REPUBLIC OF MALAWI

GENDER AND RURAL TRANSPORT INITIATIVE (GRTI) – PHASE TWO

Final Report on Promotion, Ownership and Use of Intermediate Means of Transport (IMTs) Among Rural Women and Men.

[NOTE: This report is verbatim, but has been **bold-faced** and/or underlined to emphasize the **Malawi Cart**.
Editorial comments, by Arnold Wendroff, PhD, are in **[editorial brackets and Arial typeface]**.
Visit the **Malawi Handcart Project** website for details at: **www.malawihandcartproject.org** April 5, 2003**]**

Malawi Rural Travel and Transport Programme
Department of Local Government
P O Box 265
Lilongwe
Tel : +265 (0)1 754 766
Fax : +265 (0)1 753 167
E-mail : mrttp@malawi.net

MARCH 2003

[See January 26, 2008 update at end of document!]

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

The Malawi Rural Travel and Transport Programme acknowledges with deep appreciation the valuable contributions of all individuals who participated in the implementation of the project.

Special thanks goes to Community Development Assistants in the Ministry of Agriculture and Ministry of Gender, Youth and Community Services located in the project areas messrs Nowa, Kataika, L. Banda, A. Kanyatula, M. Gondwe, R. Njikho, and Mrs. Mlelemba.

For help in identifying and locating groups of women and men engaged in income generating activities who constituted the project's beneficiary groups, we want to thank the following Regional and District Community Development Officers in the Ministry of Agriculture and Ministry of Gender, Youth and Community Services: Mr. A. Mtambo, Mr. G. Kachere, Mrs. E. Ndalama, Mrs A. Gama and Mr. M. Chinkhota in Mzimba, Dedza, Zomba and Mchinji districts respectively.

This acknowledgement would be incomplete without mention of Mr. Luckie Sikwese, the Deputy Director Planning and Development in the Department of Local Government who is also the Programme National Coordinator of MRTTP for his untiring support to the Unit both in technical and administrative issues. And the entire staff of the Department of Local Government for the operation support to the Unit.

Lastly, to Mr. Chingati Phiri and Mr. Fred Simwaka in the Ministry of Gender, Economic Activities Programme and all the staff of MRTTP for working hard in the implementation of the project.

Jephthah G. Chagunda
Acting Programme Coordinator – MRTTP.

LIST OF ACRONYMS

CDA	Community Development Assistant
DDO	District Development Officer
EAP	Economic Activities Programme
GRTI	Gender and Rural Transport Initiative
IGA	Income Generating Activity
IMT	Intermediate Means of Transport
MOGYCS	Ministry of Gender, Youth and Community Services
MRTTP	Malawi Rural Travel and Transport Prgramme
NGO	Non-Governmental Organisation
PIRTP	Pilot Integrated Rural Transport Project
PRA	Participatory Research Approaches
RTT	Rural Travel and Transport

EXECUTIVE SUMMARY

Malawi Rural Travel and Transport Programme (MRTTP) submitted a proposal on promotion of ownership and use of intermediate means of transport with gender as a priority in November, 2000. And the Gender and Rural Transport Initiative (GRTI) in the World Bank granted MRTTP a grant of US$7,000 to carry out the project in April, 2001.

The objective of the project was to undertake a baseline study to assess gender relations in the access of goods and services and their influence on transport and highlight constraints and opportunities. And to establish a revolving fund for purchase of intermediate means of transport (IMTs) which were to be distributed in four pilot areas.

The baseline study on the Promotion, Ownership and Use of IMTs Among Rural Women and Men was carried out between July and October, 2001 in selected rural areas in Zomba: Chingale area, Mchinji: Chiosha and Kazyozyo areas, Dedza: Lobi area and in Mzimba District: Embangweni area. This study was carried out to obtain baseline data and information that could be used for designing, planning and implementation of appropriate interventions in a practical and realistic way. The final report was submitted to MRTTP in January, 2002 and results of the study were disseminated to the stakeholders.

The other component of the project was distribution of IMTs. The type of IMTs which were proposed for the project were a bicycle and a **Malawi Hand Cart**. A bicycle is the most common IMT in Malawi but it was proposed in the project so that its use among women could be studied in different areas and also the ownership and management trend among the rural communities. A **Malawi Handcart** is a new cart which was **designed by Dr. Arnold Wendroff** of United States of America who had worked in rural areas of Malawi for more than 20 years. **This cart was proposed so that it could be promoted in the rural areas due to its robust in carrying capacity of a maximum capacity of 100kg and also due to its diversity in use**. This was aimed at relieving the head and shoulder loading common among rural communities and also as an alternative to a bicycle which is subjected to heavy loading beyond its capacity. These IMTs were purchased in September 2001 and they were distributed in June 2002 to the focus groups of the areas where the baseline study was done. **[The Malawi Cart / AfriCart design "was proposed," because it can be built locally by carpenters using hand tools and relatively inexpensive and readily available wood, bicycle wheels, bicycle bolts, common nails and wood screws.]**

There were a number of constraints when implementing the project, but the major constraints was finances since the budget of the project was below the scope of the activities under the project. Despite these constraints the project achieved its objectives since a baseline study was carried out and the revolving fund for the distribution of IMTs was established.

The baseline study highlighted information of rural travel and transport situation in rural areas in Malawi. This information would be used for formulating interventions in rural travel and transport issues. **The other main achievement of the project is that it managed to bring awareness to the people in the areas to be innovative in rural travel and transport to facilitate their mobility for example by adapting a wooden frame Malawi Handcart for carrying goods**. This was also coupled with the gender and rural transport awareness in the rural communities.

In general terms this project was a success and it would act as a stepping-stone for the future interventions in the rural travel and transport issues.

1.0 INTRODUCTION

Malawi Rural Travel and Transport Programme (MRTTP) submitted a proposal on promotion of ownership and use of intermediate means of transport with gender as a priority in November, 2000. After several discussions, the Gender and Rural Transport Initiative (GRTI) in the World Bank granted MRTTP a grant of US$7,000 to carry out the project in April, 2001.

The objective of the project was to undertake a baseline study to assess gender relations in the access of goods and services and their influence on transport and highlight constraints and opportunities. And to establish a revolving fund for purchase of intermediate means of transport (IMTs) which were to be distributed in four pilot areas. A monitoring and evaluation framework was developed to monitor and evaluate the use of IMTs.

2.0 PLANNED PROJECT ACTIVITIES

The major activities planned under the project were:

a) Review and draw lessons from the past projects in the rural transport sector in order to adequately address gender issues in rural transport;

b) Procure IMTs and establish a revolving fund in order to be able to increase the coverage;

c) Create a data base and carry out gender analysis in relation to transport;

d) Develop a framework for monitoring and evaluating the impact of the gender and rural transport interventions;

e) Assess the effects of gender relations between men and women on rural travel and transport issues;

f) Assess the current provision and cost pattern of transport services in off road areas;

g) Promote road safety initiatives in the planning and implementation of gender and rural transport interventions.

The financial budget of the activities was as follows:

ACTIVITY	**BUDGET in US$**
Formation and training of four business groups	1,500
Pretesting of data tools and training of data collectors	1,000
Purchase of IMTs (16 bicycles and **16 Handcarts**)	1,500
Data collection and analysis	2,000
Monitoring and evaluation	600
Dissemination of findings	400
Total	**7,000**

3.0 PROJECT ACTIVITIES

3.1 The Baseline Study

The baseline study on the Promotion, Ownership and Use of IMTs Among Rural Women and Men was carried out between July and October, 2001 in selected rural areas in Zomba: Chingale area, Mchinji: Chiosha and Kazyozyo areas, Dedza: Lobi area and in Mzimba District: Embangweni area.

The baseline study was carried out to obtain baseline data and information that could be used for designing, planning and implementation of appropriate interventions in a practical and realistic way. The field study was conducted targeting three kinds of respondents viz: -

a) groups of women and men engaged in income generating activities - focus groups
b) individuals
c) key informants – constituting those that own a means of transport

The final report was submitted to the Client in January, 2002 and results of the study were disseminated to the stakeholders.

3.2 IMTs Distribution

The type of IMTs which were proposed for the project were a bicycle and a **Malawi Hand Cart**.

A bicycle is the most common IMT in Malawi but it was proposed in the project so that its use among women could be studied in different areas and also the ownership and management trend among the rural communities.

A **Malawi Handcart** is a new cart which was **designed by Dr. Arnold Wendroff** of United States of America who had worked in rural areas of Malawi for more than 20 years. This cart is made of a **wooden framework and two rear bicycle tyres**. The cart, being a new means of transport, was proposed so that it could be promoted in the rural areas due to its robust in carrying capacity of a maximum capacity of 100kg and also its diversity in use. This was aimed at relieving the head and shoulder loading common among rural communities and also as an alternative to a bicycle which is subjected to heavy loading beyond its capacity. **[Rear 28½" wheels are used as their 40 spokes make them stronger than front wheels with 36 spokes.]**

The IMTs were purchased in September 2001 and they were distributed in June 2002. The delay in distribution was due to a number of reasons which have been explained below.

4.0 ANALYSIS OF THE PROJECT

4.1 Baseline Study

The baseline survey incorporated convectional and participatory research methods for data collection. The focus of the study was on the availability; ownership; control; access to and maintenance of means of transport; availability and condition of transport infrastructure; and construction and maintenance of roads.

It was discovered that there are a number of transport means available for rural communities besides walking. These include bicycles, pick ups, ox-carts, wheelbarrows, trains and sledges. The bicycle is the most common means of transport because it is affordable, suitable for type and conditions of rural areas, easy to maintain and also due to unavailability of alternative means of transport. Seen from the customer's point of view, the bicycle is also the most expensive means of transport due its unstandardised hiring charges.

Almost all means of transport are owned and controlled by men and accessed mainly by boys and men. **Women** virtually own no means of transport, have limited control and access and **bear most of the transport burden**. **Head loading and walking remain the order of the day.** Their income generating activities remain very small

and unprofitable because they cannot tap on urban and semi urban markets with high buying power.

On rural roads, it was discovered that rural areas continue to have inadequate infrastructure and insufficient transport services. Condition of most of the rural access road is poor. Most of the roads are small and during ensuring wet season.

For those individuals who had benefited from the previous initiatives to improve the transport problems faced by rural communities through provision of loans, women have been very good at repaying the loans than their male counterparts. This is because they bear the most travel and transport burden and thus would not want to disappoint those that relieve their burden at the same time that there is continued support.

The main bottle necks and constraints militating against owning a means of transport include the cost of buying and maintaining the means of transport, the strength that would be required to operate the means of transport, poor road infrastructure and mechanical and technical back-up support to frequent breakdowns.

The main transport activities that the rural people in Malawi perform relate to crop cultivation, movement of farm inputs, crop harvesting and crop marketing. Rural people also travel to access social services and facilities such as health centers, schools, shops and markets. Women continue to carry out much of the travel and transport work but have limited access to and control over the means of transport besides walking and head loading. **Domestic activities like fetching of food, water, going to grinding mills consumes the highest amount of household time and effort with women contributing significantly more than other household members. [So in fact, on an overall basis, "the main transport activities" also include these domestic tasks of carrying water, firewood, etc.]**

Improvement of the rural travel and transport situation calls for improvement of the rural transport infrastructure, economic empowerment of the rural people to enable them own and maintain means of transport, sensitization on gender issues relating to rural travel and transport, a mechanism that would minimize numerous breakdowns of the means of transport. Institutional frameworks to coordinate implementation of rural travel and transport also needs to strategised.

4.2 IMTs Promotion

4.2.1 Distribution

Four groups of women and men engaged in income generating activities were identified in each District as pilot groups for the project. These groups were focus groups in the baseline study. The method of choosing these was based on past performance of a group in areas such as; loan repayment, unity of the group and economic performance of the group. This was done in collaboration with the District Development Officers (DDOs) in the Ministry of Agriculture and Ministry of Gender, Youth and Community Services in the districts with the support of the Community Development Workers in the based in the districts.

There were two main categories of income generating activities that were found to be common in the districts. These were horticulture production which is being supported by a credit system under the Ministry of Agriculture and intermediate agricultural business which are supported by other credit lending institutions e.g. Finca and Demat. For example in Dedza district, two of the groups were in horticulture production and two were small scale business groups. This was also the same in Mchinji and Zomba districts. In Mzimba, three groups were in horticulture production and one in intermediate agricultural business. The number of people per group ranged from 7 to 25 people. Below is Table showing the total number of beneficiaries of the project.

Table 4.1 Number of Beneficiaries

District	Number of groups	Total members	Female members	Male members
Dedza	4	58	43	15
Zomba	4	36	29	7
Mchinji	4	46	38	8
Mzimba	4	57	51	6
TOTAL	**16**	**197**	**161**	**36**

4.2.2. Evaluation and Monitoring

The monitoring and evaluation process was mainly targeted at getting the impact, the use and the performance of the IMTs which were distributed. The participatory approach method was used to get the information from the focus groups. This was done by distributing a form for each means of transport distributed in vernacular language whereby the use and performance of the equipment was recorded. The payback period of the loan was put at 6 months with a minimal interest of 5%.[1]

All groups indicated the need of a bicycle at the beginning of the project. After briefing them about a **handcart**, interest was also shown in the means of transport, though the committees were not sure of the performance of the equipment.

After using the means of transport for three months, the bicycle was still the most liked means of transport though the need of the **hand cart** had increased.

The bicycle was the most liked means of transport due to its versatility in use. **[What does "versatility in use mean? In what way/s is the bicycle more versatile than the handcart?] The handcart was mainly used for heavy carriage e.g. manure, garden produce and going to the grinding mill. One lady in Dedza indicated that he had used the cart to transport farm manure to her garden. She had carried a total of 27 trips to the garden which is about 500m away. [The handcart excels at carrying bulky loads, which can be accommodated in its capacious box body, but which would require tedious packaging in order to be carried on a bicycle.]**

In the same area, another handcart was hired by a school to carry two cartoons of school books from a distance of 6km. Another group was using the handcart for carrying horticulture produce and manure as well. One lady indicated that he had used it to carry 30 – 50 heads of cabbage from 3 km distance garden to a market.

Bicycles were generally used to transport goods which are not very heavy (on average not more than 40kg) to long distances. Some ladies in all the areas of the project indicated that they had used the bicycles for long distances, 20 – 30 km to buy or sell their goods. It was observed that the bicycle was generally durable and strong. **[Once**

[1] Base rate at commercial banks in Malawi is at 50% at the moment. Lending institutions for micro economic businesses range from 14-25%.

again, it is the ability to carry bulky and not merely weighty loads that makes handcarts preferable to bicycles in many rural transport applications.]

In one group, the bicycle gave them more problems due to punctures. **The reason given when asked why they did not have any problems with the handcart was that they were loading the handcart within the loading limit of 100kgs. [The bicycle wheels on a Malawi Cart are quite durable if they are not over-loaded.]**

In general, the handcart gave more problems than the bicycle due to the strength of the wheels as shown in Table 4.2 below. **The rim of the tyre easily flattened if the handcart was overloaded**. In Dedza one of the groups had changed the tyres and had replaced them with the **ITG fabricated rims**. These rims are strong since they are fabricated by angle irons but they **require good technical knowledge to maintain them by a trained welder**. The performance of the handcart under discussion improved though it required some improvements since the hubs used are made out of a pipe. Therefore the **[ITDG] wheels would easily wobble if the hubs were not properly fixed**. The use of these wheels could be explored further if it could be sustained due to the **[high]** cost of production. The limiting factor envisaged for using these wheels is that they might defeat the whole purpose of using a handcart which would ease head and shoulder loading and at the same time lower in price than a bicycle. Therefore this could be sustained if mass production of these wheels is done by the experts hence reduce the total cost of production. By the end of February the status of IMTs were as follows: **[The ITDG wheels are neither cost or ergonomically competitive with bicycle wheels. The ideal wheels to use are not the ITDG design, but the heavy duty bicycle wheels utilizing 12 gauge (as opposed to 14 gauge) spokes, with heavy duty hubs and rims built to accommodate these thicker spokes. In Tanzania, many handcarts using these components are in use, carrying loads in excess of 200 kilograms.]**

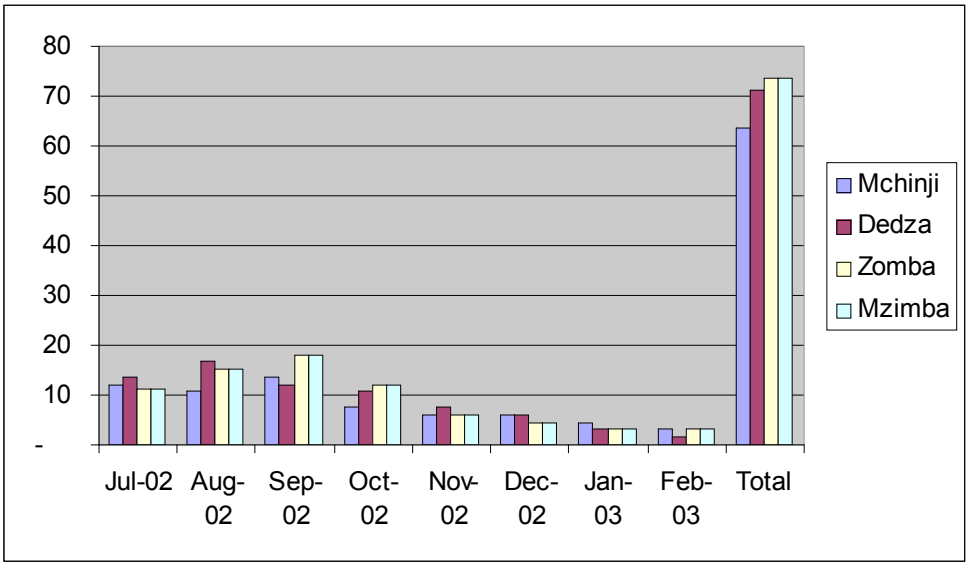
Table 4. 2 Status of the distributed IMTs

	Bicycles	**Percentages**	**Handcarts**	**Percentage**
In use	14	88%	**7**	**44%**
Broken down	2	12%	**6**	**37%**
Heavy breakdown	0	0	**3**	**19%**
Total	16	100%	**16**	**100%**

Concerning the loan repayments, the groups with more women were better at paying back the loan. This was observed from the repaying rates by groups which were composed of mainly women. For example in Zomba and Dedza. These showed a repaying rate of over half on the amounts in the first four months of servicing the loans. Whilst two groups in Mchinji which had almost equal number of women and men returned the means of transport after one and half months since they had other loans which they were failing to service as the group's performance had gone down despite the reports and training programmes of business management done by the DDO's. Since the IMTs were not used they were distributed to other groups.

It was also observed that when the means of transport were just distributed, the repaying rate of the credit was very high, then it went down as time went by. The main reason given by the groups were that from October (which the beginning of the rainy season), the economic activities were not a priority since the people were busy with farming activities. Hence the income for the groups had gone down as shown on the bar graph below.

Table 4.4 Graph Showing Percentage of Payments to Total Credit Amount



It was also observed that the performance of a group did not depend on the number of people in the group but the activeness of the group. In all districts different sizes of groups performed differently. It could also be observed on the graph that the total repayment percentage ranged from 64% to 73% after 8 months of repayment. As already indicated before, initially the repayments were planned to be done in 6 months but due to low income levels in the later months of the year, the repayments would

definitely continue for another 4-5months when people start harvesting their crops and economic activities in the rural areas pick up once again.

4.3 Constraints and Achievements of the Project

In the first phase of the project, the progress was very good since the funds were available and the activities were carried out in time. This part included carrying out the baseline study and procurement of the IMTs. Though the IMTs were bought in good time, the distribution coincided with the rainy season. Since most of the areas under the project are in deep rural areas, the access to these areas is not easy due to the bad conditions of the roads. This made the project to break until the rainy season was over.

The late distribution of the IMTs also affected the repayment of the loan since the IMTs were distributed late when the groups had already harvested their agricultural produce which is the main income earner of the rural communities. At the time of distributing the IMTs (in July 2002), the people had already started planning for the next farming season which normally starts in October.

The other problem which was faced in carrying out the project was financial constraints. The scope of the project was beyond the budget of the project. For example creation of database for carrying out gender analysis in relation to transport is a comprehensive activity which required a lot of both financial and human resource. Though the baseline study was carried out professionally, the information which was got from the study was supposed to be synthesized and analysed so that lessons could be derived from them. Dissemination of the baseline study was not fully budgeted for hence the report was just sent to stakeholders without getting any feedback to analyse the study. To make matters worse, due to the delay in implementing part of the project during the rainy season, the bank account for the project was frozen by the Government due to changes in the financial management system of government accounts. Therefore the implementation unit had to source funds from other sources to complete the project. Monitoring and evaluation costs were also under budgeted hence it affected the monitoring process of the project since the districts are far part. For example from Lilongwe to Mzimba it is 280km away and to Zomba it is 300km away.

Furthermore, due to the financial constraints, it will also not be possible to carry out a post review evaluation study of the project to measure changes in the project indicators.

Although bicycles were bought in Lilongwe, the **Handcarts** were made in Livingstonia which is 480km way from Lilongwe. It was expensive to transport these handcarts to Lilongwe then to various districts for distribution. **At the moment these handcarts are being manufactured at Chitedze Research Institute which is within Lilongwe**. **[The Malawi Cart was designed to be built locally in the rural (or urban) areas where is it used. Any carpenter can build a Malawi Cart if he or she is provided with a simple dimensioned plan and brief written instructions. There is no need to ship these carts from a remote workshop, as the carpenters, wood, bicycle components, wood screws and nails are available at most markets and trading centres.]**

On the other hand the project achieved its purpose of coming up with a baseline study highlighting information of rural travel and transport situation in rural areas in Malawi. This information could be used for formulating interventions in rural travel and transport services.

The Unit also managed to procure and distribute IMTs in the pilot areas. A revolving fund has been established which if well managed would benefit a lot of people in the areas. This has relieved the rural communities of the transport burden of head and shoulder loading and walking.

The introduction of the Malawi Handcart has also relieved the burden of head and shoulder loading and it has been taken as an alternative to the bicycle for heavy carriage for both business and domestic use.

This project has also assisted to assess the effects of gender relations between men and women; control over and **access to different IMTs** by both men and women.

And generally, the project has also managed to bring awareness to the people in the areas to be innovative in rural travel and transport to facilitate their mobility by adapting a wooden frame Malawi Handcart for carrying goods.

5.0 FINANCIAL STATEMENTS OF THE PROJECT

Below are the financial statements of the project:

	USD
Funds received	7,000.00
Less expenditures	

Baseline Study	3,130.70
Fuel and Lubricants	534.05
Purchase of **hand carts** and bicycles	1,495.33
Training of the groups	834.50
Distribution of IMTs	1,250.00
Monitoring and Evaluation	1,370.00
Total	**8,614.58**
Surplus/Deficit	**(1,614.58)**

6.0 RECOMMENDATIONS

The MRTTP would like to make the following recommendations so that projects of a similar nature should be carried out efficiently and effectively:

a. Planning and budgeting of the activities should be done comprehensively so that the projects should be done effectively.
b. Economic empowerment of rural people should be done to enable them own and maintain means of transport by establishing group loans.
c. Sensitization on gender issues relating to rural travel and transport e.g. raise awareness to communities on the benefits to families on women making greater use of the IMTs available.
d. Post-review study to get feedback on the project.

The Unit would like to carry out the following activities as a follow up of the current project:

a. Maintain the revolving fund established and even increase the fund so that a lot of rural people can benefit from the fund
b. Strengthening of institutional frameworks to coordinate implementation of the rural travel and transport activities.
c. Social mobilization campaigns
    i. Dissemination of existing labour-saving technologies e.g. displaying the use of bicycles with trailers and **hand carts**
    ii. **Improvement of rural roads network** using labour intensive work involving both men and women
d. Training of local artisans to fabricate and repair any broken part of IMTs.

e. **Train local artisans/suppliers on the manufacturing of common IMTs e.g. Malawi Handcarts**.
f. Post-review study to get feedback on the project.

7.0 CONCLUSION

Though there were some constraints in the implementation of the project, the project was a success for it had achieved its objectives.

A baseline study was done which highlighted information of rural travel and transport situation in rural areas in Malawi. This information would be used for formulating interventions in rural travel and transport issues.

The project also managed to bring awareness to the people in the areas to be innovative in rural travel and transport to facilitate their mobility for example by adapting a wooden frame Malawi Handcart for carrying goods. This was also coupled with the gender and rural transport awareness in the rural communities.

In general terms this project was a success and it would act as a stepping-stone for the future interventions in the rural travel and transport issues.

MRTTP200303

BIBLOGRAPHY

Chitukuko Associates, (2002), *"Baseline Study Report on The Promotion, Ownership and Use of IMTs Among Rural Women and Men",* Lilongwe

Government of Malawi, (1999), "*Malawi Rural Travel and Transport Programme",* Programme Document, Lilongwe

Government of Malawi, (1999), *"An Issues Paper on the Poverty Reduction Strategy for Malawi,"* The Technical Committee on the PRSP Preparation, Lilongwe

Malmberg-Calvo, C. (1992), *"Intermediate Means of Transport";* Working Paper, Geneva.

Maramba P., and Bamberger M. (2001), *"A Gender Responsive Monitoring and Evaluation System for Rural Travel and transport Programs in Africa",* SSATP Working Paper No. 55, Washington

Starkey, P (2001), *"Local Transport Solutions: People, Paradoxes and Progress",* SSATP Working Paper No. 56, Washington.

[UPDATE: The AfriCart type of bicycle-wheel-based handcart was developed as an interim solution to the problem of how to construct a handcart when no purpose-built handcart wheels on a common axle were available. That role has now been made redundant, as we have finally sourced true handcart wheels and axles from suppliers in China and Taiwan. In 2006 and 2007, the Malawi Handcart Project funded the importation of 60 wheel-axle sets and their spares, and the construction and distribution of 60 handcarts for assessment by the MRTTP, the UNDP's Millennium Village Project, and Plan-Malawi. This assessment is currently underway, and the results will be reported by the MRTTP sometime in 2008,

Arnold P. Wendroff, Ph.D.
Malawi Handcart Project
Brooklyn, New York, USA
January 26, 2008.]