

Country Report 4: Ethiopia

GRTI Activities in Ethiopia

In Phase II, Ethiopia was funded to conduct a baseline survey, but the project was extended to Phase III. The study on IMTs was commissioned by the Ethiopian Roads Authority (ERA) under the Ethiopian Rural Travel and Transport Programme (ERTTP). The main objective of the project was to strengthen the implementation strategy of ERTTP and provide tangible lessons and experience on the use of low cost transport means. The grant was limited to only one type of IMT; that is, animal drawn carts.

Background to the Study

In much of rural Ethiopia, travel and transport takes place along footpaths, trails and tracks as well as on the main trunk and rural road networks. Walking and back loading, shoulder loading or head loading are the major means of travel and transport. Among the IMTs used, animal drawn carts are available only in very few rural communities. The introduction of animal drawn carts and other types of IMT use is limited due to the absence of accessible roads. Available animal drawn carts are mostly used for non-domestic travel and transport activities. They transport agricultural inputs from the depot to the fields, and transport harvested crops to store and market centers. Motorized public transport is only available in major towns in the rural areas. Hence, due to this limited service delivery the majority of the rural population does not have access to motorized transport.

One aim of the study was to determine the feasibility of distributing IMTs to the study area. The study was part of the RTTP activity which was concerned with raising awareness on the use and benefits of IMTs for communities and investors and creating motivation for private investors to participate in the provision of appropriate and cost effective rural transport. In addition, the study looked into the possibilities of creating income for further provision of IMTs on credit basis, improving transport services and reducing travel burden as well as generating awareness of gender issues by communities.

Areas of study: The study selected one pilot *woreda* (district) from each of the following states:

- i. Atsbi wenberta from Tigray National Regional State,
- ii. Bako Tibe from Oromia National Regional State,
- iii. Estie from Amhara National Regional State, and
- iv. Yem Special from Southern Nations and Nationalities Peoples Regional State.

Each pilot *woreda* showed different characteristics of mobility and accessibility. At the same time, they all have dispersed settlement pattern and are divided into smaller villages with high population density. The major economic activity in the locality is crop farming, largely on a subsistence basis with between 60 to 75% of the production used for household consumption.

Within each *woreda*, four *kebeles* (the smallest administrative unit in Ethiopia) were sampled. The selection of the sampled *kebeles* from each *woreda* was carried out on the basis of criteria set by the *woreda* development committee that was formed for the study. The selection criteria used by each committee were nearly the same, including:

- topography and terrain condition of the *kebeles* for the use of animal drawn carts;
- availability and accessibility of road network in the *kebele*;
- distance of the *kebele* from major trade and market centers;
- availability of grinding mills and other services within or in the nearby *kebeles*;
and
- proximity to the trunk road network.

The sampled *kebeles* from the respective pilot *woredas* are listed in Table 4.1. The table also presents the basic characteristics of the terrain in each of the districts.

Methods used in the study: The methods adopted for the study of IMTs in the pilot *woredas* included:

1. Site visits and observation of sample *kebeles* selected for the introduction of IMT,
2. Focus group discussions with women household members,
3. Community meetings and discussions (jointly with men and women),
4. Meetings and discussions with *woreda* council and development committee,
5. Meeting and discussions with *kebele* leaders and with other members of the community,
6. Discussion and interviews with owners of animal drawn carts,
7. Discussion and interviews with randomly selected women and men,
8. Gender analysis tools, and
9. Review of secondary data.

Table 4.1: Sampled *Kebeles* from Selected *Woredas* in the Study of IMTs in Ethiopia

State	Woredas	Kebeles	Terrain
Southern Nations and Nationalities Peoples Regional State	Yem Special	<ol style="list-style-type: none"> 1. Ashe 2. Safa Laften 3. Goromina Hangeri 4. Shemona Mettelo 	Hilly and mountainous; Highly rugged area that makes transport difficult. Of the sampled kebeles, two are lowlands (Ashe and Safa Laften) and the other two are highland areas.
Oromia National Regional State	Bako Tibe	<ol style="list-style-type: none"> 1. Dambi Dima 2. Bechera Oda Gibe 3. Amerti Gibe 4. Terkanfata Gibe 	Mostly relatively plain and rolling terrain, except for some hilly areas.
Tigray National Regional State	Atsbi wenberta	<ol style="list-style-type: none"> 1. Gebrekidane 2. Felegewoine 3. Habes 4. Haresawi 	Some parts are stony and marshy; Other areas are mountainous and rocky.
Amhara National Regional State	Estie	<ol style="list-style-type: none"> 1. Achikan Dagut 2. Mekane Yesus 3. Licha 4. Gib Asira 	Rough, stony, with steep slopes in some locations; thereby difficult to pilot animal drawn carts.

Major Findings of the Study

Modes of Travel and Transport: The common modes of travel and transport in the pilot *woredas* are walking, animal driven IMTs or motorised transport. Donkeys are commonly used to transport crops to the market, bring home food relief and take grain to the grinding mill. About 7% of Ethiopian households own either a mule or a horse. Ownership of these animals is reflective of the wealth of a household and the animals are used for transporting people from one place to the other.

Motorised transport as a form of public transport is not commonly used as a means of transport by the majority of population in the *woredas*, although there are a few trucks that transport agricultural inputs and products. The roads, however, are not good and are inaccessible at some times of the year. The usual mode of transport for domestic purposes is walking and head or shoulder loading by both men and women.

In one of the selected *kebeles*, the only IMT that is used is a wooden wheel barrow. The non-introduction of various types of IMTs is attributed to the lack of information and experience of other IMTs, low income levels by the members of the communities, lack of credit facility and poor road networks. In Bako Tibe, the IMT that is commonly used is the locally made animal drawn cart, but they are not widely used for domestic travel because of the following reasons:

- Women do not own animal drawn carts;
- The rental price for these carts is very high;
- Animal owners do not provide animal drawn services for a small amount of goods;
- The roads leading to water points and fuel wood collection are inaccessible; and
- Women have limited experience in the use of animal drawn carts.

There is, however, increased demand for animal drawn carts for the purposes of transporting goods to the market or food relief distribution.

In the following case study, the practice of hiring out animals to meet local transport needs is described. It is a means of making extra income for animal owners and of having access to this form of transport for others. As indicated, however, the cost for renting the animal drawn carts is high. Nevertheless, the study does demonstrate that there is local experience with providing such services.

Box 4.1: Hiring Animals for Transport

In Estie *woreda* and in its surrounding *kebeles*, there are several young men who make part of their living by hiring horses and mules as passenger transport and for loading goods. Every morning, in the town of Estie, 25-30 young men who live in the area gather at the center of the town with their mules and horses and look for people who would hire them. The rental cost of the pack animals is similar in most of the sampled *kebeles*. Its cost varies according to distance and the time it takes and sometimes on the terrain type. The rental cost for one-way trip by donkey varies from Birr 4 to 6 for shorter and medium distances, and for longer distances it usually increases twofold. Similarly, the rental cost of a mule for a one-way and medium trip

is between 6 to 8 Birr, and for longer distances it is between 15-20 Birr. On average, for a longer trip that takes between 10-12 hours the transport or rental costs of mule or horse is Birr 20, and Birr 40 for a round trip.

The general lack of transport has posed a great problem to the local population. In the sample *kebeles*, trips that are made outside of the *kebele*, especially to other *woredas*, are very infrequent due to the absence of roads and also due to the community's low level of income and limited resources. The following case study gives the example of the dual problem of lack of access to health services and inadequate or inappropriate transportation. The resulting consequence to the quality of health, particularly for women, children and the elderly is clearly indicated.

Box 4.2: Health Problems Resulting from Lack of Transport

In those *kebeles* where there are no clinics, people travel more than 10 km to reach the nearby clinic. The problem is more severe for children, pregnant women and mothers. People who are seriously ill or sick are mostly carried to the clinic by a group of people on a locally made wooden stretcher. This is a daily scene in most *kebeles*. Even those people who could afford to pay for transport have no choice except to be carried by stretcher due to the absence of a motorable road. The problem affects pregnant women, mothers with young children and elderly people more than other members of the community. Most of the time it is mothers who face the difficulties of traveling to clinics that are found in other areas. It is believed that the maternal mortality rate from delivery complications is more in these rural areas without clinics. In general, lack of access to medical care coupled with the lack of roads to travel to where health services and other social service centers are located is a major problem in most *kebeles*.

Gender Analysis of Division of Labour and Rural Transport: The study carried out a gender analysis of division of labour, roles and relationships, including the travel responsibilities for economic activities and for social services in the study area. The analysis revealed that most domestic activities are carried out by women and girls. Among the various types of transport-related domestic and social activities carried out by women are water collection, fuel wood collection and travel to grinding mills and to the clinic. The report underscored the importance of travel and transport in performing these roles. The analysis highlighted the issue of control over resources by men and noted that women's access to resources is mainly dependent on the decisions by their husbands. This impacts directly on the way women are able to play their roles at the household level.

The report highlighted the effects of time poverty suffered mainly by women. Much of their time constraint is due to the need to travel long distances and lack of any alternative to walking and headloading. In Saja and Ashe *kebeles* of Yem *Woreda*, mothers and their daughters spent several hours daily to carry out various types of domestic and social activities as shown in Table 4.2. The minimum time spent by women and girls on a round trip to collect water is between 1 – 1½ hours, 4 – 6 hours to collect firewood, 30 minutes to 3 hours to go to a grinding mill and up to 2 hours to access health services.

Table 4.2: Travel time spent by women for domestic and social activities in Saja and Ashe kebeles of Yem Woreda, Ethiopia.

Saja kebele	Travel time (excluding waiting time)	Ashe kebele	Travel time (excluding waiting time)
To water points	30-60 minutes round trip	To water points	1- 1:30 hours round trip
Fuel wood collection	4-6 hours round trip	Fuel wood collection	4-6 hours round trip
Grinding mill	30 –90 minutes round trip	Grinding mill	1-2 hours round trip
Clinic	15 – 60 minutes	Clinic	1:30-2 hours

The following table presents a daily activity profile of a typical woman in the pilot *woredas*. It clearly shows the heavy work load and consequent time constraints of rural women in Ethiopia.

Table 4.3: Daily Activity Profile of Rural Women in Ethiopia

Time	Activity
5:00 am	Waking up time
5:30 – 7 am	Breakfast preparation
7–7:30 am	Breakfast time
7:30-8 am	Feeding children
8-8:30 am	Milking of cows
8:30-9:00 am	Taking cattle to grazing area / Cleaning cattle pen
9:00- 1:00 pm	Working in farm field
1:00 –2:00 pm	Lunch preparation
2:00-3:00 pm	Lunch break
3:00-6:00 pm	Water collection, fuel wood collection, going to grinding mill
6:00-8:00 pm	Dinner preparation, milking of cows
9:00-10:00 pm	Dinner time
10:00- 12:00 pm	Grinding of grain using stone grind
12:00-5:00 am	Bed time

Travel to Markets: In all the sampled *kebeles*, women household members travel to markets at least two times in a week. Women travel to sell and exchange agricultural products and in return to buy other needed household consumables. In most places, going to market may require a half or even a full day. Most women travel long distances requiring between 2 to3 hours walking time to reach markets. In addition to their travel and transport time, women spend long hours in the market to sell their goods and buy other items.

The travel to market also requires carrying loads including grain or other goods to be sold in the market. The trip back also means carrying loads of items bought from the market back home. In most cases, women back or head load 10-20 kg of different types of goods and also carry something with their hands. Those who have relatively better income rent a donkey to transport their goods to markets. It is only a small percentage of the women who can afford to rent donkey or mule drawn carts to transport goods to markets. Renting a donkey or mule cart depends on the quantity of the item to be transported and the

distance. As indicated earlier, the rental cost of donkeys may be Birr 4 to Birr 8 or more depending on the distance of the market location. In the case of transporting some goods, however, the use of animal drawn carts may be considered inappropriate such as the case study below illustrates.

Box 4.3: Perceived Disadvantage of Using Animal Drawn Carts by Women Engaged in Pottery Making

In one village of the Dambi Dima *kebele* of Bake Tibe *Woreda*, most of the women are engaged in making pottery as an additional source of income. They make different types and sizes of clay pots, pans and other items. These women sell their products in Bako and Shoboka. They transport their products by back loading while traveling to markets. They do not use carts because they fear that the clay pots might be broken. In reality, however, it would be possible to use animal drawn carts to transport the clay to market with good packing. In addition to transporting the finished pots, the transportation of the clay is also difficult for women. It is a heavy task to transport the soil from the forest areas to the villages. The women need to be enlightened to the advantages of using animal drawn carts for this income generating activity and taught how to properly pack their products for transporting to the market.

Potential and Constraints for Increasing the Use of Animal Drawn Carts: The introduction and supply of animal drawn carts through a credit program to females members of the household in the short term is expected to contribute and address practical needs and bring some changes in their transport requirements. In the long term, it should increase incomes and also reduce the transport burden related to domestic activities while also increasing the decision-making power of women, enabling them to have control over resources. However, in rural societies of Ethiopia this might take some time until awareness about gender roles and division of labor is created by the society. Development programmes should be proposed in a way that they would address gender issue through participatory planning methods. The implementation should also be carried out in consultation and partnership with the beneficiary communities. The following sections discuss the specific experiences of the use of animal drawn carts in the sampled *woredas*.

Use of animal drawn carts in Yem special *woreda*: In the *woreda* there is very little experience about the use of IMTs. The only IMT type that is introduced in the *woreda* and in the sample *kebeles* is the locally made wooden wheelbarrow, and even this is not widely known or used. The reason given by the community and *woreda* officials for the absence of different types of IMTs in the *woreda* is mainly associated with lack of knowledge and experience about IMTs, low level of income in the communities, lack of credit facility, poor road network and difficult natural terrain.

During the discussion in a meeting held with people from all the sampled *kebeles*, several people (both men and women) showed interest to receive carts with the animal if provided with a long-term credit facility. Women commented that there is no cultural restriction that might hinder them from using animal drawn carts, but they admitted that it might take them some time until they develop confidence and experience in managing the

animal or other technical issues related to the cart. Some women suggested that since they may not be able to operate the cart for long hours in a day due to their workload and other responsibilities, they might assign their husbands or children to operate it if it is used for income generating activities.

Use of animal drawn carts in Bako Tibe woreda: In Bako Tibe *woreda*, there has been significant experience and practice on the use of animal drawn carts. However, the use of these animal drawn carts has not spread widely to meet the needs and requirements of the community when compared to the number of households in each village and to their transport demands and requirements. In all of the four sampled *kebeles* in the *woreda*, there are on average two animal drawn carts owned by individual households.

Most of the carts found in the area are locally made, costing between Birr 800 and 900. In addition to the locally made type of carts, there are also carts that are made by the Bako Agricultural Technology Center. The price for the locally made carts is cheaper than the cart made in the agricultural technology center. However, the local type is of poor quality and has a limited working duration. The carts that are made in the center are supplied to selected farmers on credit through the *woreda* agriculture office.

Among the four pilot *woredas*, it is only in Bako *woreda* that there has been a relatively good experience and knowledge on the use of animal drawn carts in the rural areas. Mules and horses are the commonly used animals in and around Bako. In three of the four sample *kebeles*, it was found that there is at least one household that owns a mule cart.

Use of animal drawn carts in Astbi wenberta woreda: In Atsbi town, there are 10 mule drawn carts run by individual households. All the carts are carrier ones for transporting goods from place to place. They mainly operate in the town of Astbi and in the nearby *kebeles*. The carrier carts in Astbi, and in some *woredas* of Tigray are four-wheel carts that are made from used vehicle axle, used tires and scrap metals that cost between Birr 2000 and 4000.

Social Benefits of Animal Drawn Carts

Poverty alleviation should be a serious concern for any development intervention in the locality. The level of poverty is indicated by the low level of household food security. Most farmers in Astbi *woreda*, and some farmers in Estie *woreda* could only feed their households for a period not more than six months. For the rest of the year they receive food aid either from government, NGOs or donors. In Bako and Yem *woredas*, most households are able to support themselves for a period of nine months in a year. The remaining three months, there is food shortage where households are forced to reduce their regular consumption level.

The proposed intervention of enhancing the use of animal drawn carts to reduce the transport constraints experienced by the people of the area attaches more emphasis to the social benefits it would bring to the community. It would be difficult and unrealistic to

analyze the cost benefit of the provision of IMTs from a purely economic and financial point of view. The social benefit the availability of an IMT would provide for both female and male household members is enormous, but it would not be possible to measure the social benefit that the intervention would provide by using financial or economic indicators alone.

The provision of carts for women in particular is expected to bring certain social benefits and positive impacts, such as:

- ✓ Build confidence and respect for women household members by ensuring their ownership of property with control over the cart;
- ✓ Save part of women's time which is mostly spent for domestic transport;
- ✓ Save energy and reduce the hardship faced by women household members in production, reproduction and other activities; and
- ✓ Create greater opportunity for children to attend school regularly.

The provision of credit for making IMTs available to rural dwellers would be provided through a special committee established for the purpose. However, the established committee for each of the pilot *woredas* is not likely to have much skill and experience in this type of activity and it would not be easy to manage the credit in the absence of financial institutions. However, it would also not be possible to attach the credit with financial institutions since the procedure and the time it would take would be longer. The financial institutions would also be reluctant to provide this type of credit. There is, therefore, the need to provide capacity building for the committees to ensure they would be effective project managers.

Monitoring and Evaluation of the Proposed Project

On the basis of the findings, the study recommended that as a project to provide IMTs is set up, a monitoring and evaluation system should be put in place. Among the activities that should be monitored are the distribution of animal drawn carts, construction of access roads, suitability of the technology of animal drawn carts, impacts and changes observed in the life of the beneficiaries, gender related benefits and the availability and suitability of the credit system.

The study has developed a set of indicators that could be used to provide monitoring and evaluation in the following areas:

- benefits and impacts that adoption of the use of IMTs has created for the beneficiaries,
- adoptability of the technology,
- the role and capacity of the credit system,
- effect of the project on the gender needs in travel and transport, and
- experiences gained and lessons learnt from the initiative.

Table 4.3 further highlights some of the monitoring indicators to be used in the process of monitoring the implementation of the project.

Table 4.4: Proposed Indicators to Monitor the Project for Animal Drawn Carts in Ethiopia

Activities to be monitored	Monitoring indicators
Distribution of animal drawn carts	<ul style="list-style-type: none"> • Number or percentage of women beneficiaries who received credit for animal drawn carts • Number or percentage of men who received credit for animal drawn carts • Types of transport activities used by animal drawn carts (in percentage or time) • Contribution of animal drawn carts in easing transport burden at <i>kebele</i> and household level
Construction of access road	<ul style="list-style-type: none"> • The road network and accessibility for the use of animal drawn carts • Number and km of road for the operation of animal drawn carts in each <i>kebele</i>
Technology of animal drawn carts	<ul style="list-style-type: none"> • Problems and difficulties encountered by the beneficiaries in the use and maintenance • The suitability and adoptability of the carts that are provided on credit, to the local condition. • Frequency of maintenance of the carts and places to maintain
Impacts and changes observed in the life of the beneficiaries	<ul style="list-style-type: none"> • The impacts and the changes brought by the project in the life of the beneficiaries and other members of the community • The amount of travel and transport time saved by beneficiary household • Monthly and annually generated income through animal drawn carts provide on credit • The percentage of income used from animal drawn credit for household purpose
Gender related benefits	<ul style="list-style-type: none"> • Who mostly operates the animal drawn carts (women or men) • Who needs and uses the carts mostly and for what purpose? • Social acceptance of women who own animal drawn carts

Activities to be monitored	Monitoring indicators
	<ul style="list-style-type: none"> • How women's domestic travel and transport reduced due to the introduction of animal drawn carts
Mechanisms of the credit system	<ul style="list-style-type: none"> • How the credit system is set up and operating • Management of the fund • Repayment mechanism • How to deal with defaulters • Plans on how to proceed with the revolving scheme

Conclusion

The demand for animal drawn carts is high in all pilot *woredas*. Since the settlement pattern in the area is scattered and the markets centers and other services are located in distant places from the villages, people see wide usage for animal drawn carts. Hence, there is a clear need and interest from women and also men to use animal drawn carts if supplied on long term credit. Most of the community members claim that it is lack of credit service and resources that has limited them from buying or using animal drawn carts.

It is to be noted that there might be some cultural and traditional thinking and also the issue of skill and confidence that would discourage some women from operating animal drawn carts. Of course, whenever new technologies are introduced there is sometimes resistance. However, most interviewed women and men have suggested that there would not be much problem if women operate and use animal drawn carts by themselves. Since women take care of animals in the household they mentioned it would not be a taboo for women if they operate the animal drawn carts.

The potential benefits of improved travel and transport for rural dwellers in Ethiopia are significant, particularly with the high level of rural poverty and low food security. Breaking down the rural isolation can enhance the local income-generating opportunities as well as open access to markets and social services. The findings of the study have not only presented a situation analysis on rural transport and use of animal drawn carts, but the study has also suggested guidelines for implementation and monitoring of a project to increase the use of the IMT.