

RURAL TRANSPORT KNOWLEDGE BASE

INTRODUCTION TO THE ISSUES

Objectives of the Knowledge Base

Until recently most developing country governments and aid donors believed that building comparatively high standard rural access/feeder roads was the most effective way of addressing rural transport problems. While it is true that better road access may well be critical to improving rural transport, there is now increasing recognition that a much wider perspective should be adopted. The most effective solution to the rural transport problem will involve a combination of policies and measures designed to address the wide range of constraints to access and mobility that are commonly experienced in rural areas of developing countries.

Rural transport covers a range of transport modes and their associated infrastructure at the village, district and regional level. Within the context of rural transport it is also appropriate to consider alternative "non-transport" solutions which include the location of important facilities and services. These solutions may be more cost effective and may have an important impact on rural transport demand.

The 'Rural Transport Knowledge Base' is a set of reference and training material of the latest thinking and practice in the field of rural transport. The material draws on experience and publications, as well as case study examples to facilitate the dissemination of best practice to policy makers, planners and practitioners in the developed and developing world. The Knowledge Base is structured in five modules, and encompasses all aspects of rural transport, including the policy, management and financing of rural transport infrastructure, transport provision and related non-transport interventions.

The five modules are:

1. Policies and Strategies
2. Planning, Design, Appraisal and Implementation
3. Management and Financing
4. Rural Transport Services and Intermediate Means of Transport (IMT)
5. Social and Environmental Issues

The project is being undertaken for the Rural Travel and Transport Program (RTTP), a component of the multi-donor Sub-Saharan Africa Transport Policy Program (SSATP) managed by the World Bank with financial support from the Department for International Development (DFID).

1. RURAL TRANSPORT CONSTRAINTS

In recent years a wide range of rural transport constraints have been identified. The following list provides a summary of the more important issues and constraints:

- The substantial human effort involved in the daily collection of water and firewood
- The particular burden on women in meeting household transport needs
- The difficulty in meeting the farming transport demand including peak times at harvest etc
- Inadequate access (particularly for women) to Intermediate Means of Transport (IMTs) including bicycles and other human transport aids, animal transport, simple motorised methods
- Community isolation from the road network involving long and difficult walks sometimes carrying heavy loads of agricultural produce to market or taking a sick person to hospital
- Poor access to economic facilities such as markets and grinding mills, and to social facilities such as clinics, hospitals, schools, telephones and government offices
- Roads and tracks that substantially hinder or prevent vehicle movement (either seasonally or throughout the year) through factors such as deep rutting, soft soils, slippery surfaces, poor water crossings etc
- Inadequate basic road, track and path infrastructure including an absence of culverts, bridges or poor road surfaces
- Poor provision and inadequate funding of road maintenance
- Poor planning and provision of road infrastructure including the mal-distribution of resources - often involving the construction of limited network roads to excessively high standards, while substantial parts of the rural population remain many kilometres from basic access
- Infrequent (or non-existent), unsafe and high priced local transport services, often arising from the operation of local monopolistic transport unions and cartels
- High vehicle maintenance costs and poor operating practises of motorised vehicles in many (particularly African) developing countries
- A lack of complementary investment and facilities to assist with the storage and marketing of agricultural produce
- A lack of investment in water transport including provision of boats, jetties, river and canal widening and maintenance

2. ASSESSING PRIORITIES

A comprehensive approach is clearly required to develop an appropriate rural transport strategy. Although many studies have been carried out relating to issues identified above, further data is still likely to be required to develop a strategy for each country or region.

A number of approaches may be required in order to identify priorities. Local priorities and perspectives may be obtained from the local population by various participatory rural appraisal techniques (PRA) involving surveys, workshops participatory mapping exercises etc. Consultation with opinion leaders, chiefs, the district administration, transporters and market traders will obviously be important, however the vested interests of those involved should not be ignored. Existing district and regional development plans may be useful tools in identifying transport constraints.

"Livelihoods Analysis" is a useful approach to adopt in order to identify the ways in which any particular measure will benefit the local community. A rural Livelihoods Analysis provides a framework for understanding how any proposed changes will affect the rural population's livelihood in the longer term. It focuses directly on how the local community uses and develops its social, human, financial, natural and physical asset structure. It is evident from the list presented above that transport and communications interact with many aspects and dimensions of a person's or a community's livelihood. Clearly very substantial benefits could be obtained if the labour requirements involved in collecting water, firewood or taking crops to market could be reduced. Similarly if rural transport services can be improved and the transport costs of taking produce to the market of larger urban commercial centre can be reduced, this too could provide substantial benefits.

Where possible, a quantitative analysis of costs and benefits should be undertaken when considering priorities. An analysis of different levels of productivity, manpower utilisation, and costs and tariffs can be very helpful. Comparative analyses of costs and conditions in different countries can provide useful insights on possible benefits and what is practical.

To give an indication of the importance of a quantitative assessment it has been calculated that, where the alternative is headloading, to bring road access 5km closer to a community gives benefits that are over a hundred times greater than upgrading the same length of motorable track up to a full gravel standard road.

3. THE ORGANISATIONAL STRUCTURE OF RURAL TRANSPORT

In taking a comprehensive view of rural transport it is useful to identify the key actors involved. These are as follows:

- Rural households
- Village communities
- District and Regional and National Government
- Road and Highway Authorities
- Road construction and maintenance contractors
- Commercial transport operators and transport unions
- Commercial garages and mechanics
- Small scale market wholesalers and retailers
- Agricultural extension services
- Health and education services
- Large scale farms, agricultural marketing and processing organisations
- The police
- Non governmental organisations (NGOs)

The ability of government to influence and control these actors is, of course variable. Rural roads cannot be supplied by the market and hence governments have traditionally taken a direct role in determining road investment and maintenance activity. There are no automatic feedback mechanisms between costs and benefits in the provision of roads, hence governments must be involved. In contrast, governments have been less involved with the actions of households and commercial

transporters, and market wholesalers and retailers. Households can assess directly the costs and benefits of their transport activities at the very local level. The market is the key mechanism that governs commercial vehicle transport operators. Governments may still need to be involved in these other areas particularly when there are important externalities (e.g. road safety and health), economies of scale, new technologies (e.g. use of new forms of IMT), or when the market does not work effectively because of monopolistic practices. Through a variety of policies governments can have a wide variety of influence over all the actors identified.

4. STRUCTURE OF THE RURAL TRANSPORT KNOWLEDGE BASE

The Knowledge Base document is divided into five broad sections which incorporate the key issues in the policy, planning and management of rural transport:

Module 1: Policies and Strategies

The first module sets the scene, describing the transport requirements of rural communities, whilst outlining the importance of rural transport in achieving poverty reduction in developing countries. It also describes the process of policy making necessary to facilitate the provision of rural transport infrastructure and means of transport.

Module 2: Planning, Design, Appraisal and Implementation

Module 2 looks in greater depth at the provision of rural transport infrastructure, the means by which engineers and transport planners prioritise investment to improve rural accessibility, appropriate design standards to meet the transport requirements of rural livelihood activities, and methods used to evaluate the cost effectiveness of investment in rural road infrastructure.

Module 3: Management and Financing

General issues of local level management are discussed in this module, with an emphasis on the problems and solutions to managing rural transport, as well as looking at specific finance issues and mechanisms used to support rural transport interventions including road funds, and appropriate frameworks for reform.

Module 4: Rural Transport Services and Intermediate Means of Transport (IMT)

Module 4 reviews the means of transport available to the rural poor including Intermediate Means of Transport (IMTs) and rural transport services, and describes the constraints to accessing such transport mechanisms. It recommends ways of improving access to rural transport by generating a 'critical mass' of IMT and service users, and offers methods for maximising demand for rural transport systems.

Module 5: Social and Environmental Issues

The final module discusses the social benefits of rural transport, and introduces the concepts of the 'Sustainable Livelihoods Approach' which seeks to provide a more holistic solution to rural poverty. It also reviews different quantitative and qualitative survey methodologies for both extracting local level information critical to the formulation of transport policy, and empowering local communities to spearhead their own development.