of range management to assure forage while the animals are trekked or held in the holding grounds; water development/maintenance to assure water about every 25 kilometers along the stock route and in the holding grounds; and animal health for protection from tick borne and other diseases and to assure disease free animals while in the marketing channels.

Marketing livestock from open range country then differs from marketing intensive pasture/feed lot cattle and the contractor/people involved should be as familiar with range cattle production/marketing as possible. Few of the grass fat/range cattle are slaughtered directly from the range in the U. S., but are usually fattened/finished in a feed lot. Most of these animals are sold at auction right off the range, the same as range cattle from Tanzania.

Comparable experience in handling and moving cattle over open range/semi-arid areas, marketing grass fat range cattle, etc., is only available in the intermountain range area of the Western U. S.

2. The project will require technical backstopping, direction, guidance, supervision and administration which are best available from the appropriate departments of a land grant university. These essential inputs have not generally been available from other contractors with which USAID/Tanzania

has had experience. Also the universities can assume responsibility for programming/implementing participant training which USAID's other contractors have not been prepared to do.

3. The project will require the livestock marketing staff, range management and water development technicians, a livestock economist, and a finance management specialist, a total of nine technicians. Except for the three field marketing technicians, the contract staff must have professional academic qualifications as well as field experience. The more the training and experience has been with open range livestock production/marketing, the better the chances of success.

A land grant university or consortium of universities will have access to a pool of technical staff to draw from to fill the positions, and professional departments to call on for the backstopping/consulting, which few if any other contractors can match. Consulting services are required on a continual basis and frequently on short notice. Projects suffer if consultant recruitment is delayed while expertise is recruited from sources not directly connected or familiar with the project. The universities obtain commitment from the appropriate departments to provide staff and consultants which speeds up recruitment and consultant services. Other contractors seldom have access to such resources. Also, personnel/program continuity is extremely important and the universities will be more apt to have a pool of staff to draw from other than contractors who do not have such access and must recruit from outside sources.

4. The universities will also have contacts Statewide through the Extension Service and other similar programs upon which to draw in filling the field marketing positions. The personnel filling the field marketing positions need not necessarily have professional academic background in economics/marketing, but they must have had several years of experience in day-to-day livestock marketing, buying, selling, handling and moving animals in the marketing channels. They must have had experience as buyers, preferably have made their living as buyers, in order to train Tanzanians in the total field marketing operation while developing and implementing a marketing system.

They must also be capable of planning, developing and managing livestock markets and of training Tanzania market management teams to manage markets. Although the three field marketing technicians will not be from the university academic staff, the universities will have as ready, and perhaps, better access to such personnel than other types of contractors.

The project must have a coordinated team effort, administered/directed/supervised by an institution with the backstopping to assure such team effort. USAID feels this will best result from a university contract. USAID's experience to date with it's non-university contractors in this function has not been good.

5. The Ministry of Agriculture is very reluctant to even discuss awarding this contract to one of the contractors currently implementing agriculture projects in Tanzania. The Principal Secretary of the Ministry of Agriculture broadens this to include other similar contractors.

6. The Principal Secretary visited Texas A&M and observed cattle ranching and marketing, and held discussions with university staff and ranchers and livestock marketing people in the surrounding area. He was very impressed with what he saw and the discussions he had. He has urged that the project contract be negotiated with Texas A&M (with other intermountain state Universities cooperating to broaden the base of home campus expertise and contract staff recruitment if necessary). The Principal Secretary has raised this issue on several occasions and urged the USAID Director, and the Food and Agriculture Officer to assure that the contract is negotiated with Texas A&M. In view of his very strong views and desires and Agency guidance on collaborative style USAID strongly urges that Texas A&M be considered as the contractor or as part of a consortium.

7. Texas A&M and Utah State Universities have both indicated a strong interest in the project and are prepared to jointly implement the project. USAID prefers a prime contractor if more than one university is involved, and recommends Texas A&M as the prime contractor.

## ANNEX I

### PROJECT SETTING

#### A. General Background 1/

Tanzania extends from the Indian Ocean to its western boundaries with Zaire, Rwanda and Burundi (Map - Annex VII). Zanzibar, lying 30 miles off the coast, is part of the Republic. The total area of mainland Tanzania is 361,800 square miles, including 20,650 square miles of inland water, and, except for a narrow strip of land along its 550-mile coastline, lies at an altitude of over 1,000 feet. A large part of the country is a plateau of about 4,000 feet, with mountainous areas rising to about 10,000 feet on its southern and northeastern borders.

Tanzania has a tropical equatorial climate, with a wide range of climatic and ecological conditions due to the different altitudes and the location relative to the ocean and inland lakes. Mean daily temperatures range between 22°C and 32°C, with the greatest diurnal variation occurring over the Central Plateau, where it may be as much as 20°C; in coastal and lake regions it is about 8°C. Rainfall ranges from less than 15 inches in parts of the Central Plateau to more than 80 inches annually in the area northwest of Lake Malawi. About half of the country receives less than 30 inches of rain annually and the climate is characterized by alternate wet and dry seasons. In the north, from the northern coastal belt west through the Usambara-Kilimanjaro area, there are two distinct wet seasons, with the main rains in March to May and lesser rains in November to December. In the remainder of the country, except for the area round Lake Malawi, the two rainy seasons merge.

The human population of Tanzania, currently about 13.5 million, is increasing at an annual rate of about 2.7%. About two-thirds of the people occupy only 10% of the land and are concentrated in rural locations that are geographically widely dispersed: in the coastal belt around and north of Dar es Salaam, around Moshi and Arusha in the north, in the areas west and south of Lake Victoria, in the extreme west around Kigoma, and in the extreme southwest around Mbeya (areas of relatively heavy concentration roughly coincide with areas free of tsetse fly). The average population density is only 39 per square mile, which compares with 49 per square mile in Kenya and 131 per square mile in Uganda. Eight districts have less than 13 people per square mile while ten districts have more than 125. Of the eighteen regions five have an average of less than 26 per square mile while six regions have more than 64.

In recent years (1965-70), the Gross Domestic Product (GDP) has been growing at about 5.6% per year, except for a dip to 2.5% during 1969. In 1971, the GDP was about US\$1,360 million at market prices. Per capita

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1/ Extracted largely from INRD/IDA Appraisal of Second Livestock Development Project - Tanzania, March 14, 1973.

GNP (at market prices) was about US\$100. However, it is estimated that the per capita income at the subsistence level, which includes a large portion of the population, is only US\$26.

## B. The Agricultural Sector

Agriculture provides 90% of employment but only 40% of GDP (1971) with subsistence production accounting for over half the value of the sector's total output. (The total value of agricultural output in 1971 was about US\$466 million). Production, which increased over the past decade at a rate barely sufficient to keep pace with population growth, comes mostly from small farms, cultivated by hand and using family labor. The main export products produced on small farms include cotton, coffee, sisal, tobacco, tea, cashew nuts, pyrethrum, meat and hides. Total agricultural exports in 1971 were valued at US\$176 million. Large-scale agriculture is carried out only on estates that grow coffee, sisal, tea, and coconut, and state farms that produce wheat, rice, and livestock. Estate production has diminished in importance, however, particularly as demand for sisal has declined, and the state farm program remains small.

Only about 9% of the total land area of the mainland is used for crop cultivation--about 8 plus percent is in small farms and less than 1% in large holdings; another 10% is fallow land or temporary pasture. The remainder is in utilized range land (23%), tsetse fly infected idle range and bush (40%) and 10% and 8% set aside for forest and game reserves, respectively.

All land is considered to be public land and title is vested in the Government, although approximately 80% is held by individuals or groups under rules of tenure in accordance with traditional or tribal rights. Lands formerly granted as freehold have been converted by law to Government lease-hold status and are held under long or short-term rights of occupancy, as are other lands planned for development.

At present, about 2 million people or over 15% of the rural population are living in Ujamaa <sup>1/</sup> villages. Ujamaa villages are economic and social communities where people volunteer to live and work together for the benefit of the community as a whole. Most of the existing Ujamaa villages have been established in relatively poor areas with a view to transforming them into creditworthy cooperative societies practicing communal production methods. The members of the Ujamaa village frame a constitution to govern their relationships, to provide guidelines for resolving conflicts and to define rules for sharing the benefits of their communal efforts. Ujamaa villages are an indigenous attempt to harness African concepts of communal work and property to modern requirements for successful commercial

<sup>1/</sup> Ujamaa is a Swahili word meaning familyhood.

enterprises. The existing ujamaa cooperatives are almost entirely associated with crop production and as yet there is scarcely any experience of the Ujamaa concept applied to livestock production.

### C. The Livestock Subsector

With about 10 million cattle, 7 million sheep and 2.5 million goats, livestock represents a major national resource to Tanzania. Most of the cattle population are in the traditional sector, and, although individually owned, generally are grazed on communal land. A recent study indicates that cattle ownership is relatively concentrated. It is estimated that approximately 250,000 rural farmers and herdsmen can be considered as cattle producers. Of the 250,000 livestock producers it is estimated that one-half (125,000) are effective producers and one-half (125,000) are marginal producers. This is based on the number of animals owned/produced rather on quality or volume of production per animal unit.

Within the 125,000 effective producers about 10 percent (12,500) of the producers own about 50 percent (5,000,000 head) of the national herd, averaging 400 animals per producer. This still leaves an average of 40 animals per producer which may vary from 20 to 150 animals per producer, among the other 90 percent (112,500) of the effective producers who own 90 percent (4,500,000 head) of the remaining 5,000,000 animals in the national herd. Therefore, even the smallest of the effective producers need and will directly benefit from an efficient marketing system.

The 125,000 marginal producers own the remaining 500,000 head in the national herd averaging 4 animals per producer which may vary from 1 to 15 animals per producer. These animals are kept for subsistence food milk/meat, social purposes, work and manure for fertilizer. Although classed as marginal producers because of the small number of animals produced they do sell surplus animals from time to time or those too old to reproduce, give milk or work, and will directly benefit from an efficient marketing system.

The type of production system varies from Sukumaland where livestock is a minor source of income in a mixed cropping/livestock production system, to Cogoland where livestock provides the greater portion of income mixed with some cropping, to Masailand where the major income is from livestock with a very minimum of crop production.

Since generally under all production systems the number rather than the quality of cattle is the traditional symbol of wealth and marketing facilities are limited, overgrazing is widespread and unproductive stock are not rigorously culled.

The location of the national herd is broadly determined by the absence of tsetse fly, which precludes extensive cattle keeping in the southeast

and in large areas of the west. The greater part of the herd is located in Mwanza, Shinyanga, Musoma, and Singida regions where cattle are kept mainly by the Sukuma people as an auxiliary activity to growing cotton and maize. Large concentrations are also found in the Dodoma, Arusha, and Kilimanjaro regions where animals constitute a major source of income for the Gogo and the Masai.

The traditional herd in practice provides for multipurpose utilization. It provides subsistence food in the form of milk, meat, and blood; plays a significant role in traditional social customs; is used as a source of fertilizer and draft animals by cultivators; and serves as a self banking and insurance program. Thus, to a large degree, cattle reaching either local or national commercial channels are in effect by-products.

With few exceptions the traditional cattle herd is made up of the indigenous small Tanzanian short horn zebu. It is inured to local conditions of poor nutrition, parasite infestations, endemic disease, and conditional management. The Tanzanian zebu is characterized by its slow maturity, small size and ability to survive the rigors of local conditions.

Although the national herd has increased by about 2.5% per year, from about 3 million head in 1924 to an estimated 10 million at present <sup>1/</sup>, its productivity is extremely low. Recorded offtake for slaughter averages about 3.0% of the total population and amounted to 318,000 head in 1970. Total offtake, which includes mortality, averages about 10% to 11% per annum and was estimated at about 1.2 million head in 1970. The low production coefficients; males requiring 5 to 8 years to mature to marketable weights of 500 to 700 pounds, cows producing their first calf at 5 years of age, and then irregularly for an average lifetime production of 5 calves by 12 or more years of age; an annual calf crop of not over 50 percent with calf mortality averaging 35 percent or more; and adult mortality at the 10 percent level can be attributed to inadequate nutrition, high disease and parasite infestation, poor management and the inferior genetic quality.

Rinderpest and Contagious Bovine Pleuropneumonia (CBPP) have been successfully controlled by a Government vaccination program involving about 1 million cattle per year. The last recorded cases occurred in 1964 and 1965, respectively. Tick-borne diseases, particularly East Coast Fever, cause serious losses in the traditional livestock sector where there is no routine dipping, but the Government is taking steps

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<sup>1/</sup> Earlier estimates based on the 1965 cattle census and a growth rate of 3.0 percent put the 1973 herd at an estimated 13.5 million. However, preliminary data from the current census indicate a herd of approximately 10 million.

to reduce them by constructing and operating dips free of charge for the traditional producer. At present, about 1,000 are in operation.

Foot and Mouth Disease (FMD) is endemic in the main area of the traditional livestock sector. Four of the seven FMD types--Type O, Type A, SAT 1 and SAT 2--occur, but Type O is the most prevalent. The TanGov operates a strict control program that requires vaccination and quarantine of cattle before they can be transferred to new regions and strict quarantine of infected herds. Presence of the disease, however, precludes the export of unprocessed meat products to many markets, particularly in Europe, and, although Tanzania is anxious to control it, a comprehensive control program has not been justified on economic grounds.

Tsetse fly, the vector responsible for trypanosomiasis of cattle and sleeping sickness in humans, infests more than 60% of Tanzania, but beef production is possible when effective control measures are applied. On large blocks (over 80,000 ha), the Tsetse Control Unit in the Ministry of Agriculture establishes a tsetse barrier (1 to 2 km wide) by clearing brush/trees around an infested area, after which insecticide is applied six times from the air. This is subsequently maintained tsetse-free by ground spraying a residual insecticide over any accidentally reinfested isolated pockets. This standard technique is only economically feasible on large areas; on smaller areas when the tsetse threat is moderate to low, the use of prophylactic drugs is cheaper.

#### D. Livestock Marketing

##### 1. Facilities and Operation

Tanzania has only one meat processing plant--the TPL plant at Dar es Salaam--and it is badly located to serve the needs of the livestock industry being several hundred miles from the railroad or loading points serving the main producer areas such as Shinyanga (638 miles) and Mbeya (589 miles). The transport charge by rail is T.Shs. 43 per head from Shinyanga and T.Shs. 75 per head by truck from Mbeya. Erected in 1950, the TPL plant has a total slaughtering capacity of 300,000 head of cattle per year and a total canning capacity of 200,000 head per year. It is jointly owned by Liebig's, an international meat packing company, and the Tanzania Government, through its parastatal National Agricultural and Food Company (NAFCO) (52% ownership) and it exports mainly to the UK but also to other European markets. The plant operates at about 50% of capacity due to its inability to procure enough cattle. Although it might be expected that TPL would process a large number of cull cows, the amount actually handled is quite small due to TPL's reluctance to offer a reasonable price for this category since mortality is high because of the long transport distance involved. The establishment of slaughter houses in Shinyanga and Mbeya will eliminate most of the live animal, long distance transportation problem, and alleviate the problem of marketing cull cows.

At present there exists 2,200 kilometers of stock routes and 23 holding ground areas with a total of about 400,000 acres of grazing. The stock routes are demarcated and cleared areas for cattle passage. This is particularly important in areas with heavy cultivation. Veterinary facilities, tick dipping tanks, and watering points are located along the stock routes. The holding grounds are established in connection with and along the stock routes as resting points with water and veterinary facilities while cattle are being trekked. They may be located in the vicinity of major cattle markets where animals are held prior to sale. Also necessary quarantine facilities are incorporated.

The existing routes and holding grounds are not adequately supplied with appropriate facilities, water, and grazing at present, and are improperly managed. In addition the existing system does not adequately cover the market trade movement of cattle from a viewpoint of cattle numbers and locations serviced.

Two types of markets, primary and secondary, are operated in Tanzania. Those designated as secondary markets have been operated by the Veterinary Section of the Ministry of Agriculture. Secondary markets (500-1,000 cattle), about five in number, are operated on a weekly basis. Cattle owners (including both producers and traders) bringing cattle to these markets are required to show proof of prior vaccination against certain diseases. However, the system has broken down and frequently quarantines have been imposed on some of the secondary markets. Such quarantines have led to sales outside the official markets and a further breakdown in the health control measures.

Primary markets (50-100 cattle) are owned and operated by the District Councils on a rotational basis, usually monthly. Cattle owners can sell cattle at these markets without prior vaccinations. About 220 primary markets are in existence of which approximately 116 can be classified as permanent due to the type of facilities available rather than the regularity of operation.

Physical facilities at the permanent markets are generally inadequate, consisting of one or two holding pens, a cattle handling crush and a scale ring, and are poorly designed for proper cattle handling. The permanent markets are usually of stone or pipe construction and have been allowed to deteriorate very badly. Corral fences are not adequately repaired. Facilities are not available for sorting cattle into uniform sale lots.

Facilities at temporary markets are even less adequate, consisting of improvised thorn bush corrals with pole type structures for the auctioneers. In some cases these markets are conducted without the benefit of even the thorn bush corral and few have cattle crush handling facilities available for vaccination.

Market charges vary greatly between districts. In some districts they are paid by the buyer with the charge being based on a percentage of the sale value. In other districts fixed charges per head are paid by both the buyer and the seller. These charges vary from the seller paying between T.Shs. 2.00 and T.Shs. 6.00 per head and the buyer paying 5% of the sale value or in some cases T.Shs. 5.00 to 6.00 per head. The total charge varies from T.Shs. 2.00 per head in Shinyanga to T.Shs. 22.00 per head in Masailand.

The District Councils consider the market fees collected as part of the district's general revenue and little if any of the funds are used to improve and maintain the markets resulting in the markets' physical condition described above.

Poor livestock handling procedures are used in the auction markets. Generally the seller holds his cattle in individual groups outside the auction waiting his turn in the sale ring. During this time producers have to herd the cattle using canes or sticks to keep them in the area. Inevitably bruising occurs during herding and as the cattle are moved along a chute or through a gate into the auction ring. This bruising could be eliminated with improved facilities and properly trained personnel. After the cattle enter the ring, bidding and sale take place with the buyer's brand being placed on the lower portion of the hind leg. Cattle are then moved into one or two pens or open areas set aside for the various buyers. At the end of the sale cattle are sorted by the buyers and the necessary inoculations and permits are obtained.

Selling procedures vary between the district council markets depending upon whether the district council acts as the sole buyer or allows competitive bidding. In the markets where the district council is the sole buyer, it is carried on as if it were an auction, but no auctioning process actually takes place. The cattle are brought into the ring and the district council buyer starts the bidding with the auctioneer restating the bid. The district council buyer continues bidding against himself until he reaches the price that he feels the animal is worth. At that time a discussion takes place between the cattle owner and the district council buyer and the price is either accepted or rejected by the cattle owner. If the price is agreed upon, the district council's brand is placed on the animal. Producers are reluctant to sell at these markets due to monopoly buying.

Competitive bidding is used in most markets. Buyers in these markets are generally the district councils, Tanzania Packers Limited (T.P.L.), buyers of immatures and traders. Bidding in these markets is generally active. After cattle are sold, the owner is paid in cash. Producers are much more active in the markets with competitive selling procedures, while traders tend to be major sellers at monopoly buying markets.

At both types of markets private treaty trade occurs outside the market where cattle are bought and sold without entering the auction ring. At some larger markets it is estimated that at least three-fourths of the cattle are purchased in this manner. A primary reason for this practice is that the poor facilities and inefficient operations of the market make it impossible to cope with the numbers of animals to be sold.

Weigh bridges have been installed at some markets, but their use has been discontinued due to mechanical failure or by popular demand of producers as they misunderstand their purpose. In many cases existing scales have been poorly sited for handling cattle properly and are only large enough to handle one animal at a time, thereby hampering the auction process.

The major buyers at the markets are the district councils, private and salaried buyers for TPL, traders, foreign buyers, and local butchers. The breakdown of buyers at these markets in 1970 was roughly as follows:

	<u>Total (head)</u>	<u>Percentage of sales for slaughter</u>	<u>Percentage of total sales</u>
Urban and Rural Butchers (except Dar es Salaam) <u>1/</u>	182,000	58	51
District Councils for TPL <u>2/</u>	72,000	23	20
Private Traders for TPL <u>2/</u>	20,800	7	6
TPL Buyers <u>2/</u>	9,600	3	3
Agents for Uganda, Kenya & Zambia	<u>30,000</u>	<u>9</u>	<u>8</u>
Subtotal of sales for slaughter <u>3/</u>	314,400	100%	88%
Traders in immature stocks (including NACO) <u>4/</u>	<u>45,000</u>		<u>12</u>
Grand Total	359,400		100%

1/ Ministry of Agriculture, meat inspection figures, 1970.

2/ TPL figures, 1970.

3/ Guessimate by East African Railways, Mwanza, based on record of live animals shipped in 1970, plus estimates by West Lake Region Economic Secretary of import requirements of West Lake.

4/ Ministry of Agriculture figures for immatures purchased at all live-stock markets, 1970.

(a) District Councils

District Councils have been the major buyer for slaughter cattle at the markets over the past three years, since the operations of major private buyers were severely constrained by Government in 1969 and the District Councils assumed the responsibility of the trading cooperatives in 1970. Between January 1970 and August 1971, the District Councils supplied TPL with over 123,000 head of slaughter stock. The district councils bought animals at their auction markets, paid the veterinary stock routes and holding ground fees, assumed death losses and then sold the animals to TPL on a dressed carcass basis. TPL paid the transport cost of these animals from the markets to Dar es Salaam. As a result of losses incurred on cattle purchases, some district councils have discontinued their buying operations for TPL.

Some district councils operated with inadequate capital resources and thus lacked the funds to finance cattle purchases during holding and transportation periods. The turnover time of these funds sometimes ranged up to 30 days. One district council has stated that it cannot continue to purchase cattle without advances from TPL. TPL made some advances, but not sufficient to meet the needs of the district councils. As a result, some district councils operated on credit, in the form of delayed payment to the seller. Some district councils prohibit other buyers at their markets and as they bought only slaughter cattle, the immature cattle trade disappeared with the small producer being the loser.

(b) Tanganyika Packers Limited (TPL)

TPL uses private agents in markets where the district council buyers do not operate.

For a short period during the latter part of 1970 and early 1971, TPL used a salaried buyer in the Arusha area to increase the purchase of cattle to meet the demand for meat by the Dar es Salaam markets. The prices paid during this period were approximately T.Shs. 100.00 per head higher than the normal market prices. The higher prices drew many cattle into this area which normally would have not been available, indicating the producers will increase sales if they feel appropriate prices are paid.

The estimated capacity of TPL is 300,000 head per year, 200,000 for canning and 100,000 for the Dar es Salaam meat market. The maximum number processed by TPL was in the drought year of 1969, 163,800 head. In addition to not being able to operate at full capacity, there are problems with seasonal fluctuations in supplies: generally between March and September cattle movements are not considerably higher than in the other months. During the slack period, TPL has a difficult time meeting the requirements of the Dar es Salaam fresh meat market.

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(c) National Agricultural Company (NACO)

The NACO ranches are a major purchaser of immature steers for fattening and females for breeding stock. NACO appoints agents, both private dealers and district councils, to purchase immatures. Generally these agents are not meeting NACO's requirements, which are expected to increase several times under the IBRD/IDA Livestock Development Phase II project.

(d) Foreign Buyers

In 1970 agents for foreign buyers purchased about 30,000 head in Tanzania. The Uganda agents have been operating in the West Lake, Mwanza, and Mara Regions to acquire cattle. Cattle from these areas have moved to Uganda rather than TPL in Dar es Salaam due to higher prices paid by the Uganda buyers. Similarly cattle move into Kenya due to higher prices and often illicitly as a means of obtaining foreign currency.

(e) Bush Traders and Butchers

Traders and local butchers are also important buyers under the present marketing system. Local butchers serve the rural areas not served by the district council's butchers. The local butchers usually buy directly from the producer's shamba or outside the auction market. The bush traders operate between the producer and the market and in certain cases between the markets in one region and the markets in another region. Where the traders operate between the market and the producers, they often trade immature cattle for slaughter cattle.

Depending upon the organization of the markets, the major seller will be the producer or trader. Traders tend to be the primary sellers in the poorly organized markets and in markets where wide price fluctuations occur. In Shinyanga, where the district council is the sole buyer, nearly all cattle are sold by traders. Producers tend to sell at relatively well organized markets where competitive bidding occurs.

2. Demand and Supply

While total livestock offtake is over one million, less than a third passes through official market channels. Total sales through official markets over the past several years averaged about 350,000 head annually. However, approximately 40-50,000 head are immatures and breeding animals which remain in the national herd. Thus the effective offtake by official commercial markets for consumption is just over 300,000 head or on the order of 3.0 percent of the total national herd.

This commercial offtake was utilized as follows: 28 percent for Dar es Salaam fresh meat market; 10 percent for canned export; 8 percent

live cattle for export; and 54 percent for rural village and urban butchers outside Dar es Salaam.

During the period 1951-1970 slaughter for urban consumption rose from about 45,000 to 245,000 head, an annual rate of increase of over 9 percent, while urban population was growing at a 6 percent per annum rate. The Dar es Salaam market by itself, during the no price increase period of 1967-1972, shows slaughter increasing at a 36 percent annual rate, while population was growing at 10 percent per year. During the 1964-1971 period real average income remained constant in Dar es Salaam, but the price of beef in real terms moved significantly downward in relation to other consumer preference and competitive sources of animal protein, i.e., fresh fish and eggs. It would appear that the monetized demand for beef centers in urban areas has been increasing rapidly due to a combination of population increases and relative real prices.

True demand in the rural villages and for home consumption remains obscured. This sector continues to absorb the difference between total offtake and offtake marketed through commercial channels. It is also known that per capita consumption is very low (probably less than 20 pounds per annum). In the future the amount that will be consumed will certainly increase, but to what level is uncertain.

Demand for export is at present in the form of fresh beef to Zambia and Zaire, canned corned beef to England and Europe, and live cattle to the Arabia Gulf. Zambia alone imports the equivalent 60,000 head annually (expected to be over 100,000 by 1980) from its southern neighbors, a market which Tanzania could supply from both a technical and trade preferential standpoint.

Zaire annually imports the equivalent of more than 60,000 head of local average quality cattle from Chad. Better quality has not been available from Chad and is flown in from Kenya and Somalia. This represents largely just the Kinshasa market. The southern Zaire market is uncertain and untreated commercially. Tanzania could compete favorably in the Kinshasa market and would have considerable delivery cost advantage in the south.

Nearly all present exports of canned corned beef by TPL (through Leibig) goes to the UK market. This is only 2.3 percent of UK imports. Assuming TPL was processing at full capacity and all production was shipped to UK it would be only 12-14 percent of present total UK imports.

All outputs from NACO ranches presently operating and planned under the IBRD/IDA Phase II project will be easily absorbed by the present demand for fresh meat in Zambia and Zaire, without taking into account anticipated demand increases in those countries or live cattle exports to the Arabian Gulf, Kenya and Uganda. Thus increased NACO ranch production need not

have an adverse effect on the local Tanzanian market. In fact, effective production increases will be required from the traditional herd for local consumption and the TPL requirements.

Without question demand exceeds supply. Increasing cattle numbers to meet the demand is a slow process and is not the sole answer. Actual meat supply can be increased through marketing heavier animals and at an earlier age, increasing the sales of animals at more desirable maturity and weight, and by reducing the wastage of what is already produced through improved marketing services.

### 3. Prices

In accordance with the TanGov policy to keep the retail prices of fresh beef to the population as low as possible, its retail price in urban areas was included in the 1967 price control ordinance. Depending upon the urban location, these prices varied from T.Shs. 2.20 to 2.85 per kilo of meat with bone. Steak prices were about 50 percent higher. These prices remained unchanged for 5 years.

This controlled retail price was the major factor in determining live cattle prices which averaged about T.Shs. 1.10 per kilo live weight. When marketing and butcher costs were subtracted from meat, offal, and hide sales value, the price that could be paid for a live animal weighing about 225 kilos was less than T.Shs. 300 (US\$42).

In some localized areas near the Uganda, Kenya, and Zambian borders foreign buyers were in a position to pay higher prices and this had an influence on overall live cattle prices. Similarly TPL was in a position to pay somewhat higher prices at times as their final product was an overall mix of fresh beef for Dar es Salaam and canned export, both of which had a higher sales value than fresh meat for other urban centers.

During this five-year period, while Tanzanian meat prices averaged slightly under T.Shs. 2.50 per kilo cold dressed weight (CDW), prices were about T.Shs. 3.00 in Uganda and Kenya, T.Shs. 3.75 in Zaire, and T.Shs. 4.30 in Zambia. As an indication of increasing demand not being met, present Zambian prices exceed T.Shs. 6.50 per kilo CDW.

In 1972 the Government recognized the inequities in favor of the consumer over the producer and the price squeeze on the butcher. Thus the retail price of meat was removed from the price control ordinance which requires legislative action for price change. While retail prices are still controlled, changes can be effected periodically by executive order of the Minister of Agriculture based on cost information. Wholesale prices of first grade, G.A.Q. and F.A.O. (the top 3) carcass grades, mostly for the hotel trade, are exempt from price controls.

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The first increase in meat price occurred in 1972 and ranged from 33 to 50 percent depending on the urban location. This raised the retail prices from T.Shs. 2.20-2.85 to T.Shs. 3.30-3.85 per kilo of meat with bone. A part of this increase was absorbed by the market trades and butchers but the average price per kilo live weight rose about 40 percent from T.Shs. 1.10 to T.Shs. 1.65.

A second price increase was announced in November 1973. This was in the order of 12 percent. It has been too recent to be reflected in live cattle prices, but it is expected that the producer will demand and receive a similar share of the present increase.

Producers do respond to price increases with greater offerings for sale as noted by several recent experiences. When foreign buyers offering higher prices compete in a market, offerings of cattle increase. When TPL was using a direct buyer and offering prices about 25 percent or nearly T.Shs. 100 per animals higher than local buyers in the Arusha area, cattle were being trekked in from other areas for sale.

During 1971, with encouragement from the Government, TPL introduced buying of cattle on a grading system. It follows the Kenya and international grade standards. The following gives an illustration of such pricing prior to recent price increases. TPL is now developing a new price structure.

Price at TPL 1973 (Prior to price increase)

	<u>T.Shs. per kilo</u> <u>(hot dressed weight)</u>
First grade	3.75
G.A.Q. (Good Average Quality)	3.63
F.A.Q. (Fair Average Quality)	3.48
L.A.Q. (Local Average Quality)	
Over 155 kgs.	3.00
135-155 kgs.	2.66
116-135 kgs.	2.52
90-115 kgs.	2.25
Rejects: Downgraded	
To Beefex	1.96
Condemned to pet food	.95
Totally condemned	.50

Most of traditional production falls in the L.A.Q. and reject grades. NACU production is mostly in the top four price grades.

**E. Government Institutions and Services 1/**

The Ministry of Agriculture is responsible for livestock production and marketing. It carries out its work through its veterinary and animal husbandry research, training, and extension staff and through the parastatal corporations LIDA and NACO. The Livestock Development Division is responsible for disease control, livestock research centers, tsetse control, stock routes, holding grounds, quarantine stations, artificial insemination, meat inspection and grading. About 34% of the 3,400 member extension staff is working in the livestock sector.

Education and training facilities have been expanded recently. Tanzanians are obtaining degrees in agriculture at the University of Dar es Salaam and at Kampala, Uganda, and in veterinary science at Kabete, Kenya. The Training Institute at Entebbe, Uganda, conducts a two-year course for veterinary assistance, with outstanding students permitted to stay for a third year for a diploma in animal husbandry. In addition, some 800 Tanzanians are studying for certificates and diplomas in agriculture and veterinary science at training institutes in Tanzania. A course leading to a diploma in ranch management from the Ministry's training institute at Mpwapwa is being organized and a course in practical ranch management training, under the first livestock project, has been started.

Although the quality of veterinary services, including research, is satisfactory, the extension services and research in animal production technology are extremely weak. Greater emphasis is needed on animal production factors, such as animal husbandry and nutrition, forage production, stocking rates, and water utilization; and research should concentrate on accumulating data for the main inputs and techniques used in livestock production and ranching.

Tanzanian credit institutions are wholly Government-owned, with the Tanzanian Rural Development Bank (TRDB) responsible for agricultural credit. It was created in 1971 and took over agreed assets and liabilities, as well as the operations of the former National Development Credit Agency. Most of TRDB's current lending involves three IDA credits, and, since it is TRDB's policy to lend at rates that reflect the commercial cost of capital, long and short-term loans are generally made at 8-1/2%. TRDB has its head office in Dar es Salaam and operates 18 regional offices throughout the country. Technical assistance is given to borrowers by regional representatives trained in agriculture and economics, and technical services have been strengthened by the addition of six UNDP/FAO specialists.

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1/ For a description of the several organizations intensively involved in the Livestock Marketing and Development Project see Annexes IV and V.

The National Bank of Commerce was established in 1967 to take over the business of nine nationalized banks. Lending operations extend into agriculture, industry and commerce with loans granted to both the private and public sectors. Most of its lending is on a short-term basis and its agricultural loans are mainly to cooperatives and parastatal companies for production, marketing and processing with interest rate at about 8-1/2% per annum.

The National Agricultural and Food Corporation (NAFCO) was established in 1969 to promote agricultural development and the production of food. It operates through several subsidiaries which enjoy substantial autonomy. Its investments include TPL (jointly with Liebig) and the National Agricultural Company (NACO), incorporated in 1968 with an authorized share capital of T.Shs. 50 million fully subscribed and owned by NAFCO.

## ANNEX II

### IDA SECOND LIVESTOCK DEVELOPMENT PROJECT

#### A. Introduction

As part of its high priority on rural and agricultural development Tanzania has requested financial assistance for the second stage or phase of its livestock development program which was started under an IBRD/IDA assisted project in 1968, with a US\$1.3 million dollar credit. This initial project was aimed at increasing the output of beef, expanding the production of improved breeding stock and demonstrating the advantages of modern ranching techniques through the development of five cattle ranches and the provision of technical services and a training program for ranch management. It was the conclusion of the IBRD in its appraisal of the Second Project that "Generally this project (the first) has demonstrated the feasibility of establishing an efficient beef industry in Tanzania."

The present project, known as the IDA Second Livestock Development project, provides for: (a) development of a livestock marketing system with required infrastructure; (b) reconstruction and construction of meat processing plants; (c) expansion of extensive beef production through ranching; (d) procurement of equipment for tsetse fly clearance and water development activities; and (e) provision of technical services. Project costs are estimated to be the equivalent of US\$24.6 million of which US\$18.5 million would be IDA credits. The rate of return to the Tanzanian economy is estimated at 35%. (See Section C of this Annex for additional financial and economic details).

At maturity the project is expected to increase annual beef production by 21,000 metric tons; 11,000 tons by increased market offtake from the traditional herd through the marketing component, and 10,000 tons from project ranches. The increased value of exports is estimated at US\$6 million annually. Added tax revenue generated by the project will be about US\$1.9 million annually. Finally, the parastatal companies will earn about US\$2.7 million annually which may be used by Government.

Permanent new salaried jobs would be created for about 2,500 employees and temporary jobs for a varying number of people over the five year development period. About 700 families, with self employment of approximately 1,400 people, would be participating and benefitting through the ujamaa ranches. Increased employment will also be involved in the production of the higher livestock offtake numbers. In addition, through the livestock marketing and meat processing components, incremental income benefits will accrue to the estimated 250,000 traditional cattle producers on a country-wide basis.

Indirectly the entire population of Tanzania, especially those in urban areas, will benefit from a more stabilized retail price and reduced

fluctuations in the supply of beef, reflecting a more equitable situation for the consuming public and improved overall nutrition.

## H. Summary of Sub-Project Activities

### 1. Livestock Marketing

A major constraint on rational, regular and efficient marketing of cattle from the traditional herd has been poorly developed and inefficient marketing systems, as well as a lack of sufficient and properly maintained supporting infrastructure consisting of market facilities, stock routes and holding grounds.

The project provides US\$2.4 million in IDA credits and a TanGov input of approximately US\$1.0 million for reorganization and development of a marketing system with an adequate supporting infrastructure. Physical development includes: (a) development of new markets (3 large, 10 medium and 20 small) and remodeling/renovation of 104 existing small markets; (b) development of 2,300 kilometers of new stock routes and improvement of 2,200 kilometers of existing ones; (c) establishment of 4 new holding grounds and improvement of 23 existing ones comprising a total area of 496,000 acres. The financial rate of return on total investment is 18 percent.

As a condition of credit effectiveness, Tanzania has established a Livestock Marketing Company (TLMC) which has responsibility for development and improvement work on existing and new infrastructure, and operation and administration of all markets, stock routes and holding grounds. TLMC will also act as a livestock buying and selling agent.

An accountant will be provided to the TLMC under the IDA credit.

### 2. Meat Processing

The TPL plant, built in 1950, is the only beef processing plant in Tanzania and it requires extensive renovation to continue to meet international standards. The long distances (500-700 miles) to the plant in Dar es Salaam from the major traditional cattle producing areas and potential new production areas increases cattle marketing costs through heavy weight losses, accidents and meat damage, and mortality in route. Many cattle, such as cull cows and other less vigorous stock, cannot survive the transport or trekking required. A chilled carcass can be railed from Shinyanga to Dar es Salaam at one half the cost of railing the live animal. Additionally to tap the potential lucrative African fresh meat market in Zambia and Zaire there is double transport to Dar es Salaam and back through producing areas to these markets. In view of these circumstances, the IBRD appraisal mission approved the establishment of two new plants and the renovation of the TPL plant and canning facilities.

The project provides US\$4.4 million in IDA credits and a TanGov input of US\$1.65 million for the following four activities:

(a) Construction of a new processing plant with a capacity of 200 head daily at Shinyanga in the western zone (640 miles northwest of Dar es Salaam). Output would be marketed in the western zone, exported to Zaire, and sent for canning to TPL (boned meat).

(b) Construction of a new processing plant with a 200 head daily capacity at Mbeya in the southwestern zone (580 miles from Dar es Salaam). Output would be marketed in the southwestern zone, exported by road/rail to Zambia, and also sent to TPL for canning (boned meat).

(c) Major reconstruction and remodeling of the TPL plant in Dar es Salaam so that it can continue to meet standards for export of canned beef and be the supplier of meat for Dar es Salaam and adjacent areas. (Nearly 1.0 million people).

(d) Establishment of the Tanzania Meat Processing Company (TMPC) to undertake the above outlined development activities and to be the responsible Government agency for equity holding and operation of the plants. The TMPC will enter into a management contract with an experienced international meat processing company to operate the new plants at Shinyanga and Mbeya. TPL is jointly owned by Leibig (48%) and the Tanzania Government (52%), which equity will be acquired by TMPC. The financial rate of return for the TMPC is estimated at 20 percent and for the individual plants it ranges from 19 to 26 percent.

A meat technologist will be provided to the TMPC under the IDA credit and posted in the head office of the TMPC.

### 3. Tsetse Clearance

Tsetse fly, the vector responsible for trypanosomiasis of cattle and sleeping sickness in humans, infests more than half of the land area of Tanzania. The location of the national cattle herd is broadly determined by the absence of tsetse fly, which precludes cattle keeping in large areas of the West and the Southeast. However, cattle production in these otherwise desirable areas is possible when effective tsetse control measures are applied.

The Tsetse Division under the Ministry of Agriculture has an operating Tsetse Control Unit with extensive experience in effective and economical control measures which include aerial spray, ground spray, bush clearing, and establishment of effective tsetse barriers. Fly survey teams establish requirements for control and monitor areas cleared. These standard and widely proven clearance and control techniques are technically effective and economically feasible only on large tracts (minimum of 200,000 acres) of land scheduled for rapid utilization. Thus tsetse cleared

areas are particularly suitable for large scale extensive ranching operations which have a comparatively low development cost per acre (mostly water development) and low labor requirements.

In its tsetse clearance operations, the tsetse unit of the Ministry of Agriculture has need for heavy equipment which is not always fully occupied. Thus this equipment can be readily and economically employed in ranch development, particularly for construction of firebreaks, tracks, and surface water storage. The tsetse control unit has considerable experience in such activities.

The project provides credit for the acquisition of necessary equipment and supplies to increase the work capacity of the Tsetse Unit and enable it to carry out tsetse clearance and control activities on the proposed project ranches, stock routes and holding grounds. The equipment will also be used to carry out the construction work such as firebreaks, tracks and surface water storage. Work in the West Lake and Masai areas will be coordinated with ongoing activities under USAID projects.

The costs for work performed by the tsetse unit will be recovered by a charge to the beneficiary project. Thus no separate financial analysis is made for the tsetse control unit, and all charges are shown against respective projects in the financial analysis.

Tsetse clearance costs, on a one time basis, vary from US\$ 500 to 5.50 per acre depending on conditions. Net return per acre from ranching, according to the models used in the IDA appraisal, range from US\$1.00-2.00 per year. Thus tsetse clearance appears to be a very economic undertaking.

#### 4. Ranching

Over the past ten years considerable experience has been gained and reliable technical information developed for systems of extensive beef production utilizing suitable grazing areas (unsuited for cultivation). This has been the result of efforts by USAID, IBRD/IDA, UNDP/FAO, local governments, and private enterprise in Tanzania and other Eastern African countries. This expertise encompasses tsetse fly control, water and ranch development, stocking rates, grazing management, animal health and husbandry, cattle breeding, and ranching economics. Technically sound and economically viable commercial ranches can be planned and established in areas which should not be cultivated, and many of which are now productively idle due to tsetse fly infestation.

On the basis of the aforementioned facts and Tanzania's own experiences, the Tanzanian Government has requested additional financing for expansion of commercial beef ranching as one means of increasing beef production, especially the production of better quality of beef to meet the increasing local demand and export trade.

Project activity in ranching is further detailed as follows:

(a) Ujamaa Ranches

In line with Government policy on expansion of the ujamaa village concept for agricultural production and social services, the project would develop 22 ujamaa cooperative ranches covering about 100,000 ha (IDA credits of US\$2.1 million and private beneficiary contributors of US\$.3 million). Ranches in the Shinyanga Region comprising a total of about 50,000 ha will be developed with about 200 Sukuma families on sparsely populated under-utilized grazing land. Livestock owners presently grazing the area will become members of the ujamaa. About 20,000 ha will be developed in the Dodoma region. Members will be livestock owners from a Gogo and a Ngu village already grazing their cattle in the area. It is expected that eight dispersed Masai ujamaa cooperative ranches will be developed in Arusha district through ranching associations formed under the Range Development and Management Act. Each ranch will be about 4,000 ha in size and will produce improved Boran bulls for sale to the ranch association members who are also ujamaa members and graze about 20,000 cattle on a surrounding area of about 150,000 ha. Ranches will be run on commercial lines, with paid management and labor, and will demonstrate the value of good ranch management techniques. Profits will be used for development on each association's ranch area. The ranch developments financed will include water development, firebreaks, stock dipping and handling facilities, housing, and incremental working capital. These are aimed directly at the traditional livestock producer and careful attention will be given to physical, technical, sociological, economic, organization and cultural implications of the ujamaa. Development on each ranch will be over two years. The financial notes of return for the two types of ujamaa ranches are estimated to be from 14-16 percent.

The number of ujamaa ranches to be established is less than originally requested by the Government of Tanzania for the following reasons:

(1) The ujamaa village cooperative for cattle production is a new and untested concept. Experience is desirable before more extensive development is started.

(2) Extensive technical assistance, which is in short supply, will be required.

(3) To reduce risks the ujamaas will be restricted to Masai and Gogo people who have had extensive experience in cattle rearing as their sole source of livelihood, and to the Sukuma who keep cattle as a subsidiary income source to cultivation and as a hedge against crop failure or loss of market.

(4) The ujamaa ranches will be established in areas now occupied by the participants. This reduces problems connected with resettlement in newly cleared but distant areas. However, this also reduces potential land availability.

(b) DDC Ranches

In order to encourage decentralized regional development, the Government is establishing District Development Corporations (DDCs) in part to own and operate breeding/fattening ranches. The project would finance four (IDA credit of US\$2.0 million and TanGov input of US\$.68 million) and these are expected to be in Morogoro, Mbeya, Iringa and Nzega Districts. All would be about 40,000 ha in size and investment per ranch would be about T.Shs. 4.6 million. The financial rates of return will be about 16 percent. Development on each ranch will be over two years.

(c) NACO Ranches

The project will finance further development of three NACO ranches already established at Usangu, Sumbawanga, and the Kitulo Plateau; establishment of four new NACO ranches at Dakawa, Mkata, Malagarasi, and Missenyi East, and four new ranches at Mwisa. The ranch on the Kitulo Plateau, developed with UNDP assistance, is presently owned by Government, but is to be transferred to NACO, with existing stock and machinery. Total IDA investment is projected at US\$5.7 million. TanGov input is projected at US\$2.4 million.

Ranches will average about 34,000 ha and all will be based on native tropical grasses, except Kitulo (9,200 ha), which will have improved ryegrass and white clover pastures. Breeding and fattening operations will be carried out at Usangu, Sumbawanga, Missenyi East, Kitulo, and the four ranches at Mwisa, while Dakawa will produce feeders for the fattening ranch at Mkata. The ranch at Malagarasi will furnish locally produced steers for export to Zaire.

The main investment items will include firebreaks, farm roads, water development, stock dipping and handling facilities, and workmen's housing, pasture development (Kitulo only), breeding stock, steers and operating expenses for the first two years. Development on each ranch will be spread over two years except at Kitulo (five years). Investment per ranch would range from T.Shs. 1.8 million to about T.Shs. 7.2 million. Rates of return range from approximately 13 percent for the Kitulo Ranch to over 22 percent for the Mkata fattening ranch. Tsetse clearance in the Mwisa area will be accomplished by the Ministry's tsetse control unit with assistance from USAID.

Funding is provided under the IDA credit for a total of six ranch development and ranch technical officers to be posted in NACO to assist with ranch development.

## 5. Technical Services

While Tanzania has considerable expertise and manpower available in certain areas such as tsetse control, there is an absence or scarcity in others. Thus the project is providing funds (US\$1.9 million) for technical services to augment that available or to fill in the gaps. This will be in the form of senior level technical personnel and training of Tanzanians.

Staff to be provided includes overall project management; a staff credit specialist for TRDB; six ranch technical officers for NACO; a senior accountant for TLMC; and a meat technologist for the Meat Processing Company for a total of 48 man years. Short term consultants may also be provided in areas related to ranch development and meat processing.

Programmed training includes: (a) four two-year overseas fellowships for technical staff (range management, range water development, meat technology and economics); (b) five trainees at diplomate level in ranch and range management, range water engineering and agricultural economics (probably at Egerton, Kenya); and (c) local training of administrative/clerical staff.

The project also provides funding for technical assistance in a further appraisal of the livestock subsector prior to preparation of a third phase of development which will place greater emphasis on increasing production in the traditional herd and on assistance to the small producer of cattle, plus areas of livestock production other than beef.

## C. Financial Considerations

Total project costs are estimated to be the equivalent of US\$24,695,000. The internal rate of return is calculated at 35 percent. As shown, rates of return to beneficiaries (THPC, TLMC, NACO, DDC, and ujamaa villages) on incremental investments range from 14 to 26 percent. IDA credits are for US\$18,448,000 or 72% of the total project while the remainder (US\$6,245,000 or 28%) represents self-financing by Tanzania.

Overall project costs are divided at 46 percent for foreign exchange and 54 percent for local costs, with IDA credits covering 100% of the foreign exchange and approximately 50 percent of the local cost element.

The following table shows a breakdown of foreign exchange/local costs by type of activity, as well as component percentage of the total project.

	<u>%</u>	<u>Project Total</u> US\$000	<u>Local Costs</u> US\$000	<u>Foreign Exchange Costs</u> US\$000	<u>Percent for Foreign Exchange</u> %
Fixed Investment <u>1/</u>	39	9,719	3,304	6,415	66
Cattle Purchase	31	7,636	7,254	382	5
Operating Capital	6	1,435	717	718	50
Technical Services	6	1,581	158	1,423	90
Physical Contingency	5	1,208	677	531	44
Price Contingency	<u>13</u>	<u>3,116</u>	<u>1,297</u>	<u>1,819</u>	<u>58</u>
Total	100	24,695	13,407	11,288	46

The following table shows the project breakdown totals and source of financing. Physical and price contingencies as well as tsetse clearance costs have been allocated to sub-projects to more nearly reflect their true expenditures.

	<u>Tanzania</u>		<u>IDA</u>		<u>Total</u>	
	<u>US\$000</u>	<u>%</u>	<u>US\$000</u>	<u>%</u>	<u>US\$000</u>	<u>%</u>
Marketing	960	28	2,439	72	3,399	15
Meat Processing	1,651	28	4,354	72	6,005	24
Tech Services	<u>-</u>	-	<u>1,886</u>	100	<u>1,886</u>	8
Sub-totals	2,611		8,679		11,290	
Ranching						
Ujamaa	330	14	2,059	86	2,389	10
DDC	862	30	2,010	70	2,872	11
NACO	<u>2,444</u>	<u>30</u>	<u>5,700</u>	<u>70</u>	<u>8,144</u>	<u>32</u>
Ranching Sub-total	3,636	29	9,769	71	13,405	53
Project Total	6,247	28	18,448	72	24,695	100

1/ This item includes water and range development, firebreaks and roads, plant construction, buildings, housing, stock handling facilities, heavy tractor equipment, vehicles, equipment, engineering, supplies, and miscellaneous.

While it will be noted that 53 percent of the total project costs are allocated to ranching, including the ujamaa component, it should also be noted that IDA credits for ujamaa ranches are 86% of costs while they are only 70% for DDC and NACO enterprises, i.e., greater self-financing is required of the parastatals. This difference is largely in cattle purchase and working capital as shown below.

<u>Ranch Project</u>	<u>Ranch Total</u>	<u>Development Cost</u>		<u>Cattle Purchase</u>		<u>Working Capital</u>	
	<u>US\$000</u>	<u>US\$000</u>	<u>%</u>	<u>US\$000</u>	<u>%</u>	<u>US\$000</u>	<u>%</u>
Ujamaa	2,309	705	29	1,427	60	257	11
DDC	2,872	1,098	38	1,527	53	247	9
NACO	<u>8,144</u>	<u>2,531</u>	<u>31</u>	<u>4,682</u>	<u>57</u>	<u>931</u>	<u>12</u>
Total	13,405	4,334	32	7,636	57	1,435	11

D. Project Implementation

1. Financial

The IDA credit of US\$18.5 million is to the Tanzania Government. Funds for technical services and machinery and equipment for the tsetse control unit (US\$3.4 million) will remain with the Tanzanian Government. The Tanzanian Government will on-lend the remaining funds US\$15.1 million to the Tanzanian Rural Development Bank (TRDB) for a term of 20 years with a grace period of five years and interest at four percent per annum. Thus, TRDB is the lending channel for loans to project beneficiaries. TRDB terms to beneficiaries are not to exceed 12 years with grace period of six years for ranches and three years for TLMC and TMPC. Interest will be at 8-1/2 percent per annum. Security for ranch loans will be a lien on land and a chattel mortgage on cattle. A lien on assets financed will be required as security for loans to TLMC and TMPC. It is a condition of credit effectiveness that a subsidiary loan agreement between Government and TRDB reflecting the above terms and acceptable to IDA be executed.

2. Procurement

Procurement under the project will be as follows:

(a) The two meat plants at Shinyanga and Mbeya will be constructed under turn key contracts awarded on the basis of competitive international bidding.

(b) Machinery, equipment, and supplies for remodeling TLP, tsetse control unit, TLNC, and ranches will be on international competitive bidding for contracts over US\$30,000. Local manufacturers will be allowed a preferential margin of 15 percent or the existing rate of import duties, whichever is lower.

(c) Marketing, ranch, and other infrastructure development will be carried out by the TanGov either by force account or local contract.

(d) Livestock required for the project will be purchased locally. An exception is a very small element of breeding stock for ranches which will probably be acquired in Kenya.

### 3. Management

Overall responsibility for project coordination and management is vested in a policy committee chaired by the Principal Secretary, Ministry of Agriculture. A project management unit has been established and is headed by a project manager (a Tanzanian) responsible directly to the Principal Secretary, Ministry of Agriculture. This project management unit includes an assistant project manager/economist (supplied by UNDP/FAO), a range management specialist, and a surface water development specialist. Since the project will comprise a number of components, both geographically and organizationally dispersed, an executive committee under the chairmanship of the project manager will be formed to ensure coordination. Its other members will be the senior executive officers of the organizations involved.

The project management unit will approve all development plans and provide technical assistance in their implementation. (This will include advice to the TRDB on IDA credit loans to sub-project beneficiaries-- nevertheless this does not relieve the TRDB of making its own evaluation of the financial and economic suitability of the loan applications and acting accordingly). However, each sub-project beneficiary will be responsible for their own activities and operations.

Finally, the Tanzanian Meat Processing Company will be formed to own and operate the two new processing plants and to assume the Government shareholding in the TPC plant at Dar es Salaam. A management contract with an experienced international meat processing company for the operation of the Shinyanga and Mbeya meat processing plant will be drawn up, the terms and conditions of which, as well as the suitability of the company selected, shall be subject to IDA approval.



## ANNEX III

### ENVIRONMENTAL ANALYSIS

The following environmental assessment was developed by livestock and range management specialists from the Development Services section of AID's Bureau for Africa. The assessment is based on over ten years experience working on livestock development projects in both East and West Africa, and experience gained during the implementation of two AID funded projects in Tanzania; the Masai Livestock and Range Management Project and the Tsetse Fly Eradication Project.

The first IBRD/IDA assisted livestock project demonstrated the advantages of using correct range management and resources conservation in order to increase livestock production. The techniques developed in this first phase will be used to ensure a minimal effect on the environment during implementation of the second phase project.

The USAID project, as a part of the second phase development, will include a study of the livestock sub-sector. This appraisal will provide basic data necessary for rational and balanced development of total livestock production in Tanzania and not limited to cattle production as proposed in the second phase of the IBRD/IDA project. The study will also consider the relationship between crop and livestock production and how to best coordinate production for optimum land use.

The major environmental consideration of this project and the IBRD/IDA Phase II Livestock Project can be grouped in three categories: conservation of natural resources, effects on the environmental and effect on human welfare.

## 1. Conservation of Natural Resources:

### a. Land Use

A general overview of present land use in Tanzania shows that: of the 361,800 square miles of land area, 9% is actively cultivated for crops, 10% is in fallow (previously cropped but now resting to restore fertility and partially grazed), 10% is in game parks and reserves, 23% is utilized solely for cattle grazing, and 40% is in range land and bush, virtually unoccupied due to the presence of tsetse fly.

Under the marketing project and other allied IDA Phase II projects, approximately 2,100 square miles are to be developed through ranches, holding grounds, markets and stock routes. This amounts to only six-tenths of one percent of Tanzania's total land area. Newly cleared areas amount to only one and one-tenths percent of the presently unused land area. Thus the project's direct demand for land is quite minor.

A macro examination of the selected project areas (and a large part of the total unused land as well) indicates that they are suitable and best used for extensive grazing of cattle for beef production when developed through tsetse clearance, surface water storage and range management planning. Soils are generally light and the topography is undulating with fairly steep slopes in many areas. Over large areas rainfall is marginal or the seasonal pattern such that crop production is hazardous. At the same time, short, heavy rains leading to extensive erosion from "bare" slopes or burned off areas do occur. This is not to say that pockets of land suitable for continuous crop production do not exist. However, in the absence of a detailed land use survey <sup>1/</sup>, which is a must in the long run, retaining the area under grass is the safest means of economically utilizing but still conserving the soil--water and wind erosion are reduced, soil moisture is conserved and fertility maintained. If the future land use surveys do indicate that parts of these areas are best utilized for cultivation, it can be initiated without major problems. In fact, clearance of tsetse, water development, and the construction of firebreaks and

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<sup>1/</sup> There is a great need for a detailed land use survey throughout Tanzania and a small start has been made with USAID assistance. However, this is a time consuming and expensive procedure which will not be completed in the near future without massive outside assistance. Such assistance is not on the immediate horizon.

tracks will facilitate land development. On the other hand, if unsuitable land is cultivated, the damage due to loss of perennial vegetation and grasses, soil erosion and reduced soil fertility is not readily reversible, and correction is possible only with heavy expenditures in time and capital.

• A final element is the effect of the marketing effort on cattle numbers. The marketing project is designed to increase offtake significantly from the traditional herd (through the provision of marketing opportunities) which utilizes 23 percent of the total land area. Much of this offtake will be unproductive animals utilizing grazing for self maintenance only. Thus we expect that total livestock numbers on currently utilized rangelands will be decreased, reducing grazing pressures and the threat of degradation of grazing lands, as the same lands become more productive.

#### b. Wildlife Conservation

A major natural resource in Tanzania is its wildlife, both animals and fowl. The heaviest wildlife concentration, particularly of migratory herds, is in northern Tanzania, centered on the Serengeti Plains. Traditional cattlemen have long used parts of this area, especially on a seasonal basis, for grazing their cattle. Under this project, existing stock routes and holding grounds on the periphery of the wildlife concentration area will be improved and some new facilities developed. As the attached map indicates none of these facilities will have any significant detrimental effect on wildlife welfare or migratory movement in this area. The resulting improvement in the orderly monitoring of cattle movement is expected to reduce the cattle-wildlife conflict. Major wildlife concentrations in central and southeastern Tanzania are not touched by any project developments. In other areas, the development of land for cattle grazing on holding grounds and ranches where game and wild fowl exist will also have an overall beneficial effect on wildlife conservation, especially with regard to improved water supplies, reduction of fires, improved grazing and reduced poaching activities.

#### 2. Effects on the Environment

a. Improvements in markets, holding grounds and stock routes will result in more humane treatment and fewer injuries to cattle; less loss of weight, and reduced death loss.

b. Adequate facilities and properly managed markets will reduce the spread of disease within and between zones by market cattle. Strict vaccination programs, quarantines, and animal health services are provided for in the project. The traditional and small mixed farm producers are the greatest beneficiaries as the mass of cattle movement is through their

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c. The development of ujamaa ranches is in areas where land is now fallow and there has been loss of fertility and productivity. The development of this land will result in conservation measures and improved soil fertility.

d. Water development for cattle drinking will be done through surface water storage. Each storage unit will be designed to meet the specific cattle watering requirements of the area. In general terms, excavations will be made in the order of 5,000 to 12,000 cubic meters and will be used as small dam fills not exceeding 2 meters in height with appropriate spillways. Watershed runoff will be grass covered and the access of cattle to water storage area will be restricted to lessen erosion and silting problems. Normally the dry season water storage capacity is within the excavated portion. The dangers of down-valley flooding is reduced and considerably less than normal flash flood runoff during heavy storms. As no concentration of human habitation will be in the immediate environs, human health risks through water contamination by water borne diseases and parasites are minimal.

e. Substantial areas will be cleared of tsetse. With virtually no disturbance of natural vegetation and wildlife present, unutilized land is brought into economic productivity and made suitable for human and cattle habitation. However, tsetse clearance does involve widespread use of insecticides. Normal procedures call for a series of aerial sprays over a three week period, with follow-up ground level spraying of small isolated areas where aerial spray has not effectively eradicated the fly.

As the areas are virtually uninhabited by humans, only minor effort and inconvenience is required for temporary short distance evacuation during the aerial spray process. The aerial spray insecticide used to date has been thoroughly field tested, has a short stable life and in concentrations used, is virtually non-toxic to animals and fowl. Necessary ground level spraying operations require a single application of a more stable (3 to 6 months) insecticide to the lower portions of bush and trees. Experience shows that only small isolated areas need this treatment and accumulatively is considerably less than 5 percent of the total area undergoing the clearance exercise. Thus direct or secondary toxic effects on human or animal life is virtually nil.

The tsetse control unit has developed excellent operational procedures and utilizes protective clothing to reduce the health hazard to unit operators to a minimal level. During recent years of operations no worker has experienced a serious health problem related to toxicity of chemicals used.

f. Cattle vaccinations and veterinary treatment at markets, holding grounds, stock routes and ranches are based on recommended and proven procedures. Full consideration is given to any treatment required prior to

slaughter to reduce risk of health hazard levels of toxic substances in beef consumed.

g. Adequate disposal facilities and procedures for tickicides being replaced in dip tanks are part of design and management to reduce toxic contamination to a non-hazardous minimum.

h. The meat processing operations and plant designs will be based on international standards with adequate by-product utilization and waste disposal systems. IBRD/IDA will review design proposals to ensure that these standards are met and its own environmental requirements fulfilled.

### 3. Human Welfare

The items previously discussed affect in one way or another the welfare of people. However, some points need to be considered more specifically.

a. It is expected that there will be an overall increase in cattle marketed; a more uniform supply to non-producing rural and urban areas; less wastage of production during the marketing process (the quickest way to increase quantity to consumer) and a reduced cost margin between producer and consumer (lower marketing costs). Wastage alone at present is estimated to be in the order of US\$2.5 million.

The decreased marketing cost plus less wastage should result in greater returns to the producer and a better price to the consumer. The producer has a small gain in income with which to augment the essentials of life he and his family require. The consumer should enjoy improved nutrition as a consequence of increased availability of meat without increases in prices caused by waste or inefficient marketing. While the activities of this project alone will not guarantee the resolution of meat shortages nor the increase of meat in the diet, it contributes substantially to make possible those ends.

b. The related ujamaa ranching activity introduces a new concept of ownership and equity in returns from economic commercial ranching. It creates an opportunity for subsistence level families to enter into the economic stream of life with less traumatic changes in life styles, social customs and traditions than resettlement for cultivation or wage employment.

c. While tsetse clearance is aimed primarily at improved ranching, there is also a consequent reduction in the threat of human sleeping sickness.

d. A huge labor element is not required to implement this activity, and thus no need for massive resettlement with its social upheaval problems and additive costs to government for substantial social services. Also

since these ranches are utilizing virtually uninhabited land, there is no great uprooting and displacement of people involved.

e. From a strictly human health viewpoint (disease, pollution or contamination of air, water, or soil, etc.) there are no significant health hazards foreseen. On the other hand there is a positive reduction of transmissible animal diseases such as anthrax and rabies, as well as internal parasites such as tapeworm.

It can therefore be concluded that the activities of this project and of related projects in livestock development have a definite beneficial effect on the environment.

## ANNEX IV

### TANZANIA LIVESTOCK MARKETING COMPANY, LTD. (TLMC)

#### Responsibilities, Functions, and Operations:

The Tanzania Livestock Marketing Company, Limited (TLMC) has been incorporated as a wholly Government owned subsidiary and has the following functions and responsibilities:

1. To acquire, control, operate, maintain, and administer the country's network of stock routes and holding grounds, and to extensively improve and expand these facilities to ensure an adequate and efficient network for movement of cattle from producers to markets, to processors or buyers of immature (stock cattle) and breeding cattle.
2. To acquire, control, maintain, operate, and manage the nation's network of livestock markets and to extensively improve and expand these facilities and services to ensure regular, rational, and effective marketing operations.
3. To engage in cattle buying and selling.

The TLMC will operate throughout Tanzania and will be organized on a zonal basis, i.e., Western, Central, Northern and Southern. It will be administered by a Headquarters Office in Dar es Salaam working through the four zonal offices located at Shinyanga, Dodoma, Arusha, and Mbeya respectively.

When fully developed, according to present plans, the field operations will be carried out through the zonal offices by 13 market management teams (65 staff), 27 holding ground and stock route teams (120 staff) and 13 buying teams (65 staff). Selection, training and operational establishment of these teams will be phased over 4 years.

Initially, the TLMC will acquire existing facilities consisting of 104 markets, 2,200 kilometers of stock routes, and 23 holding grounds. Under the IBRD/IDA Livestock Development Loan Phase II Project, existing facilities will be renovated and improved, and new facilities for an additional 33 markets, 2,300 kilometers of stock routes, and 4 holding grounds constructed over a 5-year period. 1/

The total marketing network facilities after completion of development will consist of 137 markets, 4,500 kilometers of stock routes, and 27 holding grounds with 496,000 acres.

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1/ A specialized Physical Development Section in TLMC will have responsibility for these activities. Upon completion of physical development works this section will be reduced and assume a maintenance role.

At present approximately 330,000 head of cattle pass through this commercial marketing network. It is expected that these numbers will rise to between 550,000 and 600,000 annually by year nine of TLMC operation.

TLMC buying teams will be buying in direct competition with private buyers or buyers representing other parastatal agencies. However, TLMC buying teams are expected to provide a wider range of more efficient services, thus becoming the major buying agent handling up to two-thirds of the cattle purchased or about 350,000 in nine years.

Staff Duties and Responsibilities:

The following description of duties and responsibilities for senior staff and operational teams provides an insight into TLMC operations. (See Organizational Chart, page 11).

1. Company Manager

The Manager will be chief executive of the Company and as such will be responsible to the Board of Directors for the proper and efficient operation of the Company. In carrying out these duties he will be supported by such numbers and types of staff as the Board of Directors may from time to time determine.

The specific responsibilities of the Manager will include: supervising, monitoring and reporting on Company activities; directing the activities of his supporting staff; preparing and submitting to the Board of Directors such financial statements of account and budgetary forecasts as may be required; advising the Board of Directors on matters of policy; functioning as accounting and liaison officer for funds obtained from the Government development budget, the Government recurrent budget, foreign aid, local loans and revenue, etc.; and generally taking such steps as are necessary to ensure the efficient operation of the Company.

2. Field Marketing and Training Advisor (AID project technician; AID project contract Team Leader)

The Field Marketing and Training Advisor will assist the Company's Manager to plan and implement the Company's livestock buying, selling and market operation programs.

Specifically, the Field Marketing and Training Advisor will assist the Manager, the Chief Operations Officer and the Company's four Zonal Managers (Central, Western, Northern and Southern) to:

- (a) Establish the Company's four zonal offices;

- (b) Select the staff for these offices;
- (c) Select the market operation and buying teams that will operate in each of the four zones;
- (d) Develop training programs for the above, and other Company staff;
- (e) Coordinate the Company's buying and market operations, and its transportation, pricing and order buying activities in the four zones;
- (f) Develop the marketing schedule for the Company's weekly and monthly market days; and
- (g) Generally develop an efficient buying, selling and market operation program profitable for the Company and beneficial to the producer.

### 3. Chief Operations Officer

The Chief Operations Officer will report to the Company's Manager and be responsible for the control, operation and maintenance of the Company's network of stock routes; holding grounds and livestock markets, and for the administrative support of the Company's livestock buying and selling operations in the field. He will be supported in the field by four Zonal Managers who will be responsible to him for the day-to-day control of the Company's operations in the field, and through whom he shall operate.

He will collaborate with the Chief Development and Works Officer on the planning and implementation of the Company's programs for renovating, modernizing and expanding its stock routes, holding grounds and livestock markets; with the Chief Veterinary Officer in the design and implementation of disease control programs in the Company's stock routes, holding grounds and livestock markets; and with the Marketing Officer in designing and implementing cattle buying programs.

### 4. Marketing Officer

The Marketing Officer will be under the Chief Operations Officer and responsible for developing and implementing the Company's livestock buying program. Specifically, the Marketing Officer will:

- (a) Know markets and potential customer demand;
- (b) Keep market conditions under continuous review;
- (c) Under the general guidance of the Chief Operations Officer, negotiate and fulfill specific buying contracts;

(d) Keep supply conditions and prices in each zone under continuous review;

(e) Devise buying programs for each zone and assist zonal buying teams to implement these programs, changing them where necessary from time to time in the light of changed marketing opportunities;

(f) Assist Zonal Managers to recruit and train zonal buying teams and ensure that buying methods and practices in each zone are the best for that zone;

(g) Prepare operating budgets and such progress and other reports as may be required from time-to-time by Company Management; and

(h) Generally, assist the Chief Operations Officer to develop an efficient and profitable livestock buying operation.

#### 5. Chief Veterinary Officer

The Chief Veterinary Officer will be responsible to the Company's Manager for the design and implementation of animal health and disease control programs within the stock routes, holding grounds, livestock markets and transport facilities operated by the Company or used by it from time-to-time.

Specifically, the Chief Veterinary Officer in collaboration with other Company staff will:

(a) Design programs to control disease conditions present in the Company's holding grounds and in the areas in which the Company's stock routes and livestock markets are located. This will involve programs of both a prophylactic and therapeutic nature and include dipping schemes; vaccination programs, nutritional management and therapy;

(b) Ensure that dip management and testing function properly within the Company's stock routes, holding grounds and livestock markets;

(c) Advise the Company's Zonal Managers concerning steps to be taken to control disease within the Company's stock routes, holding grounds and livestock markets, ensure that requirements for drugs, medicine and vaccines are included in the Company's operating plans, and that the necessary equipment and personnel are available for carrying out the control program

(d) Ensure that the Company's disease control programs comply with district, regional and national programs and veterinary regulations; and

(e) Ensure that training programs for the Company's staff assigned to carry out disease control measures are prepared and carried out.

## **6. Chief Development and Works Officer**

The Chief Development and Works Officer will be responsible to the Company Manager for renovation, modernization and expansion of markets, holding grounds and stock routes. He will also be responsible for establishing a system of routine maintenance for the facilities in question.

Specifically, the Chief Development and Works Officer will:

(a) Prepare phased plans for the renovation and construction of livestock markets, stock routes and holding grounds including buildings, housing, firebreaks, tracks, small bridges, dams, country-type roads, dips, water systems, etc., in accordance with the provisions of the IDA Second Livestock Development Project;

(b) Prepare detailed designs and tender documents, and arrange and supervise all contracts awarded for this work;

(c) Manage any skilled and unskilled labor employed on direct construction;

(d) In collaboration with the Chief Accountant, institute systems of financial control and reporting for this work;

(e) Supervise the work of his subordinate staff;

(f) Prepare such budgets and progress reports as may be required by the Company's Management from time to time;

(g) Develop and initiate systems for the routine maintenance of the Company's facilities; and

(h) Generally, be responsible to the Company's Manager for the timely implementation of the Company's physical development program.

The Chief Development and Works Officer will be supported by a qualified Range Development Officer and such Works Supervisor, Surveyors, Draftsmen and construction staff as may be required.

## **7. Range Development Officer (AID Contract project technician)**

The Range Development Officer will be responsible to the Company's Chief Development and Works Officer for the design and implementation of range management and grazing plans on the Company's holding grounds and stock routes.

Specifically, the Range Development Officer in collaboration with other Company staff will:

- (a) Prepare management and livestock grazing plans for each holding ground;
- (b) Ensure the development of adequate water supplies, sound feed conservation plans and proper grazing utilization and control as affected by seasonal and yearly forage availability on each holding ground;
- (c) Develop soil erosion control and watershed protection practices particularly with regard to surface water catchment areas;
- (d) Supervise revegetation on areas of past land misuse;
- (e) Prepare and assist in the implementation of development plans for each holding ground so as to improve their contribution to meat production and
- (f) Train counterpart staff.

H. Economist (Livestock Marketing) (AID Contract project technician)

The Economist will be responsible to the Chief Operations Officer for the preparation of all documentation of an economic nature within the Company.

Specifically, the Economist will, in collaboration with other Company staff:

- (a) Develop livestock marketing baseline data, market intelligence and reporting services;
- (b) Assist in planning marketing timetables and programs;
- (c) Assist in preparation of investment and operational budgets;
- (d) Assist in auction negotiations and the preparation of buying and auction contracts;
- (e) Collect, maintain and analyze records of the Company's performance and operations for the use of management;
- (f) Carry out economic, financial and administrative analyses within the Company as may be required from time to time; and
- (g) Train counterpart staff.

**9. Chief Accountant (supplied by IDA Funds)**

The Chief Accountant will be the head of the Accounts Section and be responsible to the Company's Manager.

He must have a degree in Accountancy, ACCA, CA or equivalent with at least five years of experience in accountancy of large undertakings. Livestock marketing experience would be an advantage.

His specific duties are:

(a) To establish adequate accounting systems for TLMC; enabling it to determine operational results of the Company such as operational costs, revenues, and profit margin;

(b) To be responsible for the entire accounting system of the Company and financial operations. He will be required to prepare final accounts and Balance Sheets of the undertaking.

(c) To advise the General Manager on the financial requirements and policies of the Company.

**10. Zonal Managers (4)**

The Company's four (Western, Central, Northern, Southern) Zonal Managers will be responsible to the Chief Operations Officer for carrying out the Company's livestock buying programs and for operating its stock routes, holding grounds and livestock markets in their respective zones.

Specifically, each Zonal Manager will be responsible, with assistance from the Company's head office, for:

(a) Establishing the Company's four Zonal Offices at Dodoma, Shinyanga, Arusha and Mbeya and for selecting and training the staff for those offices;

(b) Selecting and training the buying, market operation, holding ground and stock route teams required for their respective zones and for directing the day-to-day operations of those teams;

(c) Developing and implementing marketing schedules for the Company's weekly and monthly market operations in their respective zones and for maintaining those markets in a proper condition;

(d) Controlling, operating and maintaining in a proper condition the Company's network of stock routes and holding grounds in their respective zones;

(e) Compiling and maintaining such financial and other records of the Company's operations as may be required by Company Management;

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(f) The security and proper accounting in accordance with Company regulations for such sums of money and other Company assets as may from time to time be entrusted him;

(g) Collaborating with and assisting the Company's Chief Development and Works Officer and his staff to improve, modernize and expand the Company's network of stock routes, holding grounds and livestock markets in accordance with the investment program being funded under the Second Livestock Development Project;

(h) Generally developing efficient buying, selling, livestock markets, stock route and holding ground operations in their respective zones; and

(i) Advising the Chief Operations Officer regarding marketing and buying problems, policies and opportunities within their respective zones.

11. Livestock Marketing Officers (3) (AID Contract project technicians)

The Zonal Livestock Marketing Officers will assist the Zonal Managers, with whom they will work, to carry out the Company's livestock buying programs and to operate the livestock markets in their respective zones.

Specifically, each Livestock Marketing Officer will assist the Zonal Manager to:

(a) Establish the Company's four Zonal Offices at Dodoma, Shinyanga, Arusha and Mbezi and to select and train the staff for those offices;

(b) Select and train the buying and market operation teams required for their respective zones and to direct the day-to-day operations of those teams;

(c) Develop and implement marketing schedules for the Company's weekly and monthly market operations in their respective zones, and assure the attendance of veterinarians on market day for health inspection, vaccination, quarantine and the issuance of certificates for the movement of stock routes;

(d) Identify obstacles to the development of a legal, orderly marketing system and, where appropriate, formulate and recommend corrective measures;

(e) Plan and implement, in collaboration with Company's Chief Development and Works Officer and his staff, improvements to existing markets and the erection of new markets in accordance with the investment program being funded under the IDA Second Livestock Development Project; develop procedures for their maintenance; and

(f) Generally, to assist Zonal Managers to develop efficient buying, selling and market operations in their respective zones. Their duty stations will be at their respective zonal offices.

#### 12. Works (Construction) Teams

These teams will function under instructions from and supervision of the Works Foreman on directives from the Supervisor of Works on behalf of the Chief Development and Works Officer.

They will carry out actual construction as instructed. These teams may be local hire employees or contracted units.

#### 13. Survey Teams

These teams will operate under instructions from and supervision of the Surveyor on directives from the Supervisor of Works on behalf of the Chief Development Officer.

Their principle task will be to carry out surveys for demarcation of stock routes and any other survey work required in connection with holding grounds or markets.

#### 14. Draftsman

The Draftsman, with such assistance as may be required, will function under the direction of the Supervisor of Works in preparation of blue-prints, plans, maps, etc., as required by field operations of the Development Section.

#### 15. Market Teams (13 teams)

Each market team will consist of 4 to 6 members depending on the workload. Each team will operate under and be directly responsible to their respective zonal office.

They are charged with the actual administration, management, and operations of markets. This includes publicizing the markets, arrangements, handling of cattle at the markets, sales operations, compliance with regulations, and supervision of maintenance of the infrastructure.

Each team will be expected to operate about 12 monthly and 1 weekly market for a total of approximately 200 market days per year.

#### 16. Holding Grounds and Stock Route Teams (27 teams)

There will be one team for each holding ground and they will be responsible also for those sections of the stock routes leading to or from the holding ground for which they have responsibility.

The teams will operate under and be directly responsible to the zonal office in which the holding ground is located. The teams are charged with the administration, management and operation of the holding ground and sections of stock routes assigned. This includes proper management of cattle in their custody; efficient movement of cattle; management of grazing and other feed resources; animal health; and maintenance of infrastructure such as water supplies, dip tanks, corrals, etc.

17. Buying Teams (13 teams)

Each team will consist of 4 to 6 members depending on the workload. They will operate under and be administratively responsible to their respective zonal offices. Zonal offices will coordinate buying activities with the TLMC Market Officer. Each team is expected to be active at markets on about 200 marketing days per year.

The teams will act as order buyers only and on a fee basis. While buying orders will be solicited locally within the area and zone of their operation, the overall buying operation will be coordinated through the TLMC Marketing Officer. No parastatal or private organization is forced to use their services; however, it is expected that through more effective and economical procedures they will obtain a majority of buying orders. However, competition will exist to install an element of competitive pricing for the benefit of the producer.

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## ANNEX V

### PROJECT COORDINATION AND RESPONSIBILITIES OF PROJECT PERSONNEL

#### Project and Personnel Coordination

##### AID Project Manager

The USAID Project Manager, who is also the USAID Contract Representative, will have responsibility for the overall management, coordination and monitoring of project implementation including Contract personnel technical performance. He will also be responsible for preparation of the necessary project documentation. The Project Manager will be stationed at USAID/Tanzania, in Dar es Salaam, which will provide him with logistical and technical support, the latter through the Food and Agriculture Office. As he will manage several projects, the Project Manager will be funded under the Mission's operation's budget. His principal contact with the project team will be, but not limited to, the Contract Team Leader.

##### Contract Team Leader

The team leader, to be appointed by the Contractor, will be based in Dar es Salaam. He will have direct responsibility for all project activities in Tanzania, including project coordination and implementation, Contract personnel technical performance, and all Contract administrative matters concerning project activities and personnel.

#### 1. Field Marketing and Training Advisor (FMTA)

(a) He will be assigned to TLMC Headquarters and be based in Dar es Salaam. As an advisor to the General Manager of TLMC, he will be expected to carry out the duties and assignments within TLMC operations described in the project's technician duties and responsibilities, the second section of this Annex. On TLMC operational and policy matters he will report and be responsible directly to the TLMC General Manager.

(b) He will also be directly responsible for project activities carried out under the TLMC and the performance of the other five technicians assigned to TLMC. He will be responsible for maintaining a close liaison with them and keeping informed of their activities.

(c) As a Contract team member he will report to the Contract Team Leader on all project activities and Contract administrative matters. (If the person appointed to this position is designated to be the Contract Team Leader, by the Contractor, he will assume the duties and responsibilities of the team leader in addition to his duties and responsibilities as the Field Marketing and Training Advisor.)

## 2. Economist (Livestock Marketing)

He will be assigned to the TLMC Headquarters and be based in Dar es Salaam.

(a) As a supporting technical staff member of TLMC management, he will report and be responsible directly to the Chief Operations Officer on TLMC operational matters and through him to the General Manager, as required, in the performance of duties and responsibilities assigned as outlined in the second section of this Annex. He will be expected to maintain close liaison with the Field Marketing and Training Advisor.

(b) As a Contract team member he will report to the Contract Team Leader through the FMTA on all Contract administrative matters and all project activities.

## 3. Range Development Officer

He will be assigned to TLMC Headquarters and be based in Dar es Salaam.

(a) As a technical staff member of TLMC assigned to the Physical Development Section, he will report and be responsible directly to the Chief Development Officer and through him to the General Manager on TLMC operational matters as required in the performance of duties and responsibilities as outlined in the second section of this Annex. He will be expected to maintain close liaison with the Field Marketing and Training Advisor, and the three Zonal Livestock Marketing Officers.

(b) As a Contract team member he will keep the Contract Team Leader informed of project activities and contract administrative matters through the FMTA.

## 4, 5, and 6. Livestock Marketing Officers (Zonal)

These officers will be assigned to TLMC Zonal Offices. They will be based at their respective Zonal Office of assignment.

(a) As technical staff members at Zonal Offices, they will report and be directly responsible to the Zonal Manager and through him to the Chief Operations Officer on all TLMC operational matters in the performance of duties and responsibilities as outlined in the second section of this Annex. During any overseas training period of the Zonal Managers, these officers will be Acting Zonal Managers and report directly to the Chief Operations Officer. They will be expected to have close liaison with the Chief Buyer, Range Development Advisor, and the Field Marketing and Training Advisor.

(b) As Contract team members they will keep the Contract Team Leader informed of all project activities and Contract administrative matters through the FMTA.

7. Financial and Management Advisor

He will be assigned to LIDA Headquarters and be based in Dar es Salaam.

(a) As advisor to the General Manager of LIDA, he will report and be directly responsible to him on matters of LIDA operations in accordance with duties and responsibilities outlined in the second section of this Annex.

(b) As Contract team member, he will report directly to and be responsible to the Contract Team Leader on project activities and on matters of Contract administration.

8, and 9. Rangeland Management Specialist and Water Development Specialist

They will be assigned to the IBRD/IDA Livestock Development Loan Phase II Project Management Unit and be based in Dar es Salaam.

(a) As technical members of the Phase II Project Management Unit, they will report directly and be responsible to the IDA Project Manager on all IDA project operational matters in accordance with duties and responsibilities as outlined in the second section of this Annex.

(b) As members of the USAID Contract team, they will report directly to and be responsible to the Contract Team Leader on project activities and operations, and on Contract administrative matters.

Because three of the Contract technicians will be based outside Dar es Salaam, they will be required to submit a short written activity report, on a monthly basis, for submission to the team leader through the FMTA with a copy to the USAID Project Manager.

All project personnel will be required to submit a detailed quarterly report to the team leader. The Contract Team Leader's quarterly report to the USAID Project Manager will combine the individual quarterly reports with his comments on overall TLMC project progress including progress made compared to existing work plans. Likewise, the Financial and Management Advisor to LIDA will assess LIDA progress in each report and the Rangeland Management and Water Development Specialists assigned to the IDA Phase II Project Management Unit will comment on Phase II Project progress. The final quarterly report of each fiscal year should take the perspective of a year-end report to fulfill annual contractor reporting requirements and to minimize report duplication.

To facilitate such reporting and other necessary written communications, the Contractor will be authorized to employ a local hire secretary who will be under the direction of the Contract Team Leader and will be officed in Dar es Salaam.

In general terms, project activities and Contract technicians will receive all necessary logistical support from the Tanzanian Government through their respective organizations: TLMC, LIDA, and the Phase II Project Management Unit. The latter has special funds earmarked for this purpose.

#### Job Descriptions for Project Technicians

##### 1. Field Marketing and Training Advisor

The officer will be assigned to the TLMC. He will assist the TLMC Manager to plan and implement the Company's livestock buying, selling and market operation programs. Specifically, he will assist the Manager, the Chief Operations Officer and the Company's four Zonal Managers (Central, Western, Northern and Southern) to:

- (a) Establish the Company's four Zonal Offices;
- (b) Select the buying and market operation teams that will operate in each of the four zones;
- (c) Select the staff for these Zonal Offices;
- (d) Develop training programs for the above and other Company staff;
- (e) Coordinate the Company's buying and market operations, its transportation, pricing and order buying activities in the four zones;
- (f) Develop the marketing schedules for the Company's weekly and monthly market days; and
- (g) Generally develop an efficient buying, selling and market operation program profitable for the Company and beneficial to the producer.

The Field Marketing and Training Advisor will be a graduate of a recognized university with a degree in the livestock field and substantial practical experience (10 years minimum) in the marketing of range cattle and the operation of livestock markets. He should be capable of both planning a large scale marketing operation and assisting field staff in its implementation. Experience in a developing country would be an advantage.

The duty station for this position will be Dar es Salaam but substantial travel will be required. The appointment will be subject to the approval of the Government of Tanzania and USAID.

## 2. Economist (Livestock Marketing)

This officer will be assigned to the TLMC and will be responsible to the Chief Operations Officer of TLMC for the preparation of all documentation of an economic nature within the Company. Specifically, the Economist, in collaboration with other Company staff, will:

- (a) Develop livestock marketing baseline data, market intelligence, and reporting services;
- (b) Assist in planning marketing timetables and sales programs;
- (c) Assist in the preparation of investment and operational budgets;
- (d) Assist in sales negotiations and the preparation of buying and sales contracts;
- (e) Collect, maintain and analyze records of the Company's performance and operations for management use;
- (f) Carry out economic, financial and administrative analyses within the Company as may be required from time to time; and
- (g) Train his counterpart.

The Economist will be a graduate in Economics or Agricultural Economics from a recognized university and will have had practical experience in enterprise planning and budgeting, business organization and management, and investment programming and supervision, all in the livestock field. He will also need a sound knowledge of livestock marketing structures and applied pricing techniques. Experience in a developing country would be an advantage.

The duty station for this position will be Dar es Salaam but substantial travel will be required. The appointment will be subject to the approval of the Tanzanian Government and USAID.

### 1. Range Development Officer

The officer will be assigned to the TLMC and will be responsible to the Company's Chief Development and Works Officer for the design and implementation of ranch management plans on the Company's holding grounds. Specifically, the Range Development Officer, in collaboration with other Company staff, will:

- (a) Develop management and livestock grazing plans for each holding ground;

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(b) Ensure the development of adequate water supplies, sound feed conservation plans, and proper grazing utilization and control, as affected by seasonal and yearly forage availability on each holding grounds;

(c) Develop soil erosion control and watershed protection practices particularly with regard to surface water catchment areas;

(d) Supervise revegetation on areas of past land misuse;

(e) Prepare and assist in the implementation of development plans for each holding ground to improve their contribution to meet production; and

(f) Train counterpart staff.

The Range Development Officer will be a graduate in range management of a recognized university with substantial practical experience (a minimum of five years) in livestock production under tropical or sub-tropical range management conditions.

The duty station for this position will be Dar es Salaam, but substantial travel will be required. The appointment will be subject to the approval of the Tanzanian Government and USAID.

#### 4, 5, and 6. Livestock Marketing Officers (Zonal)

Those officers will be assigned to the TLMC and will assist the Zonal Managers to operate the livestock markets and carry out the Company's livestock buying programs in their respective zones. Specifically, each Livestock Marketing Officer will assist the Zonal Manager in his respective zone of assignment to:

(a) Establish the Company's four Zonal Offices at Dodoma, Shinyanga, Arusha, and Mbeya, and to select and train the staff for those offices;

(b) Select and train the market operation and buying teams required for their respective zones and to direct the day-to-day operations of those teams;

(c) Develop and implement marketing schedules for the Company's weekly and monthly market operations in their respective zones, and assure the attendance of veterinarians on market day for health inspection, vaccination, quarantine and the issuance of certificates for the movement of stock on stock routes;

(d) Identify obstacles to the development of a legal, orderly marketing system, and, where appropriate, formulate and recommend corrective measures;

(e) Plan and implement, in collaboration with the Company's Director of Works and his staff, improvements to existing markets and the erection of new markets in accordance with the Livestock Development Project, and develop procedures for their maintenance; and

(f) Generally, to assist Zonal Managers develop efficient buying, selling and market operations in their respective zones.

The Zonal Livestock Marketing Officers will have substantial practical experience (a minimum of five but preferably 10 years) in the marketing of range cattle and the operation of livestock markets. They should be capable of training counterpart staff. Experience in a developing country would be an advantage.

Their duty stations will be Dodoma, Shinyanga, or Arusha, according to assignment. The Southern Zone (Mbeya Duty Station) will be developed after the other Zones, and thus one of the officers may be re-posted to Mbeya. Extensive travel will be required. The appointments will be subject to the approval of USAID and the Tanzanian Government.

#### 7. Financial and Management Advisor

The advisor will be assigned to the Tanzania Livestock Development Authority (LIDA). He will serve as principal advisor to the Managing Director regarding all financial and management matters, and:

(a) Develop and implement financial and management procedures for LIDA;

(b) Plan and organize the Financial Services Division in LIDA responsible for monitoring the subsidiary companies, analyze financial data and report to management accordingly;

(c) Conduct financial and management studies of subsidiary companies for LIDA management;

(d) Develop financial and management control systems for projects under LIDA;

(e) Design budget procedures for LIDA and its subsidiary companies;

(f) Investigate the training needs and coordinate a training program for financial and management personnel;

(g) Supervise and train a counterpart financial manager for LIDA;

(h) Assist the Planning Unit in developing systems to monitor livestock projects;

(1) Assist subsidiary companies in improving their financial and management procedures.

The Financial and Management Advisor should have a degree in Business Administration or comparable field, with extensive course work in accounting business management, business practice and business law. He should have a minimum of five years' actual business experience with particular experience in the financial/management area. He must be able to deal effectively with both senior and junior officials. Experience in a developing country would be a distinct advantage.

The duty station will be Dar es Salaam. The appointment will be subject to Tanzanian Government and USAID approval.

#### 8. Range Management Specialist

The officer will be assigned to the IBRD/IDA Livestock Development Loan Phase II Project, under the Ministry of Agriculture (Kilimo), as a member of the Project Management Unit. Other members of this Unit are: the Phase II Project Manager, an assistant project manager (agricultural economist), a range management specialist, a water development specialist, and administrative/secretarial staff. He will be responsible to the Phase II Project Manager for:

(a) Reviewing the range management plans of the ujamaa, the District Development Corporation and National Agricultural Company ranches participating in the project;

(b) Developing and promoting improved range management plans;

(c) Assisting sub-borrowers in their financial, organization and conservation planning;

(d) Developing sound feed conservation plans; and

(e) Training counterpart staff.

The officer will be a graduate in range management of a recognized university with substantial practical experience (minimum of five years) in: livestock production under range management conditions; soil and water conservation; range ecology; range analysis techniques; and range improvement. He should also have a good knowledge of livestock husbandry and nutrition. Experience in a developing country would be definitely desirable.

The appointee's duty station will be Dar es Salaam with extensive travel. His appointment will be subject to the approval of the Government of Tanzania, USAID and the International Development Association (IDA).

9. Water Development Specialist

The officer will be assigned to the IBRD/IDA Livestock Development Loan Phase II Project, under Kilimo, as a member of the Project Management Unit. Other members of this Unit are the Phase II Project Manager, an assistant project manager (agricultural economist), a range management specialist, a water development specialist and administrative/secretarial support. He will be responsible to the Phase II Project Manager for:

(a) Reviewing the ranch water plans of the ujamas, the District Development Corporation and National Agricultural Company ranches participating in the project;

(b) Determining ranch water requirements and developing sound water and feed conservation plans;

Assisting sub-borrowers to design and construct water retarding and storage facilities in collaboration with other technical officers; and

(d) Training counterpart staff.

The officer will be an engineering graduate of a recognized university with professional training and substantial practical experience in soil and water conservation, water development, the design and construction of water retarding and storage facilities, and soil stabilization structures (minimum of five years). Experience in a developing country would be an advantage.

The appointee's duty station will be Dar es Salaam with extensive travel. His appointment will be subject to the approval of the Government of Tanzania, USAID and the IDA.

## ANNEX VI

### PARTICIPANT TRAINING

#### Rationale for Training Proposals

The Tanzanian Government development philosophy recognizes that to achieve program success and to fully meet project objectives each activity undertaken must be effectively implemented and managed. Implicit in this success is the requirement that each project must be fully staffed with well trained, competent officers/technicians. Translated into practice this means that as is often the case, when sufficient Tanzanians are not initially available to fill all the established positions in a project, non-Tanzanians must be used to complete staffing requirements. While the Government fully endorses the temporary or short-run utilization of non-Tanzanians, it is also firmly committed to the principle that major efforts to train Tanzanians as replacements should begin as soon as possible after the project is approved to ensure a lasting project impact.

In the livestock subsector Tanzania has a reasonable level of personnel (total manpower and competence) in the veterinary field but is very short of degree level professionals in other disciplines connected with the livestock industry. Recent efforts of the Government have resulted in an improvement in the number and quality of diploma and certificate level personnel, however, a sizeable deficit still exists in the more specialized technical areas such as range management, market operations, extension techniques, etc. Thus Tanzania remains heavily dependent on non-Tanzanian professional personnel to fill positions in the livestock industry.

A complicating factor in the manpower situation, but a reality that must be taken into consideration, is the Government's Civil Service structure. Senior level administrative, supervisory, and technical positions must be filled by degree holders to meet legislated qualifications and regulatory requirements. As there are not enough qualified Tanzanian degree holders to fill all Civil Service positions, many senior positions are empty or temporarily filled by non-degree holders. Because the number of trained personnel required by the rapidly expanding development activities will greatly exceed the number now in training even though the Government has, in most cases, included training programs in each activity, the immediate prospects for improvement appear dim. The situation is exacerbated by the practice of assigning a degree holder to a position outside his field of competence simply to meet the immediate requirement to fill a position. This has happened frequently in the livestock area with a particularly adverse effect on animal health activities and development.

Taking into consideration the foregoing plus a certain amount of attrition and promotion and/or premature transfer out of the project (infrequent), the project training program has been designed to provide degree training for counterparts/replacements for all project supplied technicians. This will be supplemented by the four fellowships, each of two years duration,

to be provided by the IDA in the areas of range management, range water development, meat technology and economics, at the degree level.

By training ten participants, the immediate needs of the project will be met while a small core of specialists in livestock related fields will be established. If our objective is a sustained effective development effort by the Tanzanian Government in the livestock area, the number of participants proposed is the minimum. A smaller number will make it extremely unlikely that the critical mass stage will be reached because a single departure will leave a sizeable gap. At the same time, while a larger number of degree participants would be desirable, the constraints imposed by funding and availability of top quality trainable manpower do not permit a much larger effort.

An important factor in the training is the need for a major effort in the early stages of the project to enable participants to return early enough to benefit from the knowledge and experience of non-Tanzanians working on the project. For this reason eight (8) of the degree participants are scheduled to depart for training in CY 1974 to return in CY 1976. In turn, this requires that funds be obligated in the Spring of 1974 for the studies beginning in the Fall if valuable time is not to be lost. Any delay in the provision of funds for training will, in our judgment, have a negative effect on the project.

Degree training of the type required in this marketing and development project is not obtainable in Tanzania. At present, most African universities either have agricultural faculties in various stages of formation or have emphasized crop production at the expense of livestock interests. The remaining schools do not offer the range of studies required in this project, such as range and ranch management, soil conservation, extensive beef production, and livestock marketing. Thus, to our knowledge, satisfactory academic training to the degree level as required for this project is not obtainable in Africa.

The U. S. is an acknowledged leader in the livestock sector, especially in the areas of work mentioned above. As an example, Tanzanian trainees in these areas financed by the Nordic group are sent to the U. S. for academic and practical training. The IBRD/IDA and UNDP/FAO trainees are sent to both the U. S. and Australia, thus some balance of technical expertise input is achieved.

In regard to non-degree training, requirements for diploma and certificate level personnel in general agriculture and animal production can be expected to be met through Tanzanian institutions. Diplomates in range and ranch management can be satisfactorily trained at Egerton College in Kenya and at the Mpwapa Agriculture Training Institute under USAID/Tanzania's assisted Manpower Development Project. Any other requirements are expected to be met through normal channels. Thus, no special diplomate training is programmed or funded in this project. Other junior level staff will be

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given specialized training through local short courses and on-the-job training as part of the project program. (The IDA project provides for five three-year fellowships to Egerton College in the areas of range management, range water engineering and agricultural economics at the diploma level.)

To develop an effective livestock marketing operation in Tanzania, the Tanzanian senior staff charged with this responsibility must have a clear concept of what they need to achieve, how this is possible, and what it takes to do this. Therefore, the project training program provides for short-term conceptual study tours to view cattle marketing operations in the U. S. These staff officers will be selected from the permanent Tanzanian senior staff in the project. It is expected that they will have substantial influence on the entire future of the cattle marketing program in Tanzania.

It would be advantageous for all U. S. participant training to be funded under an institutional contract with full responsibility for implementation of the training program resting with the contractor. However, due to the importance of early departure, the first three to five degree participants and the first conceptual study group will be handled by USAID. Subsequent degree participants and study groups will be processed by the contractor. This should provide for greater participation on the part of contract technicians in the selection of trainees and in the development of the training program. It should also provide for more coordination between field personnel and the training institution, and allow for improved follow-up on the return of the trainees. In addition, the burden of academic placement and acceptance of transfer credits is focused at one institution. This procedure of contractor backstopping is also in line with general AID policy of reducing Mission support activities.

#### Training Programs

Project participant training will be carried out through the following programs:

1. Academic/professional degree in U. S. (10 trainees). The Tanzanian counterpart/replacements for AID-supplied project technicians will undergo academic degree and summer practical training in the U. S. (10 in total, as one Financial Management Specialist has two counterparts).

Trainees will study for degrees in agricultural economics, agricultural engineering, animal production, range management, or economics/financial management. All will have had prior field experience. An exception is a degree holder in economics to study livestock marketing analysis and reporting.

When possible, trainees will be selected and posted on-the-job in Tanzania for at least four months prior to departure. Upon return, the

trainees will work with and under the supervision of AID-provided technicians to gain practical experience in applying the academic knowledge obtained.

2. Conceptual study tours in U. S. (three groups--11 people total):

(a) Top level management (one group--three people). This group will consist of the TLMC General Manager, Chief of Field Operations, and Chief Buyer. All will be degree level professionals. A 4-6 week conceptual study tour of market management, organization, facilities, and operations particularly from an administrative viewpoint is programmed. This training should take place as soon as possible after the project is approved.

(b) Operational level management (two groups--four each). Two groups, each consisting of a senior market management officer and a cattle buyer for two zones, are to participate. It is felt that one group of eight plus a training leader would be too cumbersome and less effective than smaller groups. The conceptual and practical training study tour is programmed for approximately two months during late Summer and early Fall. The program will cover market management, operations, buying and cattle movement at the practical, operational level. These officers will receive additional on-the-job training while assisting the AID Contract project technicians in establishing, training and operating market management and buying teams in their respective zones.

(c) Formal short-course training (between 104 and 156 trainees): Formal short courses lasting about four weeks will be set up in Tanzania as the initial training for market management teams and buying teams. The short-course training will be followed by on-the-job training under the supervision of the AID-supplied project livestock marketing officers. As presently planned, 13 market teams and 13 buying teams will be trained. Each team will be composed of four to six people depending on the workload, for a total of between 104 and 156 trainees.

(d) Informal on-the-job training (an additional 81 to 150 trainees): On-the-job training will be given to project personnel assigned to stock routes and holding ground operations. Some informal short-course training will also be carried out. There will be 27-30 teams of three-five people each for a total of from 81 to 150 staff trainees.

In addition, it should be noted that informal on-the job training will be provided on a day-to-day basis by AID-supplied project technicians for all trainees in the academic degree element, the conceptual study tour groups, and those completing the formal short-course training.

### U. S. Participant Training Details

The following are the details of the training to be accomplished at the degree level (keyed to table on Page 7).

1. M.Sc. Degree in Agricultural Economics (Livestock Marketing Analyst)-- Counterpart/replacement for the AID Contract technician in the TLMC Economist project position.

Trainee is expected to have a Degree in Agricultural Economics or General Economics. Training will emphasize economic analysis of cattle marketing, pricing policy, data collection and reporting.

2. B.Sc. Degree in Agricultural Economics (Livestock Market Management)-- Counterpart/replacement for the AID-financed Field Marketing and Training Advisor. He will fill the position of Zonal Manager for the Western Zone in TLMC field operations. The trainee will hold a diploma in the livestock area with experience in marketing of cattle. Training will emphasize market management and economics. Special practical field training is to be included for one summer.

3, 4, and 5. B.Sc. Degree in Agricultural Economics (Livestock Market Management)--Same details as for trainee 2.

Trainees will return as TLMC Zonal Managers for the Central, Northern, and Southern Zones.

6. B.Sc. in Range Management--Counterpart/replacement for the AID Contract technician assigned to the TLMC Range Management specialist. The trainee will hold a diploma in Range Management. The training will emphasize range development and management. One summer of practical training will be included.

7. B.Sc. in Range Management--Counterpart/replacement for the AID Contract technician assigned to the IDA Phase II Project Management Unit. The trainees will hold a diploma in Range Management. The training will emphasize range development and management. One summer of practical field training will be included.

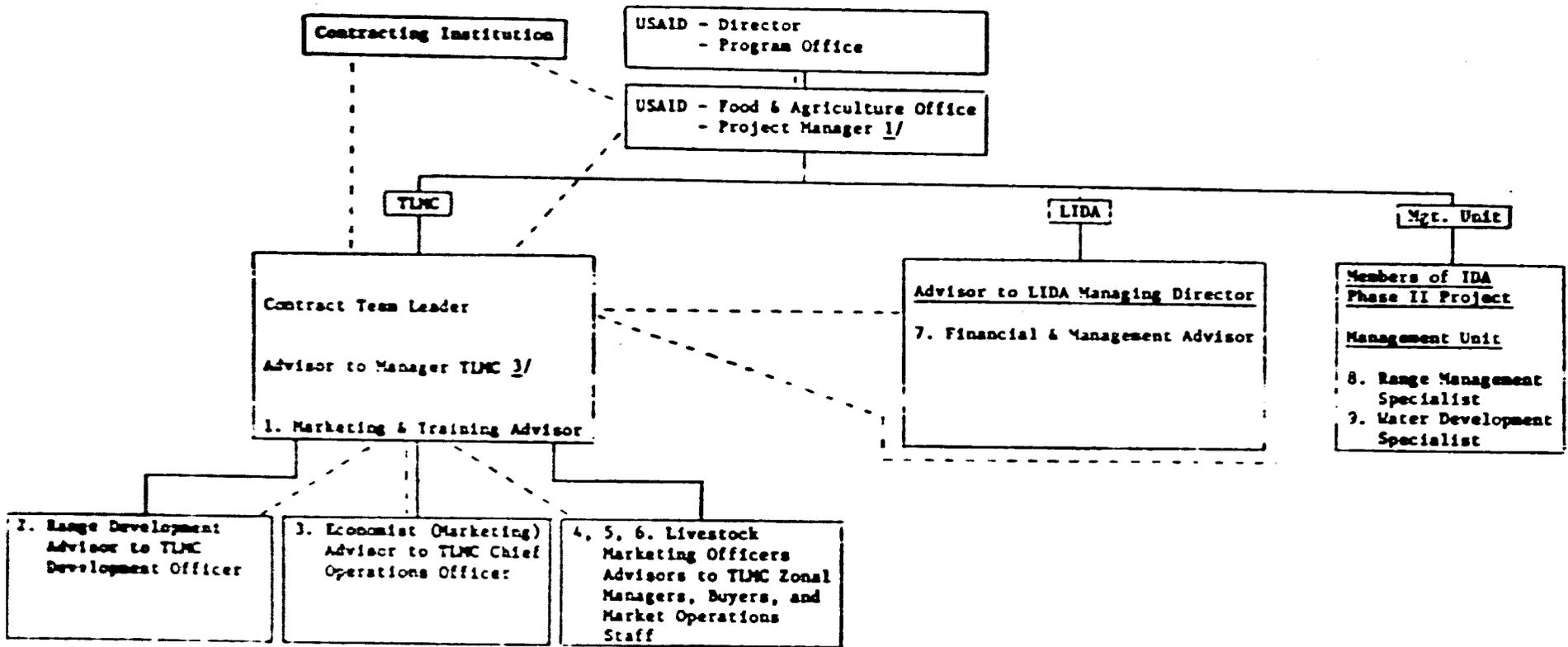
8. B.Sc. in Agricultural Engineering (Surface Water)--Counterpart/replacement for the AID Contract technician assigned to the IDA Phase II Project Management Unit as the Surface Water Specialist. The trainee will have a diploma in Range Management or Agricultural Engineering. The training will emphasize all aspects of surface water development as applicable to cattle requirements in open range conditions. If possible, two summers of practical field training should be included.

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9. B.Sc. or M.Sc. in Economics (Financial Management)--Counterpart/ replacement for the AID Contract technician assigned to LIDA as the Financial and Management Advisor. The trainee will hold a degree or diploma in Economics (Finance). Training will emphasize analysis of finance and financial management.

10. B.Sc. in Economics (Accounts Management)--A second counterpart to the AID Contract technician assigned to LIDA as the Financial/ Management Advisor. Upon return he may be assigned to the Financial Management Section of LIDA. The trainee will hold a diploma or degree in Accounting. Training will emphasize management of accounts and financial records.

USAID COORDINATION OF PROJECT



1/ Project Manager - AID Direct-Hire funded outside of project.

2/ Contract Team technicians numbered 1 through 9.

----- Project Implementation Coordination

- - - - - Contractor Personnel Administration

3/ Although this table assumes the Field Marketing and Training Advisor will be the Contract Team Leader, the Contractor may designate any member of the team to be its team leader.

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PARTICIPANT TRAINING

<u>Participant Specialty</u>	<u>CY 1974</u>	<u>CY 1975</u>	<u>CY 1976</u>	<u>CY 1977</u>
1. M.Sc. Agr. Econ.	-----			
2. B.Sc. Agr. Econ.	-----			
3. B.Sc. Agr. Econ.	-----			
4. B.Sc. Agr. Econ.	-----			
5. B.Sc. Agr. Econ.		-----		
6. B.Sc. Range Mgt.	-----			
7. B.Sc. Range Mgt.	-----			
8. B.Sc. Agr. Eng.	-----			
9. B.Sc. Econ. (Fin. Mgt.)	-----			
10. B.Sc. Econ. (Accts. Mgt.)		-----		
11. Group A (Short-Term)	July			
12. Group B (Short-Term)		July-Aug		
13. Group C (Short-Term)		Aug-Sept		

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PARTICIPANT FUNDING

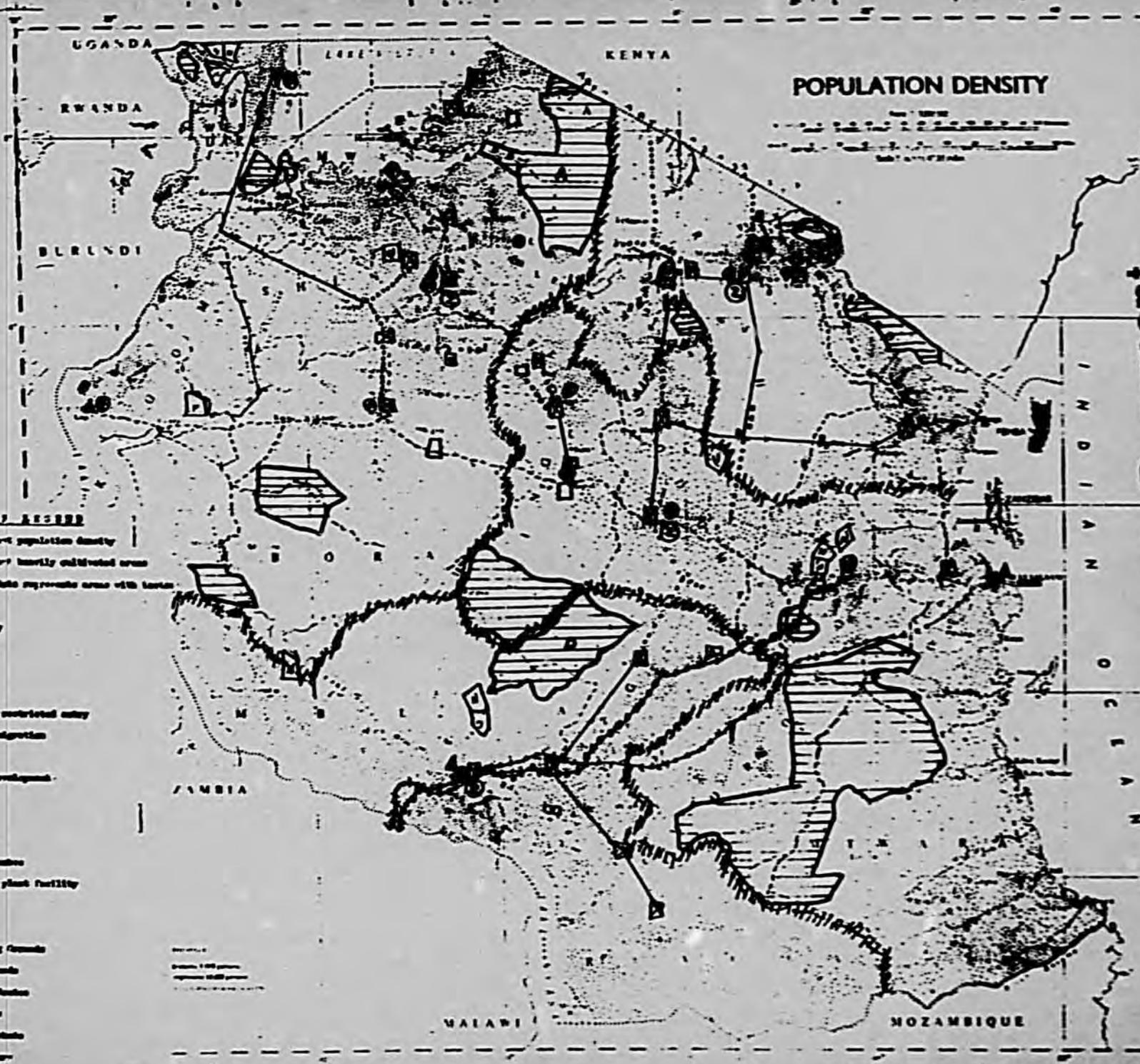
	<u>FY 1974</u>	<u>FY 1975</u>	<u>FY 1976</u>
New <u>1/</u>	\$ 76,800 (8)	\$ 19,200 (2)	-
Continuing <u>1/</u>	-	76,800 (8)	\$ 19,200 (2)
Short-Term <u>2/</u>	4,200 (3)	22,400 (8)*	-
Transportation <u>3/</u>	<u>15,400</u>	<u>14,000</u>	<u>-</u>
	\$ 96,400	\$132,400	\$ 19,200

1/ Degree (\$9,600 per year).

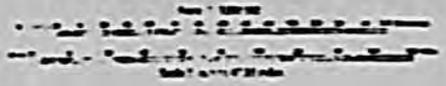
2/ Short-Term (\$1,400 per man-month).

3/ Calculated at \$1,400 per participant, of which Dar es Salaam/London return fare to be reimbursed to the U.S. Government by Government of Tanzania per our Agreement dated June 25, 1969 between the two governments.

\* Approximately two months' training each.



**POPULATION DENSITY**



**MAP LEGEND**

- Red hatching represents population density
- Red hatching represents heavily cultivated areas
- Shaded red hatching represents areas with forests

- Transalpine Highway
- Transalpine Railway

- ⊙ Town Parks
- ⊙ Town Parks - restricted entry
- Major air gate alignment

**The Transport Development**

- ⊙ SACO Routes
- ⊙ M.P. Routes
- ⊙ Ujama Routes
- ⊙ Road Ujama Routes
- ⊙ Meat processing plant facilities

**UNEP Project**

- ⊙ Existing Building Grounds
- ⊙ New Building Grounds
- ⊙ Existing Road Routes
- ⊙ New Road Routes
- ⊙ Major Cattle Markets
- ⊙ Coal Reserves
- ⊙ 11KV Road Reserves

**Best Available Document**

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