

Nkone River Bridge and its Impact on Travel and Marketing

Activities of the Karia Community of Meru District in Kenya

(Chapter 7)

By P..G. Kaumbutho



Background

Karia is an administrative Location in Egoiji Division of Meru Central District in Kenya. The Karia community has a deeply rooted culture in both commercial and subsistence farming activities. The history of the community goes back to the arrival of colonial Christian missionaries, early this century. Christianity, the influences of the Presbyterian Church of East Africa to the South, and the Roman Catholic Church to the North, government-set development trends, such as the co-operative movement in coffee and tea farming and the environmental location of Karia, on the Eastern Slopes of Mount Kenya, next to the forest, have had an impact in day to day activities and status of the people.

Karia is located on the slopes of Mt Kenya in an agriculturally high potential area of deep, iron-rich, volcanic soils. The area is capable of producing a wide range of forest products such as timber, charcoal, firewood, honey and several horticultural products. Benefiting from the resources of the snow capped mountain, each valley has a fresh permanent stream or river. In every-day talk in Karia, as in the whole of Egoji Division, going “to the valley” is synonymous with “going to fetch water”. The hilltop location of Karia has great influence on access and general travel to and from the area. Transport means are highly limited, especially in the last decade when all government efforts in infrastructure provision and management, like many other services, have dwindled.

It would appear that as soon as government constructed the elaborate Thuci-Nkubu road (see Figure 1) all services into the interior rural access road were forgotten and left to local initiative. Trade and other livelihood efforts shifted to locations near the tarmac. The tarmac road became a gateway, through which the community could gain efficiently from developments in the rest of the location and country at large. But in Karia, an area of falling coffee and other important agricultural yields, on erosion-degraded and fertility-depleted soils the road has not motivated development.

Simple but highly important infrastructure such as Nkone bridge have been abandoned by central government, with a direct and negative influence on rural development. The Nkone bridge and the road it serves is the most efficient, shortest and the best evacuation route from Karia and neighbouring Kiangua, for agricultural produce and other merchandise.

During the rains, Nkone is most likely to be swept away by the river water, which swells twenty to thirty-fold during a storm. The presence or absence of the bridge highly

influences access to schools, hospitals, information, worship, trade centres and other locations with community livelihood activities.

The Study

At the time of this study, a Meru based organisation, Rural Infrastructure Development Organisation (RIDO) had approached the International Labour Organisation Advisory Support, Information Services and Training (ILO/ASIST) office in Nairobi, looking for financial and technical assistance to rebuild the Nkone Bridge which had been swept away by the rains. ILO had in turn involved the Kenya Network for Draught Animal Technology (KENDAT) and the Intermediate Technology Development Group (ITDG). The community had on several previous occasions provided labour, money and involved other stakeholders such as the District Engineer in efforts to rebuild the bridge. These efforts had been greatly frustrated, more so during the *el niño* rains of 1997/98. A permanent solution was urgently sought. From the intensity and urgency of the community's search for help it was clear that the bridge and the road it served were of great community importance and concern.

Aim and Scope of the Study

This study was undertaken with the aim of assessing and reporting on how the Nkone River Bridge had different impacts on access to transport and other services for women and men of the Karia location. The study intended to understand the gender based dimension of the village travel and transport problem in Karia and to acquire and provide information which would be useful to any individual or organisation willing to assist the Karia community in their travel and transport improvement agenda.

The research was conducted through intensive visits to the Karia, Kiangua and other locations.. Various stakeholders, including farmers, teachers, school children, priests, youth and women's' groups were interviewed as well as members of various interested or support organisations. The bridge site was visited several times. A particularly useful visit to the bridge site was with the Nkone Committee and RIDO management. These were the people that had actively participated in the bridge repair with the support of a local mason, the Catholic Church, local administration and District Engineer.

Interviewers attended two very distinctively different meetings; one called by the coffee factory, where all participants were men and another called by the District Officer, the Church and other leaders. The latter was of necessity held during a market day, in the market compound, with a loud speaker. The choice of day and location seemed a way of reaching the majority, who were women. Women would normally be expected to receive reports of deliberations from the many meetings, through their husbands. Apparently women are involved in meetings only when they are of general community nature and when donations are being sought from *everyone*. Otherwise they would be expected to attend meetings of their own *Women's' Groups*, of which every village has at least one. Women's' groups are not expected to deal with *serious* issues, only minor development ones!

A participatory rural appraisal was conducted at this meeting. Through the various discussions and expressed opinions it was definitely possible to assess the value the community attached to a functioning Nkone Bridge and the road it serves. Vivid experiences about the bridge were articulated which ranged from struggles in getting to hospital and even deaths of patients, to marketing produce and difficulties of getting children to school.

Attempts to reach the District Engineer were in vain, though the current one was new and not the one involved in the development assistance work that had taken place at Nkone previously.

During a tour of the location with Father Njeru, who was in charge of the local Catholic Parish it was possible to see the many access problems of Egoji Location. Fr. Njeru's impressive development programme had worked in a participatory way with communities, to assist not only Nkone, but also Mbara in the Mweru/Mworoga area. Mbara like Nkone, had a bridge that was swept away and in urgent need of rehabilitation. An early morning visit to Mbara made it possible to interview men and women farmers on their way to the farms, and to learn about the efforts of the community.

From the interviews the socio-economic and other characteristics such as daily roles and chores of men, women and children were well captured.

The Study Area and Access Situation

Nkone River Bridge

Nkone River bridge was originally constructed as part of the infrastructure for the old colonial Embu-Meru road. Due to age, runoff and changing water flow patterns the bridge was unable to stand the energies of the water passing under it, and gave way a few years ago. The community has fixed the bridge several times. Their most intensive effort was in November 1996 when culverts were replaced. These were easily swept away, soon after. The bridge was re-built by the community in 1997. Due to cheap construction coupled with poor workmanship the bridge was again washed away by the

heavy *el niño* rains of November 1997 to March 1998. Today the bridge has the recently built foundation and a temporary wooden treading surface.

Access and the Karia Community

Like many other parts of Kenya interior roads of Meru District are in need of repair and maintenance. The Karia-Karia road, on which Nkone bridge is located, hardly 500m from the Thuci-Nkubu tarmac road, is a particularly important gateway to a location of great economic potential. During the rains, which come twice a year, over 3 month periods each, Karia is virtually inaccessible and the damage caused by each rainy season makes the area inaccessible for long after. The poor response to road repair by government and other stakeholders drastically affect crop harvesting and marketing.

Transport means available to the Karia community is dominated by women and children carrying loads. The variety of intermediate means of transport (IMT) available is minimal. There are some men on bicycles, a few wheelbarrows, an occasional pack donkey or ox-cart, a few motorcycles, vehicles and rarely seen trucks.

Almost all roads are virtually impassable by small personal cars even during the dry season. During the rains, the only useable roads may be the ones in tea growing area where the Kenya Tea Development Authority (KTDA) has attempted to make them all-weather, in order to aid tea collection. Much of the agricultural produce goes to waste during the rainy seasons. The value of milk is drastically reduced.

Nkone Bridge as a Gateway

Figure 1 is a schematic showing the access situation and the locational importance of the Nkone Bridge. There is steep climb to Karia from three main access routes. From point C on Figure 1 the route to Karia and Kiangua is more or less a gorge, between the

hilly areas above point E and point B. The road itself has an average gradient of 30 degrees, rising to 60-70 degrees at some points. Another general rise is above point F. This topography makes Nkone Bridge on one side and Old Mara Bridge on the other, weirs at the collection points of two large water catchments. It contributes to the river flow behaviour, which can grow into a source of destructive energy during the rainy season.

Road DECBFA on Figure 1 is part of the old windy road used before the new, tarmac Thuci-Nkubu road. Section DA is a part of this road, was constructed with British aid and opened for use in 1986. Since the construction of the tarmac road neither the 1945 built, Old Mara, nor Nkone bridges have received any maintenance. Since that time Nkone has been swept away several times while the Old Mara bridge has not been damaged. However, the Mara now has gaping holes, and other signs of dilapidation. Nkone is the more favourable route for vehicles since they cannot use the seemingly stronger Old Mara due to the road having been swept away at point E and a very degraded and slippery section EC. The road at E cannot be expanded away from the river since the farmer owning the land above will not allow excavation through a rock that protects his whole farm from being swept down-slope, in this landslide prone area. The route to Karia through route AFBC is relatively more user-friendly to travellers on foot and on vehicles, as long as it is dry and the Nkone bridge is in place.

Travelling from Karia through Nkone to the tarmac at Keria market is the shortest and most straightforward route. Keria-Karia route is about 3 kilometres long. The alternative routes to the tarmac are through Kinoro (about 15km) and through Kabeche and Chogoria (8km). Travel through Kinoro to the tarmac is at least 10 times longer, with sections as rough as the Keria-Karia section. The Karia-Kiangua route is also as rough

as anywhere on the Keria-Karia route thought it may be considered passable due to attempts by the Kenya Tea Development Authority to fix it. The route through Kabeche and Chogoria has a very steep climb into and out of the Mara River up-stream gorge. Most vehicles cannot travel across this gorge even in dry weather. No vehicle would try it in wet weather. Even walking on the slopes of this gorge in wet weather is an impossible task. Fixing the Karia-Chogoria road would be very expensive due to the Mara gorge. If fixed however, this would be the logical route to get a sick person to Chogoria general hospital.

Inhabitants of Karia and Eastern Kiungu use Nkone as a gateway to their homes and farms. It is the only accessible route for incoming farm inputs, building and other materials, stationery and other supplies for schools, shops, churches and other institutions. Nkone is an outlet for agricultural, horticultural, forest and other products heading for markets and an efficient access route to information, administrative, spiritual, medical and other services. Keria, Egoji and Chogoria town centres are all located on the tarmac road with Keria being the most readily accessible in terms of distance. Egoji and Chogoria are easily accessible on public transport, once one is on the tarmac road. These towns are channels of information and services from the rest of the district and the country at large. People's mobility is highly influenced by whether or not the day is a market day or a weekend. Many women see the market day as the day to catch up on information, the popular day-out for women. Men, on the other hand, consider every day and especially evenings (when weather allows), as time to catch-up on information.

During the rains the tarmac road and Keria market can appear to be a long distance away, because of the steep and slippery roads and depending on whether Nkone bridge is in place or not. Karia is hardly 3 kilometres from the tarmac (at Keria) through Nkone

Bridge but local people will say that the estimated distance between the Keria and Karia is 8 to 10 kilometres. Older people in Karia opt to stay home. Men who leave Keria market for home after dark do so in teams throughout the year. Women make sure they are home long before dark on market days. During the rains and after dark, many opt to stay downhill for the night.

Often farmers are unable to get inputs to farms due to the transport problem. Men will often send women and children to Keria market to divide say an 80 kg bag of fertiliser among them for portability. They see this as the means of transport whenever some IMT or vehicle is not available, even when the women and children have to do several trips. The other option is to catch the one or two Landrovers available to bring the load uphill (when they can) but the charge for transport can easily double the price of the inputs. This is understandable considering that even the owner of the Landrover often opts to walk home, to save on the wear and tear on the vehicle.

Karia people have to cover longer distances or take more time on the damaged roads to reach essential services such as hospitals, health centres, churches, bank, maternity, administrative offices and markets. At the Nkone Bridge site people interviewed became emotional as they reiterated incidents where women have given birth at the bridge, unable to cross the river to Chogoria hospital on rainy nights.

Impact of the Nkone Bridge on the Daily Chores for Women and Men of Karia

A typical day in a Karia woman's Diary

Around 6.00 a.m.:

- Waking up and preparing breakfast
- Waking the children up and preparing them for school

- Preparing breakfast and warm water for the husbands' bath
- Taking or setting off the children to school (depending on age)
- Starting domestic household chores
-

8.00 a.m. – Farm Work

- Feeding the animals (usually zero-grazed)
- Fetching water and firewood
- Nursing younger siblings
- Tendering cash crops such as coffee and tea

1.00 p.m. – 2.00 p.m. – Preparing and serving lunch

2.00 p.m. – 5.00 p.m.

- Back to work in the fields
- Fetching firewood and water
- Locking up the animals and milking
- Preparing dinner

7.00 p.m. – 9.00 p.m.

- Feeding the family
- Cleaning utensils
- Putting children to sleep

9.00 p.m. onwards

- Miscellaneous night services to the spouse

Around mid-night – falling asleep very exhausted.

A typical diary for men

7.00 a.m. – 8.00 a.m. – waking up and taking breakfast

8.00 a.m. – 12 noon – Some work in the fields and mostly in the cash crop farm. (May leave for town centre to chase this or that business item, input or attend a meeting)

1.00 p.m. – 2.00 p.m. – Lunch

1.00 p.m. – 4.00 p.m. – May or may not go back to work

4.00 p.m. – 9.00 p.m. – Socialising with friends (probably still or back in town centre), later dinner and retiring to bed.

Women have an overloaded diary compared to men, and implement almost all the economic activities of the community. While men may be involved in planning and some of the heavier tillage work, women prepare seedbeds and plant; they weed, harvest and take produce to the market. A survey of the market at Keria showed that the majority of traders are women. There are few men in the market, and they handle only those goods that have shorter sale-time and fetch larger returns, such as live animals and hardware.

In cases where farms were located a distance away from households, women prepare to be away all day. They are forced to wake up earlier to complete their other chores, prepare lunch and make arrangements for their husbands to be comfortable during their absence.

It was apparent that men carry out what they described as “well defined and tangible” jobs or chores, such as bringing fertiliser from the market, fetching the veterinarian,

attending community and other meetings and arranging transport to collect building materials or farm produce.

The “well defined and tangible” jobs or chores for Karia women were organising cooking and food for the family, caring for livestock, including feeding, milking and general welfare, home and house care, “minor” commercial ventures such as marketing kitchen-garden produce to neighbours, and transport of small loads, animal feed, firewood and water.

Men definitely stayed away from the tasks which are described as “miscellaneous” particularly those relating to children such as helping them with their homework and school projects, care of their clothes and dealing with problems of friends and adolescence. The safety of children crossing the river after the Nkone Bridge had been swept away was not considered a concern of the men.

The women further cited worry and anxiety over their children who risk crossing swollen streams to reach school, church or market. They said they have to work in turns to supervise the safe crossing of their children. Recently two adults had drowned while crossing Nkone. Following such bad experience, parents are obliged to step on stones in the rivers and throw the children across in turns. This is usually done by the mothers since taking children to school is mainly a woman’s responsibility.

In the Karia community rain and dry seasons make a major difference to peoples’ lives. The chores conducted by men and women change drastically between the seasons. Whenever the normal routine is broken, it affects the accepted gender division of labour. Women and children bear the greater brunt of the new “miscellaneous” tasks that arise. For example, if the Nkone Bridge was damaged, men could no longer hire transport for

the fertiliser and nor could they transport it on their backs or heads. Such chores were immediately passed to women and children. Loads that would otherwise be ferried on bicycles, motorcycles, pull-carts or even motor-vehicles were now left to women and children.

During the rains, small streams swell into fast moving rivers due to flash floods.

Crossing points become impassable. The roads are swept away or cut into deep gullies by runoff water. Soil erosion peaks with tonnes of soil carried away in a matter of minutes. In such circumstances people take longer detours to avoid the attendant dangers. Although everyone is inconvenienced, women suffer more by covering longer distances on alternative bush routes with heavy loads on their backs and at times babies strapped on their chests. Due to time lost, they get to their destinations late and forego other important tasks in the process. Besides, they delay many other domestic chores, which no one else will do.

Crop marketing

To a great extent men leave their womenfolk and children to struggle alone with transporting crop produce to the selling centres. Children have dropped out of school partly because parents need their labour for transport and other tasks. This is particularly so when conditions are unfavourable, such as when harvesting coffee and tea in the rain. Since only small loads can be carried there are chances of the harvest getting wasted in the fields. For several crops, middlemen exploit the transport situation by buying farm produce at very low prices. The community often preferred to sell at throwaway prices than lose everything in the fields.

According to the Leaf Manager of Kinoro Tea Factory, farmers in Karia area have to be served from the Kiangua side because there is more tea in that area and the number of collection centres in Karia is small. However, he agreed that if the Nkone road and bridge were fixed, tea from the buying centres located even as far as Kiangua would be collected through Nkone. He confirmed that it was a struggle to collect tea during the rain season, more so for growers on the Keria-Kiangua road and that tea produced is often lost due to the impossibility of collecting it. Collection vehicles often fail to arrive in Karia at all. In 1997/98 *el niño* rainy season, tea farmers served by Kinoro produced 20 million kilograms of green tea leaf. Out of this, they lost about a fifth (4 million kilograms) because of poor roads.

The Leaf Manager estimated that it would take about Ksh 666,000 per kilometre to simply pour hard core (rough quarry waste) on the tea roads, as is common practice and that a decent *murrum*, compressed job would need Ksh 1.5 million. The factory received Ksh 3 million a year from tea cess (tax) and has some 130 km off road to maintain, inland from the Thuci-Nkubu tarmac road.

Below is a table of the numbers of tea growers and their production at the five centres on the Keria-Kiangua road, during the 1997/98 period.

<i>Buying Centre</i>	<i>No. of growers</i>	<i>Green Leaf Production (Kgs)</i>
KR 18 Kiangua	525	588,987
KR 21 Ruiga	254	525,235
KR 22 Githumbi	115	409,228
KR 29 Karia	267	280,145
KR 48 Karau	216	390,292

The figures show the importance of tea farming in the area under study. In tea farming, men do mostly the planting and pruning of tea. They may also help apply fertiliser. Women and children do the plucking and the delivery to collection centres where they have to sort it for grading. KTDA agreed that upgrading of the road and bridge would boost production of these centres and generally shorten distances covered to the factory and even the buying centres for many of the farmers.

The Egoji Catholic parish expressed great need for a workable solution to the Nkone bridge situation. The Parish had put in great managerial and financial effort within the capacity available. They, like other users, needed the Keria-Karia road, which they use to reach the parishioners for spiritual counsel as well as for involvement in agricultural and other development efforts. Many of their parishioners are utterly isolated, not only during the rainy season but also in dry weather. Some areas that are hardly 10 kilometres off the tarmac take the whole morning to reach during the rain season. Areas which would take 5 minutes to cross by car take several hours as alternative routes are sought and used. Priests often opt to walk to such areas of worship, Karia and Kiangua being some of them. For Karia however it is not a five-minute walk but several hours.

The Parish had helped raise Ksh 200,000 towards the repair of Nkone and Mbara bridges which the Parish considered priority projects and which paid for the labour and the stone. Some of the money was lost because of mismanagement by an undependable contractor, who had earlier put the culverts at both bridges which had been swept away. Father Njeru believes that the foundation put in place at Nkone was now good enough and what Nkone now needs is metal for reinforcing the top lining, of

which a temporary wooden one had been installed and was currently in use. He felt that half a million shillings (a little over USD 8000) would do the remaining job.

Any future community based bridge and road work was going to be handled like it was before. The church and its associates, including local government office, would seek funding and any external technical advice as well as provide a dependable contractor. The community would provide labour including a hot meal from women. The local District Office of Ministry of Public Works would provide the machinery (without petrol) and technical advice.

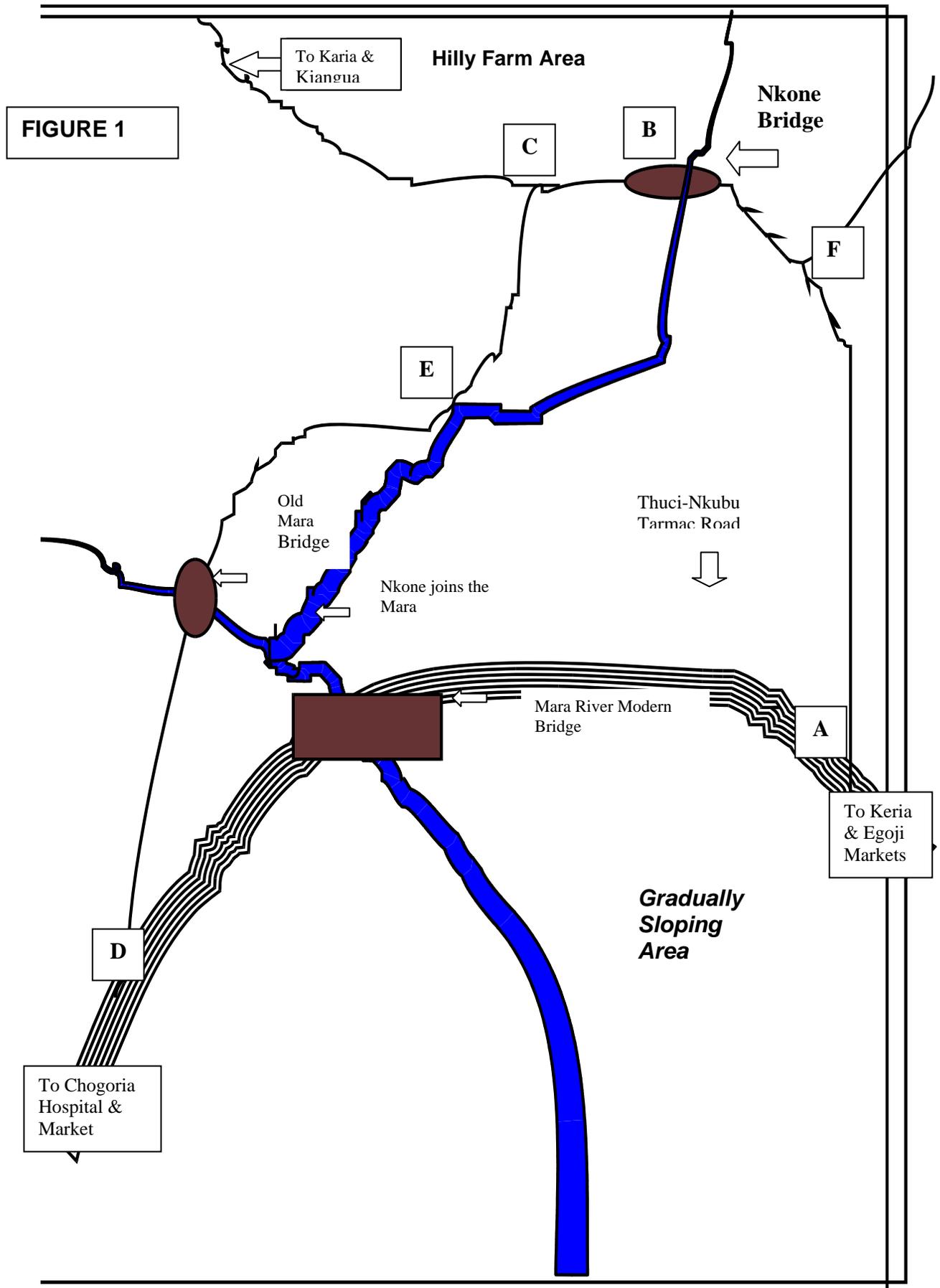
Several members of the community insisted that all monies must be controlled and accounted for by the church or its designated representatives. They lacked confidence in the so called “committee members” who they felt had not been transparent.

Conclusion

It is essential and urgent that the Nkone bridge and road is fixed. After the devastating effects of the *el niño* rains of 1997/98 many farmers are already giving-up on capacity to produce food, cash crops. The potential the Karia community has for agricultural production is enormous, but there are no other economical or logistical options “as evacuation routes” for Karia community. Travel through Kinoro to the tarmac is at least 5 times longer with sections as rough as the Karia-Karia section. Travel through Chogoria would be shorter than through Kinoro but it would be three times longer than Karia-Karia, and traversing an impossible hill that many vehicles cannot climb even in dry weather.

The study shows that women and children suffer more due to the absence of the Nkone bridge and a serviceable road across it, connecting Keria (on tarmac) to Karia and Kiangua. Men are inconvenienced less. Since they abdicate their responsibilities to women and children, whenever conditions are difficult or unfavourable, their inconvenience lies mainly in inaccessibility, lost time and opportunities. Men would prefer to have improved motorised transport services and capacity to own and use intermediate means of transport such as hand and animal drawn carts, pack animals, motorbikes and bicycles. While these intermediate means of transport are available in very small numbers in Karia and Kiangua, the introduction of some, such as bicycles would be discouraged by the sloping topography. However such assistance to men does not seem a priority for the community.

Fixing the bridge and road would more readily assist women, directly influence their ability to use their time efficiently and reduce their workload. The community would directly gain as goods are transported with ease into and out of otherwise difficult areas. The Nkone bridge is important also because it will help save lives of men, women and children, increase economic activity and remove isolation and give the Karia community a better chance for developing sustainable rural livelihoods, encourage travel and information exchange for the community, bring a boost to crop and produce marketing, including better access to farm and other inputs, reduce the price of food and supplies needed at farm level, increase the returns from cash crops such as coffee, tea, forestry, and horticultural products through reduced transport costs.



Information about the Book - **Balancing the Load. Women, Gender and Transport**

The **Balancing the Load** book is the culmination of a networked research programme that began in 1998 when only a few pioneering studies existed on the subject of gender and transport. Today there is a growing body of knowledge and an increasing number of transport initiatives that seek to reduce the unequal burden of transport tasks, improve women's participation in transport activity and to encourage women's access to transport services and means of transport. You can find further discussion of the issues and links to relevant initiatives by clicking on the gender link at <http://www.ifrtd.org/new/issues/issues.htm>

Book Contents:

1. Introduction: Bridging the Gap between Gender and Transport - Priyanthi Fernando and Gina Porter
2. Social Exclusion and Rural Transport: A road improvement project, Tshitwe, Northern Province, South Africa - Mac Mashiri and Sabina Mahapa
3. Intermediate Means of Transport and Gender Relations in Zimbabwe - Dorris Chingozho
4. Do Intermediate Means of Transport Reach Rural Women in Tanzania? - Josephine A. Mwankusye
5. Bicycles, Boda Boda and Women's Travel Needs: What impact? Mpigi, Uganda - Harriet Iga
6. Safety and Gender in Rural Transport Busia, Uganda - Kwamusi Paul
7. Bridges: What Impact on Travel and Marketing? Nkone River Bridge, Meru, Kenya - P. G. Kaumbutho
8. Feeder Roads and Food Security: The impact, Darfur, Sudan - Suad Mustafa Elhaj Musa
9. Off-road Areas: A Gender Perspective on Transport and Accessibility: Women Traders, Gomoa, Ghana - Gina Porter
10. Road Rehabilitation: The Impact on Transport and Accessibility: Soba District, Kaduna State, Nigeria - Mohammed-Bello Yunusa, E. M. Shaibu-Imodagbe and Y. A. Ambi, with Aminu Yusuf and Binta Abdul Karim
11. Gender Needs and Access to Rural Transport: Tuya, Yatenga Province, Burkina Faso - Amadou Ouedraogo
12. Women's Empowerment and Physical Mobility: Implications for developing rural transport, Bangladesh - Nilufar Matin, Mahjabeen Mukib, Hasina Begum and Delwara Khanam
13. Cycling into the Future: The Pudukkottai experience, Tamil Nadu, India - Nitya Rao
14. Women, Water and Transport: Mapping the interplay, Banaskantha, Gujarat, India - Poorni Bid, Reema Nanavaty and Neeta Patel
15. A Forest Economy and Women's Transportation: Dumka District, Bihar, India - Nitya Rao
16. A Daily Odyssey: Transport in the lives of SEWA Bank clients, Ahmedabad, India - Sangita Shresthova, Rekha Barve and Paulomi Chokshi
17. From Dawn to Dusk: Rural women and the Calcutta metropolis, India - Mahua Mukherjee
18. Gender and Rural Transport: Chattrra Deurali, Nepal - David Seddon and Ava Shrestha
19. Mountain Transport and in the Terai Nepal - Ganesh Ghimire
20. Cashcrops and Transport: Cashew growing and processing, Sri Lanka - Kusala Wettasinghe and Upali Pannilage

Published: May 2002

320pp

Hb ISBN 1 85649 981 2 £49.95 \$75.00

Pb ISBN 1 85649 982 0 £16.95 \$27.50

ZED BOOKS, 7 Cynthia Street, London N1 9JF

Tel: (44)(0)20 7837 8466; Fax: (44)(0)20 7833 3960

Zed Web Site: <http://www.zedbooks.demon.co.uk>

Free Copies are available (subject to availability) to organisations and individuals in the developing world. To obtain a copy please email the IFRTD Secretariat at publications@ifrtd.org

Individuals and organisations in Europe, USA, Canada, Australia and New Zealand should contact Zed books at sales@zedbooks.demon.co.uk