

MASAI LIVESTOCK & RANGE MANAGEMENT PROJECT
COMPLETION OF PROJECT REPORT (621-0093)

1. Background:

In 1962, AID sponsored a range management survey which served as the basis for the Tanzania Range Act of 1964. The Act provided for the conservation, development and improvement of grazing lands in Tanzania and for the establishment of district range development commissions to administer ranching associations. In 1965 the TanGov requested assistance from AID to implement the Act. AID responded with an agriculture sector study in 1967, followed by a detailed analysis to determine the potential and technical feasibility of a range and livestock improvement project and finally designed the Masai Livestock and Range Development Project which began implementation in 1970.

The "Masai Project" was developed "to assist the Masai Range Commission with its task of increasing the per man and per acre livestock productivity of Masai herdsman". As the Project was being designed, the Masai Range Commission was in the process of setting up four grazing associations, which would be operational in 1970.

Total AID funding in the original PROP of 1969 was \$1,553,000 spread over ten years. The anticipated contribution by the TanGov was \$3,883,000. Five expatriate technicians would be funded in the areas of animal production, Range management, water development, extension sociology and livestock marketing under an OPEX arrangement.

Project target outputs as outlined in the original PROP were ambitious. It was expected that the Project would:

1. increase the size of individual animals from 600-800 lbs at 60 months to 1,000 lbs at 30 months;
2. lower cow's age at first calf from five to three years;
3. increase a cow's calving rate from every other year to every year;
4. decrease the calf mortality rate from 65 percent to 10 percent;
5. increase the calf crop of mature cows from 50 percent to 90 percent annually; and
6. increase the herd annual market offtake from 3 percent to 12 percent.

It appears that AID/W was skeptical of the soundness of Project design, but primarily on the basis of recommendations by A.H. Jacobs, a noted expert on the Masai, the project was approved.

The project designers recognized the experimental nature of their endeavor and built in frequent evaluations to determine if the project could realistically meet goal and outputs. On the basis of these evaluations a series of project revisions occurred.

The first revision in 1971 increased the LOP AID contribution to 2,507,000 and the TanGov contribution to 4,212,000. The revision called for the addition of a project coordinator bringing the total number of expatriate technical assistance to six. The project target outputs were left essentially the same.

In 1972 and 1973, the project received \$500,000 and \$950,000 respectively for the purchase of heavy equipment for range and water development. The equipment included 11 caterpillar tractors of various sizes and well drilling equipment.

The second project revision, which was approved in 1973, increased the AID contribution to \$3,219,000 and the TanGov contribution to \$5.0 million over the life of the project. Technical Assistance was listed as nine OPEX technicians. Positions added were an hydrologist, a veterinarian and a heavy equipment specialist. Conditions expected to exist at the end of the project were changed substantially. Project designers expected to have eight ranching associations fully activated. These associations would be subdivided into an appropriate number of management units with each management unit having a management plan. Also expected was the formation of an additional thirteen ranching associations with rights of occupancy. Specific end of project outputs were:

1. annual herd offtake increased from 7 percent in 1970 to 12 percent in 1980 on fully activated ranching associations;
2. average slaughter steer live weight increased from 550 lbs in 1970 to 650 lbs in 1980;
3. calf drop rises from 50 percent in 1970 to 60 percent in 1980;
4. calf mortality reduced from 35 percent in 1970 to 20 percent in 1980;
5. average age of slaughter steers at market weight reduced from six years in 1970 to four years in 1980; and

6. average age of females at first calf reduced from five years in 1970 to four years in 1980.

Revision Number 3 in 1974 did not increase project funding nor number of expatriate technicians but did shift from the OPEX arrangement to a host country contract with the Near East Foundation (NEF). This revision called for a Reconnaissance Soil and Land Capability Evaluation Survey for Arusha Region which had been recommended by an evaluation team and a Land Use Approach Study Team in 1973.

In 1972-74 a severe drought hit East Africa with particularly devastating effects to Masailand. AID responded with the Arusha drought program which involved the construction of 150 miles of access roads, two cattle holding grounds of 30,000 acres each at the terminal points of the access roads and a rural training centre. The project paper was approved in 1975 with an AID LOP contribution of 2,787,000. Later it was decided to construct 425 miles of roads with no increase in funding.

The fourth project revision in 1975 increased the AID LOP contribution to \$4,870,000 where it remained for the rest of the project. Our records show only \$4,710,130 was ever obligated. The TanGov contribution remained the same. Under this revision two expatriate technicians were added in the areas of rural training and well drilling and the marketing specialist was shifted to the AID funded Livestock Marketing and Development Project. Project target outputs remained the same.

Progress of the project between 1975 and 1979 is difficult to chart, but it appears that up until 1975 the project was still on-track but greatly behind schedule. In 1976, Dr. Allan Hoben, AID/PPC completed a social soundness analysis of the Masai Project, which contributed to the documentation procedures required for the revision of the Project in 1976. Hoben pointed out in his analysis that the Masai Project "has been extremely successful in creating an awareness and a demand for improved water technology, dipping, veterinary service and improved livestock, but that no new grazing associations had been established for several years and that the project had only marginal impact on economic life and monetary income of the Masai".

Hoben identified the major problem facing the Masai as "the ecological deterioration that is resulting from the increasingly rapid encroachment of much of their better dry season rangeland and water points by bean farmers, agricultural settlements, game parks and from related overstocking". Hoben recommended that the revised project should have the goal "to improve the quality of life of the Masai by assisting the Tanzanian Government in its

efforts to integrate them more fully into the national economy and policy".

As a result of Dr. Hoben's analysis, Dr. Allan Jacobs, an anthropologist with considerable experience working with the Masai was asked to do a study on the future of the Masai as a cattle herding people. Dr. Jacobs report is unavailable in Tanzania, though it should be noted that it was on his recommendation that the original Masai Project was approved by AID/W. Dr. Jacobs was a member of the Masai Project terminal evaluation team of 1979 and his views may be found in that document.

In the 1976 revision of the project there is no mention of grazing associations nor of specific targets for improving the quality of Masai Livestock while reducing the deleterious effects on the range. Rather the emphasis is on providing range management plans for villages and infrastructure for the Masai and their livestock. Under this revision there were to be ten expatriate technicians in the areas of animal production, range management, water development, sociology, heavy equipment, rural training, hydrology, well drilling and veterinary medicine.

The project now had a dual purpose:

1. To assist the TanGov in its efforts to introduce integrated range and livestock management systems accepted by the Masai People.
2. To establish physical and social infrastructure to enable the Masai to improve their quality of life.

Expected outputs at this time include:

1. greater security of land tenure (involved registration with rights of occupancy of 40 villages);
2. comprehensive range management plans for forty villages;
3. forty villages following regular dip schedules and practices;
4. potable water development and distribution systems in forty villages;
5. thirty two trained Tanzanians;
6. baseline surveys as necessary;
7. forty miles of feeder roads; and

8. a fully equipped, functioning training centre at Monduli.

2. Contribution of the Parties:

- A. USAID:

As mentioned earlier, AID funding to this project was \$4,710,030. If amounts contributed under the drought program and the Agriculture Sector Loan are added, the amount comes to \$8,947,130. AID funding provided the technicians mentioned above, thirty-seven vehicles (see attached list) and spare parts, 50 percent of the construction costs of six houses, two houses purchased with project funds, sixteen motorcycles, thirty kerosene refrigerators, veterinary supplies and equipment, technical books for Monduli Training Centre, a workshop for the training centre, some of the construction costs of the rural veterinary centres, photographic equipment, a mobile veterinary centre and other miscellaneous costs.

- B. TANGOV:

The TanGov contribution is much more difficult to quantify, however it appears likely that its anticipated contribution of \$5.0 million was met or exceeded. The TanGov contribution included the basic salaries plus a 25 percent gratuity of the four to six technicians for the first four years of the project under the OPEX arrangement; 50 percent of the construction costs of six houses; all hard furnishings of six to ten houses; a vehicle repair facility; some of the construction costs of the rural veterinary centres, most of the building construction of the Monduli Rural Training Centre, counterparts for most expatriate technicians; running costs of the water and range development equipment and labor as required. A copy of the proposed budget for 1979, the last year of the project, is attached.

3. Project Accomplishments:

Of the outputs expected prior to the revision of 1976, none were accomplished, nor should it have been possible to achieve most in the relatively short time period. After 1976, it appears that accomplishments were minimal. There are various reasons for the poor project performance among which are poor coordination between the TanGov and the expatriate technicians, lack of leadership on the part of the expatriate project coordinators, the villagization policies of the TanGov, unclear project purpose and poor USAID/T support. Perhaps the severest shortcomings of the project were the relative absence of baseline data collection and the poor monitoring of project objective attainment.

Major accomplishments of the Masai Project as identified in the terminal evaluation of 1979 include:

- A. The development of water points and the construction of dips and animal health care centres:
1. 36 dams were constructed at new sites and 12 others were repaired.
 2. 30 wells were constructed.
 3. 60 dips were constructed.
 4. 22 rural veterinary centres were completed, staffed, but not fully equipped.
- B. The overseas training of project technicians (attachment):

The project trained twenty-eight Tanzanians, among whom are six Masai speakers. Most of those trained are still working with the TanGov in Arusha Region or elsewhere.

- C. The Rural Training Centre at Monduli:

Funded originally as a component of the Arusha Drought Project in 1975, the centre was subsequently made an integral component of the Masai Project extension program. The purpose of the centre as conceived is to introduce improved animal production techniques to the Masai People of Northern Tanzania.

The TanGov purchased the 1,200 acres of land on which the centre is situated and constructed a dormitory, offices, classrooms, a library and a kitchen/dining-room. USAID funded construction of a workshop, equipment for the centre, two vehicles and a technician to develop the curriculum and identify equipment needs.

Although the centre has been in operation since September, 1978, it has never been fully utilized because of funding constraints and until recently lack of strong direction.

The TanGov has a slightly different view of the major project accomplishments. In a forward to the regional review of the terminal evaluation, the Regional Development Director of Arusha Region maintains that the project made the Masai much more aware of their needs with regard to animal health care, primary health care services, and universal education. He also thinks that the project helped to settle the nomadic Masai.

4. Lessons Learned:

The Regional Development Director of Arusha Region during the last years of the Masai Project feels that the Region learned the following lessons concerning project implementation:

- A. donor and recipient efforts should be better coordinated;
- B. recruitment of expatriate technicians should be upgraded;
- C. foreign-made equipment should not be imported without a large supply of spare parts;
- D. counterparts are a very essential part of successful project implementation.

The best analysis of lessons learned from the Masai Project comes from Dr. Jon Moris, a former chief of party of the project, who has included a chapter on the project in his recently published book entitled "Managing Induced Rural Development". Dr. Moris concludes that:

- A. The designers of the Masai Project frequently identified what they would like to happen rather than what was feasible. They should have modified prescriptions to fit capabilities and not vice versa.
- B. Any project or program which must work against the grain of inherent trends has limited chance of success. He points out the fact that shortrun, high risk exploitive farming continues to displace pastoralists from the best rangelands.
- C. The pastoral dilemma is primarily a systems problem. Modernization of pastoralism is possible, but it requires simultaneous improvement in control over land use, developing alternative food supplies, identification of individual animals, means to keep foundation herds alive during drought, adequate disease control and efficient transport and marketing of animals.
- D. High risk projects should include fall back objectives which convey substantial benefits even if the primary objectives are not realized. Dr. Moris points out that it was hoped that the trained manpower left behind in the Masai Project would eventually find solutions for the pastoral population even if the project did not.

- E. Projects are time-phased. Often when they end, all resources are immediately withdrawn and the better staff transferred to other projects or regions. There is a need to institutionalize program resources separately from individual projects.

5. Present Status:

At the present time, two years after the departure of the last expatriate technician and nine months after the Project Assistance Completion Date, Arusha Region still has a Masai Project. The project is administered by the Regional Livestock Office, with Mr. Isack M. Isae serving as the Project coordinator. Mr. Isae received both his bachelors and masters training under the Masai Project and has worked on the project for approximately six years. There is no funding nor personnel, other than Mr. Isae, designated specifically for the Masai Project. Funds for project activities must come from the regional and district livestock budgets.

Mr. Isae feels that there are some positive contributions of the Masai Project still remaining:

1. The borehole equipment is still operating in the Masai districts and has a fairly large supply of spare parts. Of the wells constructed under the project 60 percent are still functioning.
2. The heavy equipment supplied by the project remains in the Masai Districts. It is underutilized because of a shortage of spare parts and recurrent budget for fuel and drivers. Of the dams constructed under the project approximately 30 percent have been breached or have silted up.
3. Approximately 60 percent of the dips constructed under the project are still intact. However, these too are underutilized because of a shortage of pesticides. Apparently the Region is moving to a system whereby the people using a dip will pay for the chemicals. Mr. Isae feels that this should make the Masai more responsible for upkeep of the dips.
4. The rural veterinary centres have been maintained and staffed, but again there is a shortage of chemicals and supplies. In 1981, the project supplied 30 kerosene refrigerators and 16 motorcycles which have helped to alleviate storage and logistical problems.
5. The Masai workshop, located in Arusha, is still functioning, although spare parts are not available to repair most of the project supplied equipment and vehicles.

REFERENCES

1. Hoben, Allen. Social Soundness of the Masai Livestock and Range Management Project. October, 1976
2. Jacobs, Alan. Development in Tanzania Masailand: The Perspective over 20 years, 1957-1977. April, 1978
3. Moris Jon. A case in Rural Development: The Masai Range Development Project in Managing Induced Rural Development.
4. Terminal Evaluation of the Masai Livestock and Range Management Project. Devres Incorporated, 1979.

SUMMARY OF PARTICIPANTS TRAINING PROGRAM

<u>Name:</u>	<u>Degree:</u>	<u>Present Posting:</u>
1. John K. Kyambwa	B.Sc. Range Management	Regional Planning Office, Arusha
2. Israel Karyongi	B.Sc. Livestock Production	District Development Director, Arumeru
3. Mathew Munisi	B.Sc. Livestock Marketing	Livestock Marketing Manager - TLMC, DSM
4. James D. William	B.Sc. Livestock Production	District Development Director, Hai District Kilimanjaro Region
5. Elikana Moluche	B.Sc. Animal Science	Returned to Kenya
6. Godfrey Mbusule	B.Sc. Livestock Production	Instructor, M.A.T.I., Morogoro
7. George Itangire	B.Sc. Livestock Production	Tumbi Training Centre, Tabora
8. Barnabas Njau	M.Sc. Veterinary Science	Veterinary Research Temeke, DSM
9. Joseph Lendy	B.Sc. Animal Science	Ngorongoro Range Officer
10. Ferdinand Lyaruu	B.Sc. Livestock Marketing	Instructor, Rural Training Centre, Monduli
11. Reginald Marandu	B.Sc. Animal Science	Technician, Ngorongoro
12. Reuben Masaki	M.Sc. Range Management	Asst. Director of Planning, Min. of Livestock, DSM
13. John Masanja	M.Sc. Livestock Production	RIDEP Coordinator, Shinyanga
14. Alex Soka	B.Sc. Range Management	Instructor, Secondary School, Monduli
15. Abubakar Kibola	Cert. Heavy Equip	Unknown
16. Godwin Mwendulili	Cert. Heavy Equip	Unknown
17. Nathan Lengisungi	B.Sc. Animal Science	Technician Kiteto District

<u>Name:</u>	<u>Degree:</u>	<u>Present Posting:</u>
18. Eston W. Siyame	B.Sc. Civil Engineer	Water Engineer, Kiteto
19. Peniel Mwashu	B.Sc. Animal Science	Technician, Range Centre, Monduli
20. Joseph Ole Kuwai	M. Sc. Range Management	Technician, Ngorongoro
21. Baltazar E.N. Njau	B.Sc. Civil Engineer	Arusha Regional Water Engineer
22. Reuben Kuney	M.Sc. Sociology	Principal, Rural Training Centre, Monduli
23. Amani Nkulo	B.Sc. Hydrology	Technician, Arusha Regional Water Office
24. Simon Thadei	B.Sc. Hydrology	Min. of Livestock Development, DSM
25. P.D. Masanja	B.Sc. Livestock Production	Unknown, Last in Loliondo
26. M.A. Mwenye	B.Sc. Range Management	Tanga, TRIDEP
27. Isack M. Isae	M.Sc. Range Management	Arusha Regional Livestock Office, Masai Project Manager
28. G. Mkumbo	B.Sc. Range Management	Tanga Bull Project

1979/80 TANGOV CONTRIBUTION

<u>ITEM:</u>	<u>AMOUNT:</u>
	<u>T.SH.</u>
1. Water System Surveys	230,000
2. Livestock Health Centres	368,000
3. Cattle Dips	320,000
4. Water supplies for Dips	290,000
5. New Dam Construction	300,000
6. Dam Reconstruction	330,000
7. Borehole Drilling	343,000
8. Water Supplies	550,000
9. Improvement of Abbatoirs	107,000
10. Operation of RTC - Monduli	449,000

TOTAL T.SH.:	3,287,000
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VEHICLES PURCHASED BY THE PROJECT

<u>TYPE:</u>	<u>QUANTITY:</u>
1. Land Rovers	3
2. Jeep Wagoneers	9
3. Jeep Pick-up Trucks	12
4. International Harvester Dump Trucks	4
5. Isuzu Tankers	2
6. Isuzu Flat Beds	2
7. Cheverolet Suburbans	2
8. Cheverolet Pick-up Trucks	2
9. International Harvester low loader	1

TOTAL:	37
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