

## POLICY TOOLS – CROSS CUTTING THEMES

### 4.5 NON-TRANSPORT INTERVENTIONS

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**Problem**      **In rural areas there is a tendency to develop capital intensive road transport interventions as a solution to access problems**

**Solution**      **In rural accessibility planning, there is an increasing emphasis on non-transport interventions as a solution to inaccessibility and immobility, with proximity to social services and amenities as key to increased time savings and associated agricultural productivity**

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#### BACKGROUND

Whilst transport is clearly a means to an end for the rural poor, and the lynchpin of all access needs whether they be subsistence requirements, social services or income generating opportunities, it is undoubtedly one of the most expensive development interventions available. According to the World Development Report (1999), only 5.2% and 3.2% of Gross National Product is spent on education and health respectively across the globe, compared to between 5-15% public expenditure on transport worldwide. Using very approximate figures, for one million US Dollars, a transport programme could purchase one of the following improvements in rural transport:

• Tar road	10km
• Gravel road	50km
• Spot road improvement	100km
• Bicycles	12,500
• Donkey carts	3,300
• Motor tricycles	700
• Pick up trucks	100
• Buses	10
• Education for Cameroon school children	14,000
• Health care for people in Cameroon	125,000

Non-transport interventions emerged as a new planning paradigm in the 1990s, as an alternative to investment in conventional infrastructure and transport service interventions. In fact, Dixon-Fyle (1997) remonstrated that “the heart of the (rural development) problem is accessibility, determined by the location of different points of satisfaction on the one hand, and on the other by people’s ability to reach these points”. In a study of rural communities in Tanzania, Ghana and the Philippines, Dawson and Barwell (1993) identified that both location of facilities and storage and credit provision would negate the need for rural travel and associated transportation requirements.

#### A HOLISTIC APPROACH TO ACCESSIBILITY SOLUTIONS

A holistic approach to addressing the problems associated with rural transport involves non-transport policy measures and interventions to increase accessibility or by reducing the *need* to travel. Measures to improve mobility through use of Intermediate Means of Transport (IMTs), improvement of infrastructure and development of transport services will increase accessibility by reducing the time and/or effort involved per trip. Trip time and effort can also be reduced, and accessibility increased by reducing the distance that people have to travel to reach facilities (Dawson and Barwell, 1993).

Conventional transport interventions are clearly a drain on donor resources and are usually implemented on the basis of cost benefit analysis with an emphasis on the rate of return that road construction or rehabilitation will have for the investor. Hence, there tend to be strict criteria regarding population density and agricultural productivity that govern where investment in roads is made. Undoubtedly, the provision of social amenities

including boreholes, woodlots, schools and health clinics is not necessarily a low-cost solution, particularly for the initial investment required, including construction materials and labour, and subsequent staff (see **Box 1** for a case study of Cameroon). However, the objective of providing the means to access such facilities is for the following reasons:

- To reduce the need for travel
- To reduce the frequency and distance of travel
- To increase time savings made on trip-making
- To enable the poor to spend more time on productive (income generating) activities
- To reduce poverty

In developing countries there does seem to be an assumption that access involves physical movement. Thus, providing intermediate means of transport; improving tracks and trails; or more generally improving the rural road network are all aimed at reducing the time and effort required in gaining access. Many such interventions have been successful. Nevertheless, they all approach the problem from the standpoint of increasing mobility. As such, they look at the problem as if it had to do with transport only.

#### **Box 1: Case study of non-transport interventions in Cameroon**

A case study of rural Cameroon was undertaken as part of the research for the Policy Toolkit for Increased Rural Mobility, which provided an insight into the needs and constraints of the rural poor in Southwest and Adamaoua Provinces. A previous case study undertaken in Zambia indicated the need to investigate non-transport interventions as a viable alternative to costly transport services and investments in infrastructure, so as to increase accessibility by reducing the need for extraneous travel by the rural poor.

The average cost of maintaining 1km of earth road in Cameroon is US\$2,500, with full rehabilitation costing approximately US\$10,000 per km. The annual cost of running a school in Cameroon (excluding staff costs) is US\$70 per child, compared with total health expenditure in 2000 at US\$8 per capita. The cost of providing basic social services is clearly a fraction of that spent on providing road access, yet as we are constantly reminded, roads are not enough, and if there are no means with which to travel on the rural roads then the intervention has been wasteful.

Clearly, the provision of more services and amenities close to populated settlements would benefit local communities through travel time savings, allowing them to spend their time on more productive activities. However, as with road prioritisation, there are certain criteria for locating schools and health services in rural areas including their catchment area, and population served. Consequently, many remote settlements are prejudiced by this selection criteria, just as those who do not fulfil the prioritisation procedures for road investment.

Rural roads and basic services are undoubtedly a catalyst for economic development and in-migration, and the removal of investment for one or the other would hinder poverty reduction.

*Source: Davis (2001)*

Work undertaken in recent years has attempted to take a broader view. It has seen the solution to the 'transport problem' both in terms of (a) mobility (or transport), and (b) the proximity of supplies, services and facilities (or non-transport). This dual approach sees the solution to access problems in terms of:

- Moving people more swiftly and easily to where they need to reach (i.e. improving their mobility);
- Bringing supplies, services and facilities closer to the people;
- A combination of the two.

Any rural household has to take conscious decisions about the resources it devotes to different activities. First and foremost, of course, the household needs to sustain itself. This means that time must be allocated to ensure adequate shelter and clothing and in obtaining water, fuel and food. Only when these basic needs have been met can time be spent on other activities. And any such 'spare' time can be devoted to a variety of objectives or activities, including better family care, health, or education; more leisure; or cash crop production, marketing or other productive and income-earning activities to lift the level of living. But the one factor that affects all these decisions is the amount of 'spare' time that may be available after reaching the most fundamental supplies, services and facilities for basic subsistence (Edmonds, 1998).

**Box 3: Access to Basic Services in Developing Countries**

Almost a third of people in developing countries live in poverty. And their poverty is reflected in some basic indicators of lack of access to basic services.

- 130 million children still do not attend primary school.
- Under 5 mortality rates are some 6 times higher than in more developed countries.
- Maternal mortality is 12 times higher than in OECD countries.
- In the 46 countries characterised by the UN as 'Least Developed' (and comprising some 550 million people), only 57% of their populations have adequate access to health services; 49% to safe water; and 36% to sanitation.

*Source: United Nations (1997)*

Arguably, the provision of facilities close to a community may not significantly reduce the total travel workload involved in accessing the health and education services, grinding mills, crop marketing facilities or in the collection of water and firewood, because consumption levels are shown to rise substantially in such instances. Yet, this is indicative of the under-utilisation of services by rural households because of the financial cost, and that of time and energy involved in accessing them. Evidently, school absenteeism and high rates of child mortality and morbidity are a symptom of these trends, and improved location of services and amenities would certainly remedy them more effectively than investments in roads alone.

**INTEGRATED RURAL ACCESSIBILITY PLANNING**

The International Labour Organisation (ILO) advocates local level planning in its Integrated Rural Accessibility Planning (IRAP) programme. IRAP is a rural transport infrastructure-planning tool that prioritises investment according to maximum need and impact, either by improving the road network or by improving the distribution and siting of services within the area. IRAP provides rural communities with access to a range of goods and services, and local employment forms the platform for economic and social development that can reverse the cycle of poverty and outward migration.

In IRAP, the main access needs of rural households are identified at two spatial levels:

- **Within the settlement area:** to destinations usually within walking distance for the majority of households, including potable water supplies, employment, fuel wood sources, agricultural landholdings, and cultural and social facilities, such as primary schools and communal buildings.
- **Outside the settlement area:** to destinations usually requiring the use of a wide range of public and private transport modes, such as markets, grinding mills, secondary and tertiary education facilities; primary health care facilities; and administrative centres.

Rural Accessibility Planning (AP) focuses on the household, and measures its access needs in terms of the time spent to get access. Because of poor access a lot of time is spent by rural households to transport themselves and their goods in order to meet their needs. The underlying principal of accessibility planning is to reduce the time spent on achieving access, and, hence have more time available for other social and economic activities.

**Features of Rural Accessibility Planning Tool**

- Accessibility Planning (AP) covers several sectors. In particular, it provides detailed data on the access that rural households have to services and facilities. These include water, energy, health, education, markets, agricultural inputs, agricultural outputs, crop marketing and post-harvest facilities.

- Accessibility Planning is gender sensitive and involves both men and women in the local level planning process, and takes account of the clear distinction between the sexes in terms of transport needs and patterns. In doing so, the women's perspective and needs will be incorporated into the planned interventions, and the burden of transport may be reduced for both sexes.
- Accessibility Planning has been designed to assist local-level planners to make appropriate investments of the limited funds available to them. The focus on the local level also provides a basis for developing the capacity of local-level planners.
- Two points are necessary to raise here. The Accessibility Planning procedure is not a planning system. It provides a basis for establishing priorities for access improvement in the sectors that it deals with. It is a tool for physical planning that captures access problems and identifies a set of prioritised interventions that address these problems in rural communities. It can be integrated into the local level planning structure process for implementation.
- Accessibility Planning is important not just because it provides an effective local planning tool. Its real importance lies in its potential to bring together the two aspects of accessibility – mobility and proximity – in a sensible manner. It suggests that access, rather than transport, should be looked at as the facilitator of development.

IRAP is needs driven and takes the access needs of households as a starting point; it is integrated in nature in that it considers all aspects of a household's need for access; and is participatory in nature at every level so that investment priorities incorporate community perceptions. This makes IRAP both comprehensive and sustainable.

#### **ADDITIONAL NON-TRANSPORT SOLUTIONS**

In addition to the provision of services to fulfil the demand of remote communities, other non-transport solutions to poverty reduction include:

**Extension and mobile services:** Agricultural and veterinary extension services are provided in most Sub-Saharan African countries, as are mobile health services. The former provide training and advice to agricultural producers and pastoral farmers located in remote regions to ensure they optimise their productivity and hence income generating potential. The latter tend to travel around rural villages administering child vaccinations and sometimes maternity health and family planning advice.

**Storage facilities:** The provision of village level storage facilities can address the crop marketing transport problem by enabling farmers to store their harvest until such a time that they can evacuate them to market. Storage facilities provide a means of preventing unnecessary crop spoilage and under-pricing by traders who exploit rural farmers when they require transit to market for their produce.

The provision of social service infrastructure as a viable alternative to road infrastructure improvements, and a means of reducing trip distance and frequency, can only be justified where the population is large enough to sustain the use of the service. As with the road sector, the key prerequisite for intervention is population density, which results in the neglect of the most vulnerable and isolated rural poor. Perhaps the only means of justifying investment in remote areas is by identification of social benefits which consider the needs and constraints of the poor alone, as opposed to the economic returns on any investment made.

#### **KEY REFERENCES**

Dawson, J. and Barwell, I. (1993). Roads are not enough. *London: Intermediate Technology Publications*

Edmonds, G. (1998). Wasted time: the price of poor access. Rural Accessibility Technical Paper No. 3. *Geneva: International Labour Organisation (ILO)*