Technical Paper: New Directions in Rural Transport

(Session 1.1)

Introduction

This paper summarises some of the key points that led towards a new framework for rural transport interventions in developing countries with a much closer link to agriculture and rural development. The proposals and justification for this are contained in Sub-Saharan Africa Transport Policy Programme's (SSATP's) Working Paper Number 93, "Rural Transport – Improving its contribution to Growth and Poverty Reduction in Sub-Saharan Africa" (2012). This contains a critical review of past measures to address rural transport. It also contains important findings and lessons on the ways in which rural transport contributes to rural growth and poverty reduction in Sub-Saharan Africa (SSA). This sets the scene and provides the rationale for a proposed new Policy Framework for rural transport. It discusses the evolution in thinking over the last 10 years that has led to the development of the new Policy Framework. Further details of the evolution in approaches, and specific developments in rural transport on which this new Policy Framework is based can be found in the other sessions of the Rural Transport Training Materials (RTTM).

What is rural transport?

Rural transport encompasses infrastructure and the means of transport used in rural areas. These terms are understood in their widest sense. Therefore, rural transport infrastructure comprises all infrastructure used for transport including rural roads, motorable tracks and footpaths. In certain areas it may also include waterways, ropeways or railways. Similarly, the means of transport includes motor vehicles, motorcycles, animal transport, bicycles and walking. The means of transport might be personally owned or hired.

Rural transport addresses the transport needs in rural areas in terms of both access and mobility (see Box 1 for the definition of these terms). Accessibility to deliver services to rural areas can be as important as the ability of rural dwellers to travel out to markets or service centres. Moreover, rural transport includes the significant amount of transport used within villages to collect water and firewood, to move between fields and homesteads and for other village-level, economic, social and domestic purposes.

Box 1: Definitions

Rural access is the connection in time and distance between rural settlements, services, and markets in order to improve the livelihood and economic well-being of the rural population. Both transport and non-transport interventions can improve access, which leads to improved mobility and accessibility.

Mobility is the ability of people to transport themselves and their goods, and to reach economic and social services. Mobility is made possible by the transport means available—both motorized and non-motorized. Individuals and private entities typically own and operate these means of transport. However, in most rural areas of Sub-Saharan Africa, rural transport is mainly by foot.

Rural accessibility is the degree of ease or difficulty rural people or communities encounter in accessing locations for satisfying their basic social and economic needs such as food production, water collection, firewood collection, education, primary health care, trading, and transport. *(Source: Banjo et al. 2012)*

Evolution in thinking and practice

From the 1970s onwards, developing countries and their development partners increased their attention on the reduction of poverty. This was linked to one of the most significant developments in addressing rural transport issues in the 1980's. This was a shift in focus from roads and transport systems to the household, as the unit of analysis. This provided a new way of understanding rural transport issues and the means for addressing these issues.

Village level studies during the 1980s revealed the significance of the transport burden on poor rural households. These studies showed that the amount of time required for transport by these households was so large, particularly for women and children, that it was a major constraint on their means of securing the necessities of life. Without reducing this transport burden, households had little capacity to increase their production and hence their income. Moreover, the predominantly top-down initiatives in the transport sector prevalent at the time based mainly on transport network data and motorised traffic volumes were having little direct impact on the transport burden of the rural poor. The village level studies showed that the explanation for this was the significance in rural households of transport for domestic purposes and the dominance of non-motorised means of transport – both of which did not figure in conventional transport planning.

Consequently, development practioners questioned the previous approach of addressing improvements to rural access based primarily around the construction of roads and transport by motor vehicles. This instigated the search for new methods to address rural access problems based on household level needs for transport and led to a number of Rural Travel and Transport Programmes supported by, amongst others, the SSATP.

Through the 1990s, this new thinking on rural transport based on the needs of the rural household for transport rather than developing infrastructure for forecast volumes of motorised traffic was embraced by many developing countries and development partners. This influenced the preparation of National Poverty Reduction Strategies in a number of countries. However, by the early 2000s it became clear that it had failed to significantly influence major investments in rural transport in developing countries.

The reasons for this have been much debated but probably included the following:

- The multi-sectoral nature of rural transport issues meant that it did not have a natural home in one Ministry. Often it became the responsibility of one unit or department in a Ministry of Roads or Local Development but with low profile and influence. Moreover, the links to other key Ministries with an interest in rural transport such as Agriculture and Health were weak;
- The rural dwellers most affected by poor rural access lacked voice and political influence;
- The fragmented and widely scattered nature of rural transport investments did not have the showcase nature of larger individual transport projects and did not attract political support for large-scale investments;
- Acute shortage of required human capacity to drive the policy at local level
- Lack of reliable data for rural transport planning.

Links between agriculture, growth, social development and rural transport

After the United Nations Millennium Summit in the year 2000, wider international development attention focused on the achievement of the Millennium Development Goals (MDGs). Although many of these goals had strong causal links to rural access problems[1], rural transport was not explicitly mentioned in the MDGs.

The MDGs strengthened measures to address the social dimensions of poverty reduction embodied in national poverty reduction strategies. But an unintentional consequence was that this tended to divert attention away from the need for economic growth and infrastructure development to support and sustain any gains made in livelihoods. Furthermore, research into strategies to achieve economic growth concluded that "in many African countries, only agriculture has sufficient scale to increase economic growth significantly over the foreseeable future. Agricultural growth is also more effective at reducing poverty, even in countries that may have the potential for industrial growth driven by rich natural resources.[2]"

Other research into rural development showed that "improving access to infrastructure appears to be among the most feasible and effective medium-term strategies. Rural infrastructure improves both farmer access to markets and expands employment opportunities in the non-farm sector…. Investments in infrastructure — most notably rural roads — tend to have a large impact on poverty reduction, and there is evidence that they also enhance agricultural productivity.[3]"

Consequently, the subsequent round of national development strategies attempted to balance "**growth and** poverty reduction". Because rural transport improvements had the potential to address both rural economic growth and the social dimensions of poverty, this presented a new opportunity in which to position effective rural transport policies and strategies.

More recently, SSATP's Working Paper Number 93 (WP93), "Rural Transport – Improving its contribution to Growth and Poverty Reduction in Sub-Saharan Africa", published in 2012, highlighted the inextricable link between rural transport and rural growth, agricultural development and social development. However, in reviewing the impact of past rural transport interventions, the Working Paper stated:

"In view of its potential, rural transport appears to be making a limited direct contribution to poverty reduction, in part perhaps because of a lack of awareness or willingness to apply known practices that hold the promise of accelerating growth and reducing poverty. Linkages between agriculture and transport are generally weak in the design of operational support within both the World Bank and donor agencies in general and the SSA countries themselves."

This downbeat assessment of the contribution of rural transport interventions provided the justification in the Working Paper for proposing a fundamental shift in policies, strategies and programmes to address rural transport issues. It was no longer viewed as sufficient to plan rural transport in conformity with national and other related sector plans and strategies. A much closer integration was required.

[1] See for example, Africa Union/UNECA "Transport and the Millennium Development Goals in Africa" February 2005.

[2] DIAO ET AL. (2007). "The Role of Agriculture in Development". IFPRI Research Report 153.

[3] VALDÉS ET AL. (2009). "A Profile of the Rural Poor". Background paper for the IFAD Rural Poverty Report 2009.

Once rural transport was viewed as integrated into, and not merely compliant with, the growth and poverty reduction agendas of national, agricultural and rural development strategies, there was a need to consider how rural transport could most effectively support these strategies.

Lessons from Rural Transport Approaches

Working Paper 93 provided a comprehensive review of the lessons learned from previous rural transport interventions. It recognised that many of the approaches needed to improve the impact of rural transport interventions on poverty reduction were known but remained largely untested beyond the pilot scale.

Research in the agricultural sector had found that agricultural productivity was strongly influenced by improvements to the bottom end of the transport network. For example, a study in Uganda found that, "The marginal returns on agricultural output and poverty reduction to public spending on feeder roads is 3-4 times larger than the returns to public spending on murram and tarmac roads"[4].

This confirmed seminal work on agricultural marketing undertaken in Ghana in the early 1980s that found, "replacing a five kilometre footpath between a village and the road head by a vehicle track may benefit the farmer through increased farm gate prices by over one hundred times more than improving the same length of poor quality road surface to a good quality gravel road"[5].

The underlying message was that transport along paths and tracks had a large influence on rural livelihoods. Improvements that facilitated the change from head loading to motorised transport had the potential to have a significant impact on agricultural productivity and poverty reduction. This was summed up in a paper by Borlaug and Dowswell who also emphasised the important role of women (see Box 2).

Box 2: The importance of footpaths, tracks and community roads

"Most agricultural production in Africa is generated along a vast network of footpaths, tracks and community roads where the most common mode of transport is "the legs, heads and backs of women". Indeed, the largest part of a household's time expenditure is for domestic transport. Efficient transport is needed to facilitate production and enable farmers to bring their products to markets, and intensive agriculture is particularly dependent on vehicle access. In addition, improvements in transport systems would reduce rural isolation, thus helping to break down tribal animosities, and facilitate the establishment of rural schools and clinics in areas where teachers and health practitioners are hitherto unwilling to settle."

(Source: Borlaug and Dowswell Feeding a world of ten billion people: A 21st century challenge).

The next point that followed on from the above was that the provision of transport services was important. Improvements to transport infrastructure were a necessary but not sufficient component in addressing improvements to rural livelihoods. The availability and affordability of the means of transport were also important. This had been identified in the village level studies mentioned above and summarised in the

[4] The Relationship between Agricultural Spending, Growth, and Poverty Reduction. Comprehensive Africa Agriculture Development Programme (CAADP) Brochure 5. Uganda. October 2009.
[5] HINE, J L and J D N RIVERSON (1982). The impact of feeder road investment on accessibility and agricultural development in Ghana. INSTITUTION OF CIVIL ENGINEERS. Conference on Criteria for Planning Highway Investments in Developing Countries, London, May 1982.

book “Roads are not Enough[6]”. This had been followed up by several studies by the World Bank and others that addressed both the appropriate types of transport and their provision.

A further issue was the standard to which infrastructure should be improved. The difficulty of establishing economic viability for the full improvement of feeder roads that would only carry low volumes of traffic had long been appreciated. This had already promoted a shift towards spot improvement of feeder roads instead of full rehabilitation. The closer linking of infrastructure improvements to the needs of agricultural development and the types of means of transport further supported the move to spot improvements for low volume roads. Moreover, because changes in agriculture are medium to long term and only respond to sustained access improvements, the importance of regular ongoing maintenance of infrastructure was particularly highlighted.

Finally, the importance of the participation of the stakeholders, particularly the rural population, was emphasised. This finding is closely linked to institutional structures based on decentralisation and devolution. Many of the failures of previous policies and strategies were found to be the result of an over dependence on top-down planning. Whereas network linkages and regional and national strategies are important, it was appreciated that top-down planning needs to be tempered by bottom up planning to achieve an effective rural transport system. Local participation not only refines the targeting of inputs but also increases transparency and accountability as well as enhancing sustainability through engendering a sense of local ownership of rural transport improvements.

Areas of Convergence between agriculture, rural development and transport

The Working Paper found that there were trends in other sectors, particularly agriculture and rural development that provided opportunities for closer integration. Some of these are described below.

Renewed approaches to growth in rural areas focused on increasing the productivity of small-scale farmers. This links closely with the rural transport agenda of a household level focus.

In non-farm rural development, there was a need for diversification requiring the injection of new ideas and better market linkages. Improvements to physical access and mobility resulting from rural transport interventions have been found to be direct contributors to improved market linkages and the flow of new ideas.

Better physical access to social services results in improved health and higher levels of literacy, which are of direct benefit to income generation in agriculture and other rural economic activities.

This convergence of the agricultural, rural development and rural transport agendas provided the basis for a new direction for Rural Transport. It was no longer to be addressed as a sub-sector on its own. An improved framework for rural transport sector strategies was required and must be closely integrated into the agriculture, rural development and poverty reduction strategies. This framework is described in detail in the next module.

[6]Barwell and Dawson (1993). “Roads are not Enough: New Perspectives on rural transport planning in developing countries”. Intermediate Technology Publications.