

UKAME ROADS IMPACT STUDY
BASELINE SURVEY

USAID - PROJECT 6980135

prepared by

C.R. Hatfield, Jr. Ph. D.
1635 Yukon St.
Lakewood, Colorado
80215

Contract N. AID T -621-79- 23
March 1980

for

Arusha Regional Development
Directorate

March 1980

Ukame Roads Impact Study Baseline Survey

TABLE OF CONTENTS

A. Introductory Issues.....	page 1
1. Background of the Study.	
2. An <u>Ex-Post Facto</u> Baseline Study.	
3. Summary Profile of the Ukame Roads.	
B. A Summary of Methodology Used in the Study.....	page 2
1. Introduction.	
2. Methodology.	
3. Research Procedures.	
a. Research Instruments/ Data Sources.	
b. Field Procedure.	
c. Sampling.	
C. Sectors Composing the Village Profiles.....	page 6
1. An Overall View of Government Operations in the Survey Area.....	page 6
a. Education.	
b. Livestock Services.	
c. Courts.	
d. Health.	
e. The Party (C.C.M.)	
f. Other Sectors.	
2. Commercial Enterprises.....	page 14
a. Mining.	
b. Charcoal.	
c. Estates and Leased Shamba.	
d. Transport.	
e. Trade.	
1. Trading Licenses.	
2. Maasai Entrepreneurship.	
3. Tourism.....	page 23
a. Hunting Permits.	
b. Tourism.	
4. Church Activities in the Survey Area.....	page 25
5. Staffing and Work Satisfaction.....	page 27
6. Local Development and Life Style Changes.....	page 32
D. Ukame Roads Impact.....	page 39
1. Introduction.	
2. From <u>Ukame</u> to Regional Road.	
3. Observed Recent Effects of the New Roads.	
a. Government operations.	
b. Commerce	
c. Church	
d. Tourism	
e. Working Conditions.	
f. Life Style.	
4. Local Opinions Concerning the Effects of the New Roads.	
a. Construction Period.	
b. Locally Perceived Profits and Problems.	

E. Appendix One..... page 44

1. Discussion of Research Procedure with Recommendations for Restudy.
 - a. Introductory.
 - b. Instruments of Research.
 1. Interview Schedules.
 - a. Types of Schedules.
 - b. Four Simple Measures of Development.
 2. Structured Interviews.
 3. Structured Observation.
 - a. The Roads Residence Survey.
 - b. Inventory of Goods in Shops.
 4. Reports, Records, Permits, and Licenses.
 - a. Village Level Data
 - b. District and Regional Records.
 - c. Other Records not Collected in the Survey.
 - d. A Note on Collection of Records and Access to Files
 - c. Proposed Re-Study TimeTable.
2. Research Instruments and Tables.
 - a. Interview Schedules.
 1. Kata Checklist.
 2. Village Chairman Checklist.
 3. Questions for Government Workers.
 4. Special Questions for Veterinary and Dispensary Staff.
 5. Questions for Entrepreneurs.
 6. Checklist of Questions for Residents.
 7. Additional Questions for Residents: Women and Evangelists.
 - b. Tourism Survey Questionnaire Form
 - c. Northern Road Residence Survey
Southern Road Residence Survey
Residence Survey Form
 - d. Table of Modern Articles found in the South Road Survey Area.
 - e. Table of Modern Articles Found in the North Road Survey Area.
 - f. Table of Infrastructure in the South Road Survey Area.
 - g. Table of Infrastructure in the North Road Survey Area.
 - h. Table of Local Experts in the North Road Survey Area.
 - i. Table of Local Experts in the South Road Survey Area.

F. Appendix Two: Village Profiles..... page 76

Wasse Village.....	page 76
Maloni (Losoite) Village.....	page 79
Samunge Village.....	page 82
Sale Village.....	page 86
Engaruka Villages.....	page 91
Mfereji Village.....	page 96
Monduli Juu Village.....	page 102
Kakessio Village.....	page 111

Kiserian Village.....	page 117
Kigongeni Village.....	page 127
Oljero Village.....	page 131
Losinyai Village.....	page 136
Kemelo Village.....	page 141
Terat Village.....	page 147
Loswaki Village.....	page 155
Sukuro Village.....	page 158
Naberera Village.....	page 162
Namalulu Village.....	page 171
Engasumet Village.....	page 177
Ndedo Village.....	page 188
Ng'abelo Village.....	page 195
Loibersirret Village.....	page 199
Mwandet Village.....	page 205

A. Introductory Issues.

1. Background of the Study. The middle 70s in Maasailand were times of severe stress for man and livestock. Rains were erratic and insufficient. In the northern sector of the area, Maasai herds were being radically depleted for lack of grass and water. Food relief programs were initiated for people, but access to some areas was so difficult that transporting food to inhabitants proved a serious problem.

In 1974 a road feasibility survey was made in North and South Maasailand by USAID and by 1975 a technical assistance team was in place. By June 1979 approximately 400 miles of road were completed cutting through four districts.

The aim of the project was to provide an access road to areas which in times of stress would not otherwise have easy contact with Regional headquarters. Thus information concerning food problems of people, lack of grass and water for stock could be more readily communicated to Arusha and remedial measures could be more quickly initiated.

The roads were to be associated with livestock holding grounds, permanent water, slaughtering blocks, and fenced-in pasture. Thus stock could be trekked to the site, left to recover and later be slaughtered and the carcasses transported to Arusha. This part of the project never became a reality.

A third component of the Project was construction of a centre which would be the focus of an outreach program in Maasailand. This part of the project has been completed and is in operation.

In the final evaluation of the Drought Project (February 1979) one of the team's recommendations was that a set of baseline information be established in collaboration with Maasai Range Project staff and that an evaluation of the impact of the road be done within two years of the Project's completion.

The writer was asked to subsequently draw up a proposed format for such an investigation. The research design was discussed with USAID RETSO staff in Nairobi in August and revised somewhat. Also a Scope of Work was drawn up. The plot was signed with the Tanzanian government August 30th 1979, but the contract was not signed until middle September. The writer was released his four months' responsibilities as research sociologist on the Maasai Range Project to initiate the current investigation, which was due to be completed by January 30th, 1980. In January, completion date was amended to March 15, 1980.

2. An Ex-post Facto Baseline Study. Normally baseline studies are done before the actual innovation takes place. In this case the writer was asked to collect material composing a baseline after the work had been completed. While somewhat unusual, this timing provided an opportunity to explore what changes were already in formation while carrying out the basic research.

3. A Summary Profile of the Ukame Roads. Although planned as primarily emergency relief roads, the two roads almost immediately took on a different character. The southern road is a main route for transport of personnel and supplies from Arusha to Kibaya and the villages en route. The northern road is less frequently used at present as a main regular supply route to Loliondo, but already three feeder roads have been cut by villages in Monduli District to facilitate transport - especially of crops.

The southern road begins just at Tanganyika Packers on the Old Moshi road, following an older track through the village of Kiserian to the Themí river drift and the Olokii cattle market. After the market area the older track virtually disappeared. It actually branched out into a series of hunting trails which spread out over the plain beyond the Losinyai river and ended at Komolo. Once a small settlement of a few houses, Komolo is now a fairly large-sized village, most of the setting of which took place just after the new road, henceforth called the Ukame (Drought) road, passed.

On top of the escarpment it continues to the East of Terat, which was the terminus of an older track branching off the Oljoro road. The Ukame road then follows an extension of this track to Naberera, Namalulu and Engasumet. Beyond Engasumet the older track turned southwards to the Kitwai mbuga and Kijungu. The Ukame road turns westwards at Londerengess hill and proceeds in an almost straight line to Ndedo. From Ndedo it goes directly to the Kibaya-Kondoa road. The distance from the Tanganyika Packers turnoff to the Kibaya junction is approximately 215 miles.

The Northern road begins at Monduli town, ascends the escarpment on a track cut in the early 70s to Monduli Juu. It crosses the plateau and descends on an existing track which had been impassable for at least six years. Then it passes through the Mfereji area in completely new territory for transport almost to the base of Kitumbeine mountain where it turns westwards towards Engaruka escarpment.

The road then passes northwards between Kerimasi and Oldonyo Lengai on the West and Kitumbeine and Gelai on the East to Lake Natron. The terrain is rough and crossed by numerous ravines made by seasonal rivers from both mountains. After skirting the western portion of Lake Natron for a short distance, the road ascends the first escarpment around Monik. It then proceeds across the Sale plains to Sale where it meets an old track which originated at Oldonyo Wassa branching off the Loliendo - Ngorongoro road. From Sale onwards it generally follows the older track. The road terminates just outside of Loliendo town. The distance is about 160 miles from Monduli to Loliendo.

B. A Summary of Methodology Used in the Study

1. Introduction. Our research task consisted of three inter-related charges:

- To obtain a foundation of information about human population on the two new roads for use in a future impact assessment.
- To ascertain what effects the new roads have had to date on these populations
- To test out various means of measuring impact and make recommendations for future study

In this report the former two are combined into general summaries of aggregated measures as well as results of discussions with District and Regional personnel - the macro view and village Profiles which concentrate on each community surveyed. The data from which these two analyses are made are essentially the same, but the former is intended to give an overall picture of life and infrastructure along the two roads, against which the more specific village descriptions can be compared.

Village profiles are aimed to provide the future researcher with as detailed a description of life in each community surveyed as well as the unaggregated data from the various sectors specific to each.

A third section, in an appendix, contains the research instruments used in the study as well as other pieces of information which we hope will be useful for the future worker, and some recommendations about which measures are best to consider, although we discuss these in some detail in the general summaries (Part C of this report).

A final product of the study is a set of map overlays which graphically presents picture, a "cultural profile" of the entire survey.

2. Methodology. Our fundamental hypothesis was that the Ukame roads will have a major direct and indirect impact on the social and economic development of the residents under its influence.

Three topics were chosen for investigation:

- Infrastructure penetration
- Local economic patterns
- Local socio-cultural dynamics (lifeways)

Infrastructure penetration was examined through government structures and staffing in each village: commercial enterprises, Church-related activities, and communications. Local economic patterns was to be examined through households' budget surveys, but after discussions with representatives of Development Alternatives, who were asked by AID to review the proposal, and after attempting to conduct such surveys in the field, we decided that this part of the research would not be fruitful. Instead we have obtained information on general economic patterns and where possible ventured into local specifics. Also "proxy" measures (consumption patterns, transport costs and frequency of travel, etc. were used where possible).

Our focus on local lifeways was from a developmental point of view - what changes are taking place in the villages within the roads' sphere of influence. To do this we used a variety of measurements from interviews to collection of statistics concerning use of government services.

3. Research Procedures.

a. Research Instruments/Data Sources. Our most important means of obtaining information came from extensive interviews with individuals connected with all and any aspect of life along the Roads. Well over 200 were interviewed, from Regional heads of department to charcoal transporters; from representatives of touring companies to people en route to sell their harvest. The major concentration of the interviews, was from the local level however.

For the most part we used a combination of questionnaire and interview schedule in these interviews. The questionnaire topics with easily obtainable information, such as "number of shops in the village", while the schedule aimed at more complex information, such as perceptions of changes in transport. The latter device easily lends itself to open ended questions.

In some cases a formal questionnaire was used as in the "Tourism Survey".

A second source of data was through statistics in monthly and annual reports. We collected a variety of different kinds of data in this manner; school attendance, dispensary attendance, attendance at meetings, visitors to facilities, court records, transfer files, mining claims, etc. Each of these is presented in Part C of this report in greater detail and further discussion of them can be found in the Appendix.

We also attempted random sampling in two cases where it proved impossible to get adequate information from registers or other sources.

A third source of information came from reports of the Maasai Range Project and, belatedly, consultation of Village Profiles done recently by the Arusha Regional Development Planning Project.

The last research instrument used was observation - structured and unstructured. The "Roads' Residence Survey" is an example of the former. The principal investigator, an anthropologist, took the opportunity of using the latter while assisting in village interviews.

b. Field Procedure. The writer and two Maasai speaking research assistants, conversant in the methods of social science composed the staff of the survey. Normally interviews with government officials was carried out by the writer and one of the assistants, while the other collected statistics. In the field, assistants had greater freedom to operate independently, the writer only being present to supervise and later copy down the notes that were collected. Collation of the data was done by all three under the writer's supervision. The analysis and write-up was the responsibility of the writer.

c. Sampling. Originally we had planned to take a sample of villages on the roads with two villages at a distance but within their sphere of influence. By sphere of influence we mean those communities which have vehicular access to the road and which are known to have altered their transport and communication because of it.

Early in the field surveys we altered our plan to work in as many communities as possible along the road and three control villages, villages which were outside the sphere of influence of the roads. The result was a total of 23 communities for which village profiles are written. They can be divided up as follows:

- On Southern Road:	13
- Within Sphere of Influence:	1
- On Northern Roads:	5
- Within Sphere of Influence:	2
- Control Villages:	2

To be absolutely accurate, we should note that we have included in the Village Profiles three communities which are vitongoji, segments or sub-villages (Namalulu, Maloni and Wasso). We have also lumped the villages of Engaruka Juu and Engaruka Chini together as one in the Profiles, even though they are separately registered villages.

Also to be perfectly accurate, we should note that "on" the road and "within the sphere of influence" are relative terms.

Not all the villages which we list as being directly on the road are in fact. Some, as Loswaki, lie a mile or more away from it. Our rule of thumb was to include those villages which were a short distance from the road as being on it, as there is little or no difference for accessibility. The villages listed as in the sphere of influence of the road are 10 to 20 miles away.

Loiborsirret was to be a control village, but after the survey was complete, we discovered that in spite of its distance from the road, it would have to be included in the southern road's sphere of influence. Kakessio and Mwandet are the only control villages remaining. It is certain that they could only have the most indirect influence from the roads.

We did not attain our goal of surveying all the communities directly on the two roads. Missing are Oldenderit kitongoji of Nduma village in Arumeru, a small settlement - perhaps a kitongoji of Ndaleta - called Olorerio near the Kibaya junction on the southern road, and Olorien kitongoji of Magaiduru in Ngorongoro. We attempted to survey Elang'ata Dapash in Monduli District, but were unable to reach the village. (Elang'ata Dapash about 8 miles from the northern road.)

C. Sectors Composing the Village Profiles. In this section we discuss in more general terms the various units - or institutions- which were used to provide the baseline information and trends of change which compose the 22 village profiles. Six topics are presented below: Overall Government Operations in the survey area, Commercial Enterprises, Touris, Church Activities, Staffing and Work Satisfaction, and Local Development and Lifestyle Changes. There is bound to be some overlap and a bit of repetition, as none of the categories are mutually exclusive.

1. An Overall View of Government Operations in the Survey Area
As we will be discussing more particular aspects of government operations in section five (Staffing) and six (Local Development) this summary of government infrastructure, plans and problems related to village in the survey area should be considered the first part of a tri-fold picture.

In the Table on page 72/73 are listed the various kinds of government services found in the 22 villages, along the North and South roads. Most of these structures were built recently within the last five years, and many were constructed within the last two. The Table doesn't list all the buildings connected with each facility, but these are presented in detail in the Village Profiles.

a. Education. There are a total of 16 schools on the Ukame roads, four in the North, 12 in the south; however, access to school is within a few miles for all the villages save for Ng'abolo, whose children are in Ndedo boarding school. If we include schools of villages within the roads' sphere of influence, the total rises to 23 (there are three schools in the two control villages).

All schools except one at Sukuro have some sort of school building, although some are borrowed from other departments or the Church. The school at Sukuro is literally held under a tree. Money has been contributed by the village for a classroom building but delays in receipt of materials have prevented construction.

Eleven of the schools have attached teachers' quarters, 9 have none, and there is no information for four. The presence of teachers' housing, however, does not mean that housing problems are non-existent. In most cases teachers have to share quarters with either other teachers or members of other departments. The 9 without housing live with neighbors in the village, share other government quarters, or rent.

Three of the schools are boarding.

The following Table contains summaries of the average numbers of students registered in schools within the survey area (including the control villages and one village which was not visited - Elanjata Dapash in Monduli District) along with percentage of attendance. Average registration and percent of attendance is given for each school where available in the village profiles. These are rough and ready figures indeed, for many of them had to be calculated on the basis of only a few months rather than the entire school year. Moreover some school records consistently reported a higher possible percent of attendance than could be existing given the number of reported registered students. (We attempted to "weed out" these figures and only used the cleaned up ones). We were not able to obtain records for all schools for all years. Thus the second column in the table reflects the numbers of schools used in calculating the percentage for a given year not the actual number of schools from which records were taken.

School Registration and Attendance in the Survey Area

<u>Year</u>	<u>// Schools</u>	<u>Average registered</u>	<u>Percent</u>
1975	8	1119	70%
1976	13	2055	77%
1977	12	2153	65%
1978	18	3246	74%
1979	20	4938	72%

Even if these figures are in the direction of overestimation of attendance, attendance does not appear to have improved since 1976

We discussed educational programs with headquarter staff at Kibaya, Loliondo, and Aru Meru. School inspections are planned for at least once a year. If problems arise at a school, then an additional visit is made. Teachers at Aru Meru come to the office for their salaries and also collect portable supplies. The other Districts (including Monduli) distribute salaries; however we were informed that normally there are delays because of transport problems. On the whole transport in all four Districts is scarce, so there is a perennial delay in sending out materials, although the three boarding schools have not recently experienced shortages in food for students, which was not the case in the past. The main problem expressed by district educational authorities was transport. Loliondo has none, but even those departments with vehicles have to share them with others.

No district - initiated school projects or plans were mentioned in the interviews, aside from building programs.

b. Livestock Services. Eleven dips are found in villages along the roads and these are in villages within the roads' sphere of influence. (Both of the three control villages have dips as well). There are three veterinary centres, two in the South are on the road, and one in the North is near it. Official cattle markets are few: none in the North and two in the south (with an additional market outside the survey area at Kitwai and a village market at Terat). There is also a fairly large secondary market at Them - or Olokii - associated with a veterinary centre and other marketing and livestock staff, including a dip, but these are apparently not used by residents very much, being reserved for Holding Ground cattle. None of the neighboring villages reported using the veterinary centre at Olokii for diagnosis or drugs.

On the local level, most veterinary staff work lies in providing drugs. Workers mentioned usual shortages of stock drugs as a problem and of course difficulties in obtaining acaricide for the dips and fuel to run the water pumping machines. In a number of villages the plan now is to give the village responsibility for transport costs of acaricide as well as the salaries of dip attendants.

Inoculation campaigns are rare, but veterinary staff do attempt to initiate them. Another significant operation at two of the veterinary centres is the creation of a village drug purchasing group. On the whole veterinary centres are regarded as repositories of drugs, so the "out reach" aspects of the centres are not much emphasized.

On the District level, aside from building and supportive activities in maintaining livestock services in the villages, there appear to be few - if any - projects planned in livestock development. There are no routine planned visits to vet centers or dips to monitor the work of their staff. If a problem arises, then special visits are made. This is not to say that headquarters staff doesn't visit these centers, but that the visits are not usually planned.

Genetic improvement of livestock has little emphasis in most of the survey area. Aru Meru has a breeding station but up to the time of the survey no one from the survey area had requested an animal. Kiteto District has two "Ujamaa bull ranches" one of which is on the Ukame road near Naberera. Eventually it will be used partly as a breeding station. (The second ranch is at Kijungu). The Maasai Range Project had introduced improved bulls to some villages in the early 70s, but as far as we were able to ascertain none in the South were in the survey area. In the North Boran Sahiwal crosses were introduced to Monduli Juu and Loliondo. The former group all died but one. There is no record of what happened to the others.

Today, Monduli Juu provides the outstanding exception to the generally moribund livestock improvement programs in the survey area. It has a large number of exotic dairy stock, a village dairy farm, Artificial Insemination services based at Monduli town, and a fairly large staff of technicians. It also is the only village in the survey area to have a milk collection center.

Discussion with regional livestock staff revealed most programs to be out of survey area. Artificial Insemination programs generally are used close to Arusha town, South and North of Arusha is considered beef cattle country, so dairying - with the exception of Monduli Juu is not emphasized.

Paralleling local and District concerns over delays in receipt of acaricide, regional staff pointed out that despite a program by which acaricide is received quarterly from Dar es Salaam they too usually experience delays in getting it on time. The only routine stock illness preventive measure, other than dipping for E.C.F., is the annual rinderpest campaign. Regional staff have attempted to draw up plans for routine visits to Districts and villages as well as other inoculation campaigns, but they have mostly failed because of problems of regular transport, materials, and intervening responsibilities.

The Veterinary Investigation Centre in Arusha has the facilities to make diagnosis of cause of death of stock in the field, so long as they receive the specimens properly preserved. Examining their Diagnosis Book from 1976 to 1979 we found very little representation from areas along the Ukame Roads: 1976 - 0, 1977 - 3; 1978 - 1; 1979 (to October) - 0. Kiteto and Monduli can do such diagnosis as well, but often the staining materials are out of supply at the veterinary centers.

c. Courts In the survey area there are three primary courts, although only two of them consist of a building with office; Engasumet and Loliondo.

Residents of the survey area, however, utilize more courts than these. Arumeru resident take cases to Enaboishu and Maramboso (in Arusha town). Villagers also take cases to primary courts in Kibaya and Monduli towns. The two "control" villages take cases to Emaoi court near Ngare Mtoni and Ngorongoro (at Edulen).

Magistrates have different arrangements for hearing cases. In Kiteto the Loiborsoit hakim is peripatatic, visiting most all of the Simanjiro tarafa on foot, followed by his assistant with the cases register. He does not have schedule of visitations to villages, but comes when he learns that there is a backlog of cases to hear or else gets transport. The Loliondo hakim is based in Loliondo town but monthly makes a round of visits to various villages in the tarafa. The Ngorongoro tarafa hakim also visits the various outstations, but does not go as far as Kakessio. Kakessio cases are heard at Endulen. Only one hakim remains at his court, the Engasumet magistrate.

Some notion of use of the courts, which is also discussed in section six can be ascertained from the two Tables below. The first Table gives the totals of primary court cases for all the villages in the survey area from 1975 divided into criminal and civil as well as the cases from the two control villages. The totals for individual villages are found in the village profiles). The second Table gives the total number of criminal and civil cases heard in the various courts surveyed with the exceptions of Engasumet, and Loliondo for which no annual totals were obtained.

Number of Court Cases Coming From Villages in the Survey Area

	1975		1976		1977		1978		1979	
	Crim	Civil								
Mwandet	23	16	12	11	10	11	8	7	9	9
Kakessio	0	1	1	2	1	2	9	1	2	3

Total Number of Cases Heard by Year and Court

Court	1975		1976		1977		1978		1979	
	Crim	Civil	Crim	Civil	Crim	Civil	Crim	Civil	Crim	Civil
Maramboso	-	-	1948	213	1296	166	1976	169	1493	139
Enabaci	150	120	130	130	140	111	160	114	110	130
Enaboishu	163	190	125	174	204	280	212	307	172	248
Loiborsoit	-	-	-	-	-	-	0	36	30	19
Monduli Primary	210	48	170	31	202	77	214	78	216	106
Kibaya Primary	184	20	165	73	179	56	119	80	96	64
Ngorongoro	18	4	14	11	15	8	19	6	12	9
Primary Court Total	725	382	2252	632	2036	698	2700	790	2129	715
Arusha Dist. Court	124	98	161	108	117	30	105	41	87	46
Monduli Dist. Court	49	12	45	8	62	20	76	19	40	20
Kiteto Dist. Court	55	15	60	20	53	29	124	25	113	23
District Court Total	228	115	266	136	232	79	305	85	240	89
Combined Total	953	497	2518	768	2268	777	3005	875	2369	804

The overall picture is slightly different for criminal and civil cases. Criminal cases, which tend to dominate all the courts and cases from the survey villages do not show any significant trends: they tend to be variable. Civil cases, on the other hand, which are far less in proportion to criminal, show a fairly steady increase from 1975 to 1979. The cases from the survey villages similarly show an increase, but there is a jump in 1978 due to the inclusion of Loiborsoit court for the first time in the additions. The peak year for both criminal and civil cases is 1978. In 1979 they tend both to drop slightly.

The District courts have a different profile: somewhat variable annual totals for criminal cases with a slow rise, and a drop in civil cases from a peak in 1977.

Our original hypothesis was that greater access to courts would facilitate their use. We see that courts in general indicate for civil cases greater use. Thus there would have to be a radical jump in percentage of cases from the survey villages to verify the hypothesis.

d. Health. We obtained the following information as regards increased medical services to be placed along the Ukame roads. Ngorongoro District has already started to construct two dispensaries: one at Masusu, Just North of the road at Sale, and one at Sale itself. The Masusu facility ~~was~~ being originally planned for Pininyi, which is at the bottom of the escarpment in the northern section of Lake Natron, but the area itself is so difficult to reach that it was decided to resettle all the Pininyi people on the Sale escarpment. Water systems are being planned for Masusu to make year-round habitation possible.

A mobile clinic is also being planned, but the transport problems have delayed it.

In the South during our visit to Naberera workmen were already putting materials in place and villagers clearing an area for construction of a health center.

There are 12 dispensaries along the northern and southern roads, including those at Engaruka and Loiborsiret, which are both away from the road. Kakessio has a dispensary and Mwandet has one under construction. MCH clinics are only found at Kiserian, Engasumet and Monduli Juu. Engasumet has the mixed blessing of having both a government and mission dispensary present. MCH facilities are found in all the district headquarter hospitals, but on the roads, there are only three: Kiserian, Engasumet and Monduli Juu. An MCH clinic is also found at Kakessio, but is mainly structured through a mobile clinic. Wasso is the site of a large TB center, which also has outpatient facilities, and a small unit at Endulen, en route to Kakessio. The staff at Wasso conducts field clinics and also cooperates with the Flying Doctors Service. The Flying Doctors operated for a brief period in the South in the early 60s.

The following two Tables present attendance records at the survey area and for Kakessio and variation of dominant diseases over the five year period. Concerning the figures in the first Table, we should point out that some of these are estimates as we lack some of the monthly reports to complete a full year. In these cases we took an average of attendance and then multiplied it by 12. This operation was only done for dispensaries which were known to have been open for the full year. Mfereji dispensary, which was only opened in June 1979 remained with its six month total as the attendance for the year. Yearly attendances are presented for each dispensary in the appropriate village profile.

Patient Attendance in Dispensaries of the Survey Area and Kakessio

Year	# Dispensaries	Total attendance	Average attendance per dispensary
1975	7	55757	7965
1976	8	70115	8764
1977	11	85073	7734
1978	10	90587	9059
1979	12	84272	7023

The average attendance for each year does not show signs of any trending, apart from a partial increase in alternate years. 1978 has the highest attendance of the five years, yet attendance drops to the lowest in five years in 1979.

Dominant Diseases Treated at Dispensaries in the Survey Area and Kakessio

Disease	1975				1976				1977				1978				1979				Total
	Dominance: 1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4				
Respiratory	4 2				4 1 2				9 2				7 3				2 3 1				30
"Other" Diseases	3 2 1 3				2 3 1 1				1 3 1				1 2								24
Malaria	2 1				2 1				2 3 2 1				2 3 2				3 2 1				24
Eye	1 2 1				1 2 1				4 2				1 1								15
Diarrhoea/Dysentery					1 3				2 1				1 2								11
Digestive	1 1				1 1				1 2				3								11
Wounds/Injuries	1 1								1 2				3				5				10
"Other" skin Diseases	1 1				2 1				1				1				2				7
Venereal Diseases					1								1				1 3				6

Over the five year period 9 out of the 18 disease categories found in the stand monthly report form are consistently in the top four most frequently treated diseases for the year.

Of the nine, the most highly represented are: Respiratory diseases; "Other" diseases, which is a catch-all category of disorders not on the clinic list, and Malaria. Eye diseases follow in frequency. The other five diseases make more variable appearances through the five years.

Respiratory and "Other" diseases tend to have a fairly consistent representation over the five year period, although both 1977 (when the dry period finally ended for most of the survey area) with a slight drop in 1979. Treatment for Eye diseases rises to a peak in 1977 and then declines. In 1979 it was out of the four most dominant diseases treated, although still found in attendance records. Diarrhoea and digestive diseases also decline in 1979. Treatment for venereal diseases, on the other hand, shows a marked rise in 1979, which could indicate greater effect of the medical "outreach" programs of health education.

Although not shown in the Table, we did not find much difference between frequencies of treatment of diseases in agricultural and predominantly pastoral communities.

Also noteworthy is the absence of Tuberculosis, intestinal worms, Schistosomiasis, and leprosy in the monthly treatment records, although Tuberculosis is considered rife in Maasailand at least.

We also would have anticipated greater incidence of intestinal worms, illnesses related to diarrhoea and dysentery, and skin diseases that was found in the record, as most of these are related to inadequate sanitation and contaminated water. Closer examination of the village profiles would reveal a small relationship between incidence of treatment for diarrhetic problems and lack of piped water (Ndedo, for example in 1976 - 1977), but on the whole it is not great, considering that most of the people in survey area are supposed to be living in highly unsanitary conditions. Thus the emphasis upon alterations in settlement and house style types.

Epidemic diseases were also not frequently reported for the villages, apart from outbreaks of measles.

e. The Party (C.C.M). Eleven CCM offices were found within the survey area (apart from the two control villages), and other villages had plans for constructing a structure which would house the office amongst other things. Almost all villages had their village chairmen, village councils and some committees in operation. Some villages also have various Party auxiliaries functioning, but for the most part the only groups with any visible activities was the Umoja wa Akina Mama. They were involved in communal shamba, kilabu, and infrequently a small sewing project.

Below we list the numbers of members of the CCM Party up to January 1980.

Chama Cha Mapinduzi Members In The Survey Area

<u>District</u>	<u>Village</u>	<u>Number of Members</u>
Aru Meru	Mwandet	No Information
Arumeru	Kiserian	234
Arumeru	Kigongoni	No Information
Arumeru	Oljoro	100 (estimated)
Kiteto	Komolo	255
"	Terat	124
"	Loswaki	No Information
"	Sukuro	57
"	Loiborsiret	111
"	Naberera	84
"	Namalulu	12 (Estimated)
"	Engasumet	131
"	Ndedo	0
"	Ng'abolo	27
Monduli	Losinyai	159
"	Enairete/Nguiki	153
"	Mfereji	74
"	Engaruka Juu	200
"	Engaruka Chini	70
Ngorongoro	Sale	82
"	Samunge	193
"	Maloni (Arash)	274 (for all of Arash Kata)
"	Wasso	67 (for all of Maigaduru village)
"	Kakessio	No Information

The only lengthy interview we had with District Party Officials was with the Kiteto District Chairman. He informed us that he calls the road Barabara ya Ukombozi - Redemption Road, because it makes reaching communities so easy now.

Our assumption concerning the Party was that the road would facilitate its own outreach program, not just for members but in its various auxiliaries. We were unable to obtain data on the rate of increase since the new Party was formed, but the figures above should be of assistance in assessing increases in the future.

f. Other Sectors. This section contains results of discussions with various other government officers mostly at the District level concerning use of the new roads and/or plans for infrastructure along it.

a. Regional Trading Centers. At the present time there is one in each District, although along the Ukame roads there are only five village shops. Neither the Kibaya or Loliondo RTC lorries use the new road as much as other routes.

Kibaya drivers fear problems of breakdown and consequent loss of goods on the southern stretch of road. If there are two vehicles, the manager said, then they will use the Ukame road, but if there is only one, then they will take the Babati route to the West. Moreover, when goods are sent from the Arusha RTC Center, they are often for Babati as well, so there is no reason to go directly to Kibaya. In the North, drivers of lorries also fear the possibility of breakdown and loss of goods, but they fear as well surmounting the two escarpments at the beginning and end of the road. The main population and supply route is still through Ngorongoro.

The RTC manager in Kibaya added that they were planning to construct a sub-center midway along the southern road. They have also discussed the possibilities of initiating a mobile sales unit. All they need is the vehicle.

b. Natural Resources and Tourism. Although the Arumeru head of this department mentioned a number of projects, only a few pertained to the survey area. Among these was a small forestry project. The department plans to select a series of villages for special assistance in planting trees and then follow up the progress of the seedlings. Although at the time of interview the villages had not yet been selected, he said they would probably be in the drier areas of the district.

Kiserian village records notes receipt of a large number of trees to initiate a forest plot. Villagers had also requested citrus trees, but had not yet received them.

The Kibaya head of department mentioned a project concerning game and poaching control. He said that at the present time his staff had little means to combat poaching, even though most poaching in his opinion was now moving into areas more inaccessible to vehicles. It is planned to revive the Terat game post with a larger staff, three from the region and two from the district, better armed and with transport.

In Loliondo a number of proposed projects were mentioned: establishing nurseries at Sale, Malambo, and anti-erosion control at Lake Natron; a fish pond at Natron, beekeeping at Sale, and starting up a village sawmill at Magaiduru (of which Wasso is a Kitongoji).

c. Lands Office. The issue of leased shambas is discussed elsewhere. It is worth noting here the possible intrusion of a large number of emigrants from Mount. Meru in the near future. We were informed that TLMC has applied for a right of occupancy to the Themis Holding Ground area, which consists of 29,000 acres. The District would like to have a 19,000 hunk of it to be used for resettlement. The plan at the time of our interview in October was to grant individual families three acre plots. Coupled with a possible take-over of some of the non-utilized portions of Filli and Umoja Estates, this would mean a total of 7456 parcels of land and thus the same number of families. The land's officer said they had already received over 2000 applications for the land. If this is accomplished it would mean a radical increase in population and even more radical changes in infrastructure along the road.

2. Commercial Enterprises . We examined five sectors in constructing a profile of the kinds of commercial enterprises in the survey area: mining, makaa (charcoal), leased shamba and estates, transport and trading licenses.

A. Mining Enterprises. The main mining location on the southern road is around Lendanei, with some minor activities (mostly prospecting) scattered through the area. Komolo has also been the site of some mining in the past. Much of the mining has declined in recent years.

There are no village projects associated with mining, apart from a proposed "cooperative" venture at Komolo village.

In the North, Lake Natron is virtually untapped source of minerals. We were informed that many years ago there was an extraction operation there using tracks cut from Gelai. To the East of lake Natron, on the mountains, were some gemstone operations (Mundara, etc) which have not been functioning for some time. Although we could not find any record of such, we were informed that extraction of sodium carbonate has begun at Natron (we saw no signs of it at Natron itself) and a group of expatriate prospectors are surveying an area North of Monduli Juu.

Ideally obtaining prospecting licenses would be an excellent measure of increased interest in the potential mining sites of the survey area, but the Moshi Mining Office informed us that such permits are issued without specifying the place to be prospected. Therefore we were forced to review only Mining Claims issued by that office. Sand collectors also need licenses. So both are included in the summary below

Mining Claims in the Survey Area: Moshi Mining Claims Office

<u>Year Issued</u>	<u>// Claims</u>	<u>Type of Mineral</u>	<u>Place</u>	<u>Present Status</u>
1975	19	Gem Stones	Arusha South (Monduli Maasai)	9 current
1976	7	Gem Stones	Kiteto Maasai	10 expired/ transferred
1976	1	Gem Stones	Monduli	7 current
1977	0	0	0	0
1978	1	Gem Stones	Kiteto	1 current
1979	2	Gem Stones	Kiteto	1 current 1 cancelled
1948-1957	11	Sand (Mchanga)	Arusha South	11 expired
1973	1	"	Kiteto	1 cancelled
1974	1	"	Monduli	1 current
1954	1	"	Maasai	1 transferred

The total of all Mining Claims from Monduli, Kiteto, Aru-Meru and Loliondo is 75. Total from the survey area is 44, of which 19 are current.

The main source of sand for the making of cement blocks and foundations in Arusha comes from Oljoro and Losinyai; the latter being on the survey area; the former being on the periphery. From estimates of number of lorries collecting sand from Losinyai, it is obvious that not all mchanga collectors have official licenses. Nonetheless, they all have to pay a tax for their sand at the korongo to Losinyai village, 2 shillings per ton. The village earns between 300 and 400/- shillings per day,

which would mean that no less than 150 tons of sand are taken from the korongo. This is probably an over-estimated tonnage.

Formerly Oljoro village had control of the business. Their Katibu Kijiwi estimated that they made about 4200/- per year from the taxes an extraction of 2100 tons which would amount to about 6 tons per day. Oljoro relinquished its rights to the sand profits in late 1979.

The presence of mchanga lorries has contributed to making the road from Kiserian to Losinyai one of the more difficult parts to maintain. During 1979 most of the trucks which would have used the Oljoro road came to Losinyai via the Ukame Road.

- B. Charcoal. The makaa enterprise in the survey area is said to date from the late 1960s, but in all probability it was much earlier. Burners were operating in the Terat, Loswaki, Numba Tano area in the early 60s, but the all-important track from Numba Tano to Terat was not cut until 1967. Up to that time charcoal collecting in the area must have been relatively small scale.

Charcoal burning is found in pockets throughout the survey area. In most cases, it is done by one or two individuals who serve the relatively modest needs of a small trading centre, such as Kakessio or Engasumet.

Intensified charcoal making is found primarily in the Komolo, Terat, and to some extent Naberera parts of the Ukame road. As far as we were able to ascertain there is very little elsewhere except for Monduli Juu which has had charcoal burners for at least 7 years providing Monduli Town with fuel.

The Naberera enterprise is of interest because it is being done by men who are clearing tsetse bush for the Olmoti bull ranch and who are taking advantage of the intensified traffic to sell their wares. As far as we were able to ascertain, charcoal collecting lorries normally don't go much further into southern Maasailand at present than the Komolo - Terat area.

Village enterprises in charcoal have been attempted both at Kigongoni and Engasumet, but in both cases the villagers concerned preferred to keep it an individual business. At Komolo, where the greatest concentration of charcoal makers are found, the village has established a tax on each gunia sack, which is paid by those who collect the charcoal.

Charcoal tax profits at Komolo for the period May - October 1979 amounted to 142,227/-, which is an average of 23,704/- per month. The tax is 2/- per sack, thus the number of sacks taken during this period amounted to 17,114. The village chairman estimated that they get an average of 52 charcoal lorries per month.

Monduli Juu village charges burners 25/- per pile - Tanvu or Tanuru - and 2/- per sack is taken from the collectors. We got no figures for resulting profits of the village.

We had hoped to get some measure of total charcoal extraction from the survey area from District or Regional records, but we were only able to obtain the yearly totals of Forest Royalties from the Regional Natural Resources Office.

Forest Royalties include other areas of charcoal collection (there are not very many) and taxation on lumber and some smaller items. The following are annual profits (1975 and 1976 are estimated);

Forest Royalties from Arusha Regional Natural Resources Office

<u>Year</u>	<u>Total Profits</u>	<u>Monthly average</u>
1974	49,642/32 (Est.)	4,136/86
1975	146,509/44 (est.)	12,209/12
1976	257,206/10	16,455/03
1977	149,133/65	12,427/80
1978	180,884/75	15,073/73
1979	176,014/08 (to Nov.)	16,001/37 (11 months)
	(192,016/44 est)	14,667/84 (12 months)

If the estimated profits are correct, we find a jump in receipts from 1974 to 1976. There is a drop in 1977 with a steady rise to present. These figures alone are insufficient to accurately inform us of the degree of rise or fall of the charcoal industry along the Ukame road. But considering that the main part of Forest Royalties does come from charcoal selling permits, they give us a broad understanding of the trends of charcoal use in Arusha Region. Interviews with charcoal collectors and locals in the collection area would lead us to anticipate greater use of the Ukame road for charcoal collection with charcoal burners moving steadily southwards and transporters following, at least until the trees suitable for charcoal making are exhausted. It is also possible that charcoal burning may extend northwards beyond Monduli Juu, but at present it is limited to the plateau.

In a restudy of the charcoal industry we would strongly recommend attempting to focus on village records of profits and District reports - if they are available to clarify figures taken from the Regional Offices.

- C. Estates and Leased Shamba. The only estates in the survey area are found in Aru Meru District and these are on the eastern periphery. There are three: Lucy, Filli, and Umoja. All are engaged in sisal making with some jaggery extraction. Filli and Umoja are small estates not operating at capacity. In fact a recent survey from Aru Meru headquarters identified large segments of both estates as potential re-settlement sites for the crowded populations around the mountain. Lucy Estate, although it appears to be a shadow of its former self, is still producing both sisal and sugar cane. It also has a small fish pond stocked with fingerlings from Aru Meru fisheries.

Lucy has a number of well-stocked shops, a police post with radio communication, although no transport, a church, and grinding machine. Not only do other estates use Lucy's facilities, but also Kigongoni, Losinyai, and Oljoro to some extent depend on these shops for goods.

The Estate has 2 landrovers and a motorcycle. A number of "short-cuts" exist from Lucy to the Ukame road. Normally the Manager hires lorries from Arusha to transport the sisal to Arusha, directly to Tanga, or to the Usa railroad depot. Most of the vehicles use the Ukame road these days rather than pass via Mlangarini and Nduruma. The manager also claims that his trips to Arusha have increased from 2 to 8 times per month since the Ukame road was constructed.

There are a number of farms at the Oljoro road; however, they tend to use the Oljoro route to Arusha. The Oljoro area also extends south and west into Monduli District where there are some leased shamba. These farms have access to both the Oljoro and Ukame road.

North of Terat and extending all the way to Lolkisale and Simanjoro are a number of large farms, mostly growing seed beans. A few in the Terat area use the Ukame road now rather than passing through Numba Tano. Those at Lolkisale tend to use the road directly

to the main road from Arusha, although it is very difficult to pass in the rainy season. Often they utilized the Ukame road up to the Simanjiro track. Similar situation prevails for Simanjiro farmers close to the Lolkisale road.

While a few far seed bean farms were in operation at Lolkisale in the early 70s, most of them as well as those at Simanjiro are of relatively recent vintage. Further south, in areas directly under the influence of the Ukame road, we find a virtual "land rush" of applications for large scale farming and grazing in Naberera, Lendanei and Laipera. There is no doubt that construction of the Ukame road has made large scale farming of potentially great economic significance in Kiteto District at least.

The following table presents the numbers of leased farms and grazing areas as well as applications for new land or renewals in Monduli, Kiteto and Ngorongoro Districts. Those marked with "app" indicate applications, otherwise the others have been granted. This information was collected from the Monduli and Kiteto District Land's Office. We were informed that there were no requests for commercial farms in the Aru Meru part of the survey area. It is quite possible that some of the Oljoro road farms are a part of Arusha town.

District	Place	# of farms	Year	Type of use	No. of hecta.	Type of lease
Kiteto	Simanjiro	2	1978	Cultivation	6000	Short term
"	"	1	1978	Grazing	3000	" "
"	"	7	1979	Cultivation	13500	" "
"	"	1	1979	Grazing	3000	Long term (a
"	"	4	1979	Cultivation	1750	Short term (
"	Loswaki (Terat)	2	1978	Cultivation	3000	Short term
"	"	2	1979	Cultivation	7000	Short term
"	Naberera	1	1978	Cultivation	7500	Short term
"	"	2	1979	Cultivation	4000	Short term
"	"	1	1979	Grazing	2000	Short term
"	"	1	1979	Cultivation	10000	Short term
"	Lendanei	1	1979	Cultivation	2000	Short term
"	"	2	1979	Cultivation	17600	Short term
"	Laipera	9	1979	Cultivation	22500	Short term
"	"	1	1979	Cultivation	2000	Short term
"	"	1	1979	Mixed	3000	Short term
"	Loibor Sirret	1	1979	Cultivation	1000	Short term
"	Anywhere on the Ukame road	1	1979	Cultivation	600	Short term
Monduli	Lolkisale	7	1975	Cultivation	13000	Short term
"	"	4	1977	Cultivation	4000	Short term
"	"	9	1978	Cultivation	6590	Short term
"	Oljoro	1	1979	Cultivation	1000	Short term
"	"	1	1975	Cultivation	300	Short term
"	"	3	1976	Cultivation	1150	Short term
Ngorongoro	Loliondo	2	1975	Cultivation	8	Short term

Total Cultivation Plots: Kiteto: granted 48,000 hectares: 24 farms
 applied 61,450 " 21 farms

Total Cultivation Plots: Monduli granted: 26,040 " 25 farms

Total Cultivation Plots: Ngorongoro granted 8 " 2 farms

Even though most of these farms have short-term leases, which of course can be renewed, most of the larger farms have rather complex supporting establishments. Retian Seed Company, whose 7500 hectare farm is just off the Ukame road a few miles from Naberera, has a few temporary structures at present, but it is planned to put 3-4 expatriate families in place to run the farm. A borehole would be sunk, houses are to be constructed and more elaborate farm buildings put up.

As it is normally unusual for Maasai to seek agricultural employment, greater number of outside workers, both seasonal and permanent will be residing in the area.

Rotian has already had some effect on the village of Naberera. The farm depends on Naberera for its water, and on occasion it has provided diesel for the water pump. It made a ^{cash} donation to the village to initiate a communal shop. And recently it advertised that its tractors would prepare fields of the village for a cut-rate price.

It is almost staggering to consider what the effect of 16 possible farmers in ~~the~~ Naberera will have on this old - for Maasailand - and rather small community, whose residents at the present time normally have to travel to distant villages to purchase their own supplies.

In the North there are very few leased fields recorded in the Monduli Land's Office; however, we were told of a mini land rush in the Western portion of Loliondo, near Olosokwan, on the track to Lobo.

On the whole the Simanjiro and Naberera leases have been granted in areas usually unutilized by pastoralists because of tsetse. Thus the loss of territory to the Maasai is more of an apparent one than real. Nevertheless some areas tend to be emergency reserves in times of drought. Such a case is the area to the West of Olosokwan in Ngorongoro district.

In theory the villages whose land is being applied for are to give permission for cultivation before the application is made to the District.

- D. Transport. Some commercial transport of goods and people has existed in various forms and with various frequencies in most of the southern Ukame road for the last 10 years at least. But much of it was local landrovers and lorries belonging to residents or shopkeepers who provided taxi services, gave lifts for a fee, or allow^d their vehicles to be rented. Bus services were scarce in the extreme. A few efforts were made to establish ~~the~~ transport for Oljoro - Terat and Simanjiro - Engasumet, but after a year or two usually ceased, as the buses were inoperable. At the present time buses travel through Kiserian as far as Themi, and a bus comes from Handeni District via Kijungu and Kitwai to Engasumet once a week. This service, which has been in operation for at least 7 years, ceases each rainy season.

The totals of lorries and landrovers (or passenger vehicles) found in the lists of village items is small; 3 trucks and 18 passenger cars. These numbers are useful in measuring future intensification of local transport, but they do not indicate the actual availability of vehicles for travel, for many local hireable cars and trucks are not found in the villages surveyed but are nevertheless part of the transportation sphere for them. Similarly mission, commercial, and government vehicles are also important source of transport for locals.

We attempted to obtain a measure of commercial vehicle use of the roads area - particularly in the South, where a track already existed - by obtaining records of transport permits from the regional office. Those which specifically list villages along the Ukame road are very few, most merely requesting permits to operate in the Region as a whole. The figures for vehicles specifically passing by villages along the road are given below, followed by the total number of permits for commercial transport issued in the Region by year. At the present time they are not meaningful for any assessment of Ukame road use, but they can provide a baseline for the future. |T01

Transport Licenses Register: Regional Office - Survey Area

<u>Year</u>	<u>Type of transport</u>	<u>Routes</u>
1974	Bus(44 Pass.)	Shabarai - Nduruma; Arusha
1974	Truck (3.5 ton)	Kiteto - Arusha area
1974	Truck	Arusha - Arumeru - Maasai
1975	bus (60 pass.)	Arusha - Kiteto (via Kondoa?)
1975	Truck (2.5 ton)	Arusha Region (Regional Trading Company)
1975	Bus (50 pass.)	Terat - Lucy - Nduruma - Oljoro - Arusha
1976	Bus (?)	Ndurma - Naberera - Engasumet - Simanjiro
1977	Bus (50 pass.)	Arusha - Kiserian - Nduruma
1977	Bus (15 pass.)	Monduli - Hanang - Kiteto - Arumeru

Transport Licenses Register: Regional Office - Arusha Region

(These figures include the above)

<u>Year</u>	<u>// of Permits issued</u>
1974	32
1975	39
1976	32
1977	21
1978	21
1979	14 (to September)

In retrospect we feel it would have been better to have carried out an actual roads' use, traffic count and strongly recommend that this be done in any future study. Kiserian would make a very good survey place for the southern part of the road as there is already a periodically functioning roadblock by the buying post, Sale, in Ngorongoro, would make another good place for such a survey.

We remain then with opinions of locals along the road to assist us in ascertaining present road's use. Each village profile contains a section dealing with past and present communication patterns and cost of transport as well as a final section noting road benefits and problems to date. Further discussion of roads' use will be reserved for the final section of this report.

E.Trade. In addition to ascertaining the kinds of shops and other businesses in each of villages surveyed. We also collected annual applications for trading licenses from District headquarters. The number and type of licenses for each year are given in the village profiles. Here it will suffice to present a more general picture of trade on the Ukame Roads as seen through these license applications, followed by a few comments on Maasai entrepreneurship.

1. Trading licenses are broken down into: duka (shop), hotel/Mgahawa (restaurant/coffee shop), "off beer" (licenses to sell beer in a shop, local beer licenses (pombe), butcher, lodging, cattle trading, wima (travelling salesman/shops, mostly associated with cattle markets), bar and other.

The following Table contains a summary of all the licenses in the Survey villages on the Ukame roads from 1975. Below it is a division of these figures into South Road and North Road Villages.

Trading Licenses On the Ukame Roads: North and South Combined

<u>Year</u>	<u>Type of Licenses</u>									
	<u>Duka</u>	<u>Hot/mgh</u>	<u>Off beer</u>	<u>Pombe</u>	<u>Butch.</u>	<u>Lodg.</u>	<u>Catt.</u>	<u>Wima</u>	<u>Bar</u>	<u>Othe.</u>
1975	24	46	38	33	0	1	2	0	1	5
1976	29	10	7	4	3	1	7	5	0	0
1977	18	12	4	3	4	0	4	6	0	1
1978	37	9	3	3	2	0	3	5	0	0
1979	33	9	10	21	1	0	3	8	0	5
Total	141	46	32	34	10	2	19	24	1	11

Trading Licenses for the North and South Roads

Road	Year	Duka	Hotel/Mgh	off.beer	Pombe	Butch	Lodg	Catt Trg.	wima	bar	other	tota
North	1975	5	0	0	2	0	0	1	0	0	0	8
	1976	5	0	0	2	0	0	1	0	0	0	8
	1977	5	0	0	2	0	0	1	0	0	0	8
	1978	4	0	0	2	0	0	1	0	0	0	7
	1979	7	1	0	2	0	0	2	0	0	0	11
												42
South	1975	19	6	8	1	0	1	1	0	0	5	31
	1976	24	10	4	2	3	1	5	1	1	0	51
	1977	13	12	8	1	4	0	4	3	0	1	46
	1978	33	9	4	1	2	0	2	8	0	5	64
	1979	26	8	10	19	1	0	1	8	0	5	78
												270

Looking at the first Table we find, not surprisingly, that trading licenses for shops are in the majority. There are only 3 village on the Roads which have no shop at all: Loswaki, Ng'abolo and Mfereji. Loswaki has access within 2 miles to Terat shops, Ng'abolo is normally a place of wet season grazing, although a travelling shop passes along the road. Mfereji is the furthest from any shop. Until the completion of the Ukame road to Lolicndo, it was almost inaccessible to vehicles. 2 villages have nearly no shop in the sense that there is practically nothing to purchase. Kiserian and Oljoro - but both have relatively easy access to food supplies elsewhere.

Hoteli and Migahawa are second in frequency. Unlike shops, they show a slight decline from 1977 to present. Partly, this is related to difficulty in obtaining supplies.

"Off-beer" and pombe shops follow third. Both show considerable rise in 1979 alone which may be related to a drive to register them, but also a number of villages womens groups have started up kilabu as a self help project.

The cattle market entrepreneurs, traders and salesmen, are fourth in frequency. Cattle trading licenses shown in the table hardly tap the number of private traders present in Maasailand. Wima licenses show a slight rise in 1979. We would anticipate that with an intensified effort to re-establish markets the number of licenses for both should drastically increase. One cattle market was surveyed at Terat and can be found in its profile.

The other categories are not highly represented. Bars and lodgings were found at Lendanei along with some butcheries. The category of "Other" is a catch-all category listing applications for which no type of trade was given and also for grinding machines.

Comparing the North and South road entrepreneurship, it is obvious that the latter has a much greater trades infrastructure than the former paralleling its larger number of villages along the Road. Trading licenses in the North tend to remain relatively stable over the 5 year period - the one exception being shops which show a slight increase in 1979. The South presents a more variable picture from year to year, although it too has some increases and recoveries of business in 1978 and 1979.

For purposes of comparing parallel increases and decreases of entrepreneurship as represented through trading licenses, we

include here a summary of license applications for two categories of villages: those within the sphere of influence of the road and those outside this sphere. We have included licenses for more villages within the sphere of influence roads than were included than were surveyed in this summary. Future impact surveys could easily collect the same data, as they are all included in the annual Trading Licenses report for each district. In addition to Engaruka and Loiborsirret, which were surveyed and whose profiles can be found in the appendix, we have included the following villages: Elang'ata Dapash, Loiborsoit, Kitwai A and B, Makami, Orkwish Oibor, Lendanei, and Narakaruo. All but Elang'ata Dapash are in Kiteto District.

The second part of the Table summarizes trading licenses for the two villages outside the sphere of the Ukame Roads, Kakessio and Mwandet. (Unfortunately the figures for the latter could not be separated in most cases for Ward totals)

Trading Licenses for Villages Within and Outside the Ukame Roads Sphere of influence

In sphere	Year	Duka	Hot/mgh	off-beer	pombe	butch	lodg.	Qst	wima	bar	othr.	Tot
								Trd.				
	1975	34	3	5	2	2	0	5	3	0	0	5
	1976	33	7	6	4	2	0	7	1	0	0	6
	1977	25	10	6	3	5	0	3	3	0	4	5
	1978	45	15	6	6	5	0	2	4	0	0	8
	1979	32	12	7	6	4	0	7	5	0	5	7
Out of sphere	1975	10	2	1	0	1	1	0	0	0	0	
	1976	11	1	0	2	1	1	0	0	0	0	
	1977	11	2	1	1	1	1	0	2	0	0	
	1978	12	2	1	1	1	1	00	2	0	0	
	1979	12	2	1	1	1	1	0	2	0	0	

Both categories of village show a rise in entrepreneurship from 1975 to present if all categories of trade are combined. For the villages in the sphere of influence of the road there is a jump from a total of 59 trading licenses to 83 in 1978. The number drops slightly in 1979.

In summary, published trading licenses from the Districts reveal an overall rise in entrepreneurship in all three categories of villages surveyed. Villages directly on the roads show a significant rise in number of licenses from 1978 to 1979. To a lesser extent this jump is also found in villages within the roads' sphere, although the rise is in 1978. (This rise is more evident in those villages within the sphere of influence of the road which were not surveyed than those which were). The two villages out of the road's influence, Kakessio and Mwandet, show a gradual rise in entrepreneurship with no major leaps. If the roads are to have a significant impact on the development of local business, we would anticipate these suggestive trends to be more striking in records of trading licenses-for 1980 to 1985.

2. Maasai entrepreneurship. Maasai involvement in local business affairs tends to be concentrated in livestock. This is not to say that entrepreneurship of other sorts is missing, but it is limited to a few individuals and is certainly not considered as a "career" option by most Maasai.

Maasai - or locally - owned shops number 10 in all: 4 in the South and 6 in the North. These shopkeepers also tend to have other business interests. One of the shopkeepers at Terat has a subsidiary shop in Naberera, and he's also a

cattle and goods trader. At Sukuro, one of the shopkeepers also has a landrover which he uses to transport people to cattle markets and Arusha. Others are attempting to start up businesses. One of the villagers at Losinyai has purchased a tractor. A few Maasai have applied for leased shambas. On the whole, however, private shops and private transport are still in the hands of non-residents.

Village shops on the surface appear to have popular appeal especially in communities, like Mfereji, where goods are distant and the likelihood of someone starting up a business himself is small. The number of village run shops is few: 5 in all. On the southern road, Oljoro has a shop, which is almost moribund and is hardly used. Naberera was to start up a shop with a gift of cash from Rotian Seed Company but through dubious circumstances the shop was opened without consulting the Village Council, so has since been temporarily closed. In the North there is a small shop at Emairete and a fairly well-stocked one at Sale. Kakessio, one of the control groups, also has a village shop, which was closed at the time of our survey.

Village-run shops at present have severe difficulties in obtaining goods to sell. They have very small capital and normally don't command transport, which means they have to rent vehicles if they want to obtain stock. The RTCs are fairly far from the shops as well. Aru Meru villages along the road use the RTC at USA, Monduli shops use the Monduli town RTC, those in Kiteto use the supplier in Kibaya. Loliondo also has an RTC subsidiary. Kiteto District is planning to establish a subsidiary store in Terat, Naberera or Engasumet to facilitate establishment and stocking of village shops in the middle part of the District.

All District officers realise, however, that the problem is also one of availability of supplies. Often the RTC doesn't have enough stock to make a costly trip by rented vehicle profitable.

Granted these constraints, we still expect to find a rise in the number of village shops along the Ukame road with hopefully a more stable supply system than is found in other areas.

More invisible but more predominant is the business of livestock trading in Maasailand. Unlike entrepreneurship discussed above, livestock trading is an open option for all Maasai males. Almost all residents interviewed along the Ukame Roads said that stock trading has increased and that every family has at least one warrior engaged in the "business".

That markets are few and far between, especially in the North, has probably stimulated an expansion of private stock trading, which, however, existed alongside the market system in the middle 70s. As this business is all "private", we do not find that the trading licenses issued for livestock to be at all accurate. Moreover, a lot of the business is periodic, when money is needed or the interest present, rather than a concerted weekly trip to purchase stock and then trek them to markets. We have no figures on the number of stock traders or on the numbers of stock sold monthly. At Terat, which is a private weekly market, about 100 cows were sold during our survey in the village. Most of the sellers come from the Simanjiro - Terat area. Buyers come from any distance, but especially Arusha.

Other entrepreneurship activities include the selling of milk cooperative Kilabu (beer shops) and selling of other locally grown products. The only milk collection centre existing on either of the two roads is at Monduli Juu. It has proved to be a great success, so much so that the husbands of the women selling the milk have now demanded their share of the profits (milk is the responsibilities of women, so the profits therefrom should be theirs). Where there are possibilities to sell milk along the roads, women do so. At Naberera a minor crisis amongst the non-cattle owners has occurred now that the Rotian Seed Company is present. Maasai women can sell their milk and other produce to the farm staff at much higher prices than to residents. So milk is becoming difficult to purchase in Naberera madukani. Other than the centre at Monduli Juu there are no other than small scale individual sales of milk along the Ukame roads.

Kilabu seems to be a popular way of organizing the Umoja wa Akina Mama into some profitable communal activities, aside from a group shamba. Most of the Kilabu are operated in larger centres by women living in "town", of whom, however, are Maasai. Outside of town women brew local beer privately for sale at home.

The only other business women engage in along the road is sale of some foodstuffs locally produced; eggs, chickens, some vegetables, etc. Basically, their communities are not yet large enough to make any sustained business of this sort profitable.

The introduction of more infrastructure government and otherwise and more frequent travel along the North and South roads will certainly tap the latent business talents and ingenuity of residents - especially women - to a much greater degree than at present. An immediate example of such effects are increased production of charcoal closer to Naberera (a male occupation), and increased sales of local produce in the Naberera area by women.

3. Tourism. Aside from informal interviews with expatriates and locals regarding travel in the survey area before the Roads' construction and after, we aimed to assess degree of tourism through records of hunting permits issued in the four districts through which the road passes and a survey of touring companies in Arusha town.

Hunting Permits. Hunting was banned in Tanzania from 1973 to 1976. In 1976 it opened again with a hunting season of 6 months - from July to December.

Hunting on the Maasai steppe has been popular for many years. Hemmingway's "Green Hills of Africa", a novel of his hunting safari to Manyara, Hanang, Kibaya and Kijungu - Sunya, was written in 1935. Up to the hunting ban, Arusha had a relatively large numbers of companies which organized large hunting safaris. A few even had semi-permanent camps in Maasailand. Many of the small tracks which criss-cross the Maasai steppe were hunters' roads.

There was no area where huntings was permitted inaccessible to hunters, including the Natron basin. We therefore made the assumption that the Ukame roads would facilitate hunting, not initiate it in the areas under survey, and that we should expect to find an increase even within the last two years of permits issued for areas through which the road passes. But the greater test remains after a longer period, especially considering that the organization of local hunting is just beginning again and that the Ukame road is in most areas less than a year old.

Ascertaining the numbers of permits issued for the period under review involved obtaining both figures from the Districts as well as the Region, as in some cases the regional office was empowered to issue permits for a District. For example, hunting on the Simanjiro plain can be a day's trip from Arusha, but if the hunter had to go to Kibaya in 1976, he would probably have to spend two days in travel. Hunting permits for Loliondo are also issued at Monduli, although in the next hunting season Loliondo will start issuing its own.

An additional problem lay in ascertaining where hunting would be done. The Arumeru part of the survey area has relatively little game, except in areas where hunting is banned - Themis Holding Ground, for example. Thus we were informed that no hunting permits were issued for the area of our interest in Arumeru. Fortunately the hunting areas for Monduli, Loliondo and Kiteto with a few minor exceptions - are traversed by or close to the Ukame road.

HUNTING PERMITS

Year	<u>KITETO</u>			<u>MONDULI</u>			<u>LOLIONDO</u>		
	Dist.	Issue	Reg. Issue	Dist	Issue	Reg issue	Dist	Issue	Reg. Issue
1976*	7		11	0		27			(Included in Monduli)
1977	0		23	24		66			(Included in Monduli)
1978	70		70	30		116			(Included in Monduli)
1979	63		not known	41		not known			(Included in Monduli)
	<u>140</u>		<u>104</u>	<u>95</u>		<u>209</u>			

* (In 1976 records for only three months were available at Kiteto District Game Office)

In general we find an overall increase in frequency of hunting from 1976 to present in the three Districts (issued of permits for the Natron area now included in Ngorongoro District rise from 9 in 1977 to 15 in 1979.)

b. Tourism. A copy of the form used in the Arusha town tourism survey we conducted can be found in the Appendix. Seventeen companies, including the Tanzania Wildlife Corporation, were contacted.

Of the 17 companies five had been in operation before 1975 and 10 opened their offices from 1978 to 1979

Prior to 1978 only one company reported any touring activities in the survey area: Tanzania Wildlife Corporation. These, of course, were all hunting safari. Two more companies initiated tours in the survey area in 1978, and in 1979 they were followed by eight more companies. Six agents reported no activities in the survey area at present.

Tours were taken for: business or government work, camping, climbing (Oldonyo Lengai), hunting, bird watching, and general sight seeing. The majority of tours (13) followed the north road, and four of these surmounted the Sale escarpment. Five tours followed the southern road (some companies have more than one tour, and others simply listed the trips they had taken).

In 1978 estimated average frequency of use of the Ukame Roads was very low about two times per year. In 1979 the average frequency rises to nine times per year with a range from three times a month to once a year

To obtain a better indication of present roads use, we asked each company to list the numbers of trips booked from October

to December 1979 in the survey area. Fourteen had no planned trips for that period. Of the three that did, two companies had a total of three camping trips planned, and the third, Tanzania Wildlife Corporation, had a total of 80 hunting trips booked. Only two of the 80 trips were to use the southern road.

Concerning future plans, four companies gave no answer and nine said they would like to start using the Roads but they would probably wait until there were greater tourist services (petrol, food, etc.) on them. For the most part these companies specialized in day safaris or ones which headed through well-populated routes to tourist hotels in game parks.

Four companies were planning to make the northern road part of their standard offering. These will be camping, climbing tours around Lake Natron and Oldonyo Lengai.

Although not radically intensified in frequency, tourism is beginning to make a modest appearance on the northern Lake Natron - sector of the Road.

This survey of course did not tap the many weekend tourists from Arusha or Moshi touring companies which we were told also use the northern road fairly frequently.

4. Church Activities in the Survey Area . Two Church groups have been involved in evangelization, school construction, and medical services in the survey area for a long time. The Lutheran Church was present in Maasailand since the 1930s, and perhaps even before, in South Maasailand, but its major building programs - especially in education and medical services, only got underway in the 1950s and 1960s. This was about the time when Catholic Missionaries started their own programs in Maasailand. In the early 70s the Swedish Pentacostal Mission began working in Loiborsoit and Kibaya.

Lutheran presence is notable along both roads. In the survey area for Kiteto and Aru Meru there are seven churches with five resident pastors or evangelists. Only the Naberera pastor has transport with which he assists evangelists in Namalulu and Engasumet. The other pastors in the survey area are helped by pastors from Simanjiro, Nduruma, Arusha and Kibaya. There is one expatriate pastor stationed at Kibaya with transport.

Catholic presence is centered mainly at Mboret (Simanjiro), about 12 miles off the Ukame road, and at Kijungu in the extreme south. The only Catholic chapel in the southern area is at Komolo, which is served by the Simanjiro priest. Oljoro village is presently being serviced by a priest from Arusha. The Catholic priests in the South are all expatriate: one at Simanjiro and two at Kijungu. There is also a Catholic sister at Kijungu. All have transport.

No schools are under Church jurisdiction these days, but there is some mission activity in the field of health. The Simanjiro Catholic mission also staffs an up-to-date dispensary with in-patient facilities. It also has a mobile clinic with an expatriate nurse which visits Komolo. There is also a Lutheran dispensary at Engasumet.

From Monduli Juu to Wasso we find five Lutheran churches with three pastors or evangelists in residence. Only one of the pastors has transport. The others depend on Monduli, Arusha and Loliondo for assistance.

Medical services in the Loliondo area are dominated by the Catholic hospital at Wasso and its outpatient clinics. It has staff of expatriate technicians. The Flying Doctors also assist the Wasso group in conducting mobile clinics.

A YMCA dispensary is present at Monduli Juu, although its staff are Tanzanian government technicians. They have access to a YMCA vehicle which visits Monduli Juu periodically.

Both denominations have changed their areal organization somewhat as a result of the new road in the North. A new Jimbo has been created in the Lutheran synod called Maasai Kati. It encompasses Engaruka, Mto wa Mbu, Makuyuni, Gelai and Kitumbeine. The first three were formerly in Ngorongoro and the latter two in Longido.

The Catholics have similarly re-divided their responsibilities in the same area. Rather than the Kitumbeine-Gelai segments being in Longido, they will now be under Monduli, as will Mfereji, which before the new road construction could only be reached from Monduli on foot.

Mission "extension" work from Arusha is also being tailored to the convenience of the new southern road. The "Extension Seminary", which has worked for five years in the North, is now moving its school to Kiteto. The head of the program plans to hold seminars once a month at Engasumet. He will pick up seminarians long the upper segment of the road, while others will be brought up from the lower segment.

The new northern road was completed during the last year of seminary work in Loliondo. The pastor said that rather than using 12 hours to get to Sonjo, their first monthly seminar site, it took them five using the new road.

Because of its relative inaccessibility Engaruka, Gelai and Kitumbeine participants were virtually excluded from the seminars. It is planned at a later date to initiate a Middle-route monthly seminar at Engaruka. It will be possible for participants to meet along the Monduli - Lake Natron stretch of the road and then travel by Extension Seminary vehicle to Engaruka along its new track.

Another activity out of Arusha is monthly evangelization program conducted by a German missionary. She picks up pastors and evangelists en route to villages not normally served by a resident mchungaji. This program, which we saw at Sukuro, has only recently started.

Most of all the Church personnel interviewed have changed their travel route to Arusha at least by using the new road. In the South this means less dependence upon the Kondo or Korogwe routes and intensification of use of the middle route upon which the new road was constructed.

In the North this means virtually abandoning the Ngorongoro route in favour of the new Road, unless of course there is work to be done there. While the presence of the new road means greater accessibility to Arusha for obtaining supplies, transporting the sick and coming for meetings with less expense of petrol and vehicle maintenance, it also in the North has opened up a new area of work virtually ignored because of its inaccessibility.

5. Staffing and Work Satisfaction. In each of the village profiles we discuss various formal aspects of staffing and staff perceptions of their personal and work situations.

5. Staffing and Work Satisfaction.

In this section we would like to discuss the background for measuring work satisfaction, the induces used, and in general present some aggregated information concerning government employees working in the survey area.

Our fundamental assumption concerning staff was that the Ukame roads would have a positive effect on the conditions of work supply of personal needs, communications, (including travel), and headquarters support of workers in the survey area.

We attempted to measure this assumption through a number of means, not all of which were successful:

Assessment of numbers of transfers in and out of the survey area
Frequency of visitors to the facility
School log books
Interviews with staff.

The most disappointing exercise in the survey was attempting to discover numbers of transfers. Each District has a slightly different method of recording actual transfers, and no record of numbers of requests for transfer.

In Aru Meru and Kiteto we attempted to take a random sample of individual personal files to obtain some measure of transfer frequency, but all too often the necessary information, such as where the person was transferred to and from, was not specific enough to assist us. Monduli District keeps a transfer register, but similarly it was impossible to learn of dates or places. Ngorongoro, as a new District, did not have its personal files arranged yet, so we could not attempt even a random sample of them.

The resulting data, however, is interesting for providing reasons for transfer - although the majority of transfers gave no reason whatsoever. Where a reason was given it tended to be "follow spouse" (to a new post), transfer to another department, required to be nearer home because of family and health.

Visitor's Books and School Log Books proved to only be of minor use as we learned that not all visitors are asked to sign the books, nor are log books consistently kept. A number of schools simply did not have them.

Thus, the major source of our information for this segment of the report comes from interviews with staff themselves, residents of their communities, and superiors.

37 interviews with government staff working in villages in the Roads area (and 6 from Kakessio and Mwandet) were made subject of a content analysis in which the following information was extracted; positions, year of posting, first post or place of transfer, ethnic group, sex, home area, marital status, family present or not, housing situation, personal supplies source, work support, assessment of travel, cooperation with the village, and opinions concerning re-posting. The following is a summary of that analysis for ~~the~~ 37 (interviews) PERSONS in the survey area. We'll include the two "control" villages in the general discussion afterwards.

Content Analysis of Interviews with 37 Government Workers in the survey area

1. Position:	Teachers	Medics	Veterinary/ Livestock	Magistrate	Others
	17	11	2	2	5
2. Arrivals at Post:	1976	- 1			
	1977	- 9			
	1978	-10			
	1979	-15			
	No information	- 2			
3. Sex:	Males: 32	Females: 5			
4. Ethnic group:	Maasai/Arusha	Other	No Information		
	10	26	1		
5. Family Location:	At Post	At Home	No information		
	11	2	0		
6. Marital Status:	Married	Not Married	No information		
	13	18	6		
7. Quarters at Post:	At the Facility	Not provided	No information		
	20	15	2		
8. Meeting Personal Needs:	All locally	Local/elsewhere	Difficult		
	5	9	23		
9. Assessment of Departmental support:	No problems	Delays and difficulties	Bad		
	14	18	5		
10. Assessment of Cooperation of Villagers with Staff:	No Problems	Villagers uncooperative	Difficulties	No information	
	13	12	9	2	
11. Re-posting:	Prefers	Remain Here	No Information		
	5	15	17		

The majority of workers interviewed were teachers, predominantly male between the ages of 20 and 30. (Most of the staff was comparatively young - and seven were in their first post). The unequal division of those interviewed in the various departments/somewhat parallel to the number of facilities in the survey area, although we did not interview every technician in every village.

Over 2/3 of the staff have only been in post since 1978, as many of the facilities are quite new. Some of the teachers however, were UPE, so had actually resided in their working place for some time. The newness of the staff made us less confident of the information concerning their work situation than we would have normally been.

About 1/3 of the workers are Maasai or Arusha, although with the exception of dip attendants and UPE teachers, who tend to be residents, most are not native to the area in which they are working.

a
About 1/3 of the workers are married, and most have their families at post with them in spite of the fact that a few did not have quarters provided by their department. 15 workers did not have quarters associated with their place of work. Some were given rooms in other buildings, while others rented rooms or stayed with villagers. Even those who have housing provided often had to share a house with one or two other workers, so that a mere count of teachers' houses for example did not give a good estimate of the availability of housing, as five staff quarters might be shared amongst 10 - 12 persons all working in different departments.

Very few workers reported that they were able to get all the personal supplies they needed at post. The majority claimed that they normally experienced difficulties in all sectors: food, clothing, cigarettes, entertainment, communications. Nine workers said that they were able to obtain most of their basic supplies in the community or nearby and only had to go elsewhere (Arusha, Kibaya or some other large commercial center) periodically.

Absolute distance from a well stocked shop or an urban centre did not appear to be the crucial issue in determining how difficult it was to obtain supplies. Rather it was the ability or good luck of an individual to work out an informal arrangement with drivers who regularly passed by the village to get a list or help with a particular purchase. At Engasumet, for example, while some workers claimed no problems whatsoever in getting supplies or obtaining transport to get supplies, others complained that they were in absolute isolation. The difference between these individuals lies in the good fortune of some to plug into a communications network extending to Kibaya and Arusha.

In assessing departmental support, we asked questions concerning salaries, receipt of work supplies, visits by departmental staff, and general responses to requests. 18 workers felt that departmental support was meager. In Kiteto, Monduli and Loliondo salaries are normally brought to the staff, but workers estimated delays in receipt from one to three months, although three months was rare. Most of the respondents said that they chased up their own salaries at headquarters or sent representatives to collect them. Some workers arranged to have their salaries put directly into bank accounts. Aru Meru staff go to headquarters to collect their salaries.

Receipt of school supplies is much like that of salaries. Portable supplies are collected by workers at headquarters. Larger supplies are brought by vehicle.

Most workers acknowledge that the delays and difficulties clustering around the items that compose their work support is due to serious problems of transport and petrol, not simple lack of interest; however, a few workers did complain that they see headquarter's vehicles frequently passing, but almost never does anyone stop to pay them a visit. These workers do feel isolated and abandoned. They reported departmental support as "Bad"

Another item composing a profile of worker's satisfaction concerns his relationship with the community. We have broken down the responses to questions dealing with village cooperation into four categories. Those who claimed "No Problems" usually had little to contribute to the interview. Sometimes there really were no problems, but more often than not this answer was intended to shorten what must have appeared to them as a

burdensome task. Those who reported "Village Uncooperative" as we explain in the Profiles were doing so in relation to their work per se, not interpersonal relations. Thus, almost every medical technician complained that although locals liked to use their services, they tended to do so only for what they felt were serious problems, did not like to accept advice on preventive measures for some diseases (and in fact made any outreach health program a painful exercise), and also most often told them what medicine they wanted. Most teachers, who were willing to talk about their school situations openly said that parents were still reluctant to send their children to school.

Those workers who reported "Difficulties" in their relationships with the community tended to be reflecting more the interpersonal than the work situation, although the difficulties arose from work problems. Some villages wrote letters of complaints to Kata headquarters about absenteeism and other activities of staff. Staff in response complained about the villagers. The result was angry feelings on both sides, and a great sense of frustration and isolation on the part of the suspected workers.

The last question which these interviews raised was the desirability of re-posting. Note that the majority of staff surveyed had already been transferred at least once. Only five definitely stated that they preferred a job in another place. 15 definitely preferred to remain at their present posting. We were unable to place 17 respondents in any category with any certainty.

The five all have in common the fact of this being their first post, none are locals or speak the local language, and all feel frustrated in their present positions. It isn't certain that even being closer to a larger commercial centre would make much difference. What appears to be at stake for these individuals is being closer to home. Conversely what makes most of those who prefer to remain in their present situation is the fact that they are at least at home. As one teacher, who had been transferred from Mbulu to Kiteto said: "Every place you work has its shida (problems), but at least here I know the culture of the people I am living with and can speak their language". For other technicians a place is considered good so long as they have adequate housing, relative ease in obtaining supplies or access to that small transport network that passes by their village.

We had anticipated that married persons whose family is elsewhere would also find their work situation unsatisfying. Most of the married staff in the survey did have their families at post, but those who did not led us to believe that this would not be a good measure to include in work satisfaction, as often it is not the lack of housing, food, or services that keeps a family away, but the fact that the wife has important responsibilities in their home area.

In a restudy of staffing five years hence, we would anticipate that if the roads have had an impact that a similar aggregation of interviews would produce the following changes:

- #7 - more quarters would be provided for staff,
- #8 - personal needs would be met locally with greater frequency, or that the category of "Difficult" would decline
- #9 - Departmental support would be ~~be~~ superior to present

- # 10 - Cooperation with villagers as regards cooperation in the working situation would have shown marked improvement. *
- # 11 - A greater number of respondents would prefer to remain at post.

"Control" Villages. Five workers were interviewed at Kakessio and one at Mwandet. The majority at Kakessio were posted within the last year. The teacher at Mwandet had been at post since 1976. Assessment of headquarters support for Kakessio was the lowest for any village. One technician expressed the feelings of most of the workers who came from outside the area in saying, "..... all workers regard this place as their hardest posting". One female worker said that she would accept reposting anywhere. Kakessio is far from any supporting facility and at the moment doubly suffers in being one of the more distant communities in a brand new District, the officers of which are themselves just being placed at post. Transport is scarce for the entire District, thus in addition to local problems confronting them, workers have a great sense of justified isolation from their headquarters.

Mwandet, oddly enough, was also considered at one time as a "Punishment post". It hardly qualifies as that now, being only 1.5 miles from the Nairobi road. The teacher had no complaints about her job, satisfying personal needs, or District support, as she was within an easy hour of Arusha town

* In this case cooperation comes from greater appreciation of the facility in question by residents. This would be the result of a combination of factors:

- 1) Better monitoring of linkers by headquarters
- 2) Greater regularity in supplying materials to the facility
- 3) More sustained efforts at outreach programs
- 4) Greater personal exposure of residents to benefits resulting from use of - and other opinions about-the facilities

6. Local Development and Life Style Changes. We measured development of villages by considering the following changes: villagization, changes in compound and house construction and style, subsistence, source of cash, consumption patterns use of modern services and participation in the developmental process. Each of these is summarized for 23 communities in the survey (including the two "control" villages of Mwandet and Kakessio), except for the last two which will be discussed below in general.

1. Villagization:

a. Settlement: Complete - 9 ongoing - 10
b. Stability: permanent residence with seasonal movement of stock: 11
seasonal movement of entire family: 2
Village is mixed cultivator/pastoral - 6
Other - 1
No information - 3

2. Style of Residence:

a. Enclosure: Boma old pattern - 5
Boma 2 ring pattern - 4
Mixed - 6
Kaya - 4
No information - 4

b. House Style:

Enkaji - 7
Enkaji modified - 2
Msonge - 6
Mixed - 9
No information - 1

3. Subsistence (cultivation):

When started: Before 1975 - 4
Recently - 10
Cultivating village predominantly - 8
No cultivation - 1

Preparing Fields:

By hand - 21
Ox plow - 8
Tractor - 5

Labor: Family works - 10
Hired labor - 11

Use of Harvest:

Home consumption - 10
Home consumption and sale - 12
No cultivation - 1

4. Sources of Cash:

Cultivation - 10
Cattle trading - 17
Other business - 3

5. Consumption Patterns:

More Money is spent on:
Maize flour - 11
Other foods in shops - 6
Clothes - 7
Hardware - 2
Drugs and treatment for man and stock - 4
Transport - 2
More things in general - 4

No information - 1

All the villages in the survey had been re-settled, although some had not yet been formally registered as vijiji and a few were still officially a part, Kitongoji, of a registered village but considered themselves independent. The resettlement process, however, was only complete in nine villages, meaning that house plots were allotted and that the village was stabilized as far as massive emigration and immigration was concerned, although in all but two villages immigration was still continuing. The ten communities under the "Incomplete" category simply indicated either that they were not registered or that the migration process was still dominant, although here the major tendency was for people to be moving into - not out of - the village. The last category contains four villages which are overtly unstable so far as migration is concerned in spite of the fact that they are registered villages. Ndedo, still engages in complete shifting of families to wet season grazing areas, leaving the village virtually deserted save for teachers, students and a few mothers. Loiborsirret villagers are starting to move away from one of the Kitongoji because of severe resurgence of tsetse fly. Kakessio people are emigrating away from the village because of avowed fear of stock theft, and a large proportion of Komolo's new population, despite what the village chairman says, shows all signs of temporary residence, most being charcoal burners who are highly mobile.

Residential stability of those who are in place in villages, nonetheless, is fairly high. Only two pastoral villages move their family when taking stock for seasonal grazing. Most livestock keepers now tend to have a permanent residence and only the stock are seasonally moved away.

Attitudes concerning villagization itself were for the most part positive. Re-settlement was not popular, although most of the villages in the survey area conformed with the government's wishes. Later, individuals became aware of some of the benefits which stabilization brought. Livestock keepers said they thought it was good especially because they could remain at home (most were older men) while they could still move their stock to other grazing areas. Women were pleased because they now are freed from having to construct and repair houses as frequently. Some also said that Kijiji was good because they were close to water, shops and dispensaries now, but they also feared that by being permanently settled near a school, all of their children would be in attendance and then they would have to assume extra herding and household work. Village leaders felt villagization by congregating residences, facilitated communications and attendance at public meetings.

Because of the predominance of Maasai settlements in the survey area, we divided style of residence into two categories. The enclosure which defines a residence is traditionally a thick fence of tangled bush with a series of entrances, usually depending upon the number of married elders residing together. Huses and small stock pens are clustered on the inside edge of the fence, while the large stock are kept in the middle space. Recently there have been efforts on the part of government to change the style to a "two ring" pattern in which the houses are kept separate from the stock corrals. The old pattern is still present, but shows definite signs of demise. The category of kaya indicates a Bantu residence structure, which may also have fences, but does not have large populations of livestock.

House styles are also a focus for changes initiated by government. Enkaji is the traditional low dung plastered Maasai house. Msonge is a usually round thatched roofed structure of which the Arusha style house is typical. In the survey we used msonge to indicate any thatched-roofed structure.* A third type of house once found along the Ukume road in areas of Sonjo concentration was bee-hive shaped.

House changes have definitely made their way into the survey area. In the two Sonjo villages surveyed, all houses were of the msonge type. Once re-settlement had taken place, the change from the traditional beehive style became mandatory. It was resented at first, but later some women said that they discovered the houses were easier to build and were more fire-resistant.

Maasai house changes tend in the direction of expanded enkaji with larger entrance ways and higher ceilings and sometimes larger windows. In the South the enkaji had already been modified somewhat to conform more to the Wagogo style which has projecting roofs. Modification of Warusha houses, which for the Maasai are the next step in development, is to the square model with gabled roof and thence to cement wall and and mabati roofing. Nine villages were mixed in their housing types. Only seven villages contained a predominance of enkaji, which again indicates a possible demise of the traditional Maasai dwelling.

One of our great surprises in conducting the survey was to learn how many villages are engaged in some form of cultivation. Of the 13 predominantly livestock villages, nine began cultivating in the last three years. When asked why they did so, they gave two answers: tumbo and serikali.

Tumbo, stomach means hunger: serikali means government. Small cultivation plots are a part of the developmental programs for most Maasai communities. Although a few individuals were cultivating long before it became common, most Maasai started with ambivalence, and most probably it was to conform to a District desire. At the same time many realized its advantages. How integrated cultivation is amongst the Maasai at present is a moot point. They are committed enough to follow the rule in most villages that each wife should cultivate 1 - 2 hectares, but for the most part they hire labour to do the work for them. Preparation of the fields is mainly done by hand, although how it is done varies from person to person depending on his family's capabilities, availability of cash for payments, and ox plow and tractors.

Most pastoralists only plant small plots so their harvests, which tend to be small, are saved for home consumption. Eleven villages grow crops both for home consumption and sale.

Agriculture brings with it of necessity a host of innovations and requirements which are not found in pastoral communities used to purchasing food for their non-dairy needs. Indeed adoption of this mode of subsistence alongside the family herds would mean a tremendous change in patterns of work

* In the Rolads' Residence Survey we added another category, tembe, which is a flat roofed structure, usually thatched or covered with earth.

and we would assume a rather great deal of family conflict were it not for the fact that Maasai tend to hire labour to cultivate. Still, there are other kinds of work to be done for which one may not hire labor. Watching the fields close to maturation time of the crops, weeding (labour is often hired for this), harvesting, preparations for storage, and construction of storage places. Someone also has to assume the responsibility of selling the harvest, if any has been grown for sale. What these extra duties add up to is the requirement that a family re-structure its labour force and also re-arrange its finances. One means of solving the agricultural labor and expertise - problem as well as obtain assistance in constructing new style houses is to marry an agricultural wife, something has been happening for a long time in Maasailand.

We were not able to determine to what extent the process of agriculture has changed the traditional division of work, but it will form an important measure of life style change in five years, if the agricultural bias continues.

An index of participation in development for pastoral people in Tanzania would be their degree of acceptance of agriculture, especially agriculture as a means of profit. But what would be a measure of development for cultivators. We cultivators ^(as a rule) about use of fertilizers, storage, and preservation of crops. Almost none of the villages in the survey area (with possibly the exception of the "control" village, Mwandet) use fertilizers. Kiserian had a room half filled with fertilizer that had been given to the village a year before. It had not been used. They said it burnt the seedlings.

No village uses any but traditional storage methods for grain. There are two systems: tying the unhusked maize together and suspending it from trees, or cobbing it and storing it in a granary or sacks in the space above the kitchen fire, the smoke being said to decrease change of vermin infestation. A few villages in Arumeru did purchase a preservative at T.F.A in Arusha. We did not ascertain how the Maasai stored their harvested crops.

Category five of the measures of participation in development concerns consumption, which has its basis the spending of money. Where do people in the survey area get cash from? Category # 4 indicates the predominance of Profits from cultivation are only found in 10 of the villages.

Livestock trading, as we noted in the section of entrepreneurship, is a common activity for most younger Maasai these days. More stock are sold because more money is needed to buy food, clothes, hardware, services and drugs (see # 5 - Consumption Patterns). All respondents volunteered the opinion that they consumed more unga, flour, these days than ever in the past, even in the rainy season, when normally maize flour is dropped as a staple. The question to examine in future years in Maasai communities where cultivation is present is to what extent is unga home grown, and if that is the case, what are livestock being sold for primarily. It is quite possible that the introduction of cultivation to the Maasai may be analogous to opening Pandora's box, and that stock will no longer be sold to obtain basic needs, but that agriculture will provide necessary cash. Where the effort over the last 10 years has been to get Maasai to sell more stock, the introduction of an alternative source of income may stimulate a radical decline in stock sales, and once again the spectre of over-grazing will rise over the pastures of Maasailand.

Concerning consumption, on the whole Maasai respondents say that their need for non-local items has increased a great deal, although they are not being met in most of their village shops. Apart from purchased foods, which include some very untraditional items like onions, rice, cooking fat, etc., in addition to increased thirst for tea, sugar, and salt, Maasai also like to purchase colored cloth (rather than the usual white type which is dyed with red ochre), a growing number of people prefer "Swahili" attire (trousers, shirts, etc) and many areas we were told the women are relinquishing their skin shirts for cloth or dresses. Hardware consists of knives, pangas, hoes, and various kinds of household equipment. (These were not included in the summaries of "modern items" in Table, p 78).

Although purchase of livestock and human drugs and transport were not as much noted as food and clothing, discussions with shopkeepers and others in the villages would lead us to believe that a major expense comes from travel to obtain these materials or services. In each village profile we have listed the current costs of transport to Arusha or Kibaya.

Our focus on consumption has been on pastoralists in the main. What are the consumption needs of cultivators? On the whole we found that the basic "kit" of cultivators is more extensive than pastoralists. A glance at the items found in a cultivating village in Table indicates how much more they possess, even though they are said to be far less prosperous than the Maasai. A glance at the shops inventories for the same villages would indicate a basically greater variety of things to be purchased than what is found in a predominantly Maasai community duka.

To simply conclude that the Maasai are less "developed" than their cultivator neighbors is inaccurate. It is better to look more deeply for the differences. We can offer three suggestions for investigation which revolve around essentially different requirements for the two subsistence patterns: greater needs of cultivators for articles, greater isolation of pastoralists from goods, and the problems of mobility.

Cultivation carries with it requirements for a greater number of tools for preparation of fields, care of plants, harvesting storage, and especially food preparation. "Pure" pastoralism requires very little. Cultivation requires that a population remain fairly sedentary for much of the year, while the opposite is true for pastoralists, who must take their stock to water, grazing, salt and disease free areas. The nature of their travel demands that they travel without too many encumbrances. Finally, the tendency for pastoralists to occupy areas relatively far from commercial infrastructure means that they have less access to goods.

Resettlement brings about a major change. It remains in the future to see to what extent stabilization of a Maasai family will mean greater introduction of the kinds of goods found in agricultural communities.

Use of modern services and assessment of participation go hand in hand. They have been addressed partially in other sections of this report and presented in great detail in each village profile. It remains for us now to provide an overview of the situation to date in the survey area as a whole. We used some simple measures of use of modern facilities and participation: attendance frequencies from 1975 or the time of construction - contributions in money and/or labor to the construction, repair and maintenance of a facility, and Self Help projects. To give these statistics

more meaning, we tried to get opinions about use of facilities and the stimulus for contributions from villagers, their leaders, and technicians.

At the onset the most important aspect to note is how new most of these services are locally. Until the early 70s infrastructure in Maasailand was essentially in its infancy. Shops were present mostly where shops are now. There were seven schools along the area through which the Ukame road passes, originally Church "bush" schools, and about five dispensaries, a few of which were quite old. By 1979 there were 19 schools within the sphere of the roads, twice the number of medical facilities the beginnings of an MCH program, a large number of dips, two veterinary centers, and a number of new or improved water points. Thus it is important to understand that many of the residents of the survey villagers have just recently come into sustained contact locally with these services.

This is not to say that they do not have opinions about the relative value of these services, but many of them are the results of a history of use under duress or infrequent visits only in emergencies and are thus not accurate reflections on how the present facilities are to function.

Schools are somewhat different from the other modern structures in that in spite of more than 30 years of an educational presence, albeit minimal, attitudes towards schooling have not changed drastically. Residents of the survey area tend to view schools as necessary evils. As one teacher said, they look upon sending a child to school as they would in making a contribution to some remote project. They do so because they have to think supporting truancy is a criminal offense. On the other hand some individuals acknowledge eventual values of education, but when weighing it against anticipated present labour loss and possible future problems of independence from the family, they prefer to make the minimum contribution which is expected of them.

Dips, dispensaries, improved water supplies, and veterinary centres have far more popularity locally, and tend to be more actively supported than schools or communal self-help projects dealing with cultivation, etc.

Our impression was that local interest in obtaining or improving these services can be quite high, and that construction of many of the facilities was initiated by villagers, through requests to headquarters and rapid contributions of cash and sometimes labor to start building.

The self-help aspect of implanting and maintaining technical services which is now being emphasized by the Districts is assisting in gaining greater commitment of villagers to them. It is not a secret that once a facility is built, Districts are often unable to regularly support its operations. The village profiles give a number of examples of malfunctioning water systems, broken dips, lack of fuel to run pumps, inadequate monitoring of field staff, etc.

Coupled with the relatively unrealistic expectations of residents concerning what headquarters is supposed to do and able to do, delays, breakdowns of service, and frequent shortage of supplies can cause a deflation of confidence in the ability of technicians to do their work properly and a failure of respect for the service itself. A case in point is a small

dispensary in a community fairly close to Arusha. While the RMA has to carry water from a pool of dubious quality herself and continuously combat invasions of bees, and try to maintain sanitary conditions in the treatment room without supplies of fuel, residents informed us that the place had no dawa, medicine, at all, and that if they need anything but the most simple of treatment they would go to town for it. What has not been made clear to the village is that this dispensary can be of great assistance to them if they lended assistance to it.

Ingrained attitudes about treatment cause medical personnel to give up budding outreach programs in health care. "All they want is dawa, not any advice", one RMA said.

Similarly, veterinary centres are viewed by locals as places which now and then have some supplies of stock dgrus. The purpose of which such centres were created was to initiate a broad range of outreach activities in livestock care and improvement, of which the purveying of drugs was to be a small part only. Locals have not been educated as to what kinds of services these centres can perform for them. Thus they only see that which meets an immediate need.

Greater local assumption of responsibilities for maintaining these structures will be in itself an educational experience. We would anticipate that in future years residents will have a better understanding of how these can assist them, a better appreciation of the constraints which districts have in running them, and technicians will have comparably a better sense of how they can serve the communities they work in. In our simple measurements, we would expect to find higher frequency of attendance in schools, greater participation in adult education, more involvement in preventative medicine and use of medical services for early treatment of Eye diseases, venereal diseases, etc. We would expect more local control of dipping facilities, broader use of veterinary centres including stock drug buying communally.

Courts, as public service structures, tap a different set of problems or needs than do the above. Magistrates said that most small communities prefer to handle their own problems themselves. Local means of conflict resolution have now a legally crystalized identity as baraza la usuluhishi, reconciliation committees. Only those cases which cannot be successfully resolved by these groups are referred to the primary and then district courts. In some villages in the survey area we found an increase number of civil cases appearing at the primary court. What this could indicate is that in some communities the nature of local interpersonal relations is becoming more diverse and complex and perhaps involves too many local/non local conflicts that these baraza cannot cope with them successfully. Improved communications and transport means that one of the six primary courts - or magistrates - is more easily available for use than before. Appeals to the District court also become more possible with better communications. Diversification of needs, life styles, etc. will all lead to an increase of potential problems along the road and therefore a possible increased use of primary court facilities. We would expect that this situation would be aggravated in areas where an intensified commercial infrastructure is being introduced and greater number of non-residents start moving in.

To summarize this section, resettlement is a fact in the majority of villages along the road. People now belong to villages. Although some residents take stock away for seasonal grazing their households are stabilized in the village set-up. A modest change in house and residence styles is taking place in Maasailand. In Sonjo house types have already completely altered. In other areas the trend is towards mabati-roofed dwellings.

Subsistence changes are remarkable for the Maasai sections of the survey area, where small household cultivation is being initiated. It does not appear to have made any inroads into the traditional division of labour and economics of the household yet, but could have radical effects in later years. The major source of cash in Maasailand is still from livestock sales.

Increases in all sectors of consumption were found, but particularly purchased foodstuffs. Although not noted specifically by locals, transport costs absorb a greater deal of cash generated through stock sales, as people begin to travel more by wheel rather than foot. Paralleling these increases in need of cash - and the decline of the marketing system in Maasailand - is an increase in private cattle traders.

Attitudes towards modern services do not appear to have appreciably become more positive in recent years; however, there is increasing local assumption of responsibility for the management of some facilities and certainly increased contributions towards their construction and maintenance responding to government interest in greater local participation in the developmental process.

D. Ukame Roads Impact

1. As this baseline survey was done after the fact of construction of the two new roads, not before, which is the normal procedure, we included a series of questions concerning what changes the road has brought since it passed through the villages in the survey area. Specific discussions are presented in the last section of each village profile. Here we would like to look at the impact in general, present some observations of District and Regional authorities and villagers, and also one last index; frequency of travel.

In an earlier section of this report we pointed out one of the main differences between the two roads: the southern road follows generally an existing and utilized track; the northern road for most of its way cuts through areas without any track worthy of the name. In the South one would anticipate an intensification of existing traffic patterns with some re-routing, while in the North one would look for completely new road use patterns and infrastructure development. Another major factor to consider is that the southern road passes through a relatively large number of villages and commercial/administrative centres, while the northern road apart from its beginning and end, passes through no villages at all.

2. From Ukame to Regional Road. As we have seen above, when the road was planned for construction, the goal was to create an emergency link with Arusha and District headquarters in times of severe drought conditions. Thus the road was commonly called, "Drought" or Ukame road. Even before its completion, it was obvious that the southern road at least was to have greater use than the purposes for which it was built. To a lesser extent this was true in the North as well.

Now the two roads have been put under direct supervision of the Regional Engineer in Arusha. The term Drought or Ukame has become redundant and wholly inaccurate. The importance of this shift in responsibility for the road lies in its maintenance and expansion. Without repairs the roads might survive for a year or two.

In the budget for roads maintenance and development for the Region, almost 30% has been granted for the two roads, Shs. 763,943/50. The funds will be used for construction of six permanent roads camps with crews, three on each road, and for culverts. The camps are planned for Olpopong at Mfereji, Ngusero at Lake Natron, and Sale in the North; Terat, Engasumet, and Ndedo in the south. Most of the crews on the roads have been taken from staff which worked on the original construction crews.

The Region also has plans to widen the roads by six metres and construct bridges, especially at Themi and possibly Losinyai. There is also a plan to link the Oljoro road, which has just been recently repaired with the southern road at Losinyai.

3. Observed Recent Effects of the New Roads. We can summarize these in the same categories as presented in the body of this report: government operations along the road, commerce, tourism, Church work, Work satisfaction, and life style changes.

a. Government operations. In no discussions with government officials did we receive the impression that departmental operations had changed because of the road. Construction of new facilities, repair, etc appear to be based more on the needs of an area rather than the presence of an easy route. So, for example, the new health centre being constructed at Naberera was not selected for that site officially because a new road passes through the area, but because of its centrality. In the North the policy appears to be, rather than use the road as a means of establishing new communities in and around Lake Natron to resettle people near the Sale escarpment.

On the other hand the new roads has had some impact on the speed with which proposed projects become actual ones. It is doubtful that the new dispensary at Mfereji would have been so easily constructed - or constructed at all - without the presence of an easy access route from Monduli. Intensification of settlement at Komolo follows completion of the sector of the new road through the village.

Use of the road for transport is a benefit agreed upon by most all government officers. The southern road has greatly facilitated movement of goods and supplies to villages not only within the sphere of influence of the road but well outside it. Transport to Arusha and Moshi from Kibaya is easier, cheaper, and less wearing on vehicles and people. Two new tracks have been cut to meet the northern road. Elang'ata Dapash and Loineinto. An older track from Gelai is also being used to transport foodstuffs to the village on that mountain. Similarly the old track from Enganuka is getting greater use and plans are being made to improve it.

b. Commerce. A direct measure of the influence of the new southern road is the radical increase in applications for leased lands for cultivation in the Nabarera and Simanjiro areas. One application simply requested a piece of land "anywhere along the new road". Charcoal burning is slowly moving southwards as well. And sand and charcoal transporters find it easier to use the new road. In mining, however, we found no visible change.

Concerning local entrepreneurship there has been increase in applications for trading licenses from 1978 to 1979 especially in villages along the roads themselves. Transport licenses did not reveal any increase, rather a Regional decline. Similarly in most areas transport of supplies for shops has become better.

c. In Church affairs the major impact has been to revise spheres of jurisdiction to include the Natron, Mfereji area in the North. In the South, the existence of an all-weather road to Ndedo has assisted in facilitating mission work in the area from Kibaya. The "Extension Seminary" has also planned its work in the South around the new road.

d. Tourism. Hunting, climbing, camping, birdwatching safaris have increased in the northern sector, around Lake Natron. The effect of the roads on tourism and hunting at present have been modest.

e. Working conditions. With a few exceptions, the new roads have made communications and transport easier for local government staff. The following is a summary of reported frequencies of visits by 60 government staff and locals to Arusha (including Monduli and Moshi), Kibaya and Loliondo.

Frequency of Travel by Respondants in The Survey Area

Place Travelled to:	<u>Arusha</u>	<u>Kibaya</u>	<u>Loliondo</u>
Frequency			
Last month	15	10	3
In last 4 months	3	6	0
In last 6 months	4	0	0
Once in a year	4	0	0
Not this year	9	2	0
Never	4	6	4
Total	39	24	7

As the frequencies are summarized for number of times a place is visited, the totals are greater than the total numbers of informants. Of the 39 respondants who were asked about travel to Arusha, well over half said they had gone within the year. Many of them visit Arusha normally once a month. We had similar responses for Kibaya, those who travelled within the last month normally travel monthly. Note, however, the proportionally higher number of individuals who have never been to Kibaya (1/3 of the ~~total~~ respondants). In the Loliondo column those who never travelled to headquarters were workers and locals from Kakession.

Despite relatively frequent travel to Regional or District headquarters, most government staff reported local difficulties in obtaining supplies and work materials; however, this was not because of lack of local transport but because of transport and supply problems found at headquarters not-related to the road.

f. Life Style. It is very difficult at this point less than a year after the completion of the roads - to start noting alterations in the cultural and social patterns of the people living along the road. In fact it would be an exercise in frustration. We have summarized some of the changes in lifestyle over the last five years in a previous section. We feel that the changes which are forthcoming from the different indices presented there will intensify. But at this stage there is nothing substantial to report. On the other hand in the following section we present local opinions of how the road has changed some social and economic patterns.

4. Local opinions concerning the effect of the new Roads. In early village interviews we asked residents how they felt the new road had altered their style of life, usually framing it in general terms of profits and problems. For the most part answers were too general to be of much value at least on the problem side.

We then revised the format of questions to include a selection of profits and problems including a section on the roads' construction period for villagers' consideration.

a. Construction Period. For the most part villagers found the presence of the roads' crew benign. No mention was made of any interpersonal problems associated with the crew, even with our probing such topics as drunkenness, wife stealing, etc. Villagers either reported little or no socializing with the workers or cooperation to the extent of having some of them stay in the village.

Economic changes brought about by the workers was of course temporary. It was also not very great. No structure of services were established by locals: workers simply added their presence to whatever was already there. Some villagers worked on the road, but most came from agricultural communities on the southern part.

Shop and hotel keepers reported sales to workers, and two claim that small debts were left. Residents said that they did provide workers with home produced foodstuffs: milk meat, eggs, and local beer. In turn they said that the crew often gave them lifts.

On the whole this area of investigation produced minimal information of interest, just as apparently the roads' crews had a minimal and temporary impact on the villages, pattern of social life.

b. Locally Perceived Profits and Problems. Most villagers agreed that possibilities of transport was now increased, that they could get to sources of supplies, medical services, and travel for personal reasons more easily. Some villagers pointed out increase of livestock buyers and also sellers of produce (duka la wima) at local cattle markets. Many also consider some of the new government services in the village to have been a direct result of the road. Only residents of Mfereji felt that the road had up to now been of no value to them, as there are not enough vehicles passing by and those that do don't stop; however, we noted a mobile shop selling goods on the road, which is an advantage they did not have prior to 1979.

Problems of the road first were explained as matters of traffic speed and resultant deaths of livestock and in one instance a child. Other problems elicited were possible increase of theft, loiterers, and troublemakers in the villages. One case of aborted theft was reported, but on the whole, although villagers agreed that unpleasant outsiders could be penetrating their communities, they said that it had not happened yet.

A second set of questions concerned increased visitors from distant places demanding hospitality and making requests for aid. Most villagers said, again, that this could very well occur in the future, but that at present it had not. Some, however, responded quickly by assenting. "Right now, I have a house-full of visitors practically using up all my food", said one elder. Another pointed out that two female relatives had recently arrived by lorry and were requesting gifts of livestock. These cases are in the minority at present.

The third set of negative possibilities was that the roads would facilitate growth of divisive tendencies in the family— independence of children and escape of wives. Again, all agreed that this could very well occur, but it was not happening yet. However, a few cases of women running away from their husbands were reported. When asked about such a possibility another group of women replied that if they had wanted to escape their husbands in the past they could do so as easily as now. Others said the increase of transport would certainly make it easier.

In general, then we emerged with an agreement that these negative effects could come in the future, but that at present such incidences were infrequent. The new road is simply too new to have facilitated any visible or articulatable changes in the social and cultural patterns of locals along it. In five years the situation may well be quite different.

E. Appendix

1. Discussion of Research Procedure With Recommendations for Re-study.

a. Introductory. Most researchers like to obtain ideas and suggestions from their colleagues but would not want to be constrained to follow exactly the kind of research they have undertaken. In the case of this particular type of work, the nature of the research procedure chosen depended very much upon the inclinations of the writer. Others might have chosen a far more structured system of obtaining information: rather than utilizing interview schedules they would have probably preferred a questionnaire. Others might have chosen the absolute participant observer road, which, given the 5 months of field research granted for this study, would have meant perhaps 5 villages in toto studied without collection of statistics. The writer chose the middle road. There is no reason, however, that either of the other two methods could not be used, although in the case of participant observation some minimal collection of aggregate data should be done as well.

b. Instruments of research.

1. Interview Schedules

a) Types of Schedules. Part 2 of this appendix contains copies of the interview schedules used in the survey. *

There are five general types:

kata (Ward) checklist

checklist of questions for the mwenye kiti (chairman or katibu kijiji) (village secretary)

checklist of questions for government workers (watumishi wa serikali) with special questions for particular workers

questions for entrepreneurs

questions for residents

Note that we have not included questions for Regional and District officials. For the most part these interviews either were quite specific - ascertaining the existence or non-existence of certain records, departmental operations in the Ukame roads area, frequency of travel, numbers of staff present - or they were open ended, attempting to ascertain opinions about development of certain villages, etc.

* The original form was a series of 5 x 8 cards which interviewer could easily refer to without being particularly conspicuous, although the topics were supposed to be put to memory.

All five of these instruments have a great deal of overlap, approaching the same kinds of information from slightly different points of view; however, if we had to omit any of the interviews it would be on the ward level, as much of the specific information which we desired for given villages was more easily obtained from the people living there themselves. The interviews on the kata level were valuable in obtaining overall pictures of the ward and in obtaining some hints concerning intra-village relationships which were useful for later probes.

Concerning the second set of interviews, we usually attempted to interview either the chairman or the village secretary, as we believed both to be in possession of the same sort of knowledge. This was not always the case. The former tends to overemphasize the ideal picture of his village's development and usually doesn't have the specific information we desired at his fingertips. The secretary tended to deal more in realities and also had greater access to what the two research assistants called "datas". In some instances, it proved necessary to question both individuals in order to obtain a complete picture. If we failed to contact either of these two men, we then tried a member of the village council.

Questions directed at government workers in the village concerned those data which we aimed to use as indices of work satisfaction and more detailed information on the facility in which they were working.

In addition to the general interview schedule for all workers, we drew up special cards for government technicians. We include as samples, additional questions for dip attendants and medical staff.

The third set of interviews concerned entrepreneurs, who turned out to be mainly shopkeepers, although a few transporters and charcoal dealers were interviewed.

The last category of interviews involved the resident himself. We normally aimed at interviewing one person at a time, but occasionally we were unable to curb the enthusiasm of the person interviewed and he collected a substantial number of cohorts who listened mostly, but sometimes offered information. Even if a group was not called together to participate, one usually gathered spontaneously, unless we chose a special place or the evening to do the work.

Opinions vary as to the benefits and disadvantages of the group interview. On the positive side, it is considered good because individuals can correct one another and generally more accurate data are obtained. On the negative side peer pressure may make an individual less willing to answer personal or mildly sensitive questions. We found group interviews less useful than discussions with the individual; however, where a group gathered we attempted to bring in opinions other than those of the person being interviewed.

Resicent - mwenyeji - was usually defined as a male head of household, but occasionally the person could be a youth-warrior, a woman, a government worker, or a pastor. We have included special questions for women and pastors in Part 2. The following is a summary of persons interviewed during the course of the study:

<u>Summary of Persons Interviewed in the Study</u>		
	North Road	South Road
Regional/District Officials	21	40
Tarafa Officials	1	0
Katibu Kata	2	5
Mratibu Kata	1	3
Village Chairman	3	11
Village Secretary	3	9
Village Council	0	3+
Teachers	6+	14
Medics	5	10
Magistrates	1	3
Livestock Staff	3	7
Water Staff	1	0
Sheps/Transport/Commercial	7	22
Residents	8	36+
Church	2	4
Other	2	17 (Tourism Survey) +8
Total	65	192
Combined Total	===== 257	

(The "+" after a number indicates that some of these interviewed were in groups, whose number kept changing.)

b) Four Simple Measures of Development. Although the interview schedules were designed to collect a variety of data, those concerned with residents and mwenye kiti contained four easily obtainable indices of development:

- catalogue of infrastructure in the village
- numbers and kind of local fundi (craftsmen/experts)
- estimates of variety and numbers of "modern" implements found in villages
- estimates of frequency of travel

The first three are found in the Part 2 of the Appendix. The fourth is found in Section D, "Ukame Roads' Impact", page 4/ .

A few words of caution. Fundi were defined originally as individuals with contemporary expertise: modern house building, man repair of utensils, tailoring, etc. But as we conducted interviews, especially in areas where there were few "modern" fundi, we began to find more mention of the traditional types: beer brewers, midwives, smiths, etc. In the impact study it would be valuable to include a more complete list of these important but less visible local experts than we did in our interview schedules.

Second, in their replies to questions concerning modern items, many Maasai respondents included modern kitchen and eating utensils. These consisted primarily of such things as cups, bowls, cooking pots, etc. As these were found in almost every village catalogue of modern items, we excluded them from mention in the tables, although sometimes they are found in the village profiles. In a re-study it would be valuable to ascertain first what specific sorts of cooking and eating utensils are contemporarily found in Maasai homes, and then include those which are not of the simple sort given here in the list. An example would be a kerosene or charcoal stove.

Although it may appear repetitive, asking a resident what sorts of modern items are found in his residence is not. We used these responses to confirm in general the broader ones of the village leaders. Our original intention, however, was to assess the variation of presence of these articles as well, but the interviewees were seldom able to obtain a sufficient set of responses to warrant the exercise.

We also discovered that the term "mikokoteni" has more than the meaning which we assumed it had - ox-cart. The term also refers to wheelbarrows and travois.

Obtaining numbers of fundi and modern items in some categories proved to be difficult. In many cases of the former we noted them as being present ("p"). In the latter case we noted presence and percent. In a re-study perhaps an assessment of presence only would be sufficient for fundi and percent - if respondents are able - or a structured set of categories such as "almost everyone, many, about half of the houses, few, none", be devised.

2. Structured Interviews: The Tourism Survey. In Part C.3. we discuss results of the tourism survey in some detail. The form used can be found in Section 2 below. We simply made a list of all the touring companies in Arusha and interviewed them one by one. On the whole we had excellent cooperation. As the focus of the survey was to discover to what extent the Ukame routes were being used now and in the past, there was not much information to proffer. Most of the groups had not used the roads to any great extent.

We had assumed that as tour companies, they would have organized touring programs, but with regards to the new roads the groups operated more as chauffeur car rental agencies. Item #7 in the questionnaire - dealing with per kilometer cost for safaris - did not prove to be of any value and should not be included in re-study.

We highly recommend a future re-survey of this sort using Arusha agencies. It would not be necessary to interview all the companies, but perhaps a purposive sample of new/old, large/small company, hunting/camping, etc.

3. Structured Observation

a) The Roads Residence Survey. The following two tables contain the results of a very simple survey of infrastructure development along the road. It can be done with one enumerator if necessary counting structures on one side of the road in one direction and then counting the other on the return trip.

A mimeographed form was used for each stretch of the road - normally we chose either an easily recognized landmark (water tank, school, etc.) or a village boundary. A copy of the form can be found in Part 2.

The enumerator then noted all types of buildings within easy sight (200 feet) of his side of the road and entered them on the sheet in the following

categories: msonge - normally conical roofed thached houses of the Warusha type, but also rectangular gabled roofed thached houses
tembe - flat roofed houses with unusually dirt covered tops
enkaji - the traditional Maasai rounded dung plastered dwelling
mixed - any structure of mixed building materials, such as a msonge house with a mabati (tin) roof
mabati - a tin roofed house
mabati & cement - tin roofed with cement or concrete block walls
shop - no distinction was made as to what sort of structure the shop was in
other - any other type of structure not included in the above list

Each line was to indicate a residence unit, boma in common parlance, which in most areas along the Ukame roads was a fenced enclosure with a number of dwellings inside. Then the notations of structure on the line itself would indicate what variations of dwellings were found in the unit.

Enumerators also noted down tracks, junctions, etc. where appropriate.

The following two tables summarize the data collected in these surveys divided into northern and southern roads. In the first column we have the distance units described. The second column contains an approximation of numbers of miles between points. This is followed by the numbers of each structure found in the distance unit noted as being either on the left or right hand side of the road. Totals are given in the final columns. A plus sign "+" next to a number indicates that the actual number of houses in the boma is larger but could not be seen properly.

We strongly suggest that a similar residence survey be conducted at the time of the impact study to measure the degree to which house styles have changed, especially increase of mabati roofs, the visible presence of shops and other structures also along the road, and the overall increase of construction.

b) Inventory of Goods in Shops. Our aim was to inventory at least one shop in every village. In most cases our powers of recall were not taxed, as the kinds of goods found were usually so few as to be almost unworthy of the name - inventory; however, there were a few shops whose stock was extensive enough to require noting goods shelf by shelf. Such shops were very few anywhere on either the South or North roads. The inventories for shops are presented in the village profiles.

These, in our opinions, would also be good measures of the kinds of changes occurring in receipt of supplies and increases in the variety of consumption needs.

4. Reports, Records, Permits and Licenses. In Section C most of these statistics are presented in aggregate form. It remains here now to discuss the relative fruitfulness of collecting them in a re-study.

a) Village Level Data. Although many of the following are obtainable in a village which has the facility present, some are included here because they can be separated by village.

- Party Membership
- Court Attendance
- School Attendance
- Dispensary Attendance
- Trading Licenses
- Veterinary Drugs Issues

Court Attendance, Trading Licenses, and Veterinary Drugs Issues, directly tap the frequency of transport along the road. We have already noted that increases of court cases from villages away from the court center constitutes a twofold change; inability of the local system to solve some sorts of inter-personal problems and easier access to alternative means of doing so. Increase of trading licenses of course indicates greater consumption demands locally, but also the establishment of a better system of supplying goods. Wina, mobile licenses, are directly related to use of transport, thus their increase would be an index of increased availability or presence of transport facilities. Veterinary drugs issue registers are located at District headquarters. Issues of drugs sometimes contain information as to whether the issue was to a government technician or a private person and the place where the person comes from. An increase of private issues of livestock drugs would of course be a measure of increased accessibility of the facility. The problem with collecting this information is that entries are not always consistent from District to District, and often we had to obtain the assistance of a veterinary officer acquainted with field personnel to inform us where the drugs were issued to and to whom. For this reason, we would suggest that a modest impact study omit collecting these data and rather question the dip attendant or veterinary assistant in a village facility as to estimate frequencies of private issues of drugs.

In all the courts but one in the survey we were able to obtain the necessary information to locate villages of litigants. The process of copying down the information is laborious, but worth the effort.

Trading licenses are issued from District headquarters. Over the five year period we found some inconsistency in the source of the license application. Sometimes it is a specific village, other times it is the kata. If these are to be used, perhaps it would be better first to check which system is current. If it is the kata, then the resultant data would not be helpful for ascertaining trends in entrepreneurship in specific villages but certainly would be valuable for examining more general developments.

Party Membership records were easily obtained. The only disadvantage was that they were not divided into year of issue. If it is possible to collect dates of first membership from District CCM headquarters, then the exercise would be well worth while, as we have few indices of political development in the survey. Membership totals should be available also from the village secretaries but these wouldn't be by year either. Another index of political development/^{would be increase in numbers of auxiliaries} to the Party and, of course, voting in elections.

School attendance records and medical reports can be obtained from the Districts. Our original aim in obtaining attendance records was based on the assumption that the roads would make it easier for children to go to school as well as for authorities to increase surveillance over truancy. The latter certainly would be true, but for the most part school children in the survey area are unaffected by the presence of the road easing their travel to school. Interviews with teachers did not produce accurate estimates of increase or decrease of attendance. Although we have used school attendance as an important measure of participation and use of modern facilities in the village profiles, if time is short for the survey we would recommend omitting it from the sample unless yearly records are easily available from the districts. They were not always available at the time of our survey.

Medical reports we found to be of potential broad use in assessing development and specifically influences of any improved communication and transport system. We have used two measures: attendance frequencies and frequencies of dominant diseases.

Attendance is a reflection of degree of acceptance of a modern institution, but we felt a more intensive look at outreach efforts increased headquarters' support and monitoring would assist in assessing the variations in dispensary attendance. MCH attendance is also a valuable statistic to follow from year to year, as it is just starting in most of the villages in the survey area, and much of its penetration into local lifeways depends on headquarters support (in some areas a mobile unit) and an outreach program.

The second aspect, dominant disease frequency, could easily be an indicator of both positive and negative aspects of development in general and improved transport in particular. We are hoping that the possibilities of outbreaks of infectious diseases could increase with both ease of long ~~distance travel and increased frequency of travellers~~

distance travel and increased frequency of travellers.

Frankly, a more successful analysis of the meaning of variations in frequency of diseases requires an expert in public health. In our analysis we were kindly assisted by Dr. Martha Collins of the Babati Health Project in obtaining a general background of the dynamics of disease and populations. It would be helpful to obtain similar assistance before the onset of the re-study, rather than after.

b) District and Regional Records. As one goes higher the information one collects becomes more and more general. For this reason we tended to concentrate on lower levels for records; however, the following were collected:

- Mining Permits
- Forest Royalties
- Transport Licenses
- Hunting Permits
- Land Leases
- VIC Diagnosis Register

Mining permits are issued at Moshi. There is a register which is relatively easy to copy from, although the staff there prefer that they consult the register. The results of our efforts indicated very little legal mining in the survey area. It would be valuable to discover to what extent mining has been revived as a result of the new roads in future years.

We have already discussed the problems with using Forest Royalties figures in the Region's annual reports - the data was also difficult to obtain. If at all possible, it would be more efficient to collect the information from the Districts and villages records of taxation on charcoal carries.

Commercial transport licenses were easily obtainable from the regional offices, but were rather disappointing for analysis. For the most part, licenses are granted for the Region as a whole and thus are not easily used for indicating commercial operations on the Ukame roads. We advise a "traffic survey" as the best means of obtaining information.

Hunting Permits indicate specific use of the roads. They are easily obtainable from the Districts and in a re-study should be obtained again.

Land Leases. One of the major inputs into southern Maasailand will be the "land rush" which the new road has opened. We were unable to talk with any of the farmers directly concerned with the Naberera operation in any detail. We recommend in addition to collecting applications for land leases (and noting how many were not granted or renewed), making interviews with some of the managers of the new shambas part of the re-study.

Examination of the VIC Diagnosis Register did not reveal any increasing frequency of use of VIC's services over the last 5 years by residents of the survey area, but in the future it might.

c) Other records not collected in this survey. Two are strongly recommended: amount of crops bought by NMC from buying posts in the survey area along with interviews of buying post staff to ascertain from what distance farmers come to use their facility; and records of livestock sales in newly re-opened markets. A third source of information could come from the Arusha dip testing center.

d) A note on collection of records and access to files. For the most part all persons we contacted for assistance in obtaining reports were very helpful; however, free access to some departmental files can be frowned upon. In one District where it was considered improper for strangers to be consulting government files, we arranged for the data to be collected by departments themselves. The result was unsatisfactory. Even though we gave specific instructions as to what kind of information we desired, sometimes a department chose not to include everything requested or neglected to include a village. In our case, there was no time to return to the District to request that the missing data be supplied, so we had to work with incomplete information. It would be important at the onset to ascertain what the feelings of District officials might be before attempting to gain access to reports and files, and if they prefer departments to provide the data, than plan on a longer period before the work in that District is completed.

c. Proposed Re-Study Timetable. We are assuming that a future re-study, the "real" impact survey will be even more modest in funding than the present baseline study. Thus, we propose two alternatives:

a yearly collection of statistical data relating to a sample of villages on the northern and southern road with an intensive field investigation at the end of 3 years.

OR waiting for the end of the 3 year period to collect statistical information from 1980 for sample villages and carry out a field investigation as well.

We favor the first method for the following reasons:

annual collection of statistical data would not be a particularly time-consuming task

departments concerned could be persuaded to ensure that the material needed would be readily available, and by doing it consistently year after year it would make the task routine, and possibly the data could be included as addenda to each department's annual report.

data could be analyzed each year and predictions for the next made, so that when the field session takes place, a more penetrating set of questions could be devised.

Yearly collection of data could include the following:

- Trading license applications (if associated with villages)
- Hunting permits
- School Attendance
- Dispensary / MCH attendance
- Increase of Government infrastructure
- Shops inventory (could be done en route to the District headquarters)
- Roads' Residence Survey (also possible en route)
- Court Cases
- Land Leases
- Buying Post Purchases
- Cattle Sales through TCMC
- Dip Testing by the sample village

At the end of the 3 year period the re-study could focus on an intensive field investigation of the villages selected as the sample - and the two control villages, utilizing the same or an up-dated version of the interview schedules which we employed in the baseline study. In addition the Tourism Survey be replicated and the following data collected for the 3 year period: CCM Membership and auxiliaries.

Transport Lic-ences.

Mining Claims.

Forest Royalties or some other measure of Charcoal Production.

VIC Diagnosis Register.

2. Research Instruments and Tables.

We include in this section copies of interview schedules, the Tourism Survey Questionnaire, the Residence Survey Form and Tables summarizing infrastructure, local experts, and modern activities found in villages in the survey area.

a. Interview Schedules.

1. Kata Checklist ; this information is to be obtained from the Katibu Kata or one of his representatives on the kata level.

- a. General information: history of kata formation
location of boundaries
of villages and population
ethnic composition
- b. Infrastructure and staffing: obtain the following information on the kinds of services listed below:
dates of construction
repair/ additions history
source of funding
changes in frequency of use for
- health: dispensary/ clinic, mission. government operated
education: primary school/ adult education
court: conflicts and settlement changes
veterinary: dips. vet centers ... note any problems
kilimo: staffing, use of fertilizers. supply problems, sale of crops
water inputs: nature of supply
buying posts:
game
other:
- note also opinions concerning alternatives to these facilities:
Loibeni
Mtembezi dawa
local midwives
other local preferences
- c. Commercial: presence of:
agri-business
entrepreneurship
outmigration for work
hired labor internally
mining
Charcoal
sand and gravel
sheps
cattle markets- and private sales
- d. roads' construction:
when section completed
numbers of locals who worked on the road
contacts between crew and kata officials
location of camps
assessment of problems between crew and locals
local entrepreneurship during construction period
- e. Communication links:
roads system pre- road construction
present changes after completion of the new road
past and present costs of transport
type of transport available
any new feeder roads or tracks
development of other communications:
post office
calling people to meetings
- f. Participation:
frequency of attendance at meetings (get records if possible)
local self-help contributions (get records)

types of self-help projects
assessment of interest in services
Party membership (records)
last meeting: purpose of meeting
 numbers attending
 how called (informed)
comparison of villages in kata

- g. Lifestyle changes:
 - changes in subsistence
 - consumption of goods
 - frequency of outside travel
 - uses of income
 - inter-group conflicts
- h. Local Experts (use list in mwenye kiti schedule)
- i. Other development inputs: mission, intermediate technology, etc.
- j. frequency of visits to and from district headquarters:
 - transport
 - mode of travel
- k. assessment of government staff's job satisfaction and relationship with locals
- l. population dynamics:
 - in-out migration
 - decrease or increase of population
 - home area of emigrants
 - how much land left for settlement in the kata

2. Village Chairman (Mwenye kiti) Checklist: (or the katibu kijiji or a balozi)

- a. Personal information:
- name
 - approximate age
 - length of residence in village
 - where he lived before
 - reasons for moving to village
 - education: where educated
 - to what level
 - adult education
 - offices held: laigwanani (age group spokesman)
 - committees
 - work: any craft specialty
 - business
 - tribe
- b. Village History:
- population of the area when he came and now: (by vitongoji if possible)
 - boma
 - family
 - people
 - number of tribes present/ approximate percent
 - migration:
 - how much emigration
 - reasons: for grazing / does entire family move
 - permanent (what are the reasons)
 - immigration: where people come from
 - permanent/ seasonal
 - number of members of the village council/ same people as in former village government (enkiguana)
 - list infrastructure present when the mwenye kiti first moved into the village
- c. Local experts (wafundi): ass/the following for those listed below:
- number
 - how long they have been in village
 - where do people go to seek expertise
 - from non-resident wafundi
- tinsmiths
 - carpenters
 - house builders
 - tailors
 - mechanics: bicycles
 - vehicles
 - bakers/ cooks
 - water experts
 - traditional doctors and midwives
 - charcoal burners
 - wood cutters
 - beer brewers
 - cattle traders
 - drug salesmen
 - hunters
 - miners
 - seasonal/ temporary workers
 - transporters
 - water carriers
 - Other:

d. Infrastructure: discover the following for the facilities listed below:

when built/ by who
repair/ addition history
breakdown frequency
other problems
staffing problems
number

school
water supply
dispensary/ clinic
dip
veterinary center
butchery
buying post
post office
cattle market
CCM office
Church
shops: private
village coops
hoteli/ mgahawa
grinding machine
game post

Other:

(Note: it is important to try to find out from the informant his opinion as to how well-liked the particular facility is in the village and what problems concerning it have come to his attention)

e. Village Development Profile:

list self-help village projects
how willing are villagers to contribute to projects
number of CCM members
activities of UWT, TAPA, Umeja wa Vijana.

adult education: popular/ unpopular in the village
number of classes
does informant participate

communication: presence of reading material in the village
if a letter needs to be written, who writes it
and how is it sent.
use of other means of communication

baraza la usuluishi (reconciliation committee):
number of cases heard this month
type of cases
increase over the last year?
change in types of cases?
numbers of referrals to magistrate
opinions about conflict:
within the village
between villagers and outsiders
independence of women and children
to what extent are family problems still solved
within the bema structure

f. Mahitaji ya lazima (personal needs):

nowadays what to people in the village want to spend money on
are people beginning to sell livestock more regularly:
where sold
reasons for sale
did the informant sell an animal last month?
what price did he receive
where did he sell it

food consumption: are people eating more or less:

unga
beans and other legumes
mboga- greens
other store bought foods
pombe, etc.

attendance at meetings:

do members come willingly or are they
fined for truancy

(note: try to get records of village meetings, and if present
collect attendance
topics discussed)

g. Road Construction Period:

when did the completed road reach the village
where was the road camp
how many villagers worked on the road
did they work all the way to the end of the road
problems with road crew: drinking, fighting, women, theft
frequency of contacts between informant and the crew chief
what kinds of local business was started during road construction

h. Profits from the Road:

travel before the road was constructed
which tracks used to get to Arusha or district headquarters
type of transport/ cost then and now
do villagers travel more by foot or vehicle these days than before
road was completed
visiting: how many visitors did the informant have last month
where they came from
use of transport/ feet to get to the village
are village visitors increasing/ decreasing
travel: when a celebration took place:
how far did people come from to attend- before and
after road construction
does informant travel more often after road completion
travel last month to: Arusha/ Moshi
District headquarters
Other

i. Problems brought by the Road: Suggest the following possibilities:

more people coming to ask for gifts of livestock, borrow money, etc.
more immigration and land or water is scarce
more government officials coming to request village contributions
easier for women and warriors to travel away from home and neglect
their domestic duties or get into other kinds of trouble

j. Agriculture.

how many villagers cultivate (especially Maasai)
types of crops planted this year
approximate acreage per family
when did cultivation begin in the village
reasons for cultivation
harvest for home use or sale: (if for sale, where are crops sold
cost of transport
difficulty of obtaining
transport)

means of cultivation: plow, tractor, hand
costs of hiring
use of seasonal, temporary workers
prices charged for labor

did informant cultivate last year:
acreage
means of cultivation
labor use
opinion of harvest
how much sold and where

use of fertilizer, insecticides
means of storing harvest

k. Presence of "Modern" Items (Vifaa) (the aim here is to find out how many modern items people possess in the village):

carts (mikokoteni)
landrovers
tractors
lorries
buses
motorcycles
bicycles
other agricultural equipment
spray guns
kerosene lamps/ kibatari
radio- cassettes
guns
syringes
other livestock equipment
new types of household items
clothes: traditional
"Swahili"

houses: (of people not government)
number of mabati roofed houses
number of cement houses
other new house types or changes in traditional style
who builds the new houses
why are new styles being built
approximate costs of construction
how many latrines
other changes in house and settlement

3. Questions for Government Workers

a. Personal:

name
sex
approximate age
when he started working in the village
former place of employment
location of wife and children (if married)
(if not present, when does he plan to bring them)

(if they will not come, try to find out why:
other work of wife
education problems
housing problems here
food supplies here
local diseases
other)

b. Personal Supplies (mahitaji ya lazima):

source of food and personal supplies
how often does he experience shortages
kinds of shortages before and after road completion
comparison of village with last place of work:

availability of supplies
housing
personal transport- costs
receiving and sending messages

c. Departmental Support:

frequency of visitors from hdq/ more now than before road was completed
salary arrangements: how frequency are delays if salary is brought to him.
supplies: regular, infrequent, never (important to find out about food for boarding school and medical and dip supplies)
business travel: how many times in the last month did informant travel to:
Arusha/ Moshi
District headquarters
Other
how many meetings, seminars has informant attended recently;;
means of transport
any changes in departmental support since road was completed

d. Description of the establishment:

inventory of buildings or structure
construction history
repairs history (and additions):
source of materials
source of workmen
source of money

(Note: you assess what condition the structure is in)

e. Work Satisfaction:

do most people consider this place a difficult one to work in
are other government workers happy/ unhappy with their living and working conditions
have these conditions improved since the road was built
(if so, get particulars)
would informant accept a re-posting if offered one

describe his work and if any changes in it have occurred since the road was constructed

4. Special questions for Veterinary staff
Dispensary

Veterinary workers:

1. assess effect of new road on: stock routes
cattle markets
private cattle sales
other movement of stock
increase of diseases
2. from how far do stock come to use this facility
has the distance changed since road was built
3. dip testing: where are samples taken
how frequently
when last was a sample taken from this dip
4. presence of improved stock in the village
5. types of stock diseases in the area.

Dispensary:

1. kinds of diseases found commonly in the area
2. what kinds of disease do locals come to be treated for
what kinds do they prefer to treat at home or with tra-
ditional doctors
3. assess interest in pre-natal care
4. what is the referral procedure
has the new road caused any changes in this system
5. increase of infectious diseases recently
any epidemics

5. Questions for Entrepreneurs

- a. Personal: (use mwenye kiti checklist)
- b. History of the shop or business:
when first established
who was original owner
is informant the owner or an employee
does the owner have other businesses:
where are they located
- c. Supplies: where do supplies come from
how frequently do they arrive
are they delivered or does the informant go to collect them
cost of transport
changes in kinds of supplies villagers ask for
- (note: this part mostly pertains to shops and restaurants)
- d. Use of the New Road:
differences in transport costs before/ after road completed
in last month, how often informant traveled to:
Moshi/Arusha
District headquarters
Other
means of transport used
opinions as to effect of road on his business:
more supplies
more regularity in stocking
more people buying
competition increase
roads' construction:
workers buy from shop
any problems
from how far do people come now for supplies:
is it a shorter or longer distance than before the
road was constructed
- e. Development in the village:
increase in personal needs:
list the items
increase of consumption of:
maize flour (even in rainy season)
other foods
community problems:
increase of thieves
non-payment of bills
troublemakers

6. Checklist of Questions for Resident.

a. Personal (see appropriate section on village chairman list)
(in addition ask):

1. boma information (better to ask these if sensitive in the middle or close of the interview):
 - number of gates
 - number of families, wives and children
 - number of boys/ girls in school (or educated)
 - relationships of heads of families:
 - brothers
 - sons
 - age mates
 - clansmen
 - olaputani - in laws
2. description of the boma structure:
 - number of houses
 - house types
 - modern items (use checklist for chairman, "k")
3. grazing patterns:
 - wet and dry season
 - has villagization introduced any changes
4. personal appearance: describe the way in which the informant is dressed noting presence of watches, modern clothes, shoes, etc.

b. Mahitaji ya Lazima (use same checklist section for mwenye kiti)

c. Agriculture (use same checklist section for mwenye kiti)

d. Livestock: changes in sale of livestock:

- where does informant sell stock these days
- are there more/ less buyers
- when did he last sell an animal:
 - price received
- where does he normally buy livestock

opinions about veterinary services:

- how frequently does he have recourse to use of dip. veterinary center, how cooperative is the staff, how adequate the supplies

e. Development:

what self-help projects has he contributed to recently
is he an adult education student- what use does he make- if any- of knowledge of reading and writing
if he needs to get a message to a distant place, how does he do it now- any difference from the past
anyone from his family working outside the village on wage labor
any hired labor in the boma
what is his opinion of the effect of sending children to school on his daily arrangements for herding and other domestic work

f. Travel and Transport: (many of these questions are found in the checklist of "Roads" items in the interview schedule for the mwenye kiti)

description of existing tracks when the informant first came to the area
(emphasize which means he used to get to Arusha/noshi
Kibaya
Other distant places)

frequency of travel to these places before the road was completed
frequency of travel now (ask how many times in the past month he went to the above places... and if others are present ask them too)

transport costs before and after road construction
type of transport used before and after road construction

frequency of boma visitors:

increase after road completed
how many visitors from a distance came last month
what means of transport did they use

does informant tend to travel more to visit relatives, friends or
on personal business

g. Road Construction Period:

did he or anyone from his boma work on the road
did he or family sell goods to workers
any conflicts with the crew

h. New Roads' Problems: (Suggest the following possibilities to the informant)

Sometimes a new road will bring new problems to people. The ones I listed
below happened to people in other places. Have they happened in this
village yet or to the informant himself?

1. increase of thieves- cattle and otherwise
2. increase of immigration of outsiders coming in and competing for
land and water (note: at Aberera ask specifically about the
Rotian leased shamba)
3. more transport means that people, especially young people, can get to
the city easily. Sometimes this causes:
 - loss of Maasai ways
 - greater desire for new things so that they either want to
sell more stock or steal to get money
 - they can escape parental control and go against parents'
wishes
 - they can move away completely and leave their families
 - women start wanting more goods and start asking for more
money (if true, what sorts of things do they want)
 - women can run away from their husbands more easily
4. relatives, friends, inlaws, etc. can now come to the boma more easily
to ask for assistance:
 - gifts of livestock
 - contributions to celebrations
 - borrow money
 - other
5. government officers can also come more easily for:
 - self-help contributions
 - enforce schooling rules
 - make changes in villagization
 - other

i. New Roads' Profits:

travel to distant places is now easier:
illness- anyone recently taken to major hospital recently from
the boma- would they have gone before the road was completed

travel to headquarters to purchase livestock drugs

shopping: has there been any change in shopping patterns by
his family

other travel:

marriage arrangements
visiting relatives and friends
collecting debts
requesting assistance
helping someone with a difficulty
attending a celebration

distributing stock at a greater distance- more stock
associates
easier to travel to check up on distributed stock

8. Additional Questions for Residents: Women and Evangelists

Women:

Effect of the new road on:
getting water
getting firewood
shopping
travel outside the village
people coming to visit
treatment of illness

Development:

skin skirts on the decline?
changes in personal needs and needs of
family
opinions about supplies in the shops
opinions about goods at the cattle market
effects of schools on the family labor
force
effects of villagization on them
assess extent of participation in:
village meetings
village committees
baraza la usuluishi

Entrepreneurship:

does informant have any business in sale
of home produced goods
does she sell things at the cattle markets
did she sell things to the road's crew

Evangelist:

Numbers of Christians

Transport:

any available to him
outline his "parish work"
increase of visitors from Arusha, headquarters,
other evangelists
increase of church attendance:
does congregation come on foot or by vehicle
from how far do they come now

Evangelization:

any changes in his work since the road was built
presence of "parish worker"-
what sort of work is she engaged in

Development:

ascertain his opinions about the state of devel-
opment of the people in his village, compared with
his former place of work

b. Tourism Survey Questionnaire

UKAME ROADS STUDY- Tourism Survey

Interviewer.....

Date.....

- 1. Name of Company.....
- 2. Address.....
- 3. Date office opened.....
- 4. Name & Title of person interviewed.....
.....
- 5. list touring programs using the drought roads:
 - a. route description b. type of safari c. date started d. frequency

- 6. tours in the survey area before 1978:
 - a. route description b. type of safari c. year d. frequency

7.

has the completion of the roads affected pricing per kilometer for these safaris:

cost:	1975	1977	1979
	1976	1978	

8. Plans for future safari programs: list below

- 9. list numbers of safaris booked from October to present in survey area:
 - a. route description b. type of safari c. passengers

d. Modern Articles in South Road Survey Area

	Kiserian	Kigongoni	Ojere	Lesinyai	Kemele	Terat	Leswaki	Sukur	Naberera	Namalulu	Engasumet	Ndede	Mg'abele	Leibersirret	Mwandet	Totals
Buses	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3
Lorrys	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	4
Landrovers	4	1	0	1	0	2	4	0	1	0	1	0	0	2	?	16
Tractors	4	1	0	1	0	2	3	0	0	0	0	0	0	0	?	11
Carts	6	0	0	0	0	0	0	0	0	0	2	0	0	0	P	9+
Ox plows	100%	6	22	2%	0	1	26	0	0	0	2	0	0	0	P	
Keresene hamps	P	F	P	0	2	?	?	1	P	P	0	0	0	?	P	9+
Kibatari	80%	?	?	80%	90%	?	100%	50%	P	P	P	P	P	P	P	
Bicycles	80%	20%	20%	80%	50%	?	?	50%	1	2	0	4	0	0	?	P
Radios	80%	P	P	1	90%	6	90%	5	P	2	2	P	3	?	P	
Motorcycles	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Guns	?	1	0	?	?	?	?	?	?	2	?	?	?	2	30%	?
Spray Machines	P	0	0	0	0	P	7	10	0	0	0	0	0	?	P	
Syringes	?	?	?	P	?	P	P	P	P	P	P	P	P	P	?	10+
Terches	(----- - all 100%-----)										P	P	P	P	P	P

(F = present but number not ascertained)
 (? = not ascertained)
 (% = estimate of percent of villagers possessing one)

C. Modern Articles in the North Road Survey Area

	Menduli Juu	Mfereji	Engaruka	Sala	Sawunge	Maleni	Wasse	Kakesie	Total
Buses	0	0	0	0	0	0	0	0	0
Lorrys	0	0	1	0	0	0	0	1	2
Landrovers	0	0	1	0	1	0	0	1	3
Tractors	0	0	?	0	0	0	0	0	0
Carts	4	0	?	0	0	0	0	0	4
Ox plows	?	3+	90%	4	0	0	0	0	
Kerosene lamps	0	0	?	P	60%	0	0	0	
Kibatari	P	P	P	P	P	P	P	P	8+
Bicycles	1	0	?	0	1	0	0	1	3
Radies	6	0	?	P	50%	0	P	0	
metercycles	1	0	?	0	0	0	0	0	1
Guns	?	?	?	?	P	2	?	4	
Spray machines	3	0	0	0	P	1	?	2	
Syringes	90%	90%	90%	0	P	P	?	90%	
Torches	P	100%	100%	100%	50%	P	?	75%	

(P = present but number not ascertained)

(? = not ascertained)

(% = estimate of percent of villagers having item)

-72-
C. Infrastructure in the South Road Survey Area

	Kiserian	Kigongoni	Oljoro	Deshiyai	Kesole	Terat	Lesvaki	Sukuro	Naberera	Namalulu	Engasumet	Nede	Ng'abelo	Leibersiret	Mwandet	Totals
School	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	14
Dispensary	1	0	0	0	0	1	0	0	1	1	1	1	0	1	1	8
MCH Clinic	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	3
Court	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
CCM Office	0	1	1	0	1	0	1	0	1	0	1	0	0	?	0	5
Church	1	0	1	0	2	1	1	0	1	1	1	0	0	0	0	9
Mosque	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
Vet Center	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
Dip	1	0	1	0	0	1	0	1	1	1	1	1	0	1	?	9
River	0	1	0	1	0	1	1	0	0	0	0	0	0	1	0	5
Spring	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
Dam	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	3
Borehole	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3
Pipeline	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	3
Water Pump	0	0	0	0	0	1	0	0	1	1	1	1	0	0	0	5
Wells	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	5
Shops	1	1	1	2	5	2	2	2	3	2	3	2	1	1	0	28
Game Post	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2
Cattle Market	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
Buying Post	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
Mining	0	0	0	0	?	0	0	0	5	?	?	0	0	0	0	5
Leased Shamba	0	0	0	0	0	0	1	0	1+	0	0	0	0	0	0	2+
Post Office	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
Milk Collect Cent.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kilabu	0	0	1	2	0	0	0	0	0	0	1	0	0	0	0	4
Hotel/ Igahawa	0	0	0	1	2	1	0	0	1	0	2	0	0	0	0	7
Grinding Machine	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Off license Bar	0	0	1	0	1	3	0	1	2	0	1	0	0	0	0	9
Butcher	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	3
Police Post	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TAPA	0	0	?	0	0	P	0	?	P	P	0	P	0	0	?	4
UNT	0	0	0	0	?	P	0	?	P	P	?	P	0	0	?	4
UWV	0	0	P	0	P	0	0	P	P	0	P	0	0	0	?	5
Village Shamba	0	0	P	P	0	P	0	?	P	0	0	0	0	0	P	4
Adult Education	P	P	P	P	0	P	0	0	0	P	0	P	0	0	P	8

(P= present but number not ascertained)
(?= not ascertained)

C. Infrastructure in the North Road Survey Villages

	Mwendu Mereji Mendu Juu	Engaruka	Sale	Samunge	Maleni	Masse	Kakesio	Totals
School	2	1	2	1	0	0	2	9
Dispensary	1	1	1	0	0	0	1	5
MCH Clinic	1	0	0	0	0	0	1	2
Court	1	0	0	0	0	0	0	0
CCM Office	1	0	1	0	1/2	0	1	3 (1 under construction)
Church	1	0	1	1	1	0	1	5
Mosque	0	0	0	0	0	0	0	0
Vet Center	0	0	0	0	1	0	1	2
Dip	2	1	1	1	1	0	1	8
River	0	0	1	0	1	0	1	4
Spring	1	1	1	1	0	7	1	5
Dam	1	0	0	0	0	0	1	2
Berehele	0	0	0	0	0	0	0	0
Pipeline	1	1	0	0	0	0	0	2
Water Pump	0	0	0	0	0	0	1	1
Wells	1	0	0	0	0	0	0	1
Shops	1	0	14	1	3	2	6	31
Game Post	0	0	?	0	0	0	1	1
Cattle Market	0	0	0	0	0	0	1	1
Buying Post	0	0	0	0	0	0	0	0
Mining	?	0	0	0	0	0	0	0
Leased Shamba	0	0	0	0	0	0	0	0
Post Office	0	0	0	0	0	0	0	0
Milk Collect Cent.	1	0	0	0	0	0	0	1
Kilabu	0	0	0	?	0	0	1	1
Hotel/ Mgahawa	0	0	1	0	0	0	0	1
Grinding Machine	0	0	0	0	0	0	1	1
Off License Bar	0	0	1	0	0	0	0	1
Butcher	0	0	?	?	1	0	?	1
Police Post	0	0	1	0	1	0	0	2
TAPA	P	0	P	0	0	0	0	2
UWT	P	0	0	0	0	0	0	1
UWV	P	0	0	0	0	0	0	1
Village Shamba	P	0	P	P	P	0	0	4
Adult Education	P	0	0	0	0	0	0	1

(P = present but number not ascertained)
 (? = not ascertained)

h. Local Experts (Fundi) in the North Road Survey Area

	Monduli Jun	Mfereji	Engaruka	Sale	Samungu	Maleni	Wasse	Kakessie	totals
Mechanics	0	0	0	0	0	0	0	0	0
House builders	?	0	0	1	0	0	0	0	1
Carpenters	1	0	0	0	0	0	0	0	1
Tailors	1	0	?	0	0	0	?	1	2
Smiths	0	0	0	1	1	0	0	0	2
Beer brewers	P	P	P	P	P	0	?	P	6+
Cattle traders	P	P	P	P	1	?	P	P	7+
Hunters	?	?	?	P	P	0	0	0	2+
Seasonal Laborers	P	P	P	P	0	0	P	0	5+
Bakers	P	P	0	0	0	0	0	0	2+
Green Grocers	0	0	?	?	2	0	?	0	2
Masons	0	0	0	0	0	0	0	0	0
Woodcutters	P	0	0	0	0	0	0	0	1+
Charcoal burners	P	0	0	0	0	0	0	1	2+
Potters	0	0	0	P	P	0	0	0	2+

(P = present but number not ascertained)

(? = not ascertained)

~~;~~ Local Experts (Fundi) in the South Road Survey Area

	Kiserian	Kigongoni	Oljoro	Losinyai	Komele	Terat	Leswaki	Sukure	Naberera	Namajulu	Engasumet	Ndede	Ng'abol	Leibersirret	Mwandet	totals
Mechanics	1	0	2	0	P	0	P	0	0	0	0	0	0	0	0	6+
House builders	1	0	4	3	P	0	0	0	0	0	P	0	0	0	?	10+
Carpenters	0	0	4	0	5	1	0	0	1	0	2	0	0	0	?	13+
Tailors	0	0	1	0	4	2	0	0	1	0	2	0	0	0	?	10+
Smiths	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	5
Beer Brewers	?	0	?	0	0	?	P	P	5	P	P	0	0	P	P	11+
Cattle traders	?	?	?	P	0	1	0	?	1	P	P	P	P	P	P	9+
Hunters	0	?	0	0	0	0	0	?	1	P	P	P	P	P	0	6+
Seasonal laborers	0	?	0	P	P	0	P	0	P	P	P	P	0	P	?	8+
Bakers	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	3+
Green grocers	P	P	?	P	0	P	?	0	0	0	?	0	0	0	?	4+
Masons	?	?	?	0	10	0	?	0	0	0	P	0	0	0	?	11+
Woodcutters	0	0	0	0	?	0	0	0	0	0	0	0	0	0	0	0
Charcoal burners	0	0	P	0	P	0	P	0	P	0	P	0	0	0	0	4+
Letters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(P = present but numbers not ascertained)

(? = not ascertained)

F. Appendix Two: Village Profiles.

These are found in the following order: From the northernmost village, Wasse, to Menduli (with the control village of Kakessie following); from Kiserian to Ng'abele (with Leiborsirret and Mwandet following).

The village Profiles are numbered according to the pagination of the report as a whole and also have individual page numbers.

WASSO VILLAGE

Dates of survey: 24-25 Jan. 1980

1. District: Ngorongoro - hdq distance: 5 miles
2. Tarafa: Loliondo - hdq distance 5 miles
3. Kata: Olgosorok - hdq distance: 5 miles
4. Village Particulars:
 - a. Vitongoji: Wasso is a Kitongoji of Magaiduru village, but it appears to be stated to become a village by itself.
 - b. Population: Magaiduru: 123 boma (Kaya?), 741 people.
Wasso has 11 bomas, not including the shops section.
 - c. Ethnic groups: Maasai, Mbulu, Kipsigis, Kikuyu
 - d. Subsistence: Livestock keeping with some cultivation in home shamba.
 - e. Leadership: not ascertained
 - f. Local experts: not ascertained
 - g. Modern articles: not ascertained
 - h. Infrastructure:
 1. School: at Nakala (nearby) (another more distant is under construction in Lolien Kitongoji)
 2. Dispensary: Catholic hospital present
 3. Primary court: Loliondo hakim
 4. CCM Office: at Magaiduru (?)
 5. Church: present, lutheran pastor at Loliondo
 6. Veterinary services: Loliondo
 7. Dip: present, functioning
 8. Water: running stream
 9. Shops: 6, 1 kilabu, 3 grinding machines
 10. Game post: Loliondo
 11. Cattle market: none
 12. Buying post: none
 13. Mining: none
 14. Leased shamba: none
 15. Post office: Loliondo
 16. Milk collection centre: none
 17. Hospital has radio call.
 - i. "Village" Projects.
Village shamba of 1.5 hectares - tobacco planted
UWT Kilabu
UWT shamba
Church project to purchase a maize grinding machine
 - j. Population stability. Wasso is popular for seasonal grazing in that it has water, salt, and a dip. It also has more infrastructure than most communities in Loliondo. Increasing numbers of people are coming to settle. Many of these are cultivators. But Wasso may not exist as a community in the same area a few years hence as it is planned to construct the new district headquarters nearby.

5. History. Wasso, aside from the traditional popularity of permanent water and salt, has had two other stimuli to development and settlement. The first was the establishment of a major cattle market for all of northern Maasailand at Wasso in the late 50s. The market since then has disappeared and today all that remains is a chimney of the rest house used by colonial officers coming for the market. The second stimulus to development was the locating of Wasso TB hospital a short distance from the present shops section. Wasso has also become a minor settlement of cultivators and businessmen.
6. Travel and Communications. Wasso is about 5 miles from Loliondo town on the "main road to Ngorongoro and Arusha. Just outside Wasso-on the Loliondo side - is a track going to Soit Sambu (with an arm to Mundorosi) and to Lobo via Olowoskwan. Another track starts near the dip, goes to the Kitongoji of Lorien and ends at Magaiduru. 11 miles along the Ngorongoro road is a turn off to Samunge and Sale, the path of the Ukame road.

All these roads existed and were more or less passable before the Ukame road was constructed, but all transport to Arusha or Monduli was filtered through Ngorongoro. Wasso residents claim that the bulk of traffic, which has increased since the Ukame road was completed, still passes that way.

Transport can be obtained from government and mission vehicles as well as 3 private business vehicles at Loliondo: 1 small pickup which is usually in need of repair and 2 lorries. Current transport costs are;

rental to Arusha 3,000+/-
 lift to Arusha 50/- per person one way
 10/- per kilo of produce (a sack of mazie would cost about 40-50/-.

7. Infrastructure.

- a. Shops. Of the 6 functioning shops at Wasso, 4 belong to Maasai entrepreneurs. They are of mud brick construction painted white. Most have mabati roofs. They form a line running along the Ukame road.

Two shopkeepers were interviewed. 1 started his shop in 1974: the other in 1978. Both got supplies from the Singh transporters at Loliondo. Now that the RTC has opened they also use it for basics. Before the border closed, they obtained many goods from Kenya. One shop also gets maize locally and grinds it for sale as flour.

Inventory: (both shops tended to have about the same stock) maize flour, salt, sugar (not available at the time of the survey), tea, coffee, tinned fruit, fruit jice, onions: blankets, varieties of coloured cloth, shorts, vitenge, hoes, axes, panga, spoons, plates, torches, torch bulbs, tea strainers, cooking pots, aspro, cefenol, cigarettes, magadi, beads, cow bells.

Trading License Applications

<u>Year</u>	<u>Shop</u>	<u>Pombe</u>	<u>Mkahawa/Hotel</u>	<u>Cattle Trading</u>
1975	3	2	0	0
1976	3	2	0	0
1977	3	2	0	0
1978	3	2	0	0
1979	4	1	2	2

1979 obviously shows an increase in interest in entrepreneurship after a very stable period of 4 years.

b. Legal Matters. The following cases were recorded at the Loliondo primary court:

<u>Year</u>	<u>// Civil Cases</u>	<u>// Criminal Cases</u>
75	3	7
76	0	4
77	0	13
78	1	3
79	5	1

Civil cases, which show a marked rise from 0 in 1976 and 1977 to 5 in 1979, were primarily concerned with divorce and possession of children. Debts followed second. 1 case of renegeing on dowry pre-payments was also heard.

Criminal cases, which demonstrate a corresponding decline from 1977, are various and reflect the heterogeneous nature of the Wasso community; 7 cases of assault, 5 theft (including only 1 stock theft), 3 disturbing the peace, 3 carrying arms in public, 2 loitering, 2 possession of illegal whiskey, and 4 miscellaneous cases ranging from arson to abusive language.

We were unable to note how many civil and criminal appeals came to the District Court in Monduli as only "Loliondo" was written as the source of the appeal.

8. Staffing and Support. No interviews with government servants at Wasso.

9. Development.

a. Villagization: Wasso achieve the status of an independent village but at present it is still a kitongoji of Magaiduru. Immigration is still common. The profile of Wasso will drastically change when it becomes the site of the new District headquarters and possibly residents will be resettled.

b. House construction. We noted no change in boma or house construction.

c. Cultivation. Being an ethnically mixed village, cultivation is fairly common both among "Swahili" and Maasai. One man said that Maasai cultivation has been relatively recent, arising mainly because of problems in obtaining maize flour from the shops. A few years ago stock were so reduced that in order to survive and retain their herds, the Maasai had to start cultivating. Some locally grown crops are sold to shops at Wasso and doubtless Loliondo, where transporters there would distribute them to maize flour scarce villages in other parts of the tarafa. As there are no tractors in Loliondo, cultivation is either by hand, home labor or hired, or by ox plows.

d. Consumption. Stock in the duka also indicate the ethnic heterogeneity of Wasso, but shopkeepers claim that even the Maasai purchase onions, rice, cooking fat, kerosene, hoes, plates and other kitchen utensils.

e. Business. Aside from some maize sold for profit, the ongoing business in the area is stock trading.

f. Modern services. No information

g. Participation. No information.

10. Perceived benefits and problems of the new road. Wasso residents, being so close to a major medical facility, tend to see the benefits of the new road in general as increasing transport to hospital.

Concerning transport to Arusha or Monduli, aside from government, most vehicles still pass through Ngorongoro. Local shopkeepers find that it is cheaper to pay for goods brought to Loliondo than to have to rent scarce transport to seek for them themselves.

LOSOITO VILLAGE
(MALONI AND OLCRERIO)

Date of survey: 24 - 26 Jan. 1980

1. District: Ngorongoro - hdq distance: 36 miles
2. Tarafa: Loliondo - hdq distance: 36 miles
3. Kata: Arash - hdq distance: (?)
4. Village Particulars:
 - a. Vitongoji: Two (?) Losoito, Maloni (Olorerio is a segment of Maloni)
 - b. Population: families 259, 1778 people (Losoito village total)
 - Maloni: 13 bomas
 - Olorerio: 2 bomas
 - c. Ethnic groups: 90% Maasai, primarily of the Loita tribe and Section.
 - d. Subsistence: livestock keeping with some home cultivation
 - e. Leadership: no information
 - f. Local experts: cattle traders, midwives
 - g. Modern articles: 100% torches, syringes present, kibatari present guns present, one spary gun (Maloni), radios (Maloni and Losoito), sewing machine (Maloni)
 - h. Infrastructure:
 1. School: at Losoito
 2. Dispensary: Wasso, DigoDigo
 3. Primary court: Loliondo
 4. CCM Office: none
 5. Church: none
 6. Veterinary services: Loliondo
 7. Dip: Losoito - not functioning
Sale - occasionally
 8. Water: streams and mountain spring
 9. Shops: two at Maloni
 10. Game post: Loliondo
 11. Cattle market: private sales
 12. Buying post: none
 13. Mining: none
 14. Leased shamba: none
 15. Post office: none
 16. Milk collection centre: none
 - i. Village projects: no information.
5. History. No information
6. Travel and Communications.

Maloni is close to the junction of the Loliondo - Ngorongoro road which passes through the Serengeti, the main road in the past and to some extent today. A track existed from this road via Maloni to Sale with an arm to Samunge. From Sale the track went to Malambo and Ngorongoro.

At the present time residents feel they have a better chance to get a lift on Ukame road rather than waiting at Losoito, close to the junction. What this means is that traffic is using the Ukame road to Sale frequently, but from Sale is still continuing the route to Ngorongoro.

Transport these days, aside from more government vehicles, is still mainly provided by the Singh lorries servicing shops in the Loliondo area.

Current transport costs: Lift to Arusha - 400/- round trip with "small loads"

Rental to Arusha 4000/- round trip.

7. Infrastructure Details.

a. School. A small school at Maloni was closed in 1978 and all school children were directed to attend the Losoito school. District authorities say that Maloni had a water shortage which caused the residents to migrate out of the area.

Children from both communities interviewed go to Losoito school. The children and frequently their mothers - reside at neighboring bomas, while the rest of the family remain at Maloni or Olorerio.

We were unable to obtain attendance records for Losoito or Maloni schools.

b. Legal matters. The following are cases from Maloni kitongoji heard at Loliondo Primary Court (no cases were recorded as being from Maloni or Losoito in the appeals register for Monduli District Court):

Loliondo Primary Court

<u>Year</u>	<u>Civil Cases</u>	<u>Criminal Cases</u>
1975	1	3
1976	2	0
1977	0	1
1978	0	1
1979	0	0

Civil cases concerned return of dowry or child in divorce. Criminal cases involved one stock theft, prosecution of three individuals trekking stock to Knya, one school truancy, one assault, and one case unstated.

Maloni seldom uses the court for civil cases and shows a decline of criminal prosecutions. Either the area is more law-abiding or malefactors are becoming more successful in avoiding prosecution.

c. Shops. There are two shops at Maloni, along the road, across from one another. One shop was established there in 1968. Its present owner, a Maasai from nearby Arash, obtained it in 1976. Second shop was opened in November 1979.

Both establishments have the same structure, wattle and daub building with a mabati roof, the shop being associated with a residence constructed behind it.

1 shop gets its supplies from RTC at Loliondo, the Singh transporters, and occasionally Arusha.

Inventory.

1 Shop: Tea, flour, sugar (not available), salt, blankets, colored cloth in abundance, raincoats, razors, pangas, hoes, pans three types of patent medicines, hand soap, gounds, wire, beads (a few), tobacco

#2 Shop: Tea, flour, sugar (not available), salt, cloth in abundance in many colors, spoons, hoes, pangas two types of livestock drugs.

Trading License applications: no information /3

8. Staffing and Support. No government employees at Maloni or Olorerio.

9. Development.

- a. Villagization. Incomplete as far as total resettlement of the population at Losoito is concerned.
- b. House construction: The enkaji, boma, is still on the older pattern of no real separation of houses from livestock corrals. House construction is mainly of the enkaji type.
- c. Cultivation: Residents claim they started cultivating around 1976, although a few had shambas before then. The rule of thumb for the village is one acre at least for each wife, but there is some variations.

All work on the fields is done by hand labor, although some locals hire seasonal laborers from Mbulu.

Crops grown are maize primarily, followed by minor stands of sweet potato, beans, and pumpkin.

- d. Consumption patterns. Residents claim greater maize flour consumption in all seasons, but also consume sweet potatoes, millet, pumpkin, and beans, (The shopkeeper interviewed added local consumption of rice, tea, beer and soda). Such inroads into traditional Maasai diet may have been a long term one, of their proximity to the Sonjo people.

Maloni residents do not appear to have any appreciable desire for more modern goods, although household utensils consist of purchased pots, pans, spoons, cups etc.

- e. Business. The only business is stock trading - all private transactions and much of it marketing in Kenya.
- f. Modern services. Neither area had any nearby access to any government service save that of the primary school at Lgoito. We didn't find much concern that they were not present, although one of the benefits of the road was that the sick could be more easily transported to Wasso or Loliendo.
- g. Participation. No information.

10 Perceived Benefits and Problems of the new Road.

Transport is the main benefit. The shopkeeper at Maloni estimates three vehicles per day on the average pass by his shop, so getting a lift to Loliendo is easy now.

Residents have an anticipation of better transport facilities. Those at Olorerio hoped that a bus service might begin passing to Samunge and Sale from Loliendo. But, for the most part, they have seen no other benefits coming from the new road.

Problems they agreed have already started. A child was struck by a passing car and was killed. And two women from Olorerio, neither on good terms with their husbands, took the opportunity to hop a vehicle en route to Arusha and have not returned.

No one from the kitongoji worked on the Road crew during construction. There was a little purchasing of locally produced goods, but mainly from ~~the~~ 1 duka at Maloni, the shopkeeper claiming that he did a lot of business with the workers. Residents said that they frequently were able to get lifts to Sale for shopping with the road crew.

No conflicts or problems with the road crew were mentioned.

SAMUNGE VILLAGE

Date of survey: 25 Jan. 1980

1. District: Ngorongoro - hdq distance: about 40 miles
2. Tarafa: Loliondo: hdq distance: about 40 miles
3. Kata: Samunge: hdq distance: 0
4. Village Particulars:
 - a. Vitongoji: 5 (Gaditi, Mageri, Samunge, Eyasi, Ndito)
 - b. Population: 282 families, 1148 people
 - c. Ethnic groups: Sonjo dominant, a few Mbulu
 - d. Subsistence: cultivation primarily with some livestock keeping
 - e. Leadership: Mwenye Kit, Katibu Kijiji, Village Council, Baraza la Usuluhishi
 - f. Local experts: smiths, beer brewers, one cattle trader, seasonal laborers, some private mining, one butcher
 - g. Modern articles: one landrover (church owned), kerosene lamps 60%, kibatari present, one bicycle (katibu kata), few spray guns, torches present,
 - h. Infrastructure:
 1. School: one large classroom building, two teachers' quarters, seven classes, 10 teachers, 169 students, vocational training program.
 2. Dispensary: Digo Digo
 3. Primary Court: Loliondo hakimu on monthly visits
 4. CCM Office: half constructed
 5. Church: present with lutheran pastor
 6. Veterinary services: vet. centre present, said to be closed
 7. Dip present
 8. Water: pipeline provided by Catholic mission
 9. Shops: 2 - 3, and one vegetable stand
 10. Game post: none
 11. Cattle market: none
 12. Buying post: none
 13. Mining: some illegal mining in the area
 14. Leased shamba: none
 15. Post Office: none
 16. Milk collection centre: none
 17. Other: One privately owned grinding machine
Police post near school with radio call.
 - i. Village Projects:
 1. CCM office thatch being cut for the roof at present
 2. Adult education
 3. Village shamba of 25 acres - $2\frac{1}{2}$ cultivated in 1979.
 4. Former resident priest at DigoDigo informed us that Sonjo villagers had collected money to purchase a vehicle to transport fresh vegetable, fruit and people to Loliondo and perhaps other areas, but this was not mentioned by the Katibu Kijiji.
 - j. Population Stability: Eventually stabilized - a little immigration by former residents. / 2

4. Infrastructure details.

a. School. The buildings were in need of minor repairs, but otherwise appeared in good condition. Housing is inadequate for ten teachers, but the problem is alleviated somewhat by the fact that many of the teachers are residents.

We were only able to obtain attendance records for June 1979, as the head teacher was away and the assistant head teacher didn't have access to the files.

In June the total of all students registered was 169 and their attendance was reported as 92%, the highest of any school along the Ukame road. Teachers said that unlike past years, villagers are beginning to recognise the value of education, so do not have to be forced to send their children to school.

Adult education: 8 classes.

b. Legal matters. The baraza la usuluhishi consists of four members. The majority of cases heard concern dowry, debt, disputes of land rights, and minor personal conflicts. The Katibu Kijiji said that land disputes are increasing of late because some people who left Samunge for other places have returned and are claiming land as theirs which has been allotted to others in their absence.

The following are cases recorded in the Loliondo Primary Court and Monduli District Court registers from Sonjo:

Year	Loliondo Primary Court		Monduli District Court	
	Civil cases	Criminal Cases	Civil appeals	Criminal appeals
1975	0	5	0	0
1976	0	4	0	2
1977	0	5	0	4
1978	0	1	0	0
1979	1	3	0	0
1980	1 (Jan)	0 (Jan)	0 (Jan)	0 (Jan)

The two civil cases involved divorce. Criminal cases in the primary court concerned four incidences of livestock theft (by Sonjo, not Maasai), Three school trauncy cases, two theft, three assault and fighting, one breaking and entering, one illegal possession of pombe, and one illegal cutting of firewood. The relatively greater incidence of criminal cases found at Sonjo may be related to the presence of a police post.

We were not able to collect the types of appeal cases from Monduli District Court.

c. Other infrastructure. No other infrastructure surveyed.

5. History. The new village of Sonjo (Samunge) was established when it was moved from the hilltop to its present location in the valley. All of the infrastructure found there now was present in 1974 except for a CCM office.

6. Communications and Transport. Prior to construction of the road there was a small track to Loliondo from Samunge via Oldonyo Wasso, but it was not easily passable, especially in the rainy season. Most people took paths that crossed the mountain to Magaiduru, about 4 - 6 hours walk, rather than chance getting a lift.

The track continued northwestwards to DigoDigo and Oldonyo Sambu, where it descended the escarpment and went southwards to Sale and Malambo.

Contact with Loliondo was mainly through the footpaths and the Oldonyo Wasso track.

At the present time those who prefer to wait for a lift - and when there are no vehicles at Samunge - walk to Ndito, on the Ukame road and take their chances with passing vehicles, especially if they are heading for Monduli or Arusha rather than Loliondo itself.

No estimates of current transport costs.

8. Staffing and Support. We met the teachers in a group, so it was not possible to address some of the issues determining job satisfaction directly.

Housing is a problem, given the small number of staff quarters and large numbers of teachers, but many of the teachers are residents and live off the school grounds.

Obtaining personal supplies locally was voiced by all as a problem. Although there are three shops in Samunge they can't provide all that is wanted. The closing of the Singh's shops in Loliondo has aggravated the situation. Teachers get supplies from Loliondo or, if they have the chance, Monduli and Arusha.

School supplies still come from Monduli, as do their salaries, although periodically teachers went to Monduli for portable supplies. Salaries were one month late in December, but normally it has not been a serious problem. They expect the new District to distribute salaries as well.

Transport. They feel to still be a problem, especially to places other than Loliondo. Rather than go to Mdito and wait, as suggested by the Katibu Kijiji, teachers prefer to get to Loliondo by car or by foot and wait for whatever car is going in Monduli direction. Usually the vehicles fill up at Loliondo, so by the time they reach Ndito there isn't any room.

9. Development.

- a. Villagization. Completed, but some conflicts with returning former residents claiming land. No opinions given on advantages or disadvantages of the resettlement program, although the move in 1974 was only accomplished with very strong district encouragement.

- b. House construction: Almost all houses are now msonge construction. The change from older style houses was made a village rule. Later villagers came to realize that the newer houses were easier to construct as well as safer from fire than the conical ones.

The Katibu Kijiji pointed out that there are only six mabati houses in the village and no latrines.

- c. Cultivation. All villagers cultivate, but the village rule is that all villagers must cultivate at least 1.5 hectares of food crops. The only equipment used is the hand hoe and traditional Sonjo digging stick. Some, the Katibu added, who can afford it, employ Mbulu labor at 240/- per acre. No fertilizers are used. In 1979 the Katibu cultivated 2.5 acres, which he said is considered a lot in his area.
- d. Business. None noted, save informal mining and cattle trading by a few individuals, in addition to cultivation.

- e. Consumption patterns. Goods do not appear to be in great demand. Goods purchased in the past consisted of articles not very different from those of Maasai communities: beads, shuka, bangles, maize flour and sugar. Nowadays people are more interested in modern wearing apparel, more so than in most Maasai villages as well as a greater

Traditional crops grown were millet, sweet potatoes and cassava, which were augmented by game meat, milk, and honey. Now almost every kind of food is consumed.

- f. Participation. The Katibu said that there was a rule which "forced" villagers to come for meetings and communal labour, but that only pertained to traditional matters. In the newer organization, no such rule is present, so attendance is not as good as in the more traditional meetings. The village shamba is so small, he said because most people are not interested in communal self-help projects.
10. Perceived Benefits and Problems of the New Road. We have already noted the opinion of the teachers that so far the road has not brought them any changes either beneficial or not. The katibu kijiji was more optimistic. He felt that in the future the road will bring many changes of transport and that even now one can relatively easily obtain a lift to Monduli or Arusha at Mdito rather than attempting to get to Loliondo first.

Samunge is at somewhat of a disadvantage in that it is not directly on the Ukame road, so that in deciding whether to walk to Loliondo which is relatively far by foot, or to Mdito, which is nearer, one has to consider where the easiest lift can be had. The teachers prefer to try the Loliondo way.

Mdito is the kitongoji which touches the Ukame road, but residences are close to Samunge itself. No one from the village worked on the road, nor were any problems with the Road crew aired. Mdito villagers did provide the crew with locally produced foodstuffs.

SALE VILLAGE

Date of survey: 26 Jan. 1980

1. District: Ngorongoro - hdq distance: 41 miles
2. Tarafa: Loliondo - hdq distance: 41 miles
3. Kata: Samunge - hdq distance: about 10 miles.
4. Village Particulars.
 - a. Vitongoji; 2 (Sale, Njoro)
 - b. Population: 252 families, 1800 people
 - c. Ethnic groups: Sale: 90% Sonjo
Njoro: Sonjo and Maasai (Maasai in the minority)
 - d. Subsistence: Cultivation primarily with some livestock keeping
 - e. Leadership: Mwenye Kiti, Katibu Kijiji, Village Council, Baraza la Usuluhishi
 - f. Local experts: arrow makers, midwives, 1 carpenter, local smiths, cattle traders.
 - g. Modern articles: 4 ox plows, 50% radios, 50% torches, syringes (few), kibatari present, kerosene lanterns (few)
 - h. Infrastructure:
 1. School: 5 classrooms, 4 teachers houses, choo, classes 1 - 7, 7 teachers, 241 students
 2. Dispensary: visits by Wasso Dr., Flying Drs., otherwise use Malambo or Wasso.
 3. Primary court: monthly visits by Loliondo hakim
 4. CCM office: room in shop building?
 5. Church: present - Lutheran pastor resides at Samunge - Hambageu Shrine
 6. Veterinary services: Malambo (vet center at Samunge not operating)
 7. Dip: Present - attendant a "volunteer".
 8. Water: spring
 9. Shops: One village cooperative shop
 10. Game post: none
 11. Cattle market: formerly Malambo, Digodigo, at present none
 12. Buying post: Monduli (?)
 13. Mining: none
 14. Leased shamba: none
 15. Post Office: none
 16. Milk Collection Centre: none
 - i. Village Projects.
 1. Village shop
 2. 20 acre shamba: 3 acres planted in 1979
10 acres planned for 1980.
 3. Adult education classes
 4. Construction of dip attendants quarters and store: discussed
 5. Dispensary: bricks being made
 - j. Population stability: little in or out migration, save perhaps by pastoralists at Njoro for seasonal grazing.

- 5. History. In the late 50s and early 60s Sale was described as having almost nothing in the line of services apart from a newly constructed lutheran school and chapel. Medical services were briefly provided by a monthly visit by the Flying Doctors. There was no shop at that time. People obtained supplies from Malambo or Loliondo.

The village was also on the escarpment. In 1973 it was resettled on the Sale plain and expanded into 2 vitongoji. A monthly out-patient clinic is still held at Sale from Wasso Catholic Hospital.

- 6. Travel and Communications. Sale lies at a crossroads of an old track running north from Oldonyo Sambu to Malambo - and Ngorongoro, generally following the escarpment, and an intersecting track coming down the escarpment from Oldonyo Wasso passing near Samunge. The track continued to the escarpment. Pininyi, at the bottom of the escarpment could be reached by a track cut in German times, but it was difficult to find and difficult to use. Missionaries who were in the area during the 60s and up until the construction of the Ukame road, noted the difficulty of descending the Sale escarpment from the Samunge turn-off. Some said it was easier to walk to Sale than to drive.

As transport, especially commercial transport increased, the track from Sale to Malambo and Ngorongoro became an alternative to the Loliondo Serengeti track. It is still used today and is probably increasing in importance. In this respect the Ukame road has increased transport from Loliondo to Sale and visa versa, but essentially the communication patterns have not changed very much, especially now that Loliondo is the new District headquarters.

Current transport costs: lift to Arusha via Ngorongoro: 50/-. The major transporter is still the Singh shopkeepers just outside Loliondo town.

7. Infrastructure Details.

a. School.

- 1. Structure: the facility was originally constructed as a lutheran "bush" school in 1959. It was later taken over by the government and expanded to its present size.
- 2. Attendance. We were unable to obtain attendance records from the new District headquarters. At the school we were able to obtain some past forms, but they are incomplete, for all classes. The following are the summaries of registration and attendance for the last month of the year.

SALE SCHOOL

<u>Year</u>	<u>// Classes noted</u>	<u>// Registered</u>	<u>% Attending</u>
75	3	108	60%
76	5	144	86%
77	7	263	59%
78	4	125	60%
79	7	241	52%

In some cases, as at Kiserian school, attendance for the month exceeded the total number of students registered, so in spite of the low attendance percentages at Sale school, they may be in reality even lower. It is interesting to note that the prevention of parents of traunt children at Sale in 1976 tends to bring school attendance that period to almost 90%

3. School Projects:

- 1.4 hectares orchard with bananas, oranges, papaya
- 1.5 hectares maize shamba
- .5 hectares groundnut shamba
- Local chicken raising: proposed

4. Adult education: the teacher said 10 classes were operating, but the Katibu Kijiji said 4. In any case, adult education is present at Sale.

b. Legal Matters.

The village baraza la usuluhishi normally handles cases involving quarrels, theft, debts, and dowries. Those cases which cannot be solved locally are referred to the hakim who comes once a month. In 1979 the baraza referred 4 cases to the hakim.

Cases reaching the Primary court are presented below. There were no appeals from 1975 in Monduli District Court from Sale.

LOLIQNDU PRIMARY COURT

<u>Year</u>	<u>Civil Cases</u>	<u>Criminal cases</u>
75	0	1
76	0	12
77	0	0
78	0	5
79	0	2

The types of criminal cases represented are 7 school trauncy, 4 fighting, 3 stock theft, 3 assault, and 3 miscellaneous. Crimes of violence dominate.

From the legal record it would appear that the people of Sale prefer to handle their own civil cases. Criminal cases also show a decline from 1976, (5 of the 12 cases in 1976 were for school trauncy).

c. Shop. We obtained no information on the development of the shop, save that the building, a stone structure, had been privately owned before the village shop began.

Inventory for the shop included:
tea, coffee, flour, sugar (none present), candy, salt, blankets, bed sheets, cloth, clothes, torches, razors, hoes, panga, 5 types of patent medicines, baby bottles and nipples and hair oil

Applications for trading licenses from 1975 were for one shop only until 1979, when the applications were made for 2 shops.

d. Dip. The facility was constructed in 1978 by the District, although the village assisted in digging foundations. At present it is used by Sale, Njoro, and Masusu (to the North), and some bomas along the Malambo road close to Sale. (We were also informed by residents of the Olorerio section of Logoito village that they sometimes used the dip as well when obtaining salt from the Sale area for their stock.

The dip attendant is an unsalaried "volunteer" who was sent to the Monduli Rural Training Centre for seminars. He's hoping to become a salaried employee soon. ~~He took up his~~

8. Staffing and Support. 2 government workers were interviewed (aside from the Katibu Kijiji), but only one was salaried. The dip attendant was hopeful of employment, but had not yet been employed.

Although the teacher is a non-resident of Sale, he comes from Samunge, also a predominantly Sonjo community, and has worked previously at Oldonyo Sambu, another mainly Sonjo village. He took up his present post in October 1978. The dip attendant is a resident of the area.

Housing is available for the teacher and his family. The dip attendant lives at home, although he said that the village is planning on constructing quarters.

District support still comes from Monduli until Ngorongoro gets a full District staff. Salaries are brought from Monduli. The teacher says he experiences usually a month's delay in receiving it. Supplies are also brought from Monduli. Although delays are present, he noted the problem has never been a road, but lack of transport at headquarters.

Personal supplies are met locally or at Loliondo. Clothes and Larger articles are purchased from Monduli or Arusha. He was last in Arusha in June of 1979.

He rated village cooperation in education as good, that they are no longer forced to bring children to school, but do so willingly. Adult education classes are also popular in his opinion.

The dip attendant only started his work in July 1979. Acaricide is brought to the dip from Loliondo once a month. He also obtains livestock drugs from Loliondo. He noted no problems with either supply or village cooperation.

On the whole, both men expressed satisfaction with their positions.

9. Development.

- a. Villagization: completed, although there is considerable seasonal migration of pastoralists on the Sale plain
- b. House construction: Almost all the houses seen at Sale were of thatch-sides and roof (peaked type). The more traditional beehive style houses were not much in evidence. A few mabati roofs present. No mention of any local projects in house improvement.
- c. Cultivation: This is the common mode of livelihood. The hoe is replacing the digging stick, but not completely yet. No tractor cultivation, and hired labour is found at pastoral plots. Some ox plows are used (4 in the village present)
- d. Business. None other than cultivation and some stock trading.
- e. Consumption patterns. We found more modern articles present at Sale than at most Maasai communities, and the village shop had a more varied stock. Yet, we did not feel the village to be more actively modern in its appearance or demands than one in Maasailand.
- f. Modern services. The village appears to use what services are given it. There does not appear to be much locally activated effort in obtaining modern services, as the rather slim set of village projects would indicate.
- g. Participation. Participation is strongly related to community cohesiveness, the ability to organize or mobilize people. It would seem that in locally activated matters - the Hambageu cult, local conflicts etc. - mobilization is strong and participation or cooperation is good, but in programs which are externally activated, participation is passive or effected with duress. The great lack of interest in cultivating a village shamba would be an example.

10. Perceived Benefits and Problems of the New Road.

District headquarters are closer spatially and temporarily these days with the new road and the shift of headquarters to Loliondo. The Transport and communication structure southwards is still based on movement through Ngorongoro, especially commerce. Thus the new road is of great use to get to Loliondo or from Loliondo to Sale and Malambo, but it is of less interest to local people as it passes through the Saleh plains to Monduli.

There are no perceived disadvantages of the new road.

During its last period of work, the Road crew had its main camp at Sale, which is proposed as the site of one of the maintenance camps. None from Sale worked on the road. People bought from the shop and purchased locally prepared goods.

Residents said there were no problems coming from the camp although the head of the Road crew said that they had experienced a considerable amount of petty theft at their camp.

ENGARUKA VILLAGE

Date of Survey 26-27 Jan. 1980

1. District: Monduli - hdq distance: about 68 miles
2. Tarafa: Manyara - hdq distance: 38 miles
3. Kata: Engaruka - hdq distance: 0
4. Village Particulars. (Note: the information here is combined for 2 registered villages: Engaruka Juu and Engaruka Chini)
 - a. Vitongoji: none for either village
 - b. Population: Engaruka Juu: 363 families, 2261 people
Engaruka Chini: 275 families, 1576 people
 - c. Ethnic groups: Engaruka Juu: Maasai and Warusha dominant with Meru, Sukuma and Somali
Engaruka Chini: Maasai dominant, followed by minority of Warusha
 - d. Subsistence: Engaruka Juu: cultivation primarily with some stock keeping.
Engaruka Chini: Livestock keeping with a little cultivation
 - e. Leadership: Each village has: Mwenye Kiti, Katibu Kijiji, Village Council and Baraza la Usuluhishi.
 - f. Local experts: no information
 - g. Modern articles: 1 lorry, 1 landrover, ox plows 90%, kerosene lamps present, kibatari present, torches 100% (all at Engaruka Juu); Engaruka Chini has kibatari, torches, syringes.
 - h. Infrastructure: (Note: all the services here noted are found at Engaruka Juu. Engaruka Chini has a primary school only).
 1. School. Engaruka Juu: 374 students, 8 teachers, classes 1 - 7 boarding.
Engaruka Chini: 119 students, 1 teacher, classes 1 -3
 2. Dispensary: present with RMA
 3. Primary court: Mto wa Mbu
 4. CCM Office: present
 5. Church: Lutheran church with pastor present - no transport
 6. Veterinary services: veterinary centre without technician
 7. Dip: 1 is shared by both villages
 8. Water: Engaruka river
 9. Shops: 10 licenced shops (4 not licensed) 1 off-license beer shop plus mkahawa
 10. Game post: none
 11. Cattle market: Mto wa Mbu
 12. Buying Post: Mto wa Mbu
 13. Mining: no information
 14. Leased shamba: none
 15. Post Office: none
 16. Milk collection centre
 17. Police post: 7 radio call

- i. Village Projects: No information other than proposed improvement of the 10 mile track to the Ukame road so as to persuade NMC to install a buying post in the village.
- j. Population stability. The Mratibu Kata (Acting Katibu Kata) said that there is considerable movement into both Engaruka Juu and Chini. Those coming into Engaruka Juu are from the mountain - or escarpment - areas to the North and West: Kapenjiro, Nayobi, Engopironi. (cultivation is banned in the Ngorongoro Conservation Authority, so these people are searching for farm land).

People from Gelai, Kitumbeine, Selela and Lepurko are moving into Engaruka Chini. He added that most of the people Salela were re-settled there some time ago when the village was registered as a Kijiji cha Ujamaa. Under the new system the village is declining so residents are starting to move back towards a place with better infrastructure.

5. History. Engaruka has been a place of cultivation from at least 1700 and perhaps before that. It is the site of an old agricultural people, now disappeared or absorbed, who practised irrigation and built stone structures, the remains of which are still visible at Engaruka. (It has been proposed to place a cultural officer at the site to be in charge of the ruins, which could be better exploited for tourism).

All informants recall that Engaruka of contemporary times existed as an agricultural community from at least 1930 - the earliest establishment of a shop in living memory. Before that Engaruka had some pre-World War 1 German estates.

6. Travel and Communications. Tracks existed from these early days, coming from Ndoposat, on the western edge of Monduli Juu, to Engaruka and then passing northwards to Kapinjiro and Oldonyo Lengai. Later it was connected to the track coming from Oldonyo Sambu, through Mfereji and Kitumbeine. A third track, and its most important road, comes from Mto wa Mbu to the South.

Recent communication and transport patterns have focused on the Mto wa Mbu road. Even after construction of the Ukame road, which meets the Kapenjiro track, almost all traffic uses the Mto wa Mbu route. Current transport costs Engaruka - Arusha lift 30/- lorry, 25/- landrover and rental 1,500/- to 2,000/-

7. Infrastructure details.

- a. School. Engaruka Juu:

1. Structure. (Number of buildings uncertain) Interviewers estimate
 - 5 teachers quarters
 - 1 Old classroom building
 - 1 new classroom building
 - 1 kitchen
 - Dormitories
 - Vyoo

The school is an old one and shows the signs of age. Repairs are needed on the older structures and repainting needed on the newer ones.

Engaruka Chini: 1 classroom and 1 teacher's quarters constructed in 1978.

2. Attendance; We have attendance records only for Engaruka Juu and only for 1979. The following are the numbers of students and average attendance for each class (note: 5 classes were represented by the specific class was not recorded)

ENGARUKA JUU PRIMARY SCHOOL 1979

<u>Class</u>	<u>// Registered</u>	<u>% Attending</u>
1	19	63%
2	61	73%
3	63	82%
4	128	84%
5	57	89%
Total	328	
Average attendance:	87%	

2. School Projects. No information for either village.

b. Legal Matters. We were told that the baraza la usuluhishi handles all the conflicts that arise in the village, so there have been almost no referrals to the primary courts. Mto wa Mbu Mahakama is normally the primary court which has jurisdiction over Engaruka, but was not included in the survey. We did, however, find cases involving Engaruka residents in the Monduli Primary and District courts, if the Ukame road were to have an impact on frequency of use of courts, it would be in the Monduli facilities.

Monduli Primary Court

Monduli District Court

Year	Civil cases	Criminal cases	Civil appeals	Criminal appeals
75	1	0	0	0
76	0	0	0	0
77	2	0	0	0
78	1	0	0	0
79	0	0	1	0

The few cases recorded at Monduli Primary court concern divorce and child custody.

c. Shops. The shops area at Engaruka Juu is on either side of the road leading to the school. We noted above that 10 of the 14 shops have licenses. In addition there is a tea shop (Mkahawa) and an off-license beer shop, which had beer, in the lower part of the village.

We had intended on inventorying 3 shops in the village, but while we were there one of the shopkeepers died suddenly, so all the shops were closed. One man was interviewed earlier. A Somali, he came to Engaruka in 1930 finding two shops present. Their supplies came normally by donkey caravan through the Ndoposat road until the 1950s when the Mto wa Mbu track was cut. Supplies were purchased in Arusha. One lorry from Arusha used to periodically make the journey.

Present transport is on the Mto wa Mbu road still.

People come from the same areas now to purchase food as they did in 1960: Ndoposat, Gejai, Kitumbeine and Engaruka-Salela.

Inventory: tea, sugar, maize flour, candy white cloth, magadi, a few beads, and local root medicines. (The shop also has 2 sewing machines).

Applications for Trading Licenses for Engaruka:

Year	Shop	Hotel	Butcher	Cattle trading
75	17	2	1	1
76	18	3	1	1
77	18	3	1	
78	18	3	1	
79	20	3	1	1

8. Staffing and Support. Of the 2 government workers interviewed, one was born at Engaruka and considers it an ideal posting for him; the other has worked there since 1976 and has his family with him, but he apparently has serious conflicts with both other government workers and village leaders, so he is not happy with his present situation.

As far as support was concerned, both personal supplies and work supplies do not appear to be serious problems. Most of what is needed can be obtained at local shops (although probably not at the shop of the man we interviewed), and other goods can be obtained at Mto wa Mbu or Monduli-Arusha. As there are two vehicles in the village, transport opportunities are not rare.

A representative of the teachers goes twice a month to Monduli for salaries.

Normally the Mto wa Mbu road is used, as that is the easiest source of transport.

9. Development.

- a. Villagization: As stated in 4.j., population movement into the village at present is noticeable. At Engaruka Chini, seasonal migration is still very important, although with increasing agricultural interests and the school more families are remaining in the area year-round, sending herders and stock away for grazing.
- b. House construction. At Engaruka Juu all the houses are tembe type some with mabati. At Engaruka Chini they are still of the enkaji type. Although the two-ring system of boma design has been introduced in Engaruka Chini, people are still using the more traditional one fence pattern.
- c. Cultivation. We were told that even at Engaruka Chini people have started to cultivate. Cultivation is by ox plow primarily, and in Engaruka Chini hired labor is used to some extent. The predominant crop grown at Engaruka Chini is maize. At Engaruka Juu cropping is more varied, although maize dominates.
- d. Consumption patterns. Informants said that all kinds of food is consumed these days. In the 1930s the shopkeeper recalled that 15 sacks of maize flour would suffice all of Loliondo, Ngorongoro, and Engaruka areas. "Nowadays the Maasai like unga more than milk." The teacher felt that the younger generation preferred to purchase "swahili" clothes: shirts, trousers, etc. In addition to torches, syringes, etc, various household cooking and eating goods were also desired more these days.
- e. Business: Cultivation is the main enterprise at Engaruka Juu, while at Engaruka Chini it is livestock trading.
- f. Modern services: No information.
- g. Assessment of participation: no information

10. Perceived Benefits and Problems of the New Road.

The Ukame road passes at its closest point about 10 miles from Engaruka. A seasonally passable track meets the road, and occasionally a sign post is put up to announce the junction. But, aside from government vehicles coming expressly to Engaruka, most transport is filtered through Mto wa Mbu, about 35 miles from Engaruka.

Nonetheless, the leaders of the village are hoping to stimulate greater interest in use of the Ukame road by improving their track to it. This interest was mainly stimulated by the refusal of NMC to establish a buying post at Engaruka until there was a better way of reaching the area

No one therefore has experienced any tangible profit from the existence of the new road, nor any loss yet.

The Ukame road passed by Kerimasi mountain in 1977. Workers on the road obtained water from Engaruka and many of their supplies. No one from Engaruka worked on the road. No problems with the road crew were voiced.

MPEREJI VILLAGE.

Dates of survey: 17-19 Jan. 1980.

1. District: Monduli - hdq distance: about 22 miles.
2. Tarafa: Kissongo - hdq distance: "
3. Kata: Monduli Juu - hdq distance: about 18 miles.

4. Village Particulars:
 - a. Vitongoji: none.
 - b. Population: 45 bomas, 172 families, 1075 people.
 - c. Ethnic groups: Maasai and Warusha.
 - d. Subsistence: livestock keeping primarily with some home cultivation.
 - e. Leadership: mwenye kiti, katibu kijiji, village council, baraza la usuluishi (?)
 - f. Local experts: pombe brewers, cattle traders, a few seasonal workers.
 - g. Modern articles: 3+ ox ploughs, 90% syringes, 90% torches, kibatari present.
 - h. Infrastructure:
 1. School: 1 classroom building, 2 classes, 90 students, 1 teacher.
 2. Dispensary, newly constructed, 3 rooms, EMA present.
 3. Primary court: up until January Monduli - now hakimumu at Emairete.
 4. CCM office: none.
 5. Church: none.
 6. Veterinary services: Monduli or Arusha.
 7. Dip: present with attendant.
 8. Water: pipeline from mountain spring.
 9. Shops: none.
 10. Game post: Monduli.
 11. Cattle market: Ngarash, Oldonyo Sambu (goats).
 12. Buying post: Monduli.
 13. Mining: none.
 14. Leased shamba: none.
 15. Ppst office: none.
 16. Milk collection center: none.
 - i. Village Projects:
 1. Village shop - proposed.
 2. School building and teacher's house: 12,000/- contributed.
 3. "Short cut" road to the escarpment road - discussed.
 4. Village shamba: discussed.
 5. Dam for Pus-Lukunya: discussed.

- 4. j. Population stability: Mfereji only became a year-round habitation area with the completion of a pipeline tapping a spring on Monduli mountain. The facility has been plagued with technical problems since its construction.

During the drought of the 70s most of the population emigrated and the area was almost abandoned. With the return of the rains, repairs of the pipeline and good grass recovery, people began moving back in 1975. The process is not yet complete.

5. Infrastructure details:

a. School:

- 1. Structure. The school was first started in 1974, but proved unpopular with teachers and eventually was abandoned during the drought for lack of students. The building, a mabati roofed and sided structure, disappeared.

The new school was completed in 1978 with a wattle and daub building with mabati roof and 1 teacher. The teacher sleeps in the village. Funds have been locally collected for a permanent cement block building and teacher's quarters. The materials were outside the district education office awaiting transport to the site at the time of the survey.

- 2. Attendance. We were only able to obtain attendance figures for 1979 from Monduli. 90 students are registered with 64% attendance. There are 2 classes. The teacher said that the main problem in utoro is seasonal migration, also that the school is relatively far from some homes. Locals are not interested in sending their children to school, especially if doing so may cause a labour shortage at home.

- 3. School Projects: None other than new construction.

b. Legal Matters:

The following are incidences of cases involving residents of Mfereji in the Monduli courts:

Year	<u>Monduli Primary Court</u>		<u>Monduli District Court.</u>	
	<u>Civil cases</u>	<u>Criminal cases</u>	<u>Civil Appeals</u>	<u>Criminal Appears</u>
1975	1	1	0	0
1976	0	0	0	0
1977	1	1	0	1
1978	4	0	1	1
1979	1	0	0	1

Civil cases involved debts, dowries, divorce. The 2 criminal cases were theft and assault. There is just not enough data from Mfereji to indicate any trends in either types of cases or frequency from 1975 to 1979, save increase in frequency of use of the District Court Appeal facilities, but 1 per year is hardly enough to even suggest a trend. Records of later years will be needed.

5. c. Dispensary:

1. Structure. The building was constructed with a grant from the Tanzania Community Development Trust Fund. The village was said to have made contributions towards the construction, but it was unclear what the contribution was.

It was completed in 1979. The RMA lives in one of the treatment rooms, as there is no house for him. A water tap is nearby, and the facility has a choo and washing place.

2. Attendance. 2413 patients came to the dispensary between June and December of 1979. The three dominant diseases treated were respiratory, eye and skin diseases other than ulcers. The RMA reported that locals make full use of the dispensary, although only for certain problems. His attempts at health education usually fail, as they prefer to be treated and not "waste time listening to advice".

d. Shops:

There is no shop at Mfereji. Before construction of the Ukame road, and still today, residents go to a variety of places to get supplies: Lengijabe (Corner) on the Nairobi road, Oldonyo Sambu on market days, Mwandet (on the Nairobi road), Ngare Mtoni, Monduli Juu, and Monduli.

e. Other infrastructure:

1. Dip. The dip at Mfereji appears to be idle more often than not. From 1974, when we did the first survey of Mfereji until recently, we never found it in operation. The problem was difficult to solve. Water was scarce, or the pipeline broken, or acaricide could not be brought to it. The only passable track was from the Nairobi road and vehicles that used it usually had to be sent for repairs after the trip.

It is working now, but mwenye kiti informed us that only the mountain part of the village is dipping these days. Those living on the escarpment and at Oldonyo Ng'iro are too far away. The District is considering construction of another dip to service the other end of the village.

We were unable to calculate frequency of issue of livestock drugs and acaricide from the Veterinary Issues Register information given us.

6. History.

The populating and de-populating of Mfereji is related to the construction and functioning of its pipeline in the late 60s. It is also related to its ecologically disadvantageous position as regards grazing. As noted above, during the 70s drought the area was virtually abandoned. Once the rains started again, population gradually returned and the villagization process was initiated.

7. Travel and Communications.

Three vehicular tracks penetrated the Mfereji area. One track was cut from Oldonyo Sambu on the Nairobi road descending the Matasiwi escarpment at Oldonyo Ng'iro. It originally went to Engaruka. Hunters mainly used the track, but it appears to have been created by a Stock Theft Unit policeman in colonial times. Later a track was cut from it to Kitumbeine.

Further towards Arusha, at Lengijabe ("Corner" or "Windy Corner") a road was cut to provide access into Mfereji during the time of the pipeline construction. It became briefly the main vehicle route used. We used the track in 1975 and found it virtually impassable. The road went on to the dip at Mfereji and a branch met the Oldonyo Sambu road at Ng'iro.

The third track was cut from Monduli Juu at the time of the Maasai Range Project activities at Komolonik ranching association, of which Mfereji was the northern part, in order to build and service the dip. This track became impassable shortly after its construction. It followed an older, hunting trail down the escarpment.

Communications of Mfereji residents move in three directions: towards the Nairobi road, southwards towards Mussa, and towards Monduli Juu and Monduli. The construction of the new road apparently has not altered this tri-fold source of household supplies and sale of stock. The new road has radically altered the means by which supplies for government infrastructure are brought into the village. In all probability neither the school nor the dispensary would have been constructed in the absence of the new road.

8. Staffing and Support.

Aside from the dip attendant, mwenye kiti, and katibu kijiji, there are only two other salaried workers at Mfereji: the RMA and teacher. Both are relative newcomers. The teacher arrived in 1978, the RMA arrived in June, 1979, his first posting.

There are no staff quarters for school or dispensary. The teacher, who is a Maasai speaker, stays in one of the neighbouring homes. The teacher stays in one of the rooms at the dispensary.

District support was rated very poor, and transport almost non-existent, as the facilities are 4 miles from the Ukame road on a fairly vague and dusty track. They both travel by foot usually to Monduli to obtain salaries, portable goods, and foodstuffs. The RMA said that on occasion he is assisted by the YMCA landrover in transporting supplies. It is about 22 miles by foot to Monduli. They go to Nguiki and spend the first night there, and then proceed to Monduli the next day. It is possible, the RMA said, to spend two weeks at headquarters awaiting transport. Aside from dignitaries attending the official opening ceremony of the dispensary, we were the first to sign either school or dispensary's visitors' book.

Personal co-operation with the villagers is good, but professionally conflicts arise. In the case of the teacher, it is truancy. For the RMA it is insistence on advising him how he should treat a case. Although the teacher is more at home in the area, both felt they were quite isolated.

9. Development.

- a. Villagization: Immigration is still occurring, and there is a possibility of establishing another settlement near Oldonyo Ng'iro. But essentially, the problem Mfereji faces is related to scarcity of water and the need to observe a fairly firm regimen of grazing management, leaving reserves open for periods of stress. There were no opinions offered for or against the villagization idea.
- b. House construction. Many homas have now the 2 ring system, but houses are still of the traditional enkaji type; however, the mwenye kiti claimed that Maasai are starting voluntarily to build msonge, Arusha style houses, which are more spacious. One informant said he was awaiting advice as to what kind of house he should build.
- c. Cultivation. It is more uncommon in Mfereji than in other areas we surveyed along the Ukame road, although we were informed it is increasing. Informants said they cultivated 1-2 acres of maize mainly, using seasonal workers at a cost of 140/- per person per field. Tractors are not used, although some individuals possess ox ploughs.
- d. Consumption patterns. Residents are said to want "more things". They are now eating more maize flour as their stock are declining. They are also eating beans and sweet potatoes. Some residents would like to have radios, but they are difficult to purchase, meaning probably, that they have to go to Arusha to buy them. Many women still wear skin skirts.
- e. Business. Aside from local cattle trading, and some youths who are selling stock medicine, there is none.
- f. Modern Services. The school is not appreciated, in spite of local contributions to its construction and expansion. The dispensary is appreciated. What the village would like most now is a shop.

Participation. In our first two surveys of Mfereji we found the area with only surface organisation, mainly clustered around various water points and with conflicts between water groups; water was a very scarce resource at the time. It was difficult, if not impossible, under the circumstances for the people to organise themselves without outside assistance. Villagization, a new village structure (although the leadership is essentially the same as in 1973), and the possibilities of accelerated development of services in Mfereji can present greater challenges to the population than they have at present. If the area remains with bountys of water and grass, ecologically stable, then the population will have the opportunity to consider its own development more seriously.

10. Perceived Benefits and Problems of the New Road.

Informants felt that the new road has not brought them any real benefits - nor problems - yet. Traffic is little and vehicles seldom stop to give residents lifts.

All informants felt that government visitors had increased, and the mwenye kiti said that assistance is obtained more easily these days than before the road was constructed.

All the services - dip, dispensary and school - are away from the road, so chances of passing vehicles assisting someone at any of these places is very slim indeed.

During construction of the road, no one from the village worked on the crew. The road crew did purchase milk, and occasionally an animal, from villagers, and they gave rides to Monduli freely.

For the most part, aside from receipt of government commodities, the road has not changed any communication patterns of the village with the outside.

MONDULI JUU VILLAGE

Dates of survey: Jan. 16-17, 1980

1. District: Monduli - hdq distance: about 4 miles
2. Tarafa: Kissongo - hdq distance: about 4 miles
3. Kata: Monduli Juu - hdq distance 0 miles.
4. Village Particulars:
 - a. Vitongoji: 3 (Emairete, Eluai, Nguiki)
 - b. Population: boma 44, 260 families, 1835 people
 - c. Ethnic groups: Warusha and Maasai
 - d. Subsistence: Primarily livestock keeping with cultivation
 - e. Leadership: Mwenye Kiti, Katibu Kijiji, Village council, baraza la usuluhishi, village manager.
 - f. Local experts: 15 cattle traders, 1 carpenter, pombe brewers, 20 traditional doctors, 20+ midwives, woodcutters, charcoal burners.
 - g. Modern articles: 4 ox carts (Nguiki), 1 motorcycle (Emairete), 1 bicycle (Emairete), 6 radios, 3 spray guns, 90% syringes, 100% torches, kibatari present, kerosene lanterns (very few), tractor trailer and landrover (YMCA)
 - h. Infrastructure:
 1. School. Emairete: 6 classrooms, 6 houses, 1 latrine, 1 damaged dormitory, 1 kitchen, 1 cook's quarters, 1 methane generator. classes 1 - 7, 10 teachers.

Nguiki: 1 classroom building (3 classrooms), no houses, 1 choo classes 1 - 5, 2 teachers.
 2. Dispensary and MCH clinic. Nguiki. YMCA and government. Large building with attached quarters, 1 house. RMA, MCH, midwife present.
 3. Primary court: Monduli until January 1980 when hakimku arrived at Emairete.
 4. CCM office: room in school compound
 5. Church: Emairete: Catholic catechist, no building, caravan for priest present.

Nguiki. Church, lutheran avangelist present
 6. Veterinary services: AFO present
Monduli Juu Dairy Farm
A.I. from Monduli
 7. Dip: Emairete: 1, attendant present
Nguiki: 1 attendant present
Spray race at dairy farm
 8. Water: Emairete: dams and hand dug shallow wells
Nguiki: pipeline from mountain spring
 9. Shops: 1 village shop at Emairete, no kilabu - pombe brew at home on Sunday only
 10. Game Post: Monduli (we were told a man was present at Emairete)
 11. Cattle market: Ngarash
 12. Buying post: Monduli
 13. Mining: some prospecting present, but no record in Moshi mining claims office.

.... / 2

14. Leased shamba: YMCA
15. Post office: Emairere has one at Monduli town
16. Milk collection centre.
17. Telephone lines to FM's residence.

i. Village Projects.

1. Wheat shamba
2. Tax on charcoal and wood
3. Tax on milk sales
4. TRDB Housing loans
5. Dairy farm
6. Pump for Nguiki pipeline - under discussion
7. Improved bull distribution program
8. Village office; under construction
9. Grinding machine: planned

j. Population stability. Monduli Juu has had a perennial problem of water associated with grazing land. Before villagization there was a great deal of seasonal migration in and out of the area. This pattern is terminating at least for emigration of people, although stock are still seasonally trekked. People are moving in, but the Katibu Kijiji said it was becoming more difficult because of the new village laws. There is no limit yet placed on the number of families to reside in the village.

5. History. In the early 70s Monduli Juu was formed as one part of a ranching association with Ardai and Mfereji. Cultivation was present then, in addition to the YMCA shamba, which was to be a communal effort. Some of the cultivation was on a fairly large scale. Later, restrictions were placed on large scale cultivation and at the time of villagization many farmers were re-settled on the plain.

The area was the object of a number of attempts at livestock improvement through introduction of improved stock and better grazing management. The first effort failed until a re-introduction of exotic stock around 1975 with better monitoring. The second, written up in a management plan, was never popular and was followed only under duress. There is still a "trade-off" between people of Ardai and Monduli Juu: water for grass. Monduli Juu stock are also taken to Mfereji for salt.

Water has been a serious problem. All efforts at boreholes have failed. Dams did not hold water. Recently a small charco at Soiminen was constructed to assist in the seasonal grazing plan and a very large and ambitious dam was constructed at Kluai. The water was breached, and repairs were only completed at the end of 1979 at a cost of about 12 million shillings. This dam is planned to provide water for the entire village through construction of pipelines and a pumping station.

Infrastructure development has been fairly recent with the exception of the Emairere school, church built in 1963, and the Nguiki dispensary.

6. Travel and Communications. The earliest road in the area was a colonial track, built either by the British or Germans, close to Soiminen, almost bypassing Monduli Juu entirely. This road has not been used for many years, and is impassable. The track is almost invisible now.

A second track was cut to Monduli Juu from Monduli town, but was re-routed in the early 70s by clearing a path through the forest reserve following a canyon which begins at Emairere school. Although opinions differed as to why it was cut, in all likelihood it was made to facilitate transport of materials for dip construction. The track then went down the escarpment to the site of the mfereji dip. This escarpment track was impassable by vehicles from 1973 until reconstruction of the Ukame road.

All communications were with Monduli, as they are now.

7. Infrastructure Details.

a. School.

1. Structure. Emairete. There has been gradual growth of the school since the government assumed responsibility for it in the early 70s. At the present time, most of the buildings look to be in need of repair - especially replacement of windows and re-painting. One dormitory building was severely damaged and is now being dismantled. Boarding students use a classroom for sleeping quarters.

Teachers have housing problems also, as in addition to the 8 certificate teachers, 3 other government workers also share these quarters.

The school kitchen is fueled by a methane generator which was installed a few years ago.

Nguiki. The classroom building was recently constructed and presently in good condition. As there is no teacher's house, 1 teacher lives in the village, while the other uses an office, The other office is used by a bwana shamba as his residence.

2. The following is the only record of attendance we could obtain for Monduli Juu from the district office. It is for 1979 at Enguiki school. In 1979 there were only 4 classes.

Enguiki Primary School Attendance for 1979

<u>Class</u>	<u>Registered</u>	<u>% attending</u>
1	24	79%
11	26	80%
111	23	92%
1V	35	80%

Opinions about attendance were generally that utoro at Emairete is almost dead: "we provide lunches now at school and at home there are food problems". The teacher at Nguiki was less optimistic about attendance, although from the above record, attendance would appear to be rather good.

Students at the Emairete boarding school come from the Kitongoji 1 - V mainly. From 6 - 7 they come in addition from Lendikanya, Nguiki, Mfereji.

3. School Projects. Emairete: none at present.
Sewing project planned - sewing machine is present but no teacher.
Small school milk herd project failed when the 2 exotic cows died.
Nguiki : A small vegetable garden , a sewing project

4. Adult education. It is present at both Nguiki and Emairete, but we were unable to get numbers of classes and students.

b. Legal Matters. Each kitongoji in the village has its own baraza la usuluhishi, and 2 weeks prior to the survey a hakim arrived in post. He is living at the Amairete school in its former dispensary building. The following are cases found concerning Monduli Juu in the Monduli Primary and District Courts.

Year	Monduli Primary Court		Monduli District Court	
	Civil Cases	Criminal Cases	Civil Appeals	Criminal Appeals
75	2	25	0	2
76	3	11	0	0
77	7	6	0	2
78	10	3	0	0
79	2	2	1	0

Cases for civil offenses dealt with the trial: dowry, debts and divorce. From the notations it is relatively impossible to tell which are which, as essentially all three involve payment of livestock or money.

Criminal cases were headed in frequency by stock theft, 22 cases, followed in decreasing frequency by possession of illegally brewed liquor (piwa), 8, to breaking and entering 2 cases.

From the primary court cases it would appear that criminal cases are becoming rare (more law and order after 1977?), while civil cases are rising.

c. Dispensary and MCH clinic.

1. Structure. The building is quite spacious and in good repair. The rooms are divided into living quarters and treatment area. The latter consists of a waiting room, consultation room, lab, and MCH room. The building was constructed by the YMCA, but the staff are salaried government employees. In addition to the RMA, midwife and MCH aide, a team of Chinese doctors visits the dispensary periodically to handle special cases, we were told that they did a lot of good work in treating eye diseases.

The staff make some home visits, but rarely. The MCH staff is involved in an outreach program of health education through the Umoja wa Akina Mama adult education classes, two days a week. Prior to opening of the Nguiki dispensary, people had to go to Monduli for treatment.

2. Attendance. The majority of patients come from Monduli Juu, but the dispensary also serves those who are residing in the Mfereji basin, which would include people from Engaruka, Kitumbeine, in the area for seasonal grazing as well.

Attendance records from 1976 indicate a slow rise to a high in 1978 of 17,203 patients, then a drop in 1979 to 14,596. This decline may be due to the opening of a dispensary in Mfereji.

Dominant diseases tend to vary somewhat from year to year. In 1976 Eye diseases predominated. From 1977 to present respiratory diseases took the lead. Other dominant diseases include a variety of disorders listed as "Other", skin diseases diarrhoea, venereal diseases, digestive and wounds.

V.D, eye, and diarrhoea were highly represented in 1976, but have shown a significant decline in later years. There has been a corresponding rise in infections. Worms are negligible digestive disease and wounds frequencies remain about the same, and there is an overall increase in skin diseases.

Concerning MCH, we found no records to assist us. The midwife, however, was able to estimate frequency of visitations. In 1978 there was a serious outbreak of measles, especially at Mfereji, which brought many children to the clinic for inoculation. In 1979 she got about 30 children and nine pregnant women a month. Since 1978 she has only delivered three babies pointing out that women tend to come to the ante natal clinics, but none the less prefer to give birth at home.

d. Shops. There is only one ushirika shop at Monduli Juu and no travelling (wima) salesmen. Since its opening in 1976 its assets have increased from around 1900/- to 6000/- It should have been 10,000/- but the shop was recently robbed of 4000/-.

In stock is scantily. We observed flour, sugar, tea, salt aspro, cigarettes, exercise books, bed covers, khanga. The shopkeeper said that normally he also has batteries, soap and cooking fat.

Goods are obtained from the RTC Monduli. The shopkeeper usually finds a lift to town. He said he hasn't yet hired a vehicle to bring in his stock.

The shop serves Monduli Juu primarily, but also to some extent Mfereji. Local opinion is that there is usually not enough there to satisfy all one's requirements, especially the government staff, so they go to Monduli for supplies. In all likelihood the shop suffers from being too close to a major centre and in a village whose population travels to the centre frequently.

Trading license Applications. From 1975 one shop license was applied for and in 1975 and 1978 there was one application for a cattle trading license - the other 14 in Monduli Juu are then informal operators.

e. Other infrastructure.

1. Livestock services. A number of livestock services either exist in - or are available to the village. The first is the improved stock program. A few years ago, at the instigation of the Prime Minister whose home is at Nguiki, a modest distribution of exotic stock raised in Tanzania was begun. At the moment there are about 10 such animals in the village. Some have died. The program was far more successful than the first stock distribution in 1970 because it was accompanied by a better support and monitoring system. For the most part the animals are in the hands of more sophisticated livestock keepers, who were willing to take the risk of caring for them as well as assume the extra work involved.

Associated with the stock improvement program is the village dairy farm, a fairly advanced center with a number of staff and modern equipment. Local animals, exotic and locally bred exotic stock are kept on the farm. A specialist in artificial insemination is also available, though he resides in Monduli, to continue the genetic up-breeding program.

The dipping situation does not appear to be a great deal better than it was in the early 70s. The dip at Emairete has a broken water pump, so stock are not being dipped. At Nguiki there appears to be a lack of acaricide. It was dipping problems and high tick infestation that brought a close to the original improved bull distribution programme a few months after it began, when almost all the introduced stock died of ECF. The new distribution depends on hand sprayers mainly.

2. Milk Collection Centre. Another major change at Monduli Juu is the presence of a milk collection facility. Milk has traditionally been sold at market days in Monduli. Now it is brought daily to the centre which is located at Emairete. We were told that in the rainy season they obtain about 7700 litres of milk per day. In the dry season this drops to 600.

To augment the village fund, a small tax is charged on each litre of milk sold at the facility, a parallel to what villages with a grain buying post do.

3. Monduli Juu Dam. The dam is a large structure, composed of compacted local materials with concrete support in the spillways. It had originally been constructed in the middle 70s, as a final attempt to provide ample water for the village and its livestock. In a particularly heavy rain, the dam was breached. Repairs began almost immediately, but were beset with numerous difficulties. Finally a private contractor was hired to complete the job.

In the plans for use of the dam a pumping station to a central tank and subsidiary pipeline to various parts of the village is proposed.

Funds for the construction of the dam were not raised locally. It remains to be seen how much the village will be asked to contribute for the pumping station and pipelines.

8. Staffing and Support.

Six government workers, aside from the mwenye kiti and katibu kijiji were interviewed. All but one are not residents of the village. They are all relatively new arriving at post in 1977/1978.

Of the five non-residents, three are married, but only two have their families with them. The absence of the third family is not due to housing, although the individual does lack a house, but rather more important work to be done in his home area.

Housing is a problem for teachers, although not all voiced this as a problem, as some do not mind sharing quarters with other workers.

District support was generally characterized as "meager" "could be better". Without exception all workers go for their salaries and for portable supplies to Monduli. They also tend to get all their personal needs met at Monduli, travelling there on the average of once a week.

Two workers claimed that transport, although better than 1978, is still difficult. Vehicles seldom stop for them. The dispensary personnel do have periodic access to the YMCA landrover. There is no vehicle in the village. Two of the workers say they normally walk to town.

Cooperation with the village is characterized as good, people to people, but workers are not without complaints with regards to cooperation between people and institution. The medical staff claim that patients delay in coming for treatment and when they do demand certain kinds of medication. The Nguiki school teacher said the village was opposed to the school shamba. In both situations villagers brought their concerns to the ear of the Prime Minister. Another worker characterized the relationship thusly: "essentially the villagers ignore us or else complain to the Prime Minister"

Working under the eye of a national figure is no easy task, and all workers feel that pressure as well as the frustration of not having as much district support as they would like. Non, however, voiced desires for re-posing.

9. Development.

a. Villagization. The residences were put in place in 1974, Monduli Juu being an early perhaps the earliest - example of pastoral resettlement village. Seasonal migration of people and stock continued through the following years. More recently stock are trekked for seasonal grazing, while people initial to herding remain home.

b. House construction. The enkaji, called at Monduli Juu, the "kombi" house style, has virtually disappeared. A few remain as memories of the past. Most houses are of the msonge, Arusha, or tembe type. Mabati roofs were making their slow appearance in 1974, but with the receipt of a TRDB bank loan, any villager so desiring a house may have one. The number of houses constructed under the loan is 30 at present, which brings up the total number of dwelling of the mabati type to 71. Nguiki is more willing to accept the loans than Emairete.

Houses are built by imported labor.

c. Cultivation. Approximately 70% of the village engages in some form of home shamba cultivation. Maize and beans are the common crops grown. Shambas are small, from 1 - 2 hectares.

Cultivation is done by tractor, but more commonly by hand or by ox plow. A few residents employ seasonal laborers to do the cultivating for them.

In addition to the village wheat shamba, there is also an incipient project of planting coffee trees. A nursery is present at Nguiki with seedlings almost ready for transplanting. Each boma is expected to take some of the seedlings.

Storage of crops is mainly by binding the unhusked maize together and suspending them from trees in the compound.

d. Consumption patterns. From the catalogue of modern articles found in the village, it is patent that Monduli Juu, as a pastoral village, has a greater need for purchased items than most villages we have come across on the road so far. But Monduli Juu is essentially a mixed community as well, so the needs of its people may vary considerably from boma to boma. Skin skirts are rarely seen in the village although men still wear blankets and warriors shuka. The difference probably is that more males have "swahili" dress for town wear than in most places, yet they prefer their more traditional attire at home.

Food changes are occurring. The katibu Kijiji said that five years ago people gave eggs to children as a kind of medicine. Now chicken and other alien foods are becoming more a part of the general diet.

e. Business. Village enterprises include taxes on woodcutters and makaa burners and collectors and a "self" tax on sale of milk.

Private enterprise for men centers around cultivation and livestock trading. The Katibu Kijiji estimated that the villagers sold an average of 20 cows and 30 goats weekly at the Ngarash market.

The sale of milk, traditionally a woman's prerogative, is still in her hands; however, the profits, after a brief halcyon period, are now being divided between husband and wife. What changes in husband - wife relationships and family economics will occur from this innovation remain to be seen. The Ujamaa and cooperatives officer, who has been very much involved in women's development at Monduli Juu, said that the women of the village are not much emancipated. Comparing them with their sisters in Loliondo, she pointed out that the Loliondo women would simply lie to their husbands when asked how much milk they sold. The Monduli Juu women haven't reached that stage of development yet.

- f. Modern Services. Aside from school attendance and the dispensary and MCH clinics, many of the modern services have just started to have an effect at Monduli Juu. Attitudes towards education do not differ from any other more "traditional" village in Maasailand, nor do approaches to modern medical treatment and childbirth. As few as ten years ago residents moved from the village to avoid having contact with dipping, as they feared it would kill their stock. Of course that even is well in the past history of the village and the Maasai in general. Nonetheless, there appears to be little actively being done to cope with problems of dipping communally. Local acceptance of the official version of the Komolonik management plan, approved by village leaders was only forthcoming under duress.
- g. Participation. Assessing participation of the village in its own development is difficult at Monduli Juu. Of all the communities along the Road it has the greatest number of technical staff and infrastructure.. It has easy access to the District headquarters and Arusha. The villagers have informal and intimate relationships with an important national political leader.

One would expect that the facade of modernization would be somewhat more deeply reflected in the individual and the household. What is reflected is more a passive conformity with what others think is good for them than any active efforts at local self help. That money making enterprises are available to prototype of what easy sources of income without much local involvement in its productions can produce. But there are also opportunities for local enterprise through the milk collection center, stock upgrading program, and coffee seedling distribution. In addition to fostering the communal profits from local taxes on charcoal and milk, great energy must be expended to encourage individual participation and contribution to village development.

10. Perceived Benefits and Problems of the New Road.

It should be underscored that Monduli Juu had an all-weather road from Monduli to Nguiki before construction of the Ukame road, so that essentially its transport and communication systems have been accelerated by the fact that it is now on route to Mfereji, Kitumbine, Gelai, Engaruka and Loliondo. No one has mentioned this aspect of the changes to be brought about by the road, as they are somewhat invisible at present. Nevertheless, traffic increase has been present since the descent of the road to the escarpment and shows only signs of intensifying.

MISSING PAGE

NO. 110

KAKESSIO VILLAGE.

Dates of survey:

1. District: Ngorongoro - hdq distance: about 172 miles.
2. Tarafa: Ngorongoro - hdq distance: " 46 Miles
3. Kata: Kakession - hdq distance: 0

4. Village Particulars:

- a. Vitongoji: 2 (Osinoni and Kakessio).
- b. Population: 140 families (10 bomas at Kakessio,
9 at Osinoni).
- c. Ethnic groups: predominantly Maasai (95%).
- d. Subsistence: livestock keeping (no cultivation)
- e. Leadership: mwenye kiti, katibu kijiji, village council, baraza la usuluishi.
- f. Local experts: cattle traders, 1 makaa burner, 4 local doctors, local midwives.
- g. Modern articles: 2-4 spray guns, 90% syringes, 4 shot guns, torches, kibatari, household utensils present.
- h. Infrastructure:
 1. School. Building with 4 classrooms, 1 kitchen/dining hall, 1 dormitory, 2 teachers' quarters, Primary school also at Osinoni.
 2. Dispensary: MCH technician present.
 3. Primary court: Ngorongoro hakim u monthly at Endulen.
 4. CCM office: present.
 5. Church: present - served from Endulen.
 6. Veterinary services: Field Assistant present, no building.
 7. dip: present with resident attendant.
 8. water: from river and 1 dam (Osinoni): pumping machine for dip. Technician present.
 9. 4 shops (1 open at time of survey).
 10. game post: anti-poaching squad present.
 11. cattle market: dead.
 12. buying post: none.
 13. mining: none.
 14. leased shamba: none.
 15. post office: none.
 16. milk collection centre: none.
- i. Village Projects.
 1. village shop.

j. Population stability.

Unstable in the extreme. The ban on cultivation has caused emigration as had recent stock thefts at Osinoni by the wasukuma.

5. History.

Kakessio is on the western edge of Maasailand, bordering Maswa and the Wasukuma. The area has always been one of border skirmishes between the two groups. Many of the Serengeti Maasai moved to Kakessio, when they were removed from the Serengeti game park. In the late 60s cultivators had moved into Kakessio, but by the mid 70s cultivation was banned. Although stock thefts had been sporadic all through the 70s, a major crisis occurred in late 1979. Thus Osinoni is depopulated, and most of the Maasai claim to be moving away. Kakessio was one of the 5 segments composing the Korongoro Ranching association.

6. Travel and Communications.

Although Kakessio is at the end of Maasailand, it is on a track which starts at Ngorongoro and passes into Shinyanga Region. Although not heavily travelled at any time - the rainy season makes travel almost impossible - there has been a steady trickle of hunters, travellers, businessmen and goods passing to and fro.

Communication in almost all official matters has been with Ngorongoro and Arusha/Monduli.

7. Infrastructure:

a. School. Structure. The school was constructed in the middle 1970s as a boarding school. At present it consists of:

- 1 classroom building with 4 classrooms (concrete).
- 1 mabati structure, temporary classroom.
- 1 building with 3 teachers' quarters, even with its own shower and kitchen.
- 1 wattle and daub structure for dining hall and kitchen.
- 1 mabati building with 2 dormitory rooms.
- 1 mabati latrine.
- (the church is also used as a classroom).

Attendance: We were only able to obtain registration records for the school and not attendance, except for the month of January 1980. Listed below are the average registrations for each year, as the number differed from month to month.

Kakessio Primary School.

<u>year</u>	<u># registered</u>
1975	97
1976	130
1977	138
1978	135
1979	127
1980	239 with 49% attendance.

The teacher estimated that over the past years the attendance has been around 20%. The great jump in registration in 1980 may be because of the mass exodus from Osinoni after the cattle raid of 1979 to Kakessio.

School Projects:

b. Legal Matters.

The hakim at Ngorongoro visits each kata in his area once a month; however, he does not go to Kakessio. He hears Kakessio cases at Endulen. The following are the cases heard by the Ngorongoro and Loliondo courts from 1975 pertaining to Kakessio:

year:	<u>Ngorongoro Primary Court</u>		<u>Loliondo Primary Court</u>	
	<u>Civil cases</u>	<u>Criminal cases</u>	<u>Civil cases</u>	<u>Criminal cases</u>
1975	1	0	0	0
1976	2	1	0	1
1977	2	1	0	0
1978	1	6	0	1
1979	3	2	0	0
1980	0 (Jan.)	1 (Jan.)	0	0

Civil cases concerned 6 child custody, 2 dowry and 1 debt. The criminal cases concerned 9 school truancy, 1 escape from custody and 3 cattle thefts. There is also 1 case from Kakessio heard at Monduli Primary Court: 1978 - injury. What is notable here is the relatively great frequency of civil cases coming to the primary court. In most of the villages in the survey, civil cases were usually dealt with either through a traditional enkiguana or the baraza la usuluishi of the village, both of which the katibu kijiji claims are very active.

No appeals were made to Monduli District Court from any community in Ngorongoro tarafa.

c. Shops.

Only one of the 4 existing shops was open. The other 3, including the village shop, had closed because there was nothing to sell. During the survey, a lorry from RTC Ngorongoro arrived with maize flour for the village shop.

The open shop belongs to a Somali family resident at Kakessio since 1962. This shop and the others are strung out in a short line in what is the village centre. All are of mud brick, painted white, with mabati roof, except for the village shop, which is newly constructed of wattle and daub.

Until 1977, the shops in the area got their supplies from Monduli and Arusha. Now, supplies are to be obtained from the RTC branch at Ngorongoro. Aside from a chronic shortage of supplies, the cost of transport plus the purchase price make goods expensive to sell, so Maasai don't want to buy them.

The inventory of the shop was thus rather scanty in the extreme: 1 5-gallon tin of beans and tobacco. At the time of the survey the owner of the shop was away purchasing goods, some say he was doing so in Maswa and Mwanza. Normally the shop sells maize flour, sugar, soap, tea, rice, beans and cloth.

The village shop tries to stock maize flour, sugar, tea, soap, cloth, pencils, aspro and cafenol. These shops only serve the people of Kakessio.

Applications for Trading Licenses: from 1975 to present applications have remained the same:

6 applications for a shop, 1 application for a hotel/mgahawa, and 1 for cattle trading.

d. Dispensary and MCH clinic.

Structure: 1 medical building consisting of 2 rooms and a store. Stock is standard: medicine cabinet, kerosene stove, examining instruments, table, benches, etc. There are no MCH materials present.

1 living quarters and latrine.

The dispensary is staffed by an RDA, who apparently at the time of the survey had already been transferred, and an MCH technician, perhaps an aide. MCH headquarters is at Ngorongoro. The Medical Assistant had been involved in a mobile clinic program, visiting each kata per month. (The program has ceased because of lack of petrol and transport). This may be the reason why there are no MCH materials at Kakessio.

Attendance. Patients come from Kakessio area. The M.A. says that outside of Ngorongoro centre itself the pastoral communities under his jurisdiction are not at all interested in the outreach program which emphasises ante-natal, post-natal care and family planning. However, the MCH aide at Kakessio claims that women there are willing to participate, but she lacks the materials with which to initiate her outreach activities.

From the attendance records we note an interesting fact, considering the general opinion that Kakessio is being abandoned: attendance has increased since 1976 from a low of 3364 to a high of 8202 in 1979, almost twice the number recorded for the previous year.

Dominant diseases treated since 1975 have some variation apart from consistent presence of respiratory diseases and malaria. The 'catch-all' category of "Other Diseases" has consistently high representation. Eye diseases are found to be among the dominant cases from 1975 to 1977. From 1977 onwards, venereal diseases make their appearance. Similarly with skin diseases and wounds and injuries, entering into the dominant 4 diseases from 1977. Oddly enough, given the kind of water supplies at Kakessio - hand-dug shallow wells in the river and a dam without a tap - diarrhoea and dysentery are only highly represented in 1979.

MCH records are for 1979 only: Post-natal: 320
Ante-natal: 115

(We have combined the normal categories in the MCH monthly record of new/return, under 6 months/over 6 months for children, and new/return, under 28 weeks/over 28 weeks for pregnancies).

8. Staffing and Support.

The consensus among those who are not born at Kakessio was voiced by a recent arrival: "All workers regard this place as their hardest posting." They consider that district support is at an absolute minimum at present. In part, this is because of transport and supply problems, but it is also a function of the newness of the new district, whose headquarters' staff is not yet in place. Most of their work support comes from offices at Ngorongoro headquarters.

Personal supplies come from Kakessio, when it is possible. Most supplies must come from outside. Although Endulen is not replete with goods, shops at Makao, on the Sukumaland border, are better stocked. Nonetheless, staff prefers to travel to Ngorongoro or Arusha for supplies whenever possible. One man, who arrived at post in January, has already been four times to Ngorongoro.

Co-operation with villagers in terms of work is fairly poor. The veterinary field assistant said that villagers refuse to assist in cleaning the dip or other remedial work. The MCH technician, on the other hand, says that village women would be interested in an MCH outreach program if she only had the equipment to start up one. Parents are very unwilling to send their children to school or co-operate in school development.

Co-operation between people, however, is good. And all workers reported that they had cordial relationships with the community at large.

Most of the non-resident workers would prefer re-posting, but as one teacher pointed out, he feared that he would be put in an even worse place.

9. Development.

- a. Villagization. If Oljoro could be characterised as a village in decline, superficially, Kakessio appears to be a village in disintegration. Locals and government workers give the obvious fact of a spate of stock thefts as the main cause; however, there are deeper issues confronting Kakessio which may also play a role. The first is a ban on cultivation which makes pastoralists more dependent upon infrequent and often unstable supplies of food from Arusha and which also prevents them from initiating a new local source of food - their own home shamba. The second issue is more vague and not at all easily measured: perceived conflict between man and game which tends to determine policies in the Conservation Authority itself. The latter issue simply creates an atmosphere of insecurity, and in some cases, anxiety in residents concerning their own future. Coupled with livestock requirements for seasonal grazing, water problems, and stock theft, these factors contribute to a most pessimistic attitude of the Kakessio people about their existence in the Conservation area, and it is not surprising that they appear to outsiders to be unco-operative and unwilling to take the lead in various self-help projects and technical programs.

- b. House construction. It is of the old, 1 fence, system, which is far better for defence from raids than the new "two-ring" style. House types are all of the enkaji model.
- c. Business. All respondents felt that each family sells more livestock now than in the past, mainly to purchase food, but also to buy services - especially hospital, livestock drugs, and transport - and some modern articles. One man estimated that he now sells from 4 to 5 cows a year. Livestock trading is common, and many warriors also carry on small businesses in stock drugs.
- d. Consumption patterns. Respondants agreed that the Maasai now have a more varied diet, maize flour especially being the main staple. Men and women still for the most part adhere to the more traditional style and substance of Maasai dress; blankets for older men, shuka for younger men, and skin skirts and capes for women.
- e. Modern services and participation. As noted above, technicians at Kakessio consider the villagers to be quite unco-operative, with relatively little interest in modern services. Actually, what appears to be a more accurate picture is that of interest in certain aspects of modern services, not refusal. For example, they appreciate stock drugs, but are not very willing to co-operate in cleaning the dip.

There is no question that their relative isolation, as far as District and Regional Headquarters are concerned, would tend to prevent them from regular exposure to ongoing development programs, but the atmosphere of pessimism which pervades Kakessio also militates against any real commitment to self-help projects.

10. Ukame Road Impact.

On Kakessio, this can only be indirect in the broadest sense, for even if the new district increases its use of the new road, any benefit to Kakessio can only come if either the road to Ngorongoro via the Serengeti, Ololosokwan-Lobo, or Sale-Malambo are improved. Otherwise, Kakessio will continue to receive most of its assistance from Ngorongoro, which uses the Mto wa Mbu road to obtain supplies.

KISERIAN VILLAGE.

Dates of survey: 3-5 Nov. 1979.

1. District: Aru-Meru - hdq distance: about 10 miles.
2. Tarafa: Moshono - hdq distance: ?
3. Kata: Mlangarini - hdq distance: " 6 miles.

4. Village Particulars:
 - a. Vitongoji: 4 (Endoinyo Enkaroni, Endoinyo Olmorua, Endionyo Loiboni, Oldendenderit - half of this area is a kitongoji of Nduruma village).
 - b. Population: 459 families (kaya), 2267 people.
 - c. Ethnic groups: 90% Warusha.
 - d. Subsistence: primarily cultivation with some stock keeping.
 - e. Leadership: mwenye kiti, katibu kijiji, village council, baraza la usuluishi.
 - f. Local experts: 1 mechanic, 1 house builder, a few entrepreneurs.
 - g. Modern articles: 4 landrovers, 4 tractors, 6 ox carts, 100% ox ploughs, 100% torches, bicycles, and radios 80%, kibatari 80%, spray guns present.
 - h. Infrastructure:
 1. School: 2 classroom buildings, 3 temporary buildings, 3 teachers' houses with vyoo, 11 teachers, 7 classes, 12 streams.
 2. Dispensary and MCH clinic: RMA and MCH aide present.
 3. Primary Court: Arusha, Enaiboishu.
 4. CCM office: temporary use of building.
 5. Church: Lutheran, pastor at Nduruma.
 6. Veterinary services: Aru-Meru hdq.
 7. Dip: present with dip attendant.
 8. Water: Pipeline, water tank and taps.
 9. 1 shop.
 10. Game post: Nduruma.
 11. Cattle market: Olokii.
 12. Buying post: present.
 13. Mining: none.
 14. Leased shamba: none.
 15. Post office: none.
 16. Milk collection center: none.

4. i. Village Projects.

1. Additions to school building: shs. 10,000/-
2. Contributions to construction of new dispensary: Cash and labour.
3. Buying post.
4. Office, store and village shop building - TRDB loan.
5. Sale of mabati at buying post.
6. Village shamba - 500 hectares - proposed.
7. Hire two villagers to tend the pipeline.
8. Purchased grinding machine for 20,000/-.
Not yet in place.

j. Population stability:

The earlier pattern of using Kiserian as a seasonal planting area by residents on the mountain is drastically decreasing. There is at present relatively little immigration, 4 new residents in the village over the past year. Out migration greater because of growing scarcity of land.

5. History:

As noted above, Kiserian was, and to some extent still is, an area of seasonal expansion for farmers from Mt. Meru. The pattern was to plant and harvest at Kiserian and then return to the mountain with crops.

The earliest arrival date of one of the leaders interviewed was 1952: the man was brought as a child. Years of settling ranges from 1952 to 1966 for these elders. When Kiserian was formed as a registered village, the rules of the village tended to force residents to make decisions as to where they would remain. This rule, in addition to the fact that mountain residents were beginning to marry wives in Kiserian, has helped stabilise the population.

Aside from a lutheran school and small church, there was almost no infrastructure until villagization took place. The head teacher characterised the Kiserian of 1973 as being "pori kabisa" - absolute wilderness - which might be a slight exaggeration, but does illuminate how drastic the changes in Kiserian have been.

6. Travel and Communications.

In the early 60s a track was cut from the old Arusha-Moshi road into Kiserian and to Olokii. Residents said it was mainly used for collecting taxes. Nonetheless, it provided a greater opportunity for the few people living in Kiserian to reach Arusha and for an intensification of migration to Kiserian from the north. Until 1975, Kiserian was a part of Nduruma Kata, headquarters of which are about 5 miles eastwards across country. Headquarters of the new kata, Mlangarini, are on the old Moshi road, about the same distance away.

6. (contd.)

Kiserian has a bus service. Two buses pass through the village. Twice a week, on cattle market days, the Ami bus takes the Kiserian route. The "Lucy" bus service travels it daily. Numbers of trips vary with the demand of passengers, approximately 2-4 per day.

In addition, most charcoal and sand lorries now use the Ukame road through Kiserian. Thirdly, one can get a lift on the NMC lorries which come to the buying post to transport grain.

Aside from some notable, and hopefully exceptional, problems in the rainy season of 1978, transport at Kiserian is absolutely no problem whatsoever these days.

Current transport costs:

- Rental: Kiserian-Arusha: 75-150/- landrover.
- Lift: Kiserian-Arusha: 3/- per person
5/- per sack of grain.
- Bus: Kiserian-Arusha: 4/-.

7. Infrastructure Details.

a. School:

1. Structure: The school was constructed in 1962 by the Lutheran Church. A new teacher's house was added after 1973. Apart from the teachers' quarters, which seem to be in relatively good condition, the school buildings are very much in need of repair. In the main classroom building, ceilings are collapsing, windows broken, etc. Moreover, most of the classrooms appear to be quite dirty. In one class, a sack of rotting grain rested near the door. Two temporary wattle and daub rooms with mabati roofs have been constructed on either end of the main building. The Church, situated nearby, serves as an additional classroom.
2. Attendance. In comparison with the school in which he is residing, Mlangarini, the mratibu kata claims that Kiserian school attendance is better, with greater co-operation between teachers and locals. Education of girls is still a problem, and some people have to be forced to send their children to school.

The attendance record for Kiserian is difficult to discern. The files in the District are not complete, and the calculations of attendance in most of the monthly reports are inflated in the extreme. The following is based on classes for which attendance was not over 100%.

Year	Kiserian Primary School.	
	# registered	% attending.
1975	216	68%
1976	247	74%
1977	323	74%
1978	339	73%
1979	498	67%

7. a. 3. School Projects.

6 acre school shamba.
1 new classroom and teacher's house.

b. Legal Matters.

The baraza la usuluishi has been in existence since 1975, arising out of an earlier enkiguana. Members said the nature of the problems they hear has not changed: mainly debts and divorce. Only 1 case of a boundary dispute was noted as coming before the baraza. More contemporary cases heard in the baraza are utoro, school truancy, and refusals to contribute to village projects.

Kiserian cases are found in 3 primary courts in the survey. The number in Nduruma court are taken from a random sample, as they are not representative of the total number of cases from Kiserian, as are the others, where a total count could be obtained.

Year	Nduruma Primary Court		Enaiboishu Primary Court		Maramboso Primary Court	
	Criminal cases	Civil cases	Criminal cases	Civil cases	Criminal cases	Civil cases
1975	0	0	0	0	0	0
1976	0	1	0	1	1	0
1977	0	1	0	2	2	0
1978	0	0	0	2	1	0
1979	0	1	1	3	1	0

Court cases on the whole are relatively few, but there is a slight trend towards greater use of primary courts to settle disputes. Civil cases involved debits primarily with 1 case of return of dowry. Criminal cases involved brewing piwa, illegal whiskey, breaking and entering and theft.

In the Arusha District Court we find the following appeals from Kiserian:

Year	Civil appeals	Criminal appeals.
1975	1	5
1976	1	3
1977	0	4
1978	0	1
1979	3	2

c. Dispensary and MCH Clinic.

1. Structure. The medical building was constructed in 1975 mostly through government funds. Villagers contributed 500/-, helped carry stones for the foundation and dug the pit for the latrine. It looks well cared for. Most of the morning was filled with patients. There are 3 rooms inside: 1 for MCH, 1 dispensary and 1 office.

There is also 1 residence near the dispensary.

None of the employees had been working at the clinic for more than 2.5 months.

- 7. c. 2. Attendance. The nurse ward attendant, who has worked in Maasailand for a number of years compared Kiserian with other areas in saying that venereal diseases were less frequent here, but aside from that he didn't note much difference between cultivators and pastoralists concerning incidence of disease. Prior to the opening of the dispensary people went to Nduruma and Arusha.

Attendance at Kiserian dispensary indicates a steady rise from 1977 of 15,258 persons to 1979, 17,264 persons.

Common diseases treated over this period are: respiratory, malaria, skin diseases, and digestive diseases.

The table below presents the average monthly attendance for children and pregnant women at the Kiserian MCH clinic, which opened in 1978.

<u>Year</u>	<u>Child average attendance</u>	<u>Pregnant women's average attendance.</u>
1978	116	52
1979	85	40

The reason for the decline may be related to village/dispensary worker conflicts which were rife at the time, although the Nduruma MCH records do not show any corresponding increase in patients from Kiserian and there is no decline in 1978 at the Kiserian dispensary. Interestingly enough, there is a corresponding drop in attendance from 1978 to 1979 in Nduruma and Ngare Nyanuki clinics, which would indicate a broader problem at work.

d. Shops:

Kiserian has only recently been provided with a shop, a small place which residents say at present only sells matches. (We were unable to find it in the village). On the road there are two small stalls usually selling a very small supply of vegetables and sometimes milk packs from Arusha. Supplies for Kiserian are normally obtained at shops on the old Moshi, Kijenge market, and Tanganyika Packers.

Trading licenses for Kiserian are few indeed. In 1975 1 off-license beer and 1 pombe license were granted. No other trading licenses were received until 1979; 1 shop and 1 buying post.

e. The buying post complex.

Kiserian is the only village in the survey possessing a buying post (Nduruma also has one, but as only a small portion of the village touches upon the road, we omitted it from consideration).

The buying post was started in 1978, at the village headquarters, housed temporarily in the dip attendants residence (the dip attendant lives on the Old Moshi Road).

7. e. It has a safe and weighing machine purchased through harvest profits. A new building is planned with similar profits.

The following table gives the number of kilo of each crop sold to the buying post for 1978 and 1979, and the gross and net profits for the village for each year. It should be noted that the total kilos sold to the buying post do not represent only crops grown at Kiserian, as we found that people from as far away as Loswaki sell their crops there.

Annual Purchases and Profits for the Kiserian Buying Post:

crop	1978		1979	
	# kilos	village tax	# kilos	village tax
maize	300,000	27,000	400,000	36,000
beans	25,000	2,250	30,000	2,700
pigeon peas	30,000	2,700	400,000	36,000
millet	15,000	450	0	0
lentils	2,000	180	3,000	270
sunflower seed	500	45	500	45
sorghum	500	45	3,000	270
ngwara (?)	0	0	9,000	870
Total	264,000	32,760 (Gross) 7,000 (Net Profit)	845,500	76,095 (Gr.) 52,865 (Net Profit)

Four full-time workers are employed by the village buying post. Aside from use of these profits to build a new buying post-office/co-operative shop complex, the village has discussed purchase of a new gun for the guard.

Not all village produce is sold through the buying post, although it is a village rule. We were told that some farmers take it directly to Arusha or sell it locally to private buyers. Although the price is a bit better, they don't have to share it with the buying post; another reason is probably that the producer gets paid immediately. At the buying post, he gets a certificate redeemable after a few months. (It was precisely the delay in obtaining payment for produce that made Loswaki residents start using Kiserian instead of Mbuyuni which is much closer to them.) A check point has been set up at the buying post to examine contents of vehicles to make sure no crops are being taken out of the village.

f. Other infrastructure.

1. Dip. It was constructed in 1972, consists of watering trough and attendants' quarters, which are now used for the buying post. The dip attendant was on leave at the time of the survey, so was not interviewed.

Residents said that the dip was not functioning because the replacement for their attendant said it needed repairing. Later in the month, when the attendant returned, we found people dipping again.

7. f. 1 (contd.)

When asked about the stock diseases and needs for drugs, locals said their most common problems are ECF, blackquarter, and anthrax. When the dip is operating they claim to dip stock 3 times a week, as the tick problem is severe. They said that they often do not get acaricide.

Aru-Meru livestock drugs issues register indicates 4 allotments of acaricide to Kiserian in 1979. The dip attendant obtained drugs from the stores on 3 occasions. For the most part residents go to Arusha or Moshi to purchase their drugs privately.

2. Water Supply. Kiserian is served by a pipeline which was built in the middle 60s from Mt. Meru. The piping apparently has caused many problems. In the dry season it cracks, being close to the surface, or on it, in places. The village agreed to hire two young men to police their portion of the pipeline and to perform minor repairs where necessary.

8. Staffing and Support.

The only salaried persons interviewed, other than the mwenye kiti and katibu kijiji, were the head teacher and the newly arrived medical personnel at the clinic. The former was in the unusual position of having worked at the school in 1973 and being transferred back in 1979.

There were no voiced problems with obtaining materials from headquarters., except that transport of heavy supplies was difficult. Teachers go to Aru-Meru for salaries and small supplies, sometimes taking students with them. The head teacher noted that the situation has improved since 1973.

Similarly, with personal supplies. Almost everything is obtained from Arusha, or from Tanganyika Packers, a few miles away. In 1973, the situation was quite different: pastoral supplies were obtained with difficulty. These days, teachers tend to go to Arusha on the weekend to do their shopping for the coming week. There is seldom a problem of transport. In fact, the mratibu kata of Mlangarini said that often teachers from his school cut across to Kiserian to catch a lift.

There were no complaints about housing. Six of the eleven teachers are UPE, so live at home. The other teachers share housing.

Relationships with the community were said to be good, although in the past letters were sent to the village office complaining about absenteeism of the former medical staff - none are present now. Also there were some complaints about teachers' absences, and during a meeting we chanced upon, villagers said that the teachers were using school shamba crops for themselves.

From the teachers' point of view the community is peaceful: co-operation is good. They cited sale of milk and produce and permission from locals to teachers to use some of their fields for cultivation as examples.

8. (contd.)
Concerning job satisfaction, the head teacher felt that his teachers were much happier with their postings in 1979 than they were in 1973, ease of transport and general development of the village being the reasons given.

9. Development.

a. Villagization. Officially Kiserian is a complete village with leadership registration. It appears that its migration patterns are becoming stabilised as well. The mwenye kiti says there is little or no land left for new comers. The original seasonal use of Kiserian is dying out. At least those who claim to possess land in the village are being forced to cultivate it or risk having it divided up. They are also being required to sell their produce to the village buying post.

At the same time, village boundaries are vague in the eastern portion (Mlangarini) and residents have a tendency to "spread out". Emigration appears to be more at work now than immigration - the case of 122 residents who moved to Kigongoni illegally and were later forced to return is an example of out-migration.

b. House construction. All said that as late as 1976 most houses were of the msonge, thatched Arusha type. By 1977 they began to change until at present they are very numerous - out of 63 houses visible from the Kiserian school to the village boundary at the railroad tracks, 21% (13 houses) were mabati roofed.

The village has a "project" of encouraging new house construction. It obtains roofing materials from RTC Arusha, and sells them through the buying post. One resident said that recently people have been competing in constructing better houses.

c. Cultivation. The average size of a field in Kiserian is 19 hectares, the range being from 6 to 25. This is probably an inflated figure as it was obtained at a meeting of the village council, the members of which are probably more affluent than many in the village. This apart, informal discussions with other residents revealed that land hunger is on the increase. One man, not a member of the council, said that in the old days (60s) a few acres seemed like a lot, but now even 20 acres seems like nothing. Most of the individuals interviewed said that they came to Kiserian precisely because of land shortages in their home communities.

Although not specified, many also said that in the early days they were most inefficient in cultivating, obtaining 2-3 sacks of grain from an acre. Now, without fertilizer, and if they don't eat any during the growing period, they can obtain from 8-15 sacks.

9. c. (contd.)

Tractors are present at Kiserian, but we were told no one used them in the last planting season. Ox ploughs are more common.

Fertilizers appear not to be popular. We found half of the dip store at the buying post filled with unused sacks of fertilizer, received apparently as a gift. Locals said it burnt up their seedlings, so it wasn't used.

Grain storage is traditional, placed in the "attics" above the kitchen. We did not ascertain if any insecticides were used to preserve it against vermin.

- d. Consumption patterns. Table ___ lists the number of modern articles found at Kiserian. Other consumption changes have included radical shift in dress from shukas in 1973 to suruale (trousers) in 1979. Skin skirts and braided moran hair styles are found infrequently at Kiserian, but this is true for most Warusha communities near Arusha these days.

The mwenye kiti said that nowadays, especially after completion of the road, people tend to go to Arusha more often than before. From discussions with the village councillors it would appear that individuals go on the average once a week, travel ranged from 3 to 30 times in October.

Food consumption changes tend towards those more associated with the Maasai, greater consumption of eggs, chicken and even pork, although fewer appreciate mboga (greens).

- e. Business. Aside from the few tractors in the village, and young people trained in education, medicine, etc. business on dealings center around cultivation. There is a greater trend towards cultivation for sale and not just home consumption. Kiserian also has almost no seasonal workers.
- f. Modern services. We have already noted a relatively poor school attendance, but this could possibly be as much a problem of the school itself as of the parents. Adult education is not very popular at Kiserian either. Certainly residents appear to take an vigilant interest in both the school and dispensary. The buying post is, of course, a village focal point,

In other areas of development, however, we find villagers requesting tree seedlings from district nurseries, purchase of a grinding machine, planning a village shamba, although implementation may be difficult as most of the villagers already are quite occupied with their own fields, donating for the schools, and decisions to pay for 2 local water fundi.

- g. Participation. Attendance at meetings is rated as good, but there is a village rule penalising truancy. Profits from their buying posts which can be used for village projects, may over-inflate somewhat the

9. g. (contd.)

accomplishments of the villagers in the area of self-help; nevertheless, they appear to be very co-operative in making contributions when asked to. The meeting was attended, among other issues, was concerned with contributions for a village party to fete returning soldiers from Uganda. As the village had already contributed over shs. 15,000/- to the war effort, the council decided to contribute the bulk of the cash for the party - shs. 1031/-. But the men attending the meeting also raised 700/- in cash and others contributed animals for slaughtering.

Kiserian is regarded by the mratibu kata as the most outstanding village in his kata, citing two reasons: local interest in development and willingness to contribute to projects.

10. Perceived Benefits and Problems of the New Road.

Benefits all center around increased possibilities of transport and greater development of infrastructure. All those interviewed believe their new huduma to be a result of the new road, which may have partial validity.

But they were also quite vocal in outlining the problems which have accompanied the new road:

Two major vehicle accidents since the road was completed.

The school is on a dangerous corner and they fear children may be struck by a passing car.

Two cows have been hit by vehicles over-speeding.

Thieves are on the increase.

They have encountered no greater visits by relatives, requests for assistance, etc. yet.

During the road construction two men from the village worked on the crew. There was not much contact between the villagers and the crew and little sale of produce: "it was a dry year, so there was little milk". No problems were encountered between the crew and the village.

One major problem they voiced with the new road stems from their greater expectations of all season ease of travel once the road was completed. Unfortunately in the heavy rains, one section of the road to the north of the village became impassable, mainly because of heavy lorry use of the road from Kiserian and Losinyai at the time. At one point transport ceased completely. Residents fear the same thing will happen in this rainy season.

KIGONGONI VILLAGE

Date of survey: Nov. 2, 1979

1. District: Aru-Meru - hdq distance: about 16 miles
2. Tarafa: Moshono - hdq distance about 12 miles
3. Kata: Nduruma - hdq distance: about 4 miles
4. Village Particulars.
 - a. Vitongoji: none
 - b. Population: 166 kaya (families) 654 people.
 - c. Ethnic groups: diverse.
 - d. Subsistence: primarily cultivators with some livestock keepers.
 - e. Leadership: Mwenye Kitij, Katibu Kijiji, Village Council
 - f. Local experts: none
 - g. Modern articles: 1 tractor, 6 ox plows, kerosene lamps/kibatari present, about 25 bicycles, a few radios, 100% torches.
 - h. Infrastructure:
 1. School: 1 classroom building, teacher's house under construction, 3 teachers, classes 1 - 5
 2. Dispensary: Nduruma, Lucy
 3. Primary court: Nduruma
 4. CCM Office - present
 5. Church: none
 6. Veterinary services: ?
 7. Dip:
 8. Water: Themu river furrow
 9. One shop
 10. Game post: Nduruma
 11. Cattle market: Olokii
 12. Buying post: Nduruma
 13. Mining: none
 14. Leased shamba: none
 15. Post office: none
 - i. Village Projects.
 1. Construction of teacher's house
 2. Village shamba
 3. CCM office completed in 1979
 4. Proposed fees for goods sellers at Olokii cattle market (awaiting authorization).
 - J. Population stability. According to the Katibu Kata for Nduruma, since 1976 population has increased in all of its constituent villages, but less so in Kigongoni - much less infrastructure present than at Nduruma village. The Katibu Kijiji claims that the population of livestock keepers is declining, but cultivators have remained. Recently a large number of residents from Kiserian moved "illegally" to Kigongoni and were finally told to return to their home village.

.... /2

- 5. History: Not ascertained.
- 6. Travel and Communications. The track to Kigongoni cuts to the East of Olokii, following the Themi river. There are a number of small seasonal roads, one of which eventually arrives at Lucy Estate, but it is known better to locals than visitors. We were told that in 1970 a bus passed through this road to Arusha from Bawani and Lucy estate. One still exists, but its route has changed so that people from Kigongoni travel to the Themi crossing, about 2.5 miles away from the school and CCM office, to get it.

There appears to have been little change in communication patterns. Nduruma is the main point of contact. Travel to Arusha and South has been greatly facilitated.

Current transport costs not ascertained, but for the bus is the same as for Nduruma/Kiserian.

7. Infrastructure Details.

a. School.

- 1. Structure. The building was completed in 1978, government contributing $\frac{3}{4}$ of the cost and the village $\frac{1}{4}$. It is constructed of wattle and daub with a mabati roof. A teacher's house of similar materials is being built at present. Teachers live either at home (some are UPE) or with neighbors of the school.
- 2. Attendance. We were unable to obtain registration and attendance records for the school. Discussions with the Mratibu Kata at Nduruma revealed that the enrollment at Kigongoni is particularly poor, parents are not willing to send children to school. He noted that the problem of utoro is not limited to Maasai children in the least at Kigongoni.
- 3. School Projects: Construction of teacher's house
- 4. Adult Education. 4 classes.

- b. Legal Matters. Earlier problems between livestock keepers and cultivators were noted, but by 1979 they appear to have been settled. The following were cases taken in a random sample from Nduruma primary court (Kigongoni is not represented in any other court surveyed, including Arusha District court).

Nduruma Primary Court

<u>Year</u>	<u>Criminal Cases</u>	<u>Civil Cases</u>
75	1	0
76	0	0
77	0	1
78	1	0
79	1	0

The criminal cases involved abusive language, 7 residents charged with not conforming to the order to build latrines (during the Cholera quarantine), and 1 assault. The only civil cases for this village dealt with debts.

- b. Shops. One shop, Somali - owned, which also has an off-license beer license, was closed at the time of the survey. According to the Katibu Kijiji, the shop has most of the levies required by the community. Its "bidhaa" comes from Arusha.

Trading License Applications. Although these are applies for Kigongoni aside from the one shop, the rest are intended for use at the weekly cattle market at Olokii, which apparently is within the village boundaries. The increase of applications from 1977 onwards is striking.

<u>Year</u>	<u>Duka</u>	<u>Hotel</u>	<u>Butcher</u>	<u>Wima</u>	<u>Other</u>
75	0	0	0	0	0
76	0	0	0	0	0
77	1	1	0	0	0
78	1	1	1	0	1
79	1	1	1	4	1

(Wima indicates a goods seller, usually following stock markets, but also equivalent to the door-to-door salesman in the U.S)

- d. Water supply. The water for Kigongoni comes from an old ditch (furrow) cut from the Themí river. It is usually contaminated. Certainly it was felt to be so during the Cholera quarantine which closed off the area in 1978.

The District some years ago surveyed the area for a pipeline, but the funds were never made available. Recently a borehole survey team found an appropriate site in neighboring Themí ya Simba.

The District Water Engineer said that residents of Kigongoni are willing to assist in sinking the borehole, but that they are basically too poor to make any substantial monetary contribution.

- 8. Staffing and Support. Teachers, the only salaried workers apart from the Mwenye Kiti and Katibu Kijiji, were not available for interviews. According to the Mratibu Kata at Nduruma the only request for transfer he received since his arrival at post in 1978 was from Kigongoni. Kigongoni was also assigned a village manager, but we were informed he refused to accept the post.

- 9. Development.

Villagization. The core of the village appears to be complete. The village is registered, housing plots are arranged opposite the track from the Themí drift, and a "village square" is composed of the shop, school and CCM office.

Immigration appears to be still ongoing, however. And it is very possible that in the future the profile of this village, of which we only obtained the barest outlines, may change radically, as the Olokii market increases in importance again and if the Themí holding ground, which borders on Kigongoni, is actually turned into settlement. The lands Officer of Aru-Meru said that he has received 3500 applications for land since news of the possible division of the holding ground was made publich.

House construction, apparently no change. Houses are mostly peaked roofed and generally conform to the style considered desirable in the villagization process. We saw very few mabati roofs. Most of the houses were wattle and daub or mud brick with thatch roofs.

Cultivation. Planting is done by tractor, ox plow and by hand. The crops grown are sunflower, beans, cow peas (Mbaazi), some cotton, bananas, cassava, maize and groundnuts. The last four are grown primarily for home consumption. The harvest is usually not husked and stored above the kitchen where the smoky fire keeps its from insect infestation.

Crops which are sold are still taken to the Nduruma buying post; however, NMC tends to use the Ukame road rather than the road from Mlangarini.

Consumption patterns. The Katibu Kijiji was unable to cite any particular changes in diet - there is such diversity at Kigongoni it would not be surprising - but did mention that furnishings in houses are becoming more varied. People are beginning to prefer tables, spring beds, etc.

Attitudes towards modern services. None directly ascertained, except opinions of officials from the Kata that the school is not highly favored.

We found that women and children from the village do use the Nduruma MCH clinic, but compared with Themí ya Simba, its neighboring village to the East, with triple the population it shows proportionally greater use of the facility increasing from 1975 to 1979.

From Nduruma MCH Clinic

<u>Year</u>	<u>Ante Natal Attendance</u>		<u>Post natal Attendance</u>	
	<u>Kigongoni</u>	<u>Themí ya Simba</u>	<u>Kigongoni</u>	<u>Themí ya Simba</u>
75	0	0	0	13
76	2	21	1	5
77	5	35	14	38
78	12	32	7	12
79	12	23	5	8 (to October)

OLJORO VILLAGE

Dates of survey: 14 - 16 November, 1979

1. District: Arumeru: - hdq distance: about 20 miles
2. Tarafa: Enaboishu: hdq distance: about 20 miles
3. Kata: Oljoro - hdq distance: about 10 miles
4. Village Particulars:
 - a. Vitongonji: 3 (Laroi, Mbuyuni and Oljoro)
 - b. Population: 541 families, 57000 people. (estimated for Oljoro kitongoji - 300 families)
 - c. Ethnic groups: great diversity with growing numbers of Warusha settlers.
 - d. Subsistence: at Oljoro proper, cultivation is primary, but some livestock keepers/cultivators moving into the other vitongoji.
 - e. Leadership: Mwenye Kiti, Katibu Kijiji, Village Manager, Village Council, Baraza la Usuluhishi.
 - f. Local experts: two mechanics, four house builders/carpenters, one tailor
 - g. Modern Articles: 22 ox plows, kerosene lamps and kibatari, 20 bicycles radios (number not ascertained), torches 100%, syringes present (these are within Oljoro kitongoji)
 - h. Infrastructure:
 1. School: Five classrooms, four teachers, seven classes, 177 students
 2. Dispensary: First aid box at Mbuyuni, Oljoro Jeshi camp
 3. Primary court: Enaboishu or Marombso (Arusha Urban)
 4. CCM Office - present
 5. Church: Lutheran chapel with evangelist
Mosque with mwalimu
 6. Veterinary services: Moshi, Arusha
 7. Dip: present with attendant.
 8. Water: Pipeline from Oljoro with village tap
 9. One shop (almost inoperative), One kilabu
 10. Game post: Nduruma
 11. Cattle market: Olokii
 12. Buying Post: Mbuyuni
 13. Mining - none
 14. Leased shamba: none
 15. Post Office: none.
 - i. Village Projects:
 1. Pay for acaricide transport with Losinyai
 2. Construct two school classrooms
 3. Village communal shamba
 4. Village shop
 - j. Population stability. The basic population of Oljoro, when it was an Ujamaa village has remained stable, but since 1976 it was removed from that status and joined with two other communities. Since that period, there has been an increase of Warusha who have been removed from present Arusha Technical College land.
5. History. Oljoro is a fascinating village for study - and perhaps someday a University student might be asked to investigate its development and decline.

The village began as an ujamaa village in 1971 with a core of 23 families. It was started on the former farm of a white settler, and most of the new villages came from his and neighboring estates which were also nationalized.

Officials in the District headquarters said that Oljoro was "spoon-fed" and consequently its residents never gained a sense of independence and self help. Village projects were mainly financed through a fee on sand collection at Losinyai korongo.

In 1976 it lost its ujamaa village status and under the Villagization Act was combined with Laroi and Mbuyuni to form a resettlement village. At this time the population also started increasing with farmers from Arusha.

6. Travel and Communication. Until the Ukame road was completed the main travel and communications route was the Oljoro road. In pre-village times a milk truck from Arusha used to visit the estate daily to purchase milk. Sand collectors and charcoal collectors also used the road. The latter two still existed during ujamaa times.

A second, but minor route approximated the Ukame road, starting at the Losinyai korongo, at the tzetze post, called "Customs" and going to the Themi Market at Olokii.

In the middle 70s a bus also passed through Oljoro village en route to Arusha from Terat.

At the present time, although the Oljoro road is still used, all interviewed claimed that it was much easier to get a lift to Arusha on the Ukame road. In part this was due to the fact that in 1979 the Oljoro road was partly closed to heavy duty vehicles. It is now open.

Current transport costs: Oljoro - Arusha 5 - 10/- (dry season)
20/- (wet season)

The lifts are on charcoal and sand collecting lorries.

7. Infrastructure details.

- a. School

1. Structure. The school was built in 1972 with yearly additions up to 1977. In 1979 the District brought materials for construction of two more classrooms, but nothing has yet happened because the village has not yet contributed its share of the building costs.

The school consists of:

- The original, cement classroom block
- Two cement, unpainted rooms without window frames
- Two teachers' houses, one being used as an office
- School grounds were neat with some small trees planted along the main drive.

2. Attendance. According to the Katibu Kata, school attendance at Oljoro is lower than for its other two vitongoji. Teachers at the school tended to agree with him. They mentioned that recently five villagers were taken to the baraza la usulhishi for chronic truancy of their children.

We were only able to obtain partial attendance records for Oljoro primary school:

Year	// Registered	% Attending
1976	102	82%
1977	?	?
1978	98	Not computable
1979	169	62%

3. School Projects: None mentioned

4. Adult education. It is present at Oljoro village headquarters. 62 members were registered in 1978.

b. Legal matters. Village leaders complained mostly about conflicts arising between old residents and new comers. Such problems are: cattle breaking into shamba, some theft, and drunkenness. Most cases are handled by the baraza la usuluhishi, as the litigants don't have to travel to Arusha.

An examination of the primary courts which Oljoro might use - Arusha Urban, Enaiboish, and Nduruma-revealed most all cases being heard at Arusha Urban (Maromboso). There were none recorded at Enaiboish and only one at Nduruma, a criminal cases involving theft. The following are the cases heard at Maromboso.

Maromboso Primary Court

Year	Civil Cases	Criminal cases
1975	0	0
1976	0	2
1977	1	2
1978	2	2
1979	0	3

The civil cases all concerned unpaid debts. Criminal cases ranged from theft, abusive language, assault, to possession of Bangi, marijuana.

There were no civil or criminal appeals in Arusha District court coming from Oljoro

c. Shops. There is a village shop in Oljoro, but for the past few years it has been on the decline. On the two occasions we visited the village it was closed. Residents said it was open once a week and sold only candy. They are accustomed to buy at Lucy, but now they tend to go to Olokii because of both ease of transport and more goods present.

Trading license applications. For one duka each year since 1975, with the exception of 1977 when no trading licenses were applied from Oljoro.

d. Other Infrastructure.

1. Dip. The dip is functioning, although residents claim the dip attendant is seldom around. One of the days we visited the village communal work group was cleaning out the dip. They voiced their greatest problem as water. There is a small stock watering trough, but the water tap is in the village. Water for filling the dip has to be transported from the tap, a time consuming process. Transport of acaricide is paid for both by Oljoro and Lesinyai once every two months. Transport costs vary from 250/- to 500/-. Most of the men present at the dip were wearing traditional Maasai Arusha dress.

2. Water supply. Oljoro's water supply comes from a long pipeline originating near the Katibu Kata's office, close to Arusha. The problem, the local water fundi explained, is not breakage of the pipeline, but distribution of the water. They are at the end of the pipeline and occasionally get no water at all.

8. Staffing and Support. Apart from the Mwenye Kiti and Katibu Kijiji the manager, dip attendant and teachers are salaried employees. We were unable to obtain any firm notion of job satisfaction from discussions with them. The manager came in 1978 to Oljoro from a post at Mto wa Mbu with the Livestock Department. He said very little during the interview and was essentially superseded by the Katibu Kijiji in information concerning village operations.

Most of the teachers are new. The head teacher arrived in 1978, his first posting. Two of the teachers are UPE, residents of Oljoro.

No one voiced any problems with receipt of materials from the District or in obtaining their own personal supplies. Transport, once the new road was completed, has become quite easy, although, in their central position on the Oljoro track used by both charcoal and sand collecting lorries, in all probability transport was always easier than in areas south of Losinyai korongo.

Concerning village satisfaction with the staff, the katibu kata said that he had received letters of complaint that teachers were frequently absent from their posts. Unfortunately the mratibu kata was on leave during the survey so we were unable to obtain further details.

9. Development. We mentioned above that Oljoro appears to be a village in decline. What is perhaps more appropriate to say is that it is a vilage in transition from a former priveleged community to one component in a larger village without many of its former perquisites.
- a. Villagization. The core of Oljoro village today is composed of four rows of small dwellings, mostly constructed of wattle and daub with either mabati or pounded debe roofs with Warusha type, msonge houses on the periphery. Village headquarters is in the former settler's house, part of the roof of which blew off during the last rainy season.
 - b. The Katibu Kijiji says that Oljoro has little land left for immigrants but that they are still coming, and there is little to do about preventing them.
 - b. House construction in the "core" is the peaked roof style. General opinion was that the villagers were too poor to make improvements in the houses.
 - c. Cultivation. Separating the reality from the ideal past was difficult. A communal shamba for the village consisted of 566 hectares, cultivated by tractor.

In the old days of the ujamaa village they planted maize, beans, millet and peanuts. Since villagization the fields have not been cultivated communally. The Katibu Kijiji explained that in 1977 there was a drought, in 1978 100 acres were cultivated, but they were given the wrong seed and no insecticides and consequently received nothing whatsoever. Individual plots fared better. We viewed the shamba and found it basically uncultivated. Others said that it is being used individually these days.

Changes in cultivation are mainly in the direction of larger individual holdings, now that the rules of the village have changed, permitting this to occur. Individuals also purchase insecticide to preserve their harvests. Apparently this season few have sold any of the harvest waiting to see if there will be a bad year for growing or not./5

- d. Consumption patterns. No measurable indicators. Certainly from the list of bicycles, etc. in the personal possession of villagers, general interest in modern articles is and could be said to be higher than in most predominantly pastoral parts of Maasailand; however, note that at Oljoro people can use bicycles to get easily to nearby villages for medical, business, and other purposes. In other parts of Maasailand, Naberera for example, a bicycle ride to the nearest village would be over ten miles.
- c. Modern services. Doubtless the Oljoro villagers have more complex requirements for articles related to agricultural production and preparation of foods. Nonetheless their interest appears to be more individual than communal based. Note that they depended on government to provide seed and fertilizer and acaricides for the communal shamba, while they obtained the same for their own plots themselves.
- f. Oljoro is also an archaeology of failed projects. The dairy cows which formed an early village project all died. A chicken raising project has only the chicken coop remaining, a UWT sewing project failed when funds were embezzled, and at the moment a store of carpentry tools awaits local training project for their use.

Most opinion - unofficial and official - concerning Oljoro's decline centres on two aspects: too many gifts and insufficient leadership locally. Under the new system, many possibilities exist for the revival of many of the older projects in Oljoro, but first the problem of integrating newcomers with older residents and rising above the "history" of its failures need to be dealt with.

LOSINYAI VILLAGE

Dates of Survey: 16,20,24 November, 1979

1. District: Monduli - hdq distance about 30 miles
2. Tarafa: Kissogo: hdq distance: ?
3. Kata: Numba Tano: hdq distance about 16 miles
4. Village Particulars:
 - a. Vitonggoji: Two (?) Losinyai, Madukani (officially Madukani is too small to be considered a separate kitongoji)
 - b. Population: 260 families, 1369 people
 - c. Ethnic groups: Maasai, Arusha at Losinyai, tribal diversity at Madukani
 - d. Subsistence: Losinyai: mainly stock keeping with some cultivation of family plots - Madukani, businessmen
 - e. Leadership: Mwenye Kiti, no Katibu Kijiji, village council, baraza la usuluhishi
 - f. Local experts: Three house builders, one butcher, "Green grocers" seasonal laborers, ten masons.
 - g. Modern Articles: 20% ox plows, 80% kibatari, 80% bicycles, one radio, one tractor, one landrover, 100% torches, syringes present.
 - h. Infrastructure:
 1. School. School building, one teacher, two classes, 33 students
 2. Dispensary: Lucy Estate
 3. Primary court: Loiborsoit hakimu
 4. CCM Office; none
 5. Church - none - use Lucy Estate
 6. Veterinary services - Arusha
 7. Dip: Oljoro
 8. Water - Losinyai river
 9. Two shops, one hoteli, one grinding machine, two kilabu, one butchery (periodic)
 10. No game post
 11. No cattle market: Olokii (Them)i
 12. No buying post
 13. Mining - none but sand collection at Losinyai river
 14. Leased shamba: none
 15. No Post office
 - i. Village Projects;
 1. Contributions to school classroom construction
 2. Alter traditional enkaaji style houses
 3. Village dip - under discussion
 4. Fees for sand collection for the village
 5. With Oljoro village pay for acaricide transport
 6. Construction of dispensary - under discussion
 - j. Population stability. Immigration into Losinyai continuing. In 1971 there were three Maasai boma. By 1978 population had increased to its present size. Warusha families are moving in, although with emphasis on livestock keeping. Those settling in the village appear to be doing so permanently. Stock are moved for seasonal grazing but not residences.

The madukani section of Losinyai practically didn't exist before the road was completed through the area, according to informants; yet trading licenses have been issued for Losinyai since 1975. Personal observation reveals accelerated construction of buildings at Madukani, from 1977 to present.

5. History. The original emigrants to Losinyai appear to have come from Simanjiro. When the Themí Holding Ground was established, some of the pastoralists residing there came to Losinyai, which borders Themí. Others came when the dip at Olokii was constructed in the early 70s. Losinyai is also closer to Lucy and other areas where food can be purchased.

6. Travel and Communications. The present road did not exist. An all season track did come from Arusha to the Themí market, but from there it divided into a series of cattle tracks. The Oljoro road was present and had an extension from "Customs", a tsetse post near Oljoro, to Losinyai. This track was mainly used by hunters and settlers. After Losinyai, it turned into a series of hunting tracks.

Cattle, foot trails and vehicle track existed eastwards to Lucy Estate.

No information obtained on cost of transport at present, although it should be about the same as for Oljoro village.

One resident, who is the "rich man" of the area, owns a landrover, and one of the business men at Madukani has a tractor and trailer. A second tractor was purchased by one of the residents of Losinyai but it is under repair at Nduruma.

7. Infrastructure details;

a. School.

1. Structure. The school was started in 1978, a one classroom wattle and daub building with mabati roof. At one end of the building there is an office store. There is no teacher's house so the teacher has a room at nearby Oljoro. A choo was being built by the students and teacher when we arrived for the interview.

2. Attendance. The teacher said that, while education itself is not highly valued, those children who are registered tend to have good attendance. The furthest distance they come from is about 2.5 miles. Before the school was constructed they went to Numba Tano school, as the village is in Monduli District.

Attendance records for Losinyai are as follows:

Year	# Registered	% Attending
1978	40	83%
1979	33	79%

3. School Projects. None mentioned

4. Adult Education. There are classes at "Customs" - or Madukani, but none have started at Losinyai proper.

b. Legal matters. Locally the baraza la usuluhishi gets few cases, one of the members said that most of them dealt with shamba disputes and sand. In November they had three land cases.

Losinyai disputants appear rarely in court records. There are none in the District court files from 1975, one case of forced marriage in Monduli Primary court for 1979. It is possible that Losinyai people use a court not included in the survey, but most likely they are able to solve local problems within the enkiguana and baraza la usuluhishi structure.

c. Shops.

1. Structure. All are at "Customs" (Madukani). All constructed of relatively impermanent materials with the appearance of having been hastily built. One former mgahawa/kilabu was in ruins after the rains had caused, the roof to cave in. Wattle and daub side with Mabati roofs is the building style.

On both sides of the Ukame road, construction of at least four more buildings is underway.

One of the shops was closed, but we were informed it normally sells only sugar. The other shop consists of two rooms - the shop itself and a residence. The owner started his business in September 1979. The hotel, very slap dash construction, was opened in 1978 from hoteliers from Komolo. (The hotel may also serve as a brothel)

2. Supplies. In the shop we found: sugar, flour, tea, salt, cooking fat, milk powder, squash, curry powder cocacola, onions, beans; kerosene, matches, bike tubes and cement, batteries, and bulbs, cafenol and aspro, soap, two brands of cigarettes, kanga, cloth, sandals, shorts, pens and pencils, composition books, glasses, sufuria, spoons, bowls and hair oil.

Aside from Komolo, it was the best supplied shop seen in the Kiteto survey.

Both he and the hotelier get their stock from Arusha, transported on charcoal lorries.

3. Attendance. The shop serves Oljoro, Losinyai, and men who come to collect sand from the river.

The hotel prepares tea, meat, mandazi, beans, ~~stew~~, and sells beer, cocacola and bread from Arusha.

4. Trading License Applications

Year	Shop	Hotel	Off-beer	Cattle Trade
1975	2	1	0	1
1976	2	1	1	1
1977	2	1	1	1
1978	2	1	1	1
1979	2	1	1	1

8, Staffing and Support. The only government employee interviewed at Losinyai was a teacher. He was posted to Losinyai from Numba Tano in 1979. Travel is relatively easy for him. Most of his needs are met here or at Numba Tano shops. He usually goes to Mōnduli for his salary once a month. The last month he used the new road. Aside from lack of village interest in the school, he appears to have little dissatisfaction with the place.

9. Development.

a, Villagization: As the Katibu Kata from Numba Tano was not present we were unable to learn whether Losinyai was a full-fledged village of its own or a kitongoji of Meruocingoin village, which is on the other side of the Losinyai river, a village primarily of cultivators. At one point the Katibu Kata for Oljoro had also included Losinyai as kitongoji of Oljoro village.

In any case, villagization is well under way, but immigration is not yet complete. Pastoralists tend to follow the pattern of only moving stock to seasonal pasture and not the entire residence.

- b. House construction: Losinyai shows considerable variation from one place to another. The "two ring" system is in partial operation. There is a push to change from the enkaji to the msonge (Arusha) style of dwelling, but as many of the residents are Warusha or have Warusha wives, it is difficult to tell to what extent the increase of this type of house is a result of conformity to the rule or simple ethnic difference.
- c. Cultivation. The village has established a shamba area, which most families used for planting. They hire ox plows at 120/- for the whole field or a tractor for 160/- per hectare, although concerning plows, one informant said there is only an exchange of labor involved. Hired labour is used also, with maize as the payment. Oljoro residents help with weeding and receive 50/- per hectare. Maize, beans and mbaazi (pigeon peas) were planted. The shamba area was washed out in the last rainy season, so many did not get a harvest.
- d. Consumption patterns. Items mentioned as being in greater demand these days are: more maize flour (consumed to a lesser extent in the rainy season as well as dry season), kerosene, shuka, salt, soap, and magadi. Residents said their mahitaji ya lazima necessities, were increasing primarily because they are easier to get these days.
- e. Other Business. The village now charge 2/- per ton for sand taken from the Losinyai korongo. Two warriors are employed as the tax collectors at 15/- per day salary. They estimated receiving 400/- per day in taxes during the dry season. This business was originally in the hands of neighboring Oljoro village, but as of September it has been granted to Losinyai, as the korongo is within the village boundary. Essentially jurisdiction over this profitable source of income has been a matter of dispute between the two Districts involved and ultimately a great loss for Oljoro.

The profits are to be used in paying for further school developments and possibly a dispensary.

- f. Modern services. Losinyai is just beginning to develop a modern set of local services. Its major interest at present is a dip, not because there is none available the Oljoro dip is within two miles of the village, but because of inter-village conflicts and differences of interest, Oljoro village is primarily one of cultivators.

The teacher felt that people send children to school under duress and that if it were not a crime to keep children at home, then more uturo would be present.

Individually, some of the villagers are becoming interested in business other than cattle trading. One owns a grinding machine, another has recently purchased an ancient tractor, which is now under repair, others periodically slaughter cows to provide meat at the butchery. Losinyai in the future should continue to display greater diversification of outside employment.

10. Perceived Benefits and Problems of the New Road: The following were listed as advantages already accruing from the Ukame Road:
- Greater interest in the Olokii market both by buyers and sellers of livestock and itinerant purveyors of "biza".
 - Nearby maize grinding machine
 - Increase of shops providing more goods
 - Increase of visitors from a distance
 - Greater ease of travelling to Arusha to purchase necessities for local celebrations.
 - Generally improved communications and ease of transport.

- 5 -

The Road Crew did employ one warrior from Losinyai, who went with them as far as Naberera. They also employed three men from Meruoin. No problems with the workers were mentioned.

No disadvantages perceived yet. However, during our survey, a new lorry collecting sand was stolen from the Losinyai korongo. This was the first time such a thing had happened, and the speed with which it occurred was blamed on easy access because of the new road.

KOMOLO VILLAGE

Date of survey: 21-22 Nov. 1979.

1. District: Kiteto - hdq distance: 167 miles.
2. Tarafa: Simanjiro - hdq distance: 25 miles.
3. Kata: Terat - hdq distance: 4 miles.

4. Village Particulars.
 - a. Vitongoji: 2 (Temeke, Tandala).
 - b. Population: 608 families, 1800-2000 people.
 - c. Ethnic groups: 120 tribal groups found in Temeke kitongoji; mostly Maasai in Tandala.
 - d. Subsistence: Temeke: cultivation and charcoal burning.
Tandala: livestock keeping.
 - e. Leadership: Mwenye kiti, katibu kijiji, village council, baraza la usuluishi.
 - f. Local experts: 25% mechanics, 5 carpenters, 4 tailors, 3 tinsmiths, 1 baker, all at Temeke.
 - g. Modern articles: 2 kerosene lamps, 90% kibatari, 50% bicycles, 90% radios, 100% torches, many syringes at Tandala.
 - h. Infrastructure:
 1. School: 3 temporary classrooms, 1 teacher, 153 students, 3 classes.
 2. Dispensary: first aid box, weekly visit from Mboret mission dispensary.
 3. Primary court, Loiborsoit hakim.
 4. CCM office, newly constructed.
 5. Church: Lutheran and Catholic Churches, served from Terat and Mboret; 1 mosque with resident mwalimu.
 6. Veterinary services: Mboret.
 7. Dip: Terat.
 8. Water: springs 1 mile from village.
 9. 5 shops, 2 hoteli, Migahawa.
 10. No game post.
 11. No cattle market: Terat used.
 12. No buying post.
 13. Mining: present.
 14. Leased shambas: none.
 15. Post office present.
 16. Milk collection centre: none.

4. i. Village Projects.
 1. Construction of permanent classrooms.
 2. Furnishing of "health room" in CCM building.
 3. Co-operative mining project: discussed.
 4. Village shop - planned.
 5. UWT kilabu
 6. Water pipeline - with Mboret mission assistance - planned.
 7. Village tax on charcoal taken out of the village.
 8. Village shamba.
- j. Population stability.

Immigration into the village ongoing. The chairman estimates that 50% of the present population came into the village since the completion of the Ukame road in 1977. Considers there is enough room to settle all-comers. Other opinion is that residents are very mobile, especially charcoal burners, only conforming to the village rule temporarily.

5. History.

The first recorded settlers at Komolo came in the early 50s, agriculturalists in search of farming land. By the early 60s charcoal burners and prospectors started penetrating the area. Until this time Komolo was quite isolated. A seldom-used track (hunting primarily) which stemmed off the Oljoro road, terminated at the village.

By 1970, a small shop was established obtaining supplies from infrequent but regularly passing charcoal lorries. On early maps a school is listed at Komolo.

We visited Komolo en route to Terat in 1975, finding a shop and a scattering of 6-10 houses.

During the villagization campaign, Komolo received its initial thrust of population increase with ex-workers from various estates and charcoal burners. It may have been registered as an ujamaa village, but is not so at present.

Population growth increased once the Ukame road was completed and transport to Arusha and Kiteto made easier.

6. Travel and Communications.

As noted above, up until the construction of the Ukame road, there only existed a winding track which emanated from Oljoro village ending at Komolo. There was no real road up the escarpment, although when we passed in 1975 we found traces of vehicles. Communications by vehicle were with Arusha via Oljoro and periodically through charcoal transporter tracks coming from Numba Tano. The mwenye kiti estimated the Oljoro way was about 75 miles to Arusha.

Other communications were by foot, bicycle and donkey. Sukuro residents used a cattle trail down the escarpment to

trek donkeys to Olokii and Lucy estate to purchase maize flour. At Komolo, however, the main cattle track cut eastwards to Shambarai.

At the present time, Komolo is right on the main road with easy communications to all points. There are well-defined tracks also cutting into Numba Tano.

Current transport costs:

Lift: Komolo-Arusha: 20/- per person.
20/- per sack of maize.
5/- per debe.

Rental: No information.

There are no vehicles other than bicycles in the village.

7. Infrastructure details:

a. School:

1. Structure. One very long and wide wattle and daub building with mabati roof, and dirt floor, no window shutters, and 2 smaller temporary buildings serving as classrooms. Inside we found a few regulation school desks and some home-made ones, slates and two blackboards. The teacher's office was piled with books and papers. There is a school choo.

Nearby, is the foundation for a 4-classroom structure. The mwenye kiti said they are awaiting cement to put up the walls.

2. Attendance. Unfortunately the attendance records for the school were only obtainable for 3 months of 1978, when classes started. With 122 students registered and an average attendance of 94%. The total number of students has risen in 1979 to 153, but we have no record of attendance.

The teacher and mwenye kiti differed as to problems of utoro, the latter claiming that it is mainly a problem from Tandala kitongoji and livestock keepers, the former maintaining that the problem is village-wide.

A number of pastoralists from Sukuro did immigrate to Tandala while their dam was under repair. The children were registered in Komolo school. Now these families have returned to Sukuro with their children. It was decided in a meeting at Sukuro that they be stricken from the Komolo school register and re-entered at Sukuro.

3. School Projects. Completion of the school rooms. Starting class 4 in 1980.
4. Adult education. 10 classes (2 at Tandala). The teacher's opinion was that attendance was fairly good and attendance high among those living "in town".

7. b. Legal Matters.

The mwenye kiti characterised the village as fairly peaceful with good co-operation, except when people are drinking. He also cited wajuaji, "know-it-alls" as common in the village. The hakimumu said that Komolo usually has many criminal cases. His aide added that the place has lots of problems with theft, as there is so great a diversity of people that knowing another person's ways of doing things is difficult.

In courts other than Loiborsoit, Komolo disputants are rare: 1 criminal case from Engasumet in 1976 concerning school truancy and a criminal appeals case at Kibaya District Court. In Loiborsoit the cases are as follows:

	<u>Criminal</u>	<u>Civil</u>
1978:	4	8
1979:	17	5

The majority of criminal cases concern theft, assault and illegal consumption of piwa - local whiskey. Civil cases concern the usual debt, dowry and divorce, although at Komolo there is a greater emphasis on thefts of charcoal than in other villages along the road.

c. Shops.

1. Structure: We inventoried two of the 5 shops at Komolo. Both had a much more varied stock than in any shop we had visited in any part of Maasailand. One rivalled Arusha shops. It is located in a large compound near what appears to be the "village square". The compound is the residence of the mwenye and houses his tailor shop, a bike repair shop, storage area for crops, what may be a local bar, living quarters and the shop itself. The buildings were constructed of mud brick, painted, with mabati roofs.

The second shop was near the Ukame road, one of a series of relatively large mud brick structures with mabati roofs.

2. Supplies: The following were found in the first shop: tea, coffee, sugar, flour, candy, curry powder, tinned honey, tomato sauce, tinned beans, 3 kinds of cooking fat, yeast, salt, beer, baby food, glucose, onions, wine; blankets, shirts, pants, shorts, shoes, cloth, cosmetics; shoe polish, sandals, mirrors, saucers, glasses, thermos, cups, kerosene, bug spray, tooth brushes, soap, soap powder, 10+ kinds of patent medicines, ink, scissors, matches, 2 kinds of cigarettes, envelopes, and baby powder.

3. Attendance. Essentially the shops serve Komolo and all the charcoal transporters coming from Arusha.

7. c. 4. Licence Applications for Trading.

<u>Year:</u>	<u>Shop</u>	<u>Hotel/ Mgahawa</u>	<u>Off-beer</u>	<u>Pombe</u>	<u>Cattle trade</u>	<u>Wima</u>	<u>?</u>
1975	2	0	1	0	0	0	0
1976	0	0	0	0	0	0	0
1977	1	0	0	0	0	0	0
1978	8	0	2	0	1	0	0
1979	4	1	3	7	0	1	1

d. Other Infrastructure.

Two major concerns are water and medical attention. The water comes from small springs trickling off the escarpment into the Komolo river. The only medical service in the village consists of a first aid box and a retired nurse who voluntarily assists in treatments.

With the assistance of the Catholic mission, the village has plans for development of a pipeline from the spring to the village proper - a distance of about one mile.

In the newly completed CCM office, which houses the village office, and has 3-4 extra rooms, it is planned to furnish one as a dispensary. At the present time an expatriate nurse from the Mboret mission dispensary visits Komolo weekly.

8. Staffing and Support.

We only interviewed the teacher at Komolo who is the only salaried government employee save for the mwenye kiti and katibu kijiji. He was posted to Komolo in January 1978, his first appointment.

As he arrived when the road had already passed Komolo, he has found little problem in obtaining transport. Headquarter support is assessed as adequate, although there are some delays, usually because of lack of vehicles in Kibaya.

His major concern is over what he feels is lack of real interest in the school which stems from problems resting in the dominant leadership of the village and also its population instability.

9. Development.

a. Villagization: is not complete, and in spite of the optimistic stance of the mwenye kiti, the many houses in Komolo appear to be of the most temporary nature. They are very small with thatch roofs and sides, although some are of the tembe type. Many are just recently constructed or just under construction. General opinion is that there has been a concerted effort to bring itinerant charcoal cutters into the village system, but that they have just barely conformed to the rule of building a house in order to reap the profits existing there, especially from the charcoal business.

9. b. House construction varies. At Temeke it is mainly of thatch or tembe type with very few mabati roofs in evidence. At Tandala it is mainly of the traditional enkaji type.
- c. Cultivation. This does not prove to be a good index of change in a village of agriculturalists. There are, however, various village shamba projects. The main village shamba is 70 hectares. Each member of the village gets a minimum of 3 acres per wife for personal use, but can cultivate up to any amount he wishes. The UWT was given a shamba of 50 hectares, but only cultivated 2. TAPA had 10 acres but didn't plant anything. Cultivation is mainly by hoe. No advanced techniques of cultivation (use of fertilizers, etc.) are in evidence.
- d. Consumption patterns. In comparison with other communities in Maasailand, Komolo is far ahead with its large percentage of radios, bicycles, and well-stock shop.
- e. Other business.
1. Charcoal. The village charges transporters of charcoal a fee of 2/- for each gunia. The present cost per bag of charcoal in Komolo is 20/-. 1/- goes to the village fund, the other goes as a contribution for the District CCM office.
 2. Co-operative Mining Venture. The mwenye kiti is trying to persuade some of the village council members to venture into a mining operation. Ten members contribute 500/- each and 10 more contribute labour. An agent in Arusha will back the venture.
- f. Modern Services. For a village the size of Komolo it was surprising to find so few services normally found in other villages where agriculture is dominant. In part, this may be due to the fact that as a village, Komolo is in the process of organisation and probably has yet to cohere as a community. Many of the village projects appear to be mainly arising from the enthusiasm of the mwenye kiti, not from the enthusiasm of the villagers themselves.

10. Perceived Benefits and Problems of the New Road.

Only positive opinions were voiced. The road has already had an impact in accelerating village formation, transport and profit from charcoal, and making more possible obtaining further infrastructure, especially a buying post. The issue here would be the extent to which cultivation and not charcoal operations becomes more for profit than subsistence.

During road construction, the main camp for the area was at Komolo. The mwenye kiti says most of the village worked on the road, 3 individuals were employed as drivers. Others cut trees and spread murrum. There were no problems with the road crew, save that a few left Komolo without settling their bills in the shops.

TERAT VILLAGE

Dates of survey: 20-24 Nov. 1979.

1. District: Kiteto - hdq. distance: 166 miles
2. Tarafa: Simanjiro - hdq distance: 22 "
3. Kata: Terat - hdq distance 0

4. Village Particulars:
 - a. Vitongoji - 4 (Londelemetii, Terat, Alalong'ai, Amani).
 - b. Population: No information.
 - c. Ethnic groups: 80% Maasai.
 - d. Subsistence. Livestock keeping with small scale family cultivation.
 - e. Leadership: Mwenye kiti, katibu kijiji, village council.
 - f. Local craftsmen: fundi: 1 carpenter, 2 tailors, 2 smiths, 1 licensed cattle trader (many unlicensed), pombe brewers (unlicensed).
 - g. Modern articles: 2 landrovers, 2 tractors, 1 ox plough, 6 radios, kibatari present, some spraying machines, almost 100% syringes and torches.
 - h. Infrastructure:
 1. school - building to be constructed, 4 classes, 124 students, 2 teachers.
 2. dispensary: RMA present.
 3. primary court: Loiborsoit hakim.
 4. CCM office: none.
 5. church: Lutheran, with pastor and pastor's house.
 6. veterinary center: use Mboret.
 7. 1 dip - not functioning, attendant not present.
 8. water: stagnant pools in Terat river.
 9. 2 shops open daily, 1 mgahawa open weekly.
 10. game post: building present, no staff.
 11. weekly private cattle market.
 12. no buying post.
 13. no mining.
 14. no leased shambas in village area.
 15. post office present - mail brought privately from Arusha.
 16. milk collection center - none.
 - i. Village Projects.
 1. labour contributions to construction of dispensary in 1977.
 2. school classroom - contributions towards preparation of burnt bricks.
 3. weekly cattle market.
 4. numerous repairs of dip water pumping machine
 5. former dip attendant paid by the village

- i. Village Projects (contd.)
 - 6. discussion of establishing a village shop.
 - 7. discussion of possibilities of purchasing a bus.
- j. Population stability. Not ascertained.

5. History.

In the '50s and earlier, Terat was not much known by outsiders. It was heavily wooded, so formed a kind of grazing boundary for the Simanjiro Maasai. The area has permanent water, so was used for dry season grazing by them. Older residents of Sukuro said they used to take their stock to the Terat springs for water in the dry season.

With the initiation of charcoal burning north and east of Terat, agriculturalists began penetrating the area. Shops were established at Terat proper by businessmen from Simanjiro.

The area really opened up to population immigration and transport when a road was cut to Numba Tano from Oljoro making it possible to reach Terat easily from Arusha.

The middle 70s were perhaps a peak of that period of development. In 1973 the cattle market was re-established with some success. Perhaps because of the market, now held weekly, that many village shops and hotels/migahawa became redundant.

The most recent major change was villagization and the decision to make Terat primarily a pastoral village, establishing Loswaki, a few miles distant, as an independent cultivators' village. This separation has served to limit the southward expansion of cultivators and concretize a definite area for grazing use only, thus bringing to a slow close a smouldering 15 year conflict.

6. Travel and Communications. Before the opening of the Numba Tano track, communications from Terat were northwards via Mboret and Lolkisale and southwards to Naberera. A small vehicle track did exist connecting Terat with Komolo, but in 1975 it was so little used as to be virtually invisible.

Once the Numba Tano road was cut communications with Arusha and Moshi were made particularly easy. The only problem with the road was that it passed through four very deep korongo and could be difficult to use in the rainy season.

Transport from Terat through Numba Tano road was very easy indeed. In addition to some government and business vehicles frequently passing - it was a shorter route to the southern villages for those living in Arusha than to go via Lolkisale - charcoal collecting lorries carried passengers as well. In the middle 70s a bus passed to Terat via Numba Tano and Oljoro villages.

The new road has made a major change in transport patterns for Terat and the villages formerly on the Numba Tano road. Mostly all traffic passes now through Komolo on the new road. Even those who utilize the Numba Tano road find that at Losinyai they return to the Ukame road.

6. Travel & Communications (contd.)

Current transport costs:

rental: Arusha-Terat - 300-700/- landrover or Peugeot lorry.
1600/-

lift: Arusha-Terat - 30/-

7. Infrastructure details.

a. School.

1. Structure. Although a classroom building has been in the making for some time, it was not completed in November 1979. Contributions had been made for burnt bricks, but apparently the first set were bad. The school building is the former stock route night boma, nicely landscaped, but very small. There are no teachers' quarters. Two of the teachers are UPE trainees, so come from the village itself. The other teacher has a room in the dispensary building.

2. Attendance. We were told no utoro, but the following records from district files indicates otherwise:

<u>Year</u>	<u># registered</u>	<u>% attending</u>
1975	60	73%
1976	55	59%
1977	88	58%
1978	114	71%
1979	114	83%

There is a slight rise in attendance from 1978 to 1979. Children graduating from Class IV are then sent to Mboret school, which has boarding facilities. Until recently, children from nearby Loswaki also attended the Terat school. It's chairman commented that if Loswaki were to remove its children from the school, there would be no students left at Terat.

3. School Projects. A school shamba was planted last year, but didn't produce - too many wild animals.

4. Adult education. The teacher said that there was, but at present none of the classes are being held. The Kibaya adult education office lists 2 teachers and 2 classes in 1979 for Terat.

b. Dispensary.

1. Structure. The dispensary, which was opened in late 1976, is a spacious building with six rooms and a large baraza. It has an open cement pit which was to be the water tank. Only one room is used for medical work. A second room is for the RMA.

The examination room consists of a large medicine chest, tables, a bench, one fridge, sacks of medicine, a few instruments and boiling containers, and a charcoal and kerosene burner. There is no water at the dispensary:

7. b. (contd.)

it must be hand carried from the Terat spring, a water supply which the RMA said contains water unfit for human use.

3. Patients. Terat dispensary indicates a rise in attendance from December 1977 to almost 11,000 patients in 1978. In 1979, the projected attendance was approximately 8500, and considerable decline.

The clinic serves Terat, Numba Tano, Komolo, Loswaki, and Sukuro mainly, although the last more commonly uses Mboret. Opinions from residents of these villages were usually negative concerning the Terat facility - not the work of the RMA - but the adequacy of medical supplies. Thus it is quite possible that they are taking the opportunity of greater transport possibilities to go elsewhere.

The main diseases treated at the dispensary have been respiratory, malaria, venereal disease, and diarrhoea/dysentery. Eye diseases, digestive diseases and wounds were also fairly well represented in some years. However, aside from respiratory disorders, which in 1979 formed 42% of the treatments at Terat, the other diseases appear to rise and fall over the four year period without any consistency. Given the poor water supply, we would have expected a major presence of water borne diseases, but this was not the case.

Measles were reported as fairly common at Terat. The RMA has made a few referrals recently - to Arusha.

c. Legal Matters. Terat had no baraza la usuluishi at the time of the survey, but we found the traditional enkiguana in operation; three days were spent dealing with three cases.

Before the arrival of the present Loiborsoit hakim, cases had to be taken to Engasumet. The following are cases found in Engasumet, Loiborsoit and Kibaya.

Year	Engasumet Primary Court		Loiborsoit Primary Court		Kibaya Primary Court	
	Civil Cases	Criminal Cases	Civil Cases	Criminal Cases	Civil Cases	Criminal Cases
1975	0	1	0	0	0	1
1976	1	1	0	0	0	0
1977	0	0	0	0	1	0
1978	0	0	1	1	0	0
1979	0	0	6	5	0	0

These figures indicate the importance of convenience even in legal matters. Representation of Terat cases in the Loiborsoit court is mainly because the hakim travels there to hear the cases. Otherwise, as the Hakim noted, the Maasai prefer and are able to handle their own problems internally. The civil cases heard at Loiborsoit dealt with debt, dowry and divorce. Criminal cases covered assault, abusive language, theft, possession of illegal whiskey - piwa - and cattle theft.

7. d. Shops.

1. Structure. The "main street" through which the old Terat track to Loswaki and Numba Tano passed, consists of a facing row of mud brick and wattle and daub buildings, most of which have mabati roofs. In earlier years the front parts of the buildings served as shops and hotels, and the back residences and stores. Now, two shops are open full-time, and some others are revived weekly during the cattle market. This market also brings with it numerous wima businessmen, who augment the somewhat scanty stock found in the local shops.

2. Supplies. Only one shop had a variety of goods for sale. The other, whose owner is also a tailor, contained mostly cloth, small children's outfits, tea and magadi. It also serves as a post office.

The larger shop contains tea, sugar, squash, maize flour, salt, magadi, three types of malaria medicine, cough syrup, razors, matches, soap, torch bulbs, cow bells, anklet chains, and cloth. (This is a greater variety than we observed in his shop in 1976).

Sources of supplies: Arusha mainly.

3. Attendance. The shops serve the Terat/Loswaki community and those who attend the weekly cattle market, especially from Sukuro. People of Naberera said that they now take advantage of transport to go to Terat to purchase goods unavailable in their shops.

4. Trading License Applications.

<u>year</u>	<u>shop</u>	<u>hotel</u>	<u>off bear</u>	<u>pombe</u>	<u>cattle trade</u>	<u>wima</u>	<u>other</u>
1975	3	1	1	1	2	1	1
1976	5	3	1		2	1	
1977	6	3	1				
1978	8*	1				2	
1979	4	1		4		2	

*(Note: of the 8 applications received, only 4 were granted).

5. Cattle Market (Mnada). As this was the only primary market observed during the survey, we took the opportunity to interview some of the attendants. Mostly all come from Arusha in lorries and landrovers. Between 6-10 vehicles were present.

Two local shopkeepers brought their stock to sell, a non-existent mgahawa and tailor suddenly sprang into life in the village, a bar with 4 cases of beer opened. Four butchers roasted meat, 7 private sellers of livestock drugs were present; 5-6 wima shops sold clothes, tyre sandals, beads, cloth, onions, cabbages, tomatoes, cooking and storage utensils, cigarretes, mirrors, blankets, native roots and herbs, pangas, locks, and knives.

Most of the sellers joined in renting a landrover (1000/- from Arusha) or got a lift (50/-).

7. e. Other infrastructure.

1. Dip and water supply. A dip was constructed at Terat in the middle 70s. It is doubtful that the facility has been used much at all. Tall grass has sprung up around it as well as bushes. The pump which takes water from the Terat springs has continuously been broken and repaired in Arusha. We viewed the pump, newly repaired in a store. The mwenye kiti said that no one in the village knew how to connect the pipes to test it and besides the pipe-wrench was lent out. Terat is not mentioned in the veterinary drugs issue register as having obtained any livestock drugs at all since 1975. Most of the drugs they require are purchased privately.

2. Game Post. The facility is there, visible from the new road, but poaching appears to be becoming so intensified that one game scout can hardly cope with the danger. As the Games Officer in Kibaya said: "one old crank rifle is hardly a match for a sub-machine gun". It is planned to re-staff Terat with two scouts from the district and three from the region, amply armed.

3. Church. The Lutheran "compound" consists of a largish Church-cum-office and a three room mud brick residence with mabati roof. There is a choo, outside kitchen, and another out-building for use by parish workers - none present at the moment.

The pastor does not have transport, although his area of work includes Sukuro and Komolo. He says that his work has considerably eased since the completion of the new road, as he can get lifts easily.

A German missionary working out of Arusha, also visits these areas with the pastor monthly. Her project started only recently.

Church projects - none mentioned.

8. Staffing and Support.

We interviewed four government employees (excluding the chairman and secretary of the village). The Katibu Kata had just arrived on transfer from Ruvu, so he was not interviewed. We also include the Loiborsoit hakim here. The teacher and RMA were posted here in 1977, the hakim was posted to the area in late 1978.

None of the locals, but two, are Maasai and have worked in Maasailand for many years. Two are married, none has family with them. Only one has housing, although the teacher in Terat does have a room at the dispensary. The hakim lodges with a shopkeeper at Loiborsoit.

Department support. Both the hakim and teacher have salaries sent directly to the bank in Arusha, so do not have to experience delays or collect them at Kibaya. The RMA says that salaries are usually delayed in arrival.

Supplies. Only the RMA felt that service was good. She noted that now that the road has been completed to Kibaya, drugs arrive quickly and replies to requests are received faster than before. Only the teacher noted travel to

8. (contd.)

Kibaya two times per year for supplies.

Personal needs. Both Terat workers agreed that supplies are usually inadequate at Terat, but that Arusha is close enough for them to get what they need.

Co-operation. The teacher feels that co-operation concerning school matters is poor, citing the delayed new school as an example. The RMA was more concerned with water problems. There appears to be no village arrangement to provide her with water or fuel for the running of the dispensary. That is one reason why she feels there is no MCH clinic at Terat: "you need lots of clean water for that".

From the above it is probable that all three are not fully satisfied with their job situation, but that only the teacher finds conditions unpleasant enough to actively desire re-posting.

9. Development.

- a. villagization: apparently complete, although the boundaries of the village are not specifically determined. No opinions given concerning positive/negative reactions to it.
- b. boma construction: the "two ring" system seems in operation in some of the bomas. AATP seminar has discussed the possibilities of cheap construction of durable unburnt bricks for house construction. A few houses are of the modern type with mabati roofs, also a few "msonge" houses present.
- c. cultivation: We were told almost all families have cultivated since 1976, voluntarily, although there is a village rule that each wife should cultivate 2 acres. Most of the work is given over to seasonal labor from Loswaki, Numba Tano, and Komolo, or else rental of tractors from Loswaki. Unofficial opinion concerning cultivation was that there is not a great interest in maintaining it at present.
- d. consumption patterns. More money is spent on non-Maasai food products, transport, payment for services, and some modern articles. No information on degree of dietary alterations.

Other business. We noted 20-30 Maasai women at the market selling local produce from milk to chickens, some were also selling vegetables. The market has proved to be an outlet for sales which probably would have been minimal within the village.

- e. Regular stock sales. Most individuals preferred not to say how often they sold stock. Doubtless stock trading is found in almost every residence. The market had over 100 animals for sale during the survey.
- f. Modern services.+ Participation. The people of Terat, unlike some villagers to the south, have multiple opportunities to utilise various government, private and business institutions for their needs.

9. f. (contd.)

Arusha is close by, transport is locally available. Although they co-operate in contributing to the school construction, and repair of the dip pumping machine, there appears to be little incentive to really follow up on these matters. They appear to be relatively unconcerned about the dipping problem - water could be transported to the dip on donkeys as is done elsewhere when a pump fails - or about the lack of suitable water for the dispensary. Some local opinion was that leadership was poor, that village leaders tended to monopolise decision-making. Whatever the problem, potential for great advances are present in Terat, money seems to be no problem, but at present interest seems lacking.

10. Perceived Benefits and Problems of the New Road.

Aside from being quite pleased with the new road, as it has brought more buyers and sellers to the weekly market and has made transport to Arusha and Kibaya possible, none of those interviewed felt that there had been any other changes resulting from it - good or bad.

The village, remembering the advantages of the former bus, has started talking up the possibilities of purchasing a bus as a village project. They fear the Komolo hill, however, as being too steep.

There were no problems with the workers on the new road, except that one of the shopkeepers claimed that a small debt remains unpaid for goods purchased in his shop.

Although requests were made for workers from Terat, none applied. The crew had a camp at the Game Post.

LOSWAKI "VILLAGE"

Date of survey: 29 Nov 1979.

1. District: Kiteto - hdq distance: 169 miles.
2. Tarafa: Simanjiro - hdq distance: 26 miles.
3. Kata: Terat - hdq distance: 4 miles.
4. Village particulars. (Note: Loswaki has not been officially registered as a village yet).
 - a. Vitongoji: None.
 - b. Population: 250 families, 540+ people.
 - c. Ethnic groups: mainly Arusha with Massai, Meru, Mbugwe.
 - d. Subsistence: cultivation primarily with axillary stock keeping.
 - e. Leadership: acting mwenye kiti, katibu kijiji, village council, baraza la usuluishi, UWT present.
 - f. Local experts: seasonal labourers, charcoal burners, all vehicle owners are also mechanics.
 - g. Modern articles: 1 lorry, 4 landrovers, 3 tractors, 26 ox ploughs, kibabari and torches and modern household utensils 100%, radios 90%, bicycles 50%, syringes present, 7 spray guns (used in the shambas), 13 mabati houses.
 - h. Infrastructure:
 1. school: building and teacher's house present, 2 classes, 2 teachers.
 2. dispensary: Terat
 3. primary court: Leiborsoit
 4. CCM office: present (not seen)
 5. church: present - pastor at Terat
 6. veterinary services: Mboret or Arusha
 7. dip: Terat
 8. water: Terat river
 9. 2 shops, 1 grinding machine
 10. no game post
 11. cattle market - Terat
 12. buying post - one requested from NMC,
 13. no mining - but charcoal burning present.
 14. 1 leased shamba in the village
 15. post office - none
 16. milk collection centre - none
 - i. Village Projects:
 1. construction of school facilities
 2. village shamba - 150 hectares cleared, but 15 cultivated in 1979.
 3. request for buying post
 4. construction of CCM office.
 - j. Population Stability. Chairman claims that immigration is on the increase, but the population has reached the limits of available land, so applications are rejected.

5. History.

Intimately tied up with Terat, Loswaki was the site of gradual penetration into what was a forested area, cleared by charcoal burners, by farmers from Arusha and also by former estate workers and charcoal cutters. It is now being established as a separate village. Until the cutting of the new road, its main access to any center was through the Numba Tano- Oljoro road to Arusha. (see Terat for more details).

6. Travel and Communications. (see Terat for details).

7. Infrastructure details.

a. School:

1. Structure. According to the mwenye kiti, one classroom and office was completed in 1978, and money contributed for construction of a second classroom and teacher's house. Yet, the church is being used as the classroom.
2. Attendance. No attendance records.
3. School projects: None.

b. Legal Matters.

Contrary to statements of the chairman, the hakimu says there is no baraza la usuluishi yet in Loswaki. Most of the problems, he says, he deals with in Loswaki are cases of illegal brewing of piwa. Actually, from the court record, those recorded in the Loiborsoit circuit for assault, fighting and abusive language, exceed piwa, but the three criminal cases heard at Kibaya primary court involved piwa. Civil cases from Loiborsoit court concerned debts, dowry and land boundary disputes with Terat village.

Court cases involving Loswaki.

<u>Year</u>	<u>Engasumet</u>		<u>Loiborsoit</u>		<u>Kibaya</u>	
	<u>Primary Court</u> <u>civil cases</u>	<u>criminal cases</u>	<u>Primary Court</u> <u>civil cases</u>	<u>criminal cases</u>	<u>Primary Court</u> <u>civil cases</u>	<u>criminal cases</u>
1975	0	0	0	0	0	0
1976	0	1	0	0	0	0
1977	0	0	0	0	0	0
1978	0	0	4	0	0	0
1979	0	0	1	6	0	3

- c. Shops. At the time of the survey the two shops at Loswaki were closed, so we had no opportunity to inventory their contents. Perhaps more significant is the presence of a maize machine, which is used by people as far away as Sukuro and Naberera.

Applications for Trading Licenses.

<u>Year</u>	<u>shop</u>	<u>off-beer</u>	<u>wima</u>
1975	1	0	0
1976	0	0	0
1977	0	0	0
1978	1	0	0
1979	0	1	1

- d. Buying Post. One has been requested for the village. At the time of the survey individuals were taking their maize and other produce to Kiserian. Transport cost is 40/- per sack of maize and beans, and 50/- for mbaazi. This is in addition to cost for the lift itself.
8. Staffing and Support.

No information. The only government workers at Loswaki are 2 UPE teachers who were not interviewed.
9. Development.
 - a. Villagization. Apparently complete, although the village is not yet registered. Residents just prior to the survey were called to hear what the village laws were to be. As it justifies possession of a disputed piece of territory, there is little doubt that the notion of villagization is popular in Loswaki.
 - b. House construction. The boma system is not seen so much here, rather one finds individual houses. Arusha, msonge houses predominate. For Maasailand, a fair number of dwellings have mabati roofs, 13 in number.
 - c. Cultivation: is the style of life at Loswaki, hence the presence of tractors and desire to establish a buying post.
 - d. Consumption patterns: not ascertained, but much more complex than in Terat. Cash comes from the harvest. As the Terat chairman said, Loswaki may be sufficient in food (maize) but Terat is more prosperous.
 - e. Other business. The chairman has, in addition to his landrover, a large leased shamba in the village. Tractor owners hire out their vehicles. There are a large number of charcoal burners in the village and some seasonal workers.
 - f. Modern services. Not ascertained directly, but there is no question that Loswaki would be placed higher on the developmental ladder than Terat just by virtue of its subsistence interests and numbers of possessions.
10. Perceived Benefits and Problems of the road.

(See Terat for details).

SUKURO VILLAGE.

Date of survey: 22 Nov. 1979.

1. District: Kiteto - hdq. distance: 156 miles.
2. Tarafa: Simanjiro -hdq distance: 12 miles.
3. Kata: Terat - hdq. distance: 10 miles.

4. Village Particulars.
 - a. Vitongoji - 3 (Oltepesi, Katikati, Sukuro).
 - b. Population: 27 bomas.
 - c. Ethnic groups: 100% Maasai.
 - d. Subsistence: livestock keeping with small scale family cultivation.
 - e. Leadership: mwenye kiti, katibu kijiji, village council.
 - f. Local craftsmen: none other than stock traders and two shopkeepers.
 - g. Modern articles: 1 landrover, kibatari (50%), 1 bicycle, 5 radios, about 10 hand sprayers, syringes 90%.
 - h. Infrastructure:
 1. School - no buildings, 1 teacher, 59 students, 2 classes.
 2. Dispensary: use mission dispensary at Mboret.
 3. Primary court: at Loiborsoit, although hakimu visits the village now.
 4. CCM office - planned.
 5. Church - Lutherans work there, no building.
 6. Veterinary centre: use Mboret.
 7. 1 dip - not yet working.
 8. Water: Sukuro dam recently repaired.
 9. 2 Shops, 2 off-license beer sellers.
 10. No game post.
 11. No cattle market.
 12. No buying post.
 13. No mining.
 14. No leased shambas in the village area.
 15. Post office - none.
 16. Milk collection centre - none.
 - i. Village Projects.
 1. Construct CCM office in Kibaya, asked to contribute 1900/-.
 2. Contributions in cash to build the school, also cut 900 poles for the building.
 3. Possible purchase of a pumping machine for the dip.

4. j. Population stability.

Although the village appears to be firmly established along motorable tracks near the Ukame road, there has been considerable earlier movement away due to a scarcity of water. Most of the residents are returning at present. Seasonal grazing of stock is still practised. (Note: a small cluster of people living near Olmoti, the village boundary, belong neither of Sukuro or Naberera villages).

5. History.

The Sukuro area has been occupied since colonial times, once the tsetse bush was cleared. The earliest infrastructure in the area was the road cut from Monduli through Lolkisale, then Sukuro dam built in 1952. Food and other supplies were obtained at Lolkisale, Olokii or through travelling merchants from Kondoia. The first shop came with a temporary shift of cattle markets to Sukuro in the early 60s. Once the Kissongo market opened, the Sukuro one died for lack of buyers, so people started trekking stock to Shambarai. Resettlement took place in 1977.

6. Travel and Communication.

Sukuro lies close to the junction of the roads coming from Simanjiro and Terat. Before the Ukame road passed by Terat, traffic in the western portion of the district came from Lolkisale. It was also possible to take a track from near Sukuro to Makami via Laipera wells.

Aside from government and businessmen, hunters passed by periodically. Once the charcoal business started near Terat, it was possible to travel there to get a lift in one of the lorries.

Current transport costs: Lift: Sukuro-Loswaki: 20/-, plus
20/- each gunia of maize.
Sukuro-Arusha: 150/-
Sukuro-Kibaya: no information.

Rental: Sukuro-Arusha: 2000/-
(roundtrip).

7. Infrastructure details:

a. school.

1. structure: at present none, save a large tree near the residence of the teacher. The school was officially opened in 1977. There is little other than a small blackboard and an empty log book to indicate that a school is present. Everything is ready for the construction of the classroom, but they are waiting for the fundi from Kibaya.
2. attendance: It is related partly to transhumance. At the time of the breaching of the Sukuro dam, many families went to the Komolo area and registered their children at Komolo school, but now they have returned with them, so the children are regarded as being truant, and their parents are liable to prosecution in court.

7. a. 2 (contd.)

Attendance for the school is as follows:

year	# registered	% attending.
1978	42	93%
1979	59	89%

3. School Projects. None.

b. shops.

1. structure: The shops are near Sukuro dam. One was opened in 1962, by a shopkeeper living at Lolkisale. The other opened in 1966, owned locally. One shop is constructed entirely of mabati sheeting - it was closed. The other is a wattle and daub building with a mabati roof.

2. supplies: Maize, flour, sugar, matches, salt, empty beer bottles (the place has an off-license bar license), kerosene, batteries, razor blades, soap, 4 kinds of malaria medicine, cloth. We were told that the other shop had less than this one.

3. attendance: The Sukuro area only.

4. Trading Licenses Applications.

	<u>Duka</u>	<u>off-beer</u>	<u>wima.</u>
1975	0	0	0
1976	0	0	0
1977	0	0	0
1978	1	0	1
1979	2	2	1

c. Dip.

The dip was constructed in 1978, but because of the repairs to the Sukuro dam and lack of a pumping machine, it has not been operative. The closest functioning dip is at Mboret, although some locals have sprayers, using acaricide purchased through T.F.A. in Arusha. They are presently awaiting a decision as to whether the district will provide them with a pumping machine or if they will be asked to purchase one.

d. Legal matters.

Sukuro has little representation in any of the courts from which data was collected. For Loiborsoit primary court the following numbers were recorded:

<u>year</u>	<u>Criminal</u>	<u>Civil</u>
1978	0	2
1979	1	2

The criminal case involved theft of a hen. The civil cases pertained to dowry, two cases of divorce, and one run-away wife.

Cases from Sukuro were not found in Engasumet primary court. In Kibaya, no cases in the district court were recorded. Only one instance was found in the Kibaya primary court: a civil case of divorce in 1978.

8. Staffing and Support.

As there is only one government worker present, there is little to be reported here as characteristic of the village.

9. Development.

- a. Villagization. Residences are relatively permanent now that the water problem is solved; they are nicely placed along motorable tracks which eventuate into one road going to the dam and shops.
- b. Boma construction. Some have the "two ring" system, but not all. A few houses are of the modern type with mabati roofs, but for the most part the houses are traditional enkaji. (The mwenye kiti did say that many people are planning on constructing mabati roofed houses).
- c. Cultivation. For most people, it is a recent innovation, coming with villagization. Although a few people do their own cultivation, it is more common to find hired labor from Komolo, Olokii, and Arusha. Cultivation by tractor cost 150/- per hectare last season. Crops are grown for home consumption. Maize is the main crop, but beans are also grown.
- d. Consumption patterns. It was generally agreed in an informal meeting of residents that people tend to eat more maize flour than before, especially now that they cultivate their own fields. Locals are also starting to eat beans, but they balked at mention of cabbage and other mboga.
- e. Attitudes towards modern services. The teacher feels that the villagers co-operate in sending children to school because they are required to. They have little or no appreciation of the value of education. He tried to start an adult education program in the village, but said that there just wasn't enough interest.

On the whole, the people of Sukuro seem satisfied with their present accommodation to modern life. Stock trading brings in enough money for their needs, and can even pay for rental of vehicles and tractors for cultivation. They are close enough to facilities to get to them when necessary. Otherwise, they are far enough away from other government presences to not feel under the pressures of modernisation.

10. Perceived Benefits and Problems of the New Road.

The new road has currently made transport easier, especially of maize to Terat and Loswaki for grinding and for residents to visit the weekly markets and purchase what the two local shops cannot provide.

Most of those interviewed rarely visit Arusha or Kibaya, the exception being the mwenye kiti who visits Kibaya once a month.

The villagers had little contact with the roads crew. No one from the village worked on the road.

They see at present no possible problems which the road could bring them.

NABERERA VILLAGE.

Dates of survey: Nov. 27 - Dec. 2,
1979.

1. District: Kiteto - hdq distance: 121 miles.
2. Tarafa: Naberera - hdq distance: 0
3. Kata: Naberera - hdq distance: 0

4. Village Particulars.
 - a. Vitongoji 4. (Engutoto, Naibor Enderit, Olodo Soito, Naberera) and officially a 5th, Namalulu.
 - b. Population: 16 boma, 35 families, 558 people.
 - c. Ethnic groups: 90% Maasai with tribal mixture in the shops area.
 - d. Subsistence: livestock keeping with small scale family cultivation.
 - e. Leadership: Mwenye kiti, katibu kijiji, village council, baraza la usuluishi.
 - f. Local craftsmen: 1 tailor, 5 pombe brewers, 1 cattle trader licensed, 2 bakers.
 - g. Modern articles: 1 landrover (mission), kibatari 50%, 1 bicycle, 5 radios, 2 guns, syringes 90%.
 - h. Infrastructure:
 1. School: 7 classes, 131 students, 9 teachers, 1 cook, boarding.
 2. Dispensary: RMA present.
 3. Primary court: use Engasumet.
 4. CCM office: under construction.
 5. Church: Lutheran with resident pastor.
 6. Veterinary centre: with AFO resident.
 7. 1 dip: dip attendant present.
 8. hand dug wells with pumping machine - pump attendant present.
 9. 3 shops, 3 migahawa/hotels.
 10. No game post
 11. Cattle market defunct.
 12. No buying post.
 13. 5 mines.
 14. 1 leased shamba.
 15. Post office: none.
 16. Milk collection center: none.

4. i. Village Projects.

1. Construct village shop with 5000/- gift from Rotian Seed Co.
2. 20 hectares shamba.
3. CCM office.
4. School classroom.
5. Assist in cleaning water pump area.
6. Assistance through labour in construction of rural health centre.

j. Population stability:

Relatively stable with a major emigration in 1977 to Olokii because of stock diseases at Naberera. People bringing in stock now for seasonal grazing.

5. History:

Naberera is at a historically major crossroad in southern Maasailand, where a number of tracks meet and originate:

Sanya-Landenai track
Simanjiro track
Track to Namalulu and Engasumet
Track to Laipera wells and Makami, Ndedo and Kibaya.

Its recent history has been one of decline in shopping facilities and some other infrastructure. In 1949 there were six shops and the dispensary had in-patient facilities. In 1960, a pumping machine was installed in one of the deep wells to provide water for the stock route (and adjunctively for the village). In 1970 only 2 shops remained with the barest essentials. In the last two years Naberera has started a small re-growth, partly because of the new road and the large commercial Seed Bean operation started nearby. The District has also assumed a renewed interest in developing the area by constructing a veterinary centre and now initiating construction of a rural health centre.

6. Travel and Communication.

Almost all traffic coming from the eastern portion of southern Maasailand had to pass through Naberera. Transport was obtained through government business vehicles, especially those connected with the monthly cattle markets, and from private transporters.

Current transport costs:

Rental: Naberera-Arusha: 3000/- (return).
Lift: Naberera-Arusha: 40-50/- (no fixed price).
Naberera-Kibaya: 60/-

The mission has a P.O. box in Arusha, which acts as the communal letter box. Otherwise letters are given to persons going to Arusha or Kibaya.

7. Infrastructure Details:

a. School.

1. Structure: this is an old Lutheran "bush" school which was turned over to the government. It began as - and still is - a boarding school.

- 2 dormitories
- 1 dining room and kitchen.
- 1 damaged building.
- 4 teachers' quarters.
- 1 cook's house.
- 1 large new building housing 2 classrooms, office and store.
- 1 classroom building.
- 1 tap and water bowser.

2. Attendance: The head teacher said that for the most part parents are not interested in sending their children to school or in co-operating in school projects. Attendance records reveal the following:

Naberera Primary School.

<u>Year</u>	<u># registered</u>	<u>% attending.</u>
1975	no record	
1976	141	55%
1977	70	66%
1978	126	67%
1979	131	69%

This is one of the lower attendance records for villages along the drought road.

3. School Projects.

Shamba of 3.5 hectares cultivated in past year with seed from Rotian Seed Co.
5 hectares prepared for cultivation in canadian beans.
6000 bricks made by teachers and students for 2 new classrooms.

4. Adult education: 4 classes.

b. Dispensary: (Note: it is anticipated that medical services in the Naberera area will change radically over the next five years with the construction of a rural health centre.)

1. Structure: The present building is a fairly old stone structure which existed in colonial times. Inside is one large room with a series of partitions separating the lab and examining area from the general waiting room. There was a midwife but she was transferred.

2. Patients: According to attendance records there was a major drop in attendance in 1977-78 from over 12,000 to about 6,000 around the time of immigration from the village. In 1979 the estimated number will be close to 9,000.

7. b. 2 (contd.)

Main diseases treated in the last five years have been respiratory, diarrhoea, dysentery, digestive disorders, and eye diseases. Malaria appears to be definitely on the increase, from 4% of the cases in 1975 to 20% of the cases in 1979. Respiratory disorders appear relatively constant, and diarrhoea shows a decline.

No mention of other infectious disease outbreaks, the percentage remaining rather low.

In 5 months, there were 3 referrals to Arusha and 1 to Kibaya.

c. Legal Matters.

The following summarizes the cases heard in Engasumet and courts concerning Naberera.

Year	Engasumet Primary Court		Kibaya Primary Court	
	Civil cases	Criminal cases	Civil Cases	Criminal Cases.
1975	0	0	0	0
1976	3	1	0	2
1977	0	0	0	0
1978	3	1	1	0
1979	0	1	0	0

In addition to the above, we find no civil or criminal appeals from Naberera in the Kibaya Primary Court, although there is 1 criminal case in the Arusha urban court. The Loiborsoit court records show no cases from Naberera.

There is a very slight increase in use of the Engasumet court from 1978. That this may be a trend needs to be assessed from court records over the next five years. No noticeable use of the Kibaya legal facilities.

There were no records for the baraza la usuluishi, but the katibu kijiji said they get about 2 cases per month, none of which have been referred to the hakim. In general, the residents of Naberera are able to deal with their local conflicts without resort much to higher authorities.

Civil cases involved debts, divorce and dowry. The criminal cases involved 2 school utoro, abusive language, 1 contempt of court, 1 breaking and entering.

d. Shops.

1. Structure: There is what can be termed a "main street" on which most of the shops are placed. It was a stretch of the old track through Naberera. Now the road cuts to the north by the school and completely by-passes the village centre.

All the buildings are simple wattle and daub or

7. d. 1 (contd.)

mud brick structures with mabati roofs, except one which is entirely constructed of mabati. There are no cement floors or glass windows.

Naberera, since the time we first started visiting the area in 1973 seems to have experienced a decline in supplies in the shops. Suppliers of produce, then from Moshi, passing through the Lendenai road, tended to bring their goods to Engasumet and Namalulu where it was said they could get better prices for them. Thus Naberera, in the middle 70s, was left almost without shopping facilities at all. Even obtaining maize flour could be a problem.

- 2. Supplies. One shop, owned by a local, only sold maize flour and sugar. A second shop, owned by a shopkeeper from Terat, had the greatest amount of "bizaa", cloth, shirts, shorts, skirts, sugar, flour, tea, magadi, tobacco (and some cigarettes), 3 types of malaria medicine, some aluminium cooking utensils and water cans. Government workers also mentioned that one could obtain periodically onions, beans, and salt from the shops.

The third shop, opened with the gift from Rotian Seed Co., without consultation with the village council, was closed until the matter got settled.

Sources of supplies are two-fold. One shop gets them from Moshi via Lendenai. The shopkeeper comes from Kilimanjaro region. The second, smaller shop, gets its supplies from Terat.

- 3. Attendance. These shops barely serve the needs of the Naberera community. There is no local competition yet, but one shopkeeper said that more people are now travelling to Namalulu and Terat to get supplies than before the road was constructed.
- 4. Trading Licenses Applications from 1975.
(Note: we could not separate those licences which were granted for Namalulu and Landenai, as they were all applied for under the name of Naberera).

<u>Year</u>	<u>shop</u>	<u>hotel</u>	<u>off-beer</u>	<u>pombe</u>	<u>lodging (Landenai)</u>	<u>?</u>
1975	7	2	4	0	0	
1976	7	2	3	0	0	
1977	no license applications received in district headqrts.					
1978	4	0	0	0	0	
1979	2	2	2	3		1

e. Other Infrastructure:

- 1. Livestock services. A new veterinary center and residence was completed in 1979. The AFO was stationed at the center in October. He has not been present long enough to have many opinions about local use of the facility; however, because of the chronic shortages of veterinary drugs available to the district, he has discussed the

7. e. 1. (contd.)

possibilities of establishing the village as a local purchase agent. Thus drugs could be bought privately and housed at the centre. This project has not yet been presented to the village council.

The dip, although constructed around 1973, appears to be very old. It was badly built and after the first year required repairs. The AFO said that normally they have problems obtaining acaricide for the dip. Dipping is popular, and there have been some local repairs made on it.

No information on the frequency of sending dip samples and specimens to either Kijungu, Kibaya or Arusha, but in all probability it is done rarely, if at all.

Stock drugs from Kibaya have arrived in Naberera with the following frequency:

1978: 13 times (2 private purchases)
1979: 9 times (3 private purchases).

Attendance. The Vet. Centre will serve Naberera, Mamalulu, and Landenai, as well as Olmoti Ujamaa Bull ranch. The dip serves Naberera proper.

2. Water. The village water supply comes from a deep hand-dug well, one of a series existing from pre-colonial times at Naberera. The water tanks and pump were installed in the 60s, to facilitate watering livestock on a new stock route. Later, taps were installed in the village (there are 3).

As diesel is in short supply, there are frequent problems in running the pumping machine. Also, the two tanks leak under high pressure. One was repaired but still leaks. The normal procedure these days is to run the pump for 3 hours. Rotian Seed Co., which obtains its water from Naberera, as does the Olmoti ranch and tsetse bush clearers near Olmoti, periodically assists the village from time to time with donations of diesel.

The village assists when it is necessary to remove the pump for cleaning.

In addition to the taps, there are 2 cattle troughs - one is not used. In recent seminars with AATP the village has discussed possibilities of constructing a new tank cheaply with local materials. Some stock are still watered in the wells.

3. Church. Many of the buildings at Naberera were constructed by the German Lutheran Church and handed over to the British government during colonial times. A small church remains in very bad repair, one parish worker's quarters, and a two storied cement house, the residence of the pastor.

7. e (3) contd.

Church attendants are mainly from the Naberera area, although the pastor noted that more are coming from greater distances for religious instruction. The Church projects include:

- 2 acre shamba
- beadwork project - almost dead because of the scarcity of beads
- a bakery, also delayed because of the scarcity of wheat flour.

The pastor has a vehicle in Naberera. His work takes him to Kitwai, Landenai, and Ruvu Remiti, although at present he goes through Arusha via the Nyumba ya Mungu road to Ruvu.

8. Staffing and Support.

Five government employees, excluding the katibu kata, mwenye kiti, and katibu kijiji, were interviewed. Only one has been at his post for more than a year. Four arrived in 1979.

None are locals, nor Maasai, and only one has worked in Maasailand previously. They are all fairly young. Two are married, but only one has his family with him. Three have housing provided for them, the other two rent quarters.

Concerning departmental support, all claim delays in receiving salaries of up to 2 months, so some normally have to collect them in Kibaya. Opinions were divided over receipt of departmental supplies. Three said that they come regularly, although there are shortages, 2 claim delays in arrival.

Naberera shops are only able to meet part of the personal needs of the workers. They send supplies from Kibaya and Arusha to supplement what local purchases. Two claim that shortages are not serious, two also said that transport since they came was easy once they got to know the drivers. Frequency of travel to Kibaya varies from never to once a month.

Co-operation in general was seen as good, in the sense that there are no personal conflicts between workers and locals, but some complaints were voiced as concerned official co-operation. The head teacher felt that local assistance was difficult to obtain for school projects, and the medical staff felt that locals tended to insist on the treatments they wanted rather than what the staff saw as desirable.

From the above it is probable that two of the workers interviewed would prefer re-posting. The other three appear satisfied with present conditions.

9. Development.

- a. Villagization. Residence is now permanent with some seasonal movement of stock. Locals interviewed said it was a "good thing", especially as the stock can move freely for their needs, and "men can grow old in peace". Women interviewed were also pleased with

the village idea, especially as they now were freed from constant building of houses: however, they feared that being close to school would mean that they would have all the responsibilities of herding, as their children would be in school.

- b. Boma construction. The "two ring" pattern is in evidence. There is some change in house construction as well. Some are larger and have larger "windows". AATP representatives recently discussed the possibilities of making durable unburnt bricks easily with the villagers.
- c. Cultivation. Almost all families cultivate at present, although they hire labour to do it for them. The plots are small and are mainly of maize. It is quite possible that residents will quickly follow the school's example of growing seed beans for sale to Rotian Seed company and some of the others nearby.
- d. Consumption patterns. More money is spent on food, clothes, payment of services than ever. Residents said that they all ate more unga these days, even during the rainy season. But others also are starting to eat beans, rice, and other non-Maasai foods. Women said that they didn't know how to cook greens (mboga) but liked to eat it. They do use eggs.
- e. Regular stock sales. Difficult to determine - opinion is that it has become more regular. "We now know the profit of selling animals and feeding our children in the dry season and buying heifers".

Other business. Women in Naberera have found a lively demand for milk because of the increased presence of strangers working at Rotian. Milk prices have soared and workers are complaining. They are also finding sale of chickens a profitable enterprise. Proceeds go to them. No other private business operations yet, other than small scale stock trading.

- f. Modern services. All are worried that children in school mean more work for the adults. Teachers said that locals regard sending children to school as making a contribution, like cash for a project.

Nonetheless, good use is made of all government services present at Naberera. Voluntary labour has cleared the space for the new rural health centre and in bringing foundation materials to the site.

- g. It was suggested by some of the workers that if the village had better leadership it would advance more quickly. They felt that its present leaders were too much interested in their own personal profits to really be concerned with communal development.

10. Perceived Benefits and Problems of the New Road.

Most agreed that specific profits and losses of the new road were yet to come. All agreed that at present because of increased traffic one could travel anywhere he wished to with ease. One can also get messages to people more quickly and also get supplies easier.

Notable changes at present are increase of travel by locals to Loswaki to purchase and grind maize. Women said the men go to Loswaki and Simanjiro by vehicle (rental 1000/-), while they take donkeys to Namalulu.

The major change in the life of Naberera residents has already started being felt - the presence of the Rotian Seed Bean Company. Aside from the contributions to the village noted above, Rotian has offered to prepare local fields for planting at a cut rate price of 120/-. This will only pertain to those whose shamba are near to the road, as the tractors will not traverse difficult tracks.

As for difficulties, all interviewed agreed that such problems could occur but had not happened yet.

The road passed through Naberera in March 1978. Workers bought produce from the shops and locals. No one mentioned any problems with them, although one shopkeeper said that a member of the crew left an unpaid bill with him.

NAMALULU "VILLAGE"

Dates of survey: Dec. 4-8, 1979.

1. District: Kiteto - hdq distance: 111 miles.
2. Tarafa: Naberera - hdq distance: 10 miles
3. Kata: Naberera - hdq distance: 10 miles.

4. Village Particulars: (Note: Officially Namalulu is not a village, as it has not been yet registered. It is a kitongoji of Naberera; however, in most all respects it operates as an independent village with chairman and committees).
 - a. Vitongoji: 4 (Alamereuti, Olkiloreti, Nagelang'u, Namalulu).
 - b. Population: 13-16 boma estimated, 500 people.
 - c. Ethnic groups: Maasai 90%, small representation of Chagga at Namalulu proper and Warusha.
 - d. Subsistence: livestock keeping with small scale family cultivation.
 - e. Leadership: Acting mwenye kiti, katibu kijiji, informal village council of 22 members - opinion of residents and government workers is that leadership is very inferior.
 - f. Local craftsmen: pombe brewers, hunters, cattle traders, local midwives.
 - g. Modern articles: 2 ox ploughs, 2 radios, a few kerosene lamps, many kibatari, torches and syringes 90%.
 - h. Infrastructure:
 1. School: 1 class, 35 students, 1 teacher.
 2. Dispensary: resident RMA.
 3. Primary court: use Engasumet.
 4. CCM office: none.
 5. Church: Lutheran and resident evangelist (Acting katibu kijiji).
 6. Veterinary Centre: use Naberera.
 7. 1 dip: no attendant.
 8. hand-dug well with pumping machine - non-functioning - attendant not present.
 9. 2 shops: 1 off-license beer license.
 10. no game post.
 11. no cattle market.
 12. no buying post.
 13. mining - non-licensed.
 14. leased shamba - none.
 15. post office - none.
 16. milk collection centre: none.

4. i. Village Projects.

- 1. Contributions towards school construction - cut poles and dug foundation.
- 2. Discussion about introducing more ploughs.
(Note: balozi said they have no real projects other than the school).

j. Population stability.

Said to be on increase from 1978, almost tripled. Predominantly pastoralists. Because of smaller population than in the past, locals say there is no seasonal movement of stock this year.

5. History.

Because of series of small hand-dug wells, Namalulu has been a minor population center seasonally. In 1965 a small shop was established there. Most infrastructure, aside from a stock route night boma, has been placed there within the last 5 years.

The old Naberera-Engasumet track descended the escarpment at Namalulu.

6. Travel and Communication.

The only major track was that from Naberera. A small track existed going southwards along the edge of the escarpment but eventuated into cattle routes.

Transport was obtained from vehicles passing on the Naberera-Engasumet track, and from periodic arrival of lorries servicing the 2 shops after 1965.

Current transport costs:

Lorry rental:	Arusha-Namalulu:	3000/-
	Namalulu-Kibaya:	3000/-
Lift:	Namalulu-Arusha:	160/-
	Namalulu-Kibaya:	140/-
	Namalulu-Moshi:	100/-

There is no post office. Letters are given to passing vehicles or the Naberera mission P.O. Box in Arusha is used.

7. Infrastructure details:

a. School.

- 1. History/Structure: The school has just started - 1978 - with one class of 35 students. Formerly, the children would have gone to the Naberera boarding school.

There is no building. The church at present serves as a classroom and the former stock route night boma serves as the teacher's quarters. The only apparent village project is construction of a classroom. Class II will start in 1980.

2. Attendance. Although the teacher claimed there was no utoro, truancy, attendance records reveal the following:

<u>Year</u>	<u># registered</u>	<u>% attending</u>
1978:	33	78%
1979:	36	89%

3. School Projects. School classroom.

b. Dispensary.

1. History/Structure. The dispensary was open in 1977. Prior to that time the sick had to be taken to Naberera or Engasumet dispensaries. An MCH clinic had been proposed for Mamalulu, but may be indefinitely delayed because of the proposed health centre at Naberera and the new clinic at Engasumet. At present, maternity patients are referred to Engasumet.

Structure consists of:

- a clean well-kept dispensary of 3 rooms; only one in use.
- living quarters - 3 rooms.
- outside choo and kitchen.

2. Patients. According to the attendance records for Mamalulu there has been a major increase in patients from 1978 to 1979, from approximately 6000 to 8000 per year. This would be consonant with local information of general population increase during this time.

Diseases tend to follow the dominant ones in other dispensaries in Kiteto. Malaria and respiratory diseases lead in frequency, while digestive, venereal diseases and wounds and injuries follow.

Digestive diseases, however, fall to insignificance in 1978 and 1979. Venereal disease shows a drop from 9 to 4% in 1979, but this may not mean eradication but less attendance for that particular problem. Wounds show an increase from 1977 to present, which may be a result of population growth. Diarrhoea, dysentery and eye diseases are insignificantly represented in any year.

There is one report of a chicken pox "epidemic" in 1978.

The RMA has initiated an modest "outreach" program of health improvement connected with adult education classes.

c. Shops.

1. History/Structure. The 2 shops are on either side of a "main street" on which are a few residences. They are both wattle and daub, painted white with

a mabati roof. Only one shopkeeper was interviewed. He started the shop in 1965, obtaining most of his needs at Moshi by hiring a vehicle from Moshi to Namalulu. He used the Lendanei road. In 1974 shopkeepers were told to purchase good through the Monduli RTC, so he started using the Lolkisale route. At the present time he uses the new road to Arusha and Kibaya, usually splitting the cost of vehicle rental with the other shop.

2. Inventory. Both shops had about the same type of goods. We found maize flour, salt, tea, sugar, dried beans, a few domestic utensils such as spoons and bowls, cloth in a variety of colors, blankets and bed covers. Magadi was also present as was hand soap. Other articles are in demand but were not available.
3. Attendance. Naberera residents come to shop at Namalulu because their own shops have so little to sell, but the rest of his buyers come from around Namalulu itself. There has not been any change in distance travelled to purchase goods at Namalulu.
4. Trading Licenses Applications.

No licenses were noted specifically for Namalulu until 1978:

1978: 1 shop
1979: 2 shops.

It is possible that earlier trading licenses for Namalulu were included in Naberera tarafa applications.

d. Other Infrastructure.

1. Dip and veterinary services. The dip has not functioned since December 1978, the problem being one of pumping water to it. In the Kibaya veterinary drugs issues book we noted two issues of drugs to Namalulu in 1979: one through government and one privately purchased. Until recently, drugs had to be obtained at Engasumet or through a private dealer.
2. Church. The Lutheran church has wattle and daub walls with a mabati roof. There is also an evangelist's house which was built by the congregation.
3. Law. The following cases from Namalulu were noted:

Engasumet Primary Court.		
	Civil cases	Criminal cases.
1975:	0	0
1976:	0	1
1977:	0	3
1978:	1	1
1979:	2	0

The three civil cases concerned 1 debt, 1 divorce, and 1 run-away wife. Criminal cases involved 2 assault, 1 threat, the rape and theft (dismissed) and 1 escape from custody. No cases from Namalulu were noted for any other court, including Kiteto District Court Appeals.

8. Staffing and Support.

Two government employees were interviewed. The teacher came to Namalulu in 1978 and the RMA in 1977. Both are not unhappy with their jobs or the village. The teacher's last post was more remote than this, and the Doctor's last post had housing problems. Salaries are supposed to be brought from headquarters, but are usually delayed, so both go to Kibaya about once a month to collect them, and supplies as well. Obtaining medical and school supplies is relatively easy if one goes to headquarters for them. Neither has travelled to Arusha in the last year. Both consider transport easily obtained now.

Concerning personal needs, both felt that supplies were short locally, and had to be supplemented from Kibaya or Arusha. The RMA, whose family is present, was more concerned over food problems locally.

On the whole, co-operation with residents is good, and no interpersonal problems were noted.

9. Development.

- a. Villagization is still taking place at Namalulu.
- b. Boma construction tends towards the "two ring" model, although there is not much internal alteration other than this re-arrangement of stock corrals. (The informants, however, were proud to note that there are two mabati houses locally).
- c. Cultivation is common. Informants claimed that 100% of the residents have a shamba of at least 1 acre, starting from 1977. Harvest is for home consumption, not for sale. Some of the cultivation is done by seasonal workers, 2 ox ploughs are present and there appears to be plans for obtaining more.
- d. Consumption patterns have also changed towards an increase of purchased foods: maize flour, even in the rainy season, is common. The shopkeeper noted that residents are now demanding a greater variety of stuffs including cook fat, batteries, nails, mabati, etc., and one of the balozi said that people are starting to admire modern clothing. Skin skirts on women is rare. Goods available in the shops are certainly not as extensive as those found in Engasumet or Komolo.
- e. Education is granted its advantages, but residents also pointed out that it means a loss of needed labour in herding.

10. Perceived Benefits and Problems of the New Road.

For the most part the benefits of the road are yet to come, although transport and receipt of supplies and communication has already been made easier. Residents said they tend to travel more by vehicle than on foot these days.

Problems have already occurred. Two cows were killed by vehicles last year, and one of the dukas was robbed, this being attributed to ease of access and escape. Shopkeepers and villagers feel that the new road will bring in more undesirable persons to the community. As for other aspects - increased visitors, etc. - none have found this to have occurred yet.

No problems were mentioned with the road's crew. They camped near the dip, bought supplies from the shops, milk from residents and came to drink pombe at the bomas. One man from Namalulu worked on the road.

ENGASUMET VILLAGE

Dates of survey: 5-7 Dec. 1979.

1. District: Kiteto - hdq distance: 93 miles.
2. Tarafa: Naberera - hdq distance: 28 miles.
3. Kata: Engasumet - hdq distance: 0

4. Village Particulars:
 - a. Vitongoji - 3.
 - b. Population - 23 boma; 1200 people.
 - c. Ethnic groups: Maasai 80%.
 - d. Subsistence: livestock keeping, with small scale cultivation.
 - e. Leadership: mwenye kiti, katibu kijiji, village council, CCM branch, UWT branch, TAPA, baraza la usuluishi.
 - f. Local craftsmen: 2 carpenters, 2 tailors, beer brewers, cattle traders, 1 transporter, local midwives, charcoal makers, masons.
 - g. Modern articles: 2 vehicles, ox carts, 4 bicycles, 2 radios, torches, kibatari, syringes present.
 - h. Infrastructure:
 1. school + classes 1-5, 6 streams, 125 students, 6 teachers.
 2. dispensary: 1 mission with resident RMA; 1 government with MCH clinic and staff of 4.
 3. primary court: resident hakim and assistant.
 4. CCM office with office of the katibu kata and mratibu kata.
 5. church with resident evangelist - Lutheran.
 6. vet center with resident AFO.
 7. 1 dip with dip attendant.
 8. 1 borehole with pump attendant, 4 water taps, 1 cattle trough, a water tank.
 9. 3 shops, 2 hotels, 1 butcher, 1 kilabu.
 10. game post with game scout.
 11. deep hand-dug wells with permanent water.
 12. 1 cattle market - not operating.
 13. buying post - none.
 14. leased shamba - none.
 15. post office - none.
 16. milk collection center - none.

4. i. Village Projects.

1. construct dip attendant's house - half-finished.
2. CCM office - completed.
3. construct 2 classrooms and 2 teacher's houses - planned.
4. purchase village grinding machine - through TRDP loan - planned.
5. village communal shamba - proposed.
6. village ushirika shop - proposed.
7. purchase transport for acaricide - ongoing.
8. pay salaries of pump and dip attendants - planned.
9. adult education - 4 classes, 4 teachers - considered unpopular except at the shops.
10. Ox plough training program.

- j. Population stability: Immigration from Kitwai, Namalulu, Moipo, and Londeregess, mostly pastoralists for seasonal grazing.

5. History.

Engasumet has been a small center from pre-colonial times because of its permanent water obtained from deep hand-cleared wells. In the dry season it is a source of water and grazing for stock. Before villagization, however, people were beginning to settle permanently around the wells, and tending to take stock away following the rains.

Infrastructure at Engasumet stems from colonial times where there were some shops, and a government tax clerk. A Lutheran "bush school" also existed. Until a few years ago, however, total dependence for water came from clan-controlled wells, annually cleared by imported labour.

Livestock services are also relatively recent.

6. Travel and Communication.

As far as any informant can remember, there has always been a track from Naberera passing through Engasumet en route to Kijungu. Until 1975, another small seasonal road existed to the east connecting Engasumet with Ruvu Remiti. (The district plans to rebuild this road soon). Before development of the two boreholes in the Kitwai mbuga to the south, the track went directly to Kijungu. A small hunters' track existed, however, passing through the mbuga eastwards to Ruvu as well as southwards to Saunyi. We were also informed that a small track also existed south of Engasumet near Londeregess, which went to Ndedo. Nonetheless, aside from hunting vehicles using these axillary trails, the main track was to Kijungu. In 1974, the Maasai Range Project graded the road from Kijungu to Namalulu in preparations for bringing the drilling rig from Kijungu. The main Engasumet track could be passed in the rainy season with some difficulties.

Aside from unplanned traffic, transport out of Engasumet was made possible by lorries which serviced the shops. Before 1970, one came each month from Moshi - in those days Moshi was the supply area. Thus vehicles tended to use the Lendanei road to Sanya. After 1970, one of the duka owners obtained a

lorry. In 1972-5 a bus came from Arusha during the dry season. Now, one comes from Kiberashi once a week, also in the dry season, passing via Kitwai and Kijungu. In 1977, one of the government workers purchased a landrover, and until recently, a cattle market brought 4-6 lorries and landrovers monthly.

Local opinion concerning transport after the completion of the road is that it has improved considerably, especially for those who want to go to Kibaya. There is no post office; letters are given to passing vehicles for posting or delivery.

Current transport costs: Lift to Arusha/Moshi: 70-120/-
to Simanjiro: 60/-
to Kibaya: 50/-

7. Infrastructure Details.

a. School:

1. History/Structure: The new school is sited on the western side of the village, across the new road. Prior to its construction there had been a small Lutheran "bush" school serving the community which had been taken over by the government after independence.

Structure consists of: 4 classrooms, 2 teachers' houses: 1 with 4 and 1 with 2 rooms, 1 choo. No recent repairs.

2. Students: In December 1979 there were 90 boys and 35 girls enrolled, a total of 125, in 5 classes with 6 streams. The teacher interviewed estimated that attendance was about 68%.

Attendance from 1975:

<u>Year</u>	<u># registered average</u>	<u>% attending.</u>
1975	90	78
1976	69	84
1977	91	78
1978	111	62
1979	119	73

The figures for 1979 differ from the teacher's numbers because they are average registered students and per cent attending for the entire year, not the month of December.

3. School Projects: Start class 6 in 1980. School shamba: 2.5 hectares obtained 4 sacks of millet which were sold to the village. School vegetable garden also sold to the village. Construction of 2 new classrooms. Construction of 2 teachers' houses.

b. Dispensary/MCH Clinic.

1. History/Structure: A government dispensary has existed for a very long time in Engasumet. Recently, an MCH clinic was added. In the early 70s a private lutheran dispensary was constructed.

The problem is that the MCH and government dispensary share one room in the CCM office. The Lutheran

7. b. (contd.)

dispensary is a large building with erratic staffing. We found a fridge, medicine chest, tables, benches, weighing machine, screen for examinations, and a maternity bed, which remained in the courtroom as it was too large for the dispensary.

2. Patients: According to attendance records, there was a significant drop in patients from nearly 13,100 in 1975 to 6000 in 1977. From 1977, there has been a slow rise up to the estimated annual total of 8156 for 1979. We would expect it to continue to increase, showing greater attendance during the dry season months.

The dominant disease category treated during this period has been respiratory; followed by malaria. These two diseases have been consistently predominant since 1977. In the two earlier years, skin diseases, diarrhoea, and digestive disorders were also found. The presence of clean tapped water, readily available, may be in part responsible for the decline of representation of these problems.

We found no recording of specific infectious diseases or epidemics at Engasumet, the category "other infections" remained little represented. Venereal disease treatment remains relatively low in frequency of treatment.

Only one attendance estimate could be obtained for the MCH clinic at Engasumet. In November, 1979, 21 patients came as first attendants. Re-attendance total was 26.

We obtained no information on referrals to other medical facilities.

The medical staff co-operates with the adult education program by holding classes three times a week on "better health" and "better food".

c. Primary Court.

1. History/Structure: The present mahakama was completed in 1978 through local contributions of cash and work and district contributions of mabati and bricks and builders. It consists of one large open courtroom and two smaller offices. The offices are sparsely furnished. There are no file cabinets for court records. Present were two tables, benches, chairs, and a safe.

The hakimū resides in the former court building. His tayarishi has a room in the CCM office.

2. Attendance. The court handles cases now mainly from Naberera tarafa, but formerly took cases from as far away as Ruvu Remitit and Komolo. At one point its jurisdiction even extended to Kijungu and Sunya.

Cases are primarily heard at Engasumet. The hakimū, unlike his counterpart at Loiborsoit, doesn't visit

7. c. 2 (contd.)

the villages in his area. His tayarishi, however, has many occasions to travel, usually on foot. As there is no lock-up at Engasumet or Kijungu, it is necessary for him to get a lift to take a remanded prisoner to the Kibaya jail.

We were unable to obtain annual totals of cases in Engasumet, so the following table indicates total number of cases in which either Maasai or residents of Engasumet are involved.

Engasumet Primary Court.

Year	<u>Civil cases</u>			<u>Criminal cases.</u>		
	<u># cases</u>	<u>from Eng.</u>	<u>Elsewhere</u>	<u># cases</u>	<u>from Eng.</u>	<u>Elsewhere</u>
1975	10	16	4	39	32	7
1976	14	14	14	77	29	48
1977	12	14	10	101	65	36
1978	22	14	30	38	21	17
1979	21	18	24	48	21	27

Concerning civil cases, while litigants from Engasumet have remained relatively constant, those coming from other villages indicates a fairly great increase in 1978. (Note that the civil cases are represented by 2 litigants, while criminal only present the accused, as the mdai in this case is the state).

But in criminal cases, we find a definite decrease in maasai or local attendance from a peak of 1977 rising again. Examining the incidence of cases involving Engasumet people in Kibaya primary court, and district appeals court we find no evidence that there is an increase of cases involving people from Engasumet in other courts, as the tabular summaries below indicate.

	<u>Primary Court</u>		<u>Kibaya</u>	<u>District Court</u>	
	<u>Civil</u>	<u>Criminal</u>	<u>Criminal</u>	<u>Criminal Appeals</u>	<u>Civil Appeals</u>
1975	0	3	3	0	1
1976	1	0	2	0	1
1977	1	0	1	0	2
1978	1	0	0	0	0
1979	0	0	2	0	0

The figures for Engasumet suggest a trend of increasing use of the primary court for civil cases with a significant rise in litigants from villages outside. In criminal cases, the increase is broken in 1978 with a return in 1979 to an upward trend. As one of the major constraints to court attendance is distance from one's home, the new road and more importantly the increased transport possibilities on it, may have a significant influence in an increase of cases heard.

d. Shops.

1. History: The number of shops and supplies in them has declined since the 60s. One shopkeeper recalls 6 shops in Engasumet when he arrived in 1969. None of the shopkeepers are from Kiteto District.

7. d. (contd.)

2. Supplies: The three shops are simple wattle and daub buildings with mabati roofs and dirt floors. Two of the shopkeepers have transport which they and the third shopkeeper use for their supplies. Formerly, the main supply route was through Moshi via Lendanei. Two shops still obtain supplies from Moshi but also now use the Kibaya and occasionally the Arusha RTC, especially for sugar. Before construction of the road through Ndedo, they had to travel to Kijungu and then 40 miles to Kibaya for district supplies.

Only two shops had any extensive stock which consisted of varieties of cloth - and tailors making clothes - kitchen, and cooking utensils, eight different kinds of commercial medicines, including those for malaria, rubbing compounds, baby medicines, sugar, maize flour, biscuits, tea, candy (one shop used to have a few tinned goods, but none were in evidence during the survey), matches, washing and hand soap. Very few beads and decorative wire, curry powder and baby pins. One shop also used to sell soda and beer, but none has been available for over a year.

Only one hotel was open during the survey. The hotel keeper also served as a butcher periodically. The structure is also wattle and daub with a mabati roof. The interior ceiling is made of painted hessian cloth (gunia). One room contains a small kabati (cupboard), while the main room has a table, a few chairs and a bench.

Food sold in the hotel varies with the supply and local demand. But the "menu" consists of mandazi, chapati, tea, beans, meat and soup, and rice when available. His supplies also come from Kibaya through a hotelier who purchases them for him and finds transport to Engasumet. This hotel has been in operation since 1973.

3. Attendance. The shops and hotel serve the needs primarily of the people of Engasumet. There are shops at Kitwai and at Namalulu, but people from these villages would come if their shops were out of needed stock - "just as we do if we are out" - one hotelier noted. Competition is also non-existent "because everyone sells the same thing".

All the businessmen interviewed claimed that the consumption needs of the local people had increased. The problem, as one shopkeeper outlined it, is not now one of what people want, but of supply. Now that locals grow their own maize, the shopkeepers expect a drop in demand for sembe in the next few years.

As far as businessmen are concerned, the road has made the possibility of getting stock easier, even renting vehicles is easier, as the owners are more willing to drive to Engasumet. But the problem remains for them of obtaining supplies in Kibaya, Arusha and Moshi. The new road has not yet brought about competitors or greater use of shops by people living far away.

7. 4. Trading License Applications.

<u>Year</u>	<u>shop</u>	<u>hotel</u>	<u>off-beer</u>	<u>pombe</u>	<u>butcher</u>	<u>cattle trading</u>
1975	0	1	0	0	0	0
1976	6	3	2	1	1	2
1977	3	6	2	1	2	1
1978	5	4	5	0	0	0

(3 granted)

These figures are for the whole of Engasumet kata, which means that businesses at Kitwai A and B would be included.

e. Other Infrastructure:

1. Livestock services. The Veterinary center consists of 2 rooms for offices and two rooms for living quarters. It is at present occupied by an AFO veterinary recently posted from Kibaya. The building, which was constructed in the mid 70s is in need of repair. None of the office rooms show much signs of use as offices. One room serves as a store for diesel for the borehole pump and as a guest room. Stock medicines are present and a fridge is in use. There is no microscope, but some other veterinary supplies are present.

The dip is a newly constructed facility, outside of "town". A local youth is being trained by the AFO as the attendant, as there is none provided by the district at present. There appears to be no problem of acaricide as a barrel is usually dropped off by the lorry transporting it periodically to Kibaya from Arusha. But the main problem is obtaining fuel to run the water pump. The dip had been inoperative for three weeks at the time of the survey because of lack of diesel.

Dip samples are not regularly sent to Kijungu - it is easier to send them to Arusha, although none have been sent since April, when the AFO arrived. Disease specimens would normally be sent to Kibaya lab. or the Veterinary Investigation Center in Arusha. Since the AFO's arrival one specimen was sent to the latter. It is not possible now, as there are no reagents on hand.

Medicines from Kibaya arrived in Engasumet with the following frequency:

- 1978 17 times (1 private purchase)
- 1979 36 times (0 private purchase)

Attendance. The Vet. Centre served Engasumet primarily, although it is also used by Kitwai A + B and by Namalulu and Naberera before the centre was constructed at Naberera. The AFO estimates about 10 visits from locals per day.

innoculation
He reports fair co-operation in the only/campaign carried out since his arrival for anthrax. The problem he said was that many of the stock had been pastured away at the time. On two occasions the village contributed money to allow him to purchase needed drugs privately.

They also contribute regularly to the purchase of diesel to operate the pumping machine. Apparently they will also pay the salaries of both dip and pumping attendants.

2. Water. The pumping machine serves the entire community, but is axillary to the Engasumet wells. In itself, it cannot meet the needs of man and stock, so the pump attendant usually rotates service. When the taps are running, he is able to supply water for 5 groups of cattle over a 9-hour period.

No major breakdown of the pump. The real problem is obtaining fuel to run it. Minor problems he handles himself. Major ones require assistance from the Water Dept. in Kibaya.

3. Game Post. Mali Asili representative. This officer reported little activity in Engasumet. No hunters report to him or request guiding assistance. Anti-poaching activities were recently concentrated in Namalulu. Considers poachers to be few in his area, although one was caught last year by the anti-poaching squad.

There are a few charcoal burners around Engasumet. He tried, unsuccessfully, to organise them into a co-operative in 1978.

His office is in his shop-cum-residence.

4. Church. The Lutheran church has been fairly active over a long term in Engasumet. The Evangelist reports that when he arrived in 1967 christians were mostly from the shops area. In 1968 livestock keepers - mainly women - started attending services mainly under the threat of a spiritual disease called Orpeko, which is believed only curable through baptism.

Most of his christians come from a 3-6 mile radius around Engasumet, although some come from Kitwai, usually on foot.

The mission has a small church and two houses, one occupied by the mratibu kata.

He obtains transport once a month when the Naberera landrover visits Engasumet.

8. Staffing and Support.

Eight government employees, excluding the mwenye kiti and katibu kijiji were interviewed. Most of them have been only recently posted here. The hakim, teacher and game scout have been present since 1977, the pump attendant, who is also the only resident of Engasumet, started work in 1978, and the four others arrived from April to October, 1979.

With one exception, most workers appear to be satisfied with their jobs, in spite of housing problems and periodic difficulties in obtaining personal and work supplies. There are different arrangements for obtaining salaries. Some have their salaries brought by a district vehicle - it was delayed by two months at the time of the survey. Others go to

8. Staffing and Support (contd.)

Kibaya to collect it. The Katibu kata has it paid directly into his account in Kibaya.

Work supplies are often obtained personally from headquarters.

Opinions differed in difficulties of meeting personal needs locally. Most said that they used the Engasumet shops, but that shortages were frequent. This difference of opinion is related primarily to the facility with which an individual can make arrangements privately with transporters or frequent travellers to get his goods from Arusha, Moshi or Kibaya. Those who appeared most satisfied with their personal situation also had such arrangements.

Frequency of travel. On the whole, the majority of those interviewed travelled to Kibaya at least once within the last two months. Fewer visited Arusha; for most, there is little reason to do so. The one employee who was least satisfied with her posting had visited Arusha or Moshi 4 times since her arrival in April, as well as having been to Kibaya once.

Co-operation with fellow workers and residents appeared to be good. No one cited problems save that the teacher mentioned cows eating up half of the school shamba, and the MCH worker complained that local women were not coming to the clinic in any great number. Most of the workers considered the Maasai conservative in the sense that they are slow to adopt the services which are proffered to them. Locals interviewed ventured no opinions about co-operatives and work habits of the various government servants.

9. Development.

- a. Engasumet has conformed to the villagization notion for pastoralists. Boma tend to be permanent, with stock being moved for seasonal grazing, a system which we noted had already been developing before Operation Mbarot. The former village chairman, who had been in charge of the Operation, said that at first it was resented, but that later people began to see its advantages. One elderly informant said about permanent settlement: "now we can die a good death at home rather than on a donkey moving somewhere".
- b. Aside from permanency, there appears to be relatively little change in style of house construction, although it was reported that a few individuals are interested in building mabati houses. Boma tend to be constructed now on the "two ring" system, a central stock corral surrounded by a fense with houses in the outer ring. The above informant also commented that this was a good idea because "you don't get stampeded by stock as you leave your house".
- c. Mostly all villagers have started cultivating, although they tend to do so through hired hand labour and their fields are small. When asked why pastoralists started tilling the earth, they replied "tumbo" - stomach. But certainly encouragement came from the local government as well. There is no village shamba yet.

- d. Changes in consumption patterns have been slowly moving towards greater dependence on purchased goods, foods and services, such as hospital treatment, stock drugs, contributions towards infrastructure, and travel. The mwenye kiti listed expenditure of money on the following from most to least important: food, stock drugs, clothes, treatments, travel and pombe. (The katibu kijiji, a non-drinker, reversed the order somewhat).

Food consumption changes are related to greater variety of foods and less seasonality in use of purchased foods, especially maize flour, although unlike some other areas, sembe consumption is said to definitely drop in the rainy season when there is plenty of milk. The hotelier claimed that "the Maasai eat anything except for fish".

Another notable reversion to use of money is the growing preference to use cash instead of stock for dowries.

- e. We obtained no information on frequency of sale of stock, but Engasumet, as most other villages in Maasailand, has a large number of private cattle traders, operating in the local markets - Kitwai and Ndedo - as well as in others further away. The market at Engasumet was due to re-open in the latter part of December 1979. Most livestock are sold at Kitwai at present.

Women, from at least 1973, at the time of the principal investigator's first visit to the area, were engaged in a modest sale of chickens, eggs and milk to government workers, shops and residents of the shops area. This business has continued informally. Women interviewed said that the profits from these sales accrue to them and are not taken by their husbands. In the shops section one group of women have started an official kilabu, through the UWT, although there is considerable unlicensed private brewing of beer in homes around the village.

- f. Attitudes towards education are no more enlightened than in the other pastoral communities in the survey, and adult education has only become popular in the shops area.
- g. Other advances in self-determination come from recent local assumption of costs - or contributions to construction and maintenance - of services. Payment for stock drugs communally, purchase of diesel to run the pumping machines, contributions towards water development and salaries for workers are all significant. As the same elderly man quoted above pointed out: "nowadays people have to help themselves or they don't get anything".

We should also note leaders' opinions that villagers and committee members more frequently attend meetings these days without the pressure of a village rule penalizing non-attendance.

10. Perceived Benefits and Problems of the New Road.

All interviewed felt that the new road would be an advantage to them in the future, particularly in easing the problems of travel for themselves and in making easier the receipt of goods in the village.

Some specific advantages mentioned were ease of travel to distant places to buy livestock, possibilities in future to transport crops, transporting maize for grinding - the nearest machine is in Kijungu.

We posed possible advantages which a new road could bring. All locals interviewed agreed that the possibility for "contamination" of youths and women with city ways was a real problem, although one woman said that if women wanted to run away they could do so in the past as much as in the present. Elders disagreed on the growing number of requests for assistance from relatives and friends from a distance, as they were also divided concerning increase of visitors from afar coming to local celebration. They all agreed that the new road made it possible for greater government contact with the community, especially in making requests for contributions to self-help projects.

The road construction period. A main camp was placed just outside the community in the latter part of 1978. Four local men were employed on the road and went with the crew as far as Kibaya. They since have returned to the village. The roads' crew used the village shops and hotels and purchased meat and milk from the villagers. No one could recall any unpaid debts nor any sort of problems resulting from the presence of the crew.

NDEDO VILLAGE.

Date of survey: 13 Dec. 1979.

1. District: Kiteto - hdq distance: 49 miles.
 2. Tarafa: Kibaya - hdq distance: 49 miles.
 3. Kata: Makami - hdq distance: 0 (?)
4. Village Particulars:
- a. Vitongoji: not ascertained.
 - b. Population: numbers uncertain - estimated at 26 bomas, 78 families, 2730 people.
 - c. Ethnic groupings: Maasai 90%.
 - d. Subsistence: livestock keeping with almost no cultivation.
 - e. Leadership: neither mwenye kiti nor katibu kijiji present - (both are in "acting" capacity), no baraza la usuluishi - enkiguana still used.
 - f. Summary of local craftsmen: none other than cattle traders, hunters and some non-Maasai seasonal labourers.
 - g. Summary of modern articles: cooking and eating utensils, kibatari, syringes, torches found in most families. Only 2-3 radios and 2 guns.
 - h. Infrastructure:
 1. School: classes 1-7, 100 students, 5 teachers, 1 cook.
 2. Dispensary; new building with living quarters, 1 RDA, 1 Nurse Ward Assistant.
 3. Primary Court: Kibaya.
 4. CCM office: none.
 5. Church: Lutheran mission activities present, pastor in Kibaya.
 6. Veterinary services: Kibaya and monthly cattle market.
 7. Dip: present, no attendant.
 8. Water: hand dug wells. 1 capped shallow well with pumping machine - tap at school.
 9. Shops: 2 seasonal.
 10. Game post: none.
 11. Cattle market: present monthly, crush and market ring built.
 12. Buying post: none.
 13. Mining: none.
 14. Leased shamba: none.
 15. Post office: none.
 16. Milk collection center: none.
 - i. Village Projects:

Assisted in construction of RDA's house.
Contributions towards construction of 1 classroom and 2 dormitories.

4. j. Population stability.

Very unstable. At the time of the survey, most residents were moving away.

5. History.

The area has long been used as a dry season reserve, as is its neighbour to the north, Makami, because of the presence of deep hand dug wells which were cleared in pre-Maasai times. These wells, one passage belonging to an individual clan group, are cleaned each year by experts from Kilimanjaro region. There has been, to no one's knowledge, anyone living permanently in Ndedo. In the rainy season the pattern was to move up out of the depression into areas of seasonal water or southwards towards Kibaya. The not too distant village of Nga'bolo contains mostly individuals who are returning from Ndedo at present.

Infrastructure at Ndedo is fairly recent. During colonial times attempts were made to sink boreholes in the area, but the water obtained was too saline for either animal or human consumption. More recent attempts by the Maasai Project proved to have the same effect. Recently, a shallow well was sunk, tapping an intermediate layer of fresh water which has been provided to the school and shops area.

Until 1974, nothing existed at Ndedo save for 3 shops, mainly seasonal.

6. Travel and Communications. Before the Ukame road was constructed, there were tracks used by vehicles passing through Ndedo. The earliest - and main track - came from Naibormurt into the Makami depression and on to Ndedo. Another small track was said to exist near Londergess to Ndedo. A third track was cut also from Simanjiro, but followed the western edge of the escarpment and descended into the depression south of Ndedo. When the school was constructed, the Arusha-based company found use of the first track impossible, so cut a small "shortcut" from the escarpment track into the site.

From Ndedo southwards tracks existed to Kijungu via Amei ranch and to Kibaya.

Informants said that these days none of these tracks are used by vehicular traffic, although the escarpment road was sometimes used by workers from headquarters en route to Simanjiro. All of these roads were mainly for use in the dry season.

Transport of people in those days was almost non-existent by vehicle, except for shop lorries bringing supplies occasionally and a rare government or hunting car passing through. To get to Arusha a person had to travel to Kibaya on foot and then get a bus via Kondoa.

Opinions of locals concerning transport is that it has improved considerably for them. "Now people are always expecting a lift, rather than going on foot", one informant declared. Among government workers, opinion is mixed. Some still feel the place is very isolated and transport difficult. Others claim there is no problem in transport whatsoever these days.

6. (contd.)

Shopkeepers: Those interviewed were clerks - tend to have their own transport system, both own lorries, and in the dry season come about once a month with supplies.

7. Infrastructure details.

a. School.

- 1. Structure: Building of the school, under contract from an Arusha construction firm, was completed in 1974, and the school opened in 1975 with 1 class and 1 teacher. Considerable problems attended its operations during the first few years. Water was obtained from the wells and was quite dirty, school children regularly were sick. Food supplies, in the rainy season especially, were difficult to obtain, as were supplies for the teachers. At one point the school was closed because of these problems. It became a boarding school in 1976.

Prior to construction of this school there had existed a Catholic mission "bush" school at Nga'bolo, which had been defunct for a number of years. At present the school facilities consist of:

- 3 teachers houses and vyoo
- 4 classrooms
- 1 dormitory - also used as a classroom.
- 1 kitchen
- 1 dining hall - also used as a classroom.
- 1 water tank and tap.

The school buildings looked to be in relatively good condition. Recent repairs were made in 1978.

- 2. Attendance: In December 1979, there were 100 registered students: boys 75, girls 25, in 6 classes.

Attendance from 1975:

	<u># registered (average)</u>	<u>per cent attending</u>
1975:	65	not computable
1976:	112	51%
1977:	118	53%
1978:	152	63%
1979:	212	51%

b. Dispensary.

- 1. Structure: The dispensary was completed in 1975. Prior to opening the dispensary, the closest source of treatment would have been Kibaya or Kijungu. If the person was seriously ill, morans would be sent to hire a vehicle from one of the centers, but informants added that the person would have died by the time transport arrived.

The dispensary building consists of three well-

7. b. (contd.)

kept rooms in neat order with a stock of drugs and hospital articles, including beds, bed pans, etc. The RMA's house has three rooms and a choo.

2. Attendance details. Frequency of patients appears to be falling from a high of 8527 in 1976 to an estimated total of 1920 for 1979. Given the very unstable residence of people at Ndedo, it is not surprising to find considerable variation from year to year. The high figure for 1976 reflects the increased population concentration around Ndedo during that time.

Dominant diseases recorded are: respiratory, showing a drop in 1979, malaria, with a rise to 34% in 1979, diarrhoea, remaining third in importance with a relatively constant frequency of 10%. Skin diseases and wounds and injuries also have high representation.

Measles was the only epidemic disease noted: 3% of the attendance in 1976. Other infectious diseases remained relatively constant: between 2 and 4% of the total.

Venereal diseases from 1975 ranges from 9% to 3% with no trends visible.

c. shops:

1. History: Both shops, as buildings, had been in existence for at least 10 years, but had changed owners in 1975-76 (the previous owners were shut down because of illegal hunting activities).

The present owners operate out of Kibaya and have their own lorries. Each shop has a clerk and assistant resident during the dry season. In the rainy season both shops are closed. One shop had been permanent under its prior ownership.

2. Structure: Both shops are simple wattle and daub structures with mabati roofs, which serve as duka, store, and residence.

"Bizaa" is obtained now mainly from Kibaya through the RTC and transported by the owners' lorries. Earlier sources of supply were Dodoma region and Kondoa.

Articles for sale were few indeed. Food consisted primarily of maize, flour, tea and candy. There was no sugar available, although when it is obtainable it is brought to the shops. One shop sold honey obtained locally. Also present were a small stock of medicine for humans, matches, pencils and copy books, tobacco and magadi and salt. One shop had pans. The other also functioned as an off-beer shop, but as beer was difficult to obtain had closed.

3. Attendance. The shops serve the Maasai living around Ndedo and three bomas remaining at Makami

7. c. (3) contd.

and the government workers in Ndedo itself. Both said that there has been no change in the distance from which shoppers come for goods.

4. Trading License Applications from Ndedo.

	<u>Duka</u>
1975:	2
1976:	2
1977:	0
1978:	1
1979:	1

No livestock trading licenses were requested or issued for the area during this period.

d. Legal Matters.

The following are cases from the Kibaya Primary and District Courts concerning Ndedo and Makami, as often the two areas are considered as one:

<u>Year</u>	<u>Kibaya Primary Court</u>		<u>Kibaya District Court</u>		
	<u>Civil cases</u>	<u>Criminal cases</u>	<u>Civil Appeals</u>	<u>Criminal cases</u>	<u>Criminal Appeals</u>
1975	0	8	0	0	0
1976	5 (Makami)	1 (Makami) 1 (Ndedo)	0	7 (Makami)	0
1977	2 (Makami) 2 (Ndedo)	0	0	0	0
1978	0	2 (Ndedo)	0	4 (Makami) 1 (Ndedo)	0
1979	0	0	0	1 (Ndedo)	0

Civil cases concerned dowry, divorce, and two cases of run away wives. Criminal cases in the Primary Court concerned disturbing the peace, possession of illegal whisky, stock theft, illegal trading, and school truancy.

Criminal cases heard at Kibaya involved illegal cattle trading, theft, possession of an unlicensed weapon, possession of a game trophy, and corruption of a miner. There is no noticeable trend in the types of cases brought before these courts. In terms of frequency it would appear that Ndedo cases are found in growing numbers from 1977, while those of Makami decline. We would suggest greater accessibility to Ndedo by law enforcement agents from 1978, but the fact that even civil cases for Makami decline after 1977 makes the accessibility explanation less plausible. Possibly both the factors of accessibility and growing popularity of the baraza la usuluishi could explain these declines.

8. Staffing, and Support.

Five persons were interviewed: teacher, RDA, 2 duka clerks, 1 duka assistant. On the whole, their opinions concerning desirability of life at Ndedo were positive; however, as the chart on page indicates, three have been long-term workers

at Ndedo, and only reside there during the dry season. The teacher is a resident of Ndedo, and the RDA is the son of one of the duka owners.

The teacher, an UPE trainee, did point out that housing for teachers was short - he shares his house with three other teachers; (at the time of the survey all were on leave.) He felt that most of the teachers were anxious to obtain transfers, the reasons he gave were difficulties of transport and obtaining sufficient personal supplies. He also has some difficulties in getting a lift and pointed out that necessities of life were usually in short supply at the shops.

On the whole, however, co-operation between government workers and shopkeepers and locals was good. This was generally agreed to in a meeting of locals headed by the laigwanani of the Irmeshuki age set which we attended.

9. Development.

- a. Villagization. Ndedo village is for the most part not stabilised in the sense of having established permanent residences. The population is still involved in seasonal movement of whole families along with stock, although there is some settling down either because of children in school or possession of a shamba.
- b. House construction. The enkang - boma - is still built on the old pattern - no separation of cattle, corrals and houses. There has been little or no alteration of house style or size (although houses tend to differ in style somewhat from those further north). Informants said that at Ndedo their wives simply put skins on house frames for cover as there was no need for constructing a more permanent dwelling.
- c. Cultivation. There is very little done at Ndedo. What planting is done has only started very recently. Hired labour is used.
- d. Business enterprises. Livestock trading is the main occupation. Most families have at least one person, usually a warrior, engaged in the business. Stock are obtained from the Kondoa area and can be trekked as far as Mbuguni, near Arusha, for sale. Attendants at the informal meeting we held all felt that because of increased consumption needs that regular sale of livestock has increased.
- e. Consumption patterns. Residents considered they now have a greater dependence upon maize flour as a staple in their diet, they prefer coloured cloth, and some possess "Swahili" outfits for travel to urban centers. They also said they use more soap now and spend more money on travelling costs. They also spend more money on stock drugs "foreign" foods, and clothing for women as "women here (Ndedo) are less fond of skins as they were in the past".
- f. Modern services. Education is seen as an imposition by most. Others said that it was of value potentially, but that it creates difficulties in allocation of herding tasks. Contributions for the

9. f. (contd.)

building of the school appear to have been stimulated from above not from perception of a local need. There is no adult education in the village.

Concerning other services - the dispensary, dip and new water supply - all were very pleased to have them. The last has assisted women particularly in obtaining water for domestic purposes. It was not intended for livestock use. The "villagers" of Ndedo are not committed to Ndedo as a place of residence. Thus they are not going to be very interested in developing an infrastructure which is of only partial use to them. As they are closely associated with Nga'bolo, it might be more appropriate to initiate self-help efforts there.

10. Benefits and Problems of the New Road.

The obvious answers were increased availability of transport for personal business, visiting, and getting the seriously ill to hospital.

On the negative side they agreed that there has already been an increase of friends and relatives coming for assistance. One man pointed out that he just had two sisters coming for gifts of stock. "If this were a long time ago, I would never have expected someone to come here to ask for help in the dry season. Now they can board a truck at Engasumet and reach here the same day".

Similarly, availability of transport make easier "escape" of wives and various problems from morans.

The new road has also facilitated an increase of visitors from headquarters requesting village contributions for various local and district projects.

NGA'BOLO VILLAGE

Date of survey: 16 Dec. 1979.

1. District: Kiteto - hdq distance: about 22 miles.
 2. Tarafa: Kibaya - hdq distance: "
 3. Kata: Makami - hdq distance: Ndedo (?) 26 miles.
4. Village Particulars:
- a. Vitongoji - none.
 - b. Population: 25 boma, 865 people.
 - c. Ethnic grouping: Maasai 90%
 - d. Subsistence: livestock keeping with small cultivation plots.
 - e. Leadership: mwenye kiti, katibu kijiji, village council, baraza la usuluishi.
 - f. Local craftsmen: cattle traders, local midwives.
 - g. Modern articles: cooking and eating utensils, torches, syringes, guns found in most families, 3 radios, 3 watches, some kibatari, 1 landrover (inoperable).
 - h. Infrastructure:
 1. school: Ndedo.
 2. dispensary: Ndedo/Kibaya.
 3. primary court: Kibaya.
 4. CCM office: none.
 5. church: Lutheran mission active from Kibaya.
 6. veterinary services; Kibaya.
 7. dip: Ndedo.
 8. water: 1 borehole without headworks.
1 dam without water.
 9. 1 duka la wima, travelling shop.
 10. game post: none.
 11. cattle market: Ndedo.
 12. buying post: none.
 13. mining: none.
 14. leased shamba: none.
 15. post office: none.
 16. milk collection center: none.
 - i. residential stability: seasonal residence primarily, although recent cropping has tended to stabilise some members of the family. Stock are grazed away seasonally, while non-herders remain.
 - j. adult education: none at present (was to start in late December).
 - k. village projects: Proposed village shop.
adult education planned.
contribution towards borehole construction.
planned contribution towards pumping machine costs.

5. History.

Tied in with Ndedo-Makami grazing and watering patterns. Was the site of a Catholic mission "bush" school, although nothing remains of the buildings at present.

There was a small shop recently established at Ng'abolo, but it was closed as the village decided to begin its own co-operative shop.

6. Travel and Communications.

As far as Ndedo essentially.

1979 costs of transport: Kibaya-Simanjiro: 100-150/-
Kibaya-Arusha: 250-300/-
(Kibaya bus 31/50).

Kibaya-Moshi: 300/-
Nga'bolo-Kibaya: 20/-

This is the cost of a "lifti" with a passing vehicle, normally those which come from Simanjiro and Terat.

Frequency of travel: Arusha/Moshi - none since July
of 17 men.
Kibaya: 2 in November.

7. Infrastructure details.

a. Shop: There had been a small seasonally operated shop at Nga'bolo, but it was closed down recently. The village, however, is also served by a wima shop on a lorry from Kibaya which passes periodically by the villages en route to Ndedo.

The only applications for trading licenses made for Nga'bolo was in 1975 and 1976 for a shop.

b. Legal Matters. The only cases concerning Nga'bolo found in the primary courts surveyed were in Kibaya. They are listed as follows:

Kibaya Primary Court.

<u>Year</u>	<u>Civil cases</u>	<u>Criminal cases.</u>
1975	2	2
1976	5	0
1977	0	1
1978	0	0
1979	0	1

Civil cases concerned 3 divorce and child custody, 1 dowry, and 3 debts. Criminal cases concerned contempt of court, assault, and stock theft.

Residents of Nga'bolo also stated that women are using the facilities of the baraza la usuluishi more frequently these days.

No criminal or civil appeals are recorded as coming from Nga'bolo in Kibaya District court.

8. Staffing. None.

9. Development.

- a. Nga'bole is more stabilised than Ndedo. Although there is considerable seasonal movement for grazing, locals claimed that the "main" boma remains permanently, and only the stock leave. They also said that if the water problem could be solved, then the necessity for seasonal agistment would no longer be present, and it is significant that only 3 deep hand dug wells were cleaned at Ndedo this season. Water elsewhere was sufficient to allow many families to remain away.
- b. Agriculture in any serious form only began in 1979. The shamba are very small, between .5 and 1.5 hectares. They are cleaned by hand, and apparently through household labour. Crops planted were pumpkins, beans, a few tomatoes in addition to maize. Planting was regarded as experimental and the harvest was considered small.
- c. Boma structure is on the old pattern, although houses tend to differ from those further north in being built on a "WaGogo" model, the roof tending to project somewhat from the sides rather than forming a smooth curve.
- d. Education. Some children go to Ndedo school. Education for children does have a profit, residents admitted. Literate sons and daughters can be of assistance in travel and communicating with outsiders. Its disadvantage is that it means often the elder or his wives must assume the child's herding responsibilities. Of the group of 15 at the meeting, none has a child who had completed standard 7, although some standard 7 leavers do exist in the village.

Adult education will be attempted either late in DEcember or in 1980. It is one of the village projects.

- e. Changes in consumption. Cultivation is the major recent change, as is the notion and possibility of permanent settlement. Changes in consumption patterns relate to increased dependence upon maize flour as a preferred food. "In the old days, you had to go so far to get it that you ate a little unga and a lot of blood. Now people don't like blood". There is also some change in the variety of food consumed, although doubtless the women who tended the gardens attempted to sell some of their produce in Kibaya or Ndedo.

Other consumption changes: more cloth, expenses for stock and human medicine, transport.

- f. Accompanying increase in purchasing goods and services is a claim to increased sale of stock. More people are involved in stock trading than before.

9. g. A perceived negative change is the increase of women bringing to the village reconciliation council various complaints about their treatment. We were told recently that three women took their cases to the Kibaya Primary Court, although we did not find them listed. The mwenye kiti said: "this is not a pleasant idea to the Maasai, but times are changing and we can't help it".

10. Benefits and Problems of the New Road.

In 1975 the government cleared the path for the new road, but it didn't reach Nga'bolo until early in 1979. The road camp was not in Nga'bolo proper. Workers did come to the village to purchase milk, chickens, and some slaughtering stock. They did not come regularly, and no problems concerning them were aired. No one from the village worked on the road. Apparently their presence had a momentary, but small, impact on the community.

With the road complete, the main advantageous changes were voiced as ease and regularity of arrival of food, ease of getting to medical attention, and travel for personal reasons increased.

Formerly, an elder would send a moran by foot to carry a message, now it is possible to use a vehicle to send the message instead.

When asked what problems the road brought, or might bring, some residents said they did tend to get an increase of visitors from further away than before, but that in general it was too early to tell what sort of problems the new road might introduce to them.

LOIBORSIRRET VILLAGE.

Dates of survey: 25-30 Jan. 1980.

1. District: Kiteto - hdq distance: about 100 miles.
 2. Tarafa: Simanjiro - hdq distance: 25 miles.
 3. Kata: Loiborsirret - hdq distance: 0
4. Village Particulars.
- a. Vitongoji: 3 (Loiborsirret, Narakaruo, Kimotorok)
 - b. Population: 21 bomas.
 - c. Ethnic groups: 90% Maasai.
 - d. Subsistence: livestock keeping with some cultivation.
 - e. Leadership: mwenye kiti, katibu kijiji, village council, no baraza la usuluishi.
 - f. Local experts: cattle traders, seasonal labourers, local midwives, treaters of ypopo.
 - g. Modern articles: 1 lorry (at Narakaruo), 1 bicycle, 5 spray guns, 4 shot guns, 2 radios, (apart from those in the shops), syringes, torches, kibatari present, hoes, and some household utensils.
 - h. Infrastructure:
 1. School: 1 classroom, 1 teacher's quarters with latrine, 3 classes, 1 teacher, 65 students (?). School opened in 1978.
 2. Dispensary: opened in 1977. Medical building with 3 rooms, 1 residence and latrine, RDA and MCH aide present.
 3. Primary court: use Loiborsoit hakimu.
 4. CCM office: none.
 5. Church: present - Lutheran with resident evangelist.
 6. Veterinary services: Mboret.
 7. dip: present with pumping machine - no attendant.
 8. water: shallow pools in river.
 9. 1 functioning shop.
 10. game post: at boundary of Tarangire Park.
 11. cattle market: Terat.
 12. buying post: none.
 13. mining: none.
 14. leased shamba: none.
 15. post office: none.
 16. milk collection centre: none.

- i. Village Projects: Increase school buildings - under discussion.

Local running of the dip - planned.

- j. Population stability: Movement tends to be away from the area, partly following seasonal grazing, but residents of Narakaruo and Kimotorok are also emigrating permanently because of tsetse encroachment.

5. History.

The Loiborsirret area was closed to grazing and people until the late 1950s, when a tsetse clearing program made human and livestock habitation possible. The first Maasai settlers came to Loiborsirret in 1958. In 1959, the first shop was opened at Loiborsirret.

6. Transport and Communications.

Tracks into the area were cut in the early 50s when the tsetse clearance project began, but doubtless some trails had already been in use by hunters from Arusha.

Three tracks are in present use. The "main road" is from Loiborsirret to Mboret. Lolkisale and Arusha/Monduli. Another lesser used track goes from Narakaruo to Hanang District. The third track goes from Loiborsirret through Kimotorok where it divides: 1 descends into the Makami depression; the other proceeds to Kondoa District. We traversed these roads in 1973 and found the latter two indistinct in the extreme.

Communications from 1958 were mainly via the Mboret track to Monduli and the Terat track from Mboret - or Sukuro - to Arusha. Those going by foot to Kibaya could use the Kimotorok track. If going by vehicle, they would have to wait for a lift at Mboret or on the Naberera road.

As there is a lorry at Narakaruo, transport these days normally follows the route it uses - the Ukame road. Travellers can also go to Mboret and try to obtain a lift to Terat where transport to Arusha is plentiful. At Lolkisale, where there are many leased shamba, transport is also relatively easy to obtain. Lolkisale transport would go to Arusha primarily.

7. Infrastructure Details.

- a. School. Structures. Loiborsirret school is not for boarding, but many of the students who go to the school live with relatives or friends nearby. The compound consists of:
 - 1 classroom
 - 1 teacher's quarters.
 - 1 latrine.

Attendance. Although Loiborsirret school officially opened in 1978, we obtained attendance records from District Headquarters from 1976. They are as follows:

Loiborsirret School.

<u>Year</u>	<u># registered</u>	<u>% attending.</u>
1975	0	0
1976	48	52%
1977	100	57%
1978	49	79%
1979	65	60%

In 1978 the number of students registered varies from month to month from a high in January of 101 to a low in July of 18.

From the onset, school monthly reports complain of truancy of school-children, lack of supplies, and on one occasion the emigration of an UPE teacher.

Projects.

2 hectare school shamba - planted this year only.

Increase of the classrooms - discussed with the village council.

Adult education - at shops area.

b. Legal Matters.

The following are cases heard by the Loiborsoit Hakim at Kibaya Primary Court; (records for the former only for 1978 and 1979):

<u>Year</u>	<u>Loiborsoit Primary Court</u>		<u>Kibaya Primary Court</u>	
	<u>Civil cases</u>	<u>Criminal cases</u>	<u>Civil cases</u>	<u>Criminal cases.</u>
1975	no record	no record	0	1
1976	no record	no record	0	0
1977	no record	no record	0	0
1978	8	0	1	0
1979	6	1	1	0

There were no cases from the Kibaya District Court recorded which concerned Loiborsirret. And at Engasumet we found 2 criminal cases for 1976 involving possession of piwa, illegal whiskey.

Types of civil cases: 8 debts, 3 dowry, 1 destruction of property (cows in a shamba), 2 run-away wives, and 2 divorce and child custody.

Criminal cases, which are very few, concerned 1 theft and 1 threat.

c. Shops.

Only 1 shop was open, selling maize flour and sugar, when available, (the enumerator was unable to verify this by taking inventory). Nevertheless, it appears

to be true, as those interviewed said that they had great problems in obtaining supplies at Loiborsirret, but added that normally the shop also sells tea and salt.

The present owner took a partnership in the shop in 1975, but the partner, who had a lorry, went into cultivation at Lolkisale. The partner usually supplied the shop from Arusha by using his own transport. Since the dissolution of the arrangement, the present owner has difficulties in travelling to get supplies.

Purchasers come from the Loiborsirret area and Kimotorok.

Applications for Trading Licenses from Loiborsirret.

<u>Year</u>	<u>shop</u>	<u>off-license</u>	<u>beer</u>	<u>hotel</u>	<u>wima</u>	<u>other</u>
1975	2	1		0	0	0
1976	0	0		0	0	0
1977	0	0		0	0	0
1978	4	0		0	1	0
1979	0	0		0	0	2 (type not recorded)

d. Dispensary/MCH Clinic.

Structure: Neither the RDA nor MCH aide were present at the time of the survey, so no interviews with medical staff were obtained.

The structure was built in 1977 on a standard model, consisting of a broad front baraza and 3 treatment rooms. This dispensary has one staff quarter and choo.

Attendance. In 1977 and 1978, attendance was slightly over 9000 patients per year. From 1979 we had to estimate based on attendance records for only 4 months. The result is 1395 patients.

We also only have data in incidence of diseases treated for the first 2 years. Respiratory diseases and diarrhoea/dysentery are represented for both years. Malaria and eye diseases were frequently treated in 1978, and in 1979 venereal disease cases were high in frequency.

From the interviews we were unable to discover any reason for the great anticipated drop in attendance for 1979, unless the village is becoming drastically depopulated because of tsetse. (It is also quite possible that the records were incorrectly copied).

No MCH records were available.

8. Staffing and Support.

Aside from the medical staff, who were not available for an interview, the only government technician at Loiborsirret is the teacher. In general he considers the village a better

place to work in than his last post in Mbulu, because "in spite of the problems here with food and transport, I know the culture of the people". Personal supplies he obtains from the shop and purchases from local cultivators. Support for the school he finds meager on all levels. Salaries are usually delayed as are school supplies.

Village co-operation he also rates as poor, not on a person to person basis, but in matters pertaining to the school.

9. Development.

a. Villagization: What keeps stabilization from occurring is tsetse. "These days they are like flies" said the mwenye kiti. But the villagization concept appears to be liked. One man said it was especially good because it did not prevent seasonal grazing of stock. Women interviewed liked the village arrangement because it freed them from having to build houses every three months. They also liked it because they were now close to water, shops and medical aid.

b. House construction. It is still of the traditional type, the enkaji. The one fence boma system is also still in use.

c. Cultivation. Village leaders said that most people cultivate these days. There is a special area near the shops set aside for planting. Normally each family has a 1-2 hectare shamba. Cultivation is done by paid labour using the hoe.

d. Business. Essentially this consists of livestock trading with some stock drug selling on the side. One such trader, a warrior, said he usually purchases cows near the Kondoa area and then treks them to any of the northern markets - Terat, Mbuguni, Arusha and sometimes Weru Weru at Moshi. Then he hops on a Simanjiro vehicle and rides back to Narakaruo.

Women said that they had little opportunity to engage in any business, as there simply wasn't a market for their produce. Locally, some occasionally brew enaisho, honey, beer, for sale. The money they receive is theirs.

e. Consumption. The villagers agreed that everyone consumes more maize flour these days. Some said that all sorts of "alien" foods are eaten now, including chicken. Money is generally spent on food purchases, medicines for man and beast, transport and costs of services and clothes. One long term businessman who formerly owned a shop at Loiborsirret said that the Simanjiro Maasai are the most developed of all Tanzania Maasai. Apart from no longer using red ochre and wearing skins, they now wear dresses and shirts and trousers. To pay for these intensified consumption needs, all agreed that they sell more stock.

f. Modern Services. The mwenye kiti said people of Loiborsirret like the dip and the dispensary: they

don't like the school. Individual opinions differed from his. Education in itself is valued, but the calculus of its profit as opposed to immediate losses of labour make it undesirable. Women said education was fine for boys, but that it made girls want to choose their own husbands.

10. Loiborsirret and the New Road.

Loiborsirret is not far enough away from the Ukame road to be unaffected by it. Transport is already being directed away from the Lolkisale route and now is passing on the new road to Arusha. (This is also in part true for Mboret.)

Apart from the technical services available in the village, focus of communication, business and receipt of supplies is northwards towards Arusha and Moshi.

MWANDET VILLAGE

Dates of survey: Feb. 11-14, 1980

1. District: Aru Meru hdq distance: about 20 miles
2. Tarafa: Mukulat: hdq distance: 9-10 miles
3. Kata: Mwandet - hdq distance: 0
4. Village Particulars.
 - a. Vitongoji: no information
 - b. Population: 354 families, 1235 people
 - c. Ethnic groups: Predominantly Warusha
 - d. Subsistence: cultivation primarily with some livestock keeping.
 - e. Leadership: Mwenye Kiti, Katibu Kijiji, Village Council, Baraza la Usuluhishi.
 - f. Local experts: are brought from Ngare Mtoni
 - g. Modern articles: 4 tractors, 90% plows, radios, some guns, 60% bicycles, 90% kerosene lamps or kibatari, spray guns.
 - h. Infrastructure:
 1. School: 7 classrooms, 9 teachers, 7 classes, 338 students
 2. Dispensary: health centre newly built, but not opened yet.
One private dispensary at Ekemwa.
Mission dispensary at Olkokola
 3. Primary court: Emaoi (Ngara Mtoni).
 4. CCM office: use the Katibu Kata's office
 5. Church: Ngara Mtoni
 6. Veterinary services: Aru-Meru headquarters
 7. Dip: present, but not functioning
 8. Water: pipeline from Mt. Meru, shared with the Army, produces very little; alternative supply at Ngare Mtoni - 7 miles away
 9. Shops: One small shop destroyed in the rains of 1979.
 10. Game post: none
 11. Cattle market: private sales
 12. Buying post: present
 13. Mining: none
 14. Leased shamba: none
 15. Post office: none
 16. Milk collection centre: none
 - i. Village Projects:
Construct village CCM office
Start up a village shop.
 - j. Population stability: stabilized - seasonal movement of stock away from the cultivation areas.
5. History: No information.
6. Travel and Communications. Although Mwandet was said to be formerly a "punishment post" for government workers, it is no longer, so far as access to transport and supplies are concerned, being only 1.5 miles

from the Arusha-Nairobi road has small kombi buses passing at all hours of the day.

Communication contact is southwards towards Arusha. Concerning livestock, it tend to move northwards towards Engikaret, where stock are grazed during the growing season. Stock is also sold in informal markets along the northern segment of the road.

- 7. Infrastructure details; (The only functioning government service, outside of the Kata office, is the school).

The school compound consists of 7 classrooms, a school latrine, a water tanks and tap without water, 4 teachers' quarters with latrines. Of the 9 teachers, 4 are UPE.

Attendance at Mwandet School is as Follows:

<u>Year</u>	<u>Registered</u>	<u>% Attending</u>
75	251	96%
76	295	95%
77	300	87%
78	316	90%
79	339	88%

The attendance record confirms the head teacher's opinion that trauncy is rather low.

School Projects; 40 hector shamba - 20 hector cultivated by the school and the rest by teachers in 1979. No harvest. They tried maize agin in 1980.

b. Legal Matters; The following are cases from Mwandet appearing at the Emaoi Primary court:

<u>Year</u>	<u>Civil cases</u>	<u>Criminal cases</u>
75	16	23
76	10	12
77	11	5
78	7	8
79	9	9

During this period we found one criminal case at Arusha Urban Court for 1977 and a civil case in 1978. There were no District appeal cases specifically recorded for Mwandet.

Civil cases involved 24 conflicts over fields - boundaries, loan of land, accidental destruction of crops - 9 debts, 5 child support, 3 dowry, 2 divorce, and 1 run away wife and children.

Criminal cases involved 27 assault and injury, 18 possessions of illegal spirits, 6 thefts (from chicken to cows), 6 abusive language, and 1 public brawl.

- 8. Staffing and Support. From the assessment of one government worker working at Mwandet poses few problems. Supplies can be purchased in Arusha or Ngara Mtoni, and District support is adequate. Teachers collect their own salaries and also obtain portable school supplies at the same time from District headquarters.

At the present time the problem is lack of adequate water.

Relationships with the village are good, although the school shamba happens to be in between the livestock watering place and the livestock. A number of clashes have ensued when children herding the animals preferred to drive them straight through the field.

9. Development.

- a. Villagization. Mwandet does not give the appearance of an agricultural village, as the houses and plots are relatively scattered, as among their pastoral cousins. The Katibu Kijiji pointed out that some villagers live as far as 7 miles from the main road - the school is 1.5 miles away.
- b. House construction. The Katibu Kijiji estimated that there were 15% mabati roofed houses, 2% cement block construction, and 83% mscng type houses in the village. Many houses have latrines.
- c. Cultivation. The poorest man at Mwandet cultivated 4 hectares; the richest, 20. Although there is a buying post present in the village, no crops were sold last year, as the harvest failed. The highest yield per hectare was 4 sacks of maize. The village is asking the district to assist them with maize flour distribution this season.
- d. Business. Agriculture is the main source of income, although there are stock traders in the village as well.
- e. Consumption patterns. Consumption needs are fairly high at Mwandet, certainly higher than any pastoral village encountered along the road. But in terms of expenditure of cash, Maasai may spend more money on transport to get supplies and services than these people living near to Arusha.
- f. Modern Services. All services are about one hour or less away from the village by bus; however, some vital requirements of the village are being not met; water is a paramount problem, and in spite of the presence of sophisticated equipment in the village and nearby available technical advice, the village as a whole was unable to produce enough harvest to feed itself in 1979.