

Developing Rural Transport Policies and Strategies: A work in progress

The preparation of this paper by Richard Robinson and myself started in 1999. It was intended to be a companion to Approach Papers published under the Rural Travel and Transport Program (RTTP). It was designed to capture emerging experiences from RTTP's work in Sub-Saharan Africa to assist countries put in place policies and strategies to address their rural travel and transport problems. Whilst the basic work of conceptualizing the approach to the policy work was relatively clear, it became quite evident as research for the paper progressed that experiences on the ground were few and more time was needed to allow for emerging experiences to reach a point where they could be documented for dissemination to a wider audience in line with the objective for preparing the paper.

In addition, discussions between the Bank's Rural Transport Thematic Group led to a decision for joint sponsorship with RTTP of a four volume World Bank Technical Paper series¹ on rural transport dealing with issues relating to (i) Management and Financing of Rural Transport Infrastructure; (ii) Design and Appraisal of Rural Transport Infrastructure; (iii) Rural Transport Services and Intermediate Means of Transport; and (iv) Rural Transport Policies and Strategies. Within this framework, it was agreed that the paper on policies and strategies should incorporate the key themes of the other papers and provide a good reference point on emerging approaches to dealing with rural transport issues. Thus, it should be the last to be published. The papers on the first two themes have now been published and the third nearing completion. The work on the policy paper has thus been restarted.

As part of that process, it was decided to take advantage of the presence in Washington for the Annual Road Management Seminar of many resource people with experience relevant to the topic of the policy paper by holding a discussion on emerging lessons in developing rural transport policies and strategies. To facilitate that discussion, the attached paper is being circulated which documents the thinking of the authors as of the end of 1999. Since then, they have gathered more information, come across more relevant lessons which they are using to revise the paper. The authors would most welcome comments, detailed and specific, information and especially case study examples, which they can use to bring to a successful closure.

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¹ The four volumes are: *Options for Managing and Financing Rural Transport Infrastructure*, *Design and Appraisal of Rural Transport Infrastructure*, *Improving Rural Mobility* and this paper, *Developing Rural Transport Policies and Strategies*.

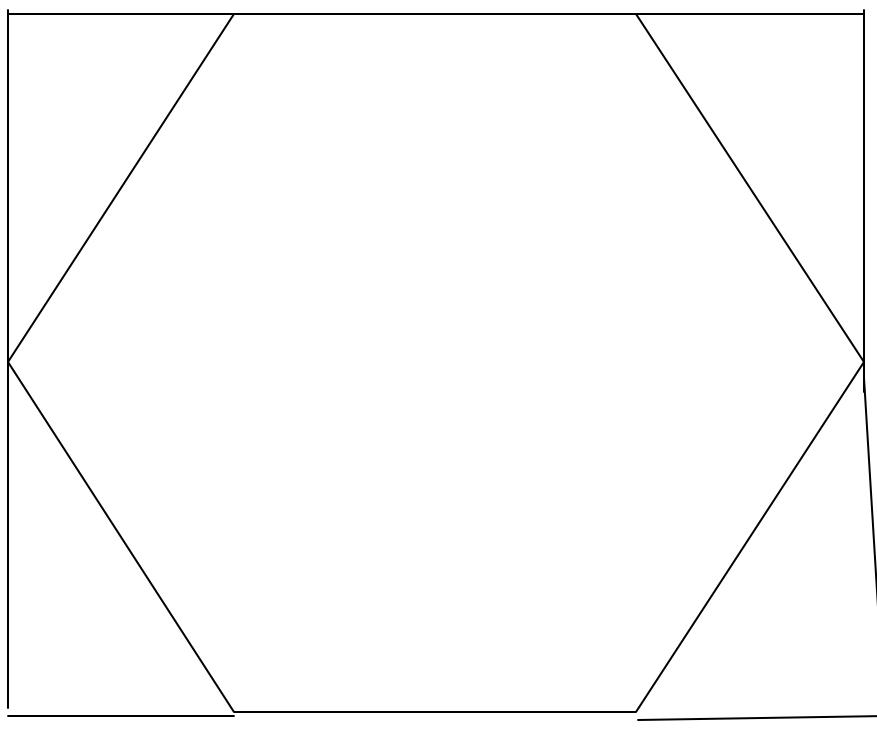


Work in progress
for public discussion

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Developing Rural Transport Policies and Strategies



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1 Introduction

1.1 Purpose

The purpose of this document is to provide guidelines on the formulation of policy and strategy for rural travel and transport. It is aimed at practitioners in the field in the Sub-Saharan Africa region who may not have past experience of policy and strategy development in this area.

1.2 Rural travel and transport

Rural transport infrastructure

It is important to distinguish between certain terms. Rural transport infrastructure is the physical asset over which travel and transport take place. In the broadest sense, transport infrastructure in rural areas can be assumed to consist of:

- ?? Tracks, trails and paths used mainly by non-motorised traffic and pedestrian travellers, sometimes known as ‘community roads’, and which are the backbone of travel within the rural district
- ?? Access roads catering mainly for within-district travel
- ?? Arterial and collector roads within rural areas carrying primarily through traffic

Whilst recognising the importance of arterial and collector roads in the national development context, they are of limited relevance to rural travel and transport policy. They are not discussed further in this document which focuses on access roads, tracks, trails and paths.

Travel and transport

Issues of rural transport are concerned with both the road infrastructure itself and the means of transport over that infrastructure. However, use of the term ‘rural travel and transport’ (sometimes abbreviated as ‘RTT’) emphasises that pedestrians often make up a significant proportion of rural travellers, and that their needs should be considered alongside, or even ahead of, the needs of motorised and intermediate (unconventional or non-motorised) means of transport. Rural travel and transport are concerned with the access and mobility of rural dwellers, and these concerns should drive any policy in this area.

1.3 Poverty and development

Poverty

Key features of rural poverty in the Africa region include a lack of income-generating opportunities outside of agriculture for rural dwellers, and inadequate access to economic and social services. In many cases, the character and extent of these problems are largely a function of the inadequate provision of rural travel and transport infrastructure and services, especially at the village and community level.

Development

Local level rural travel and transport are relevant to a number of key development issues (Barwell 1996):

- ?? They are of central significance to poverty alleviation, food security and gender issues
- ?? They are a significant impact on environmental degradation

- ?? They can be an important avenue for developing the private sector
- ?? They can both promote and benefit from increased community participation
- ?? Greater sustainability is needed for both the maintenance of infrastructure and the operation of services

Policy is set on behalf of society, normally through central and local government. The societal aspect of rural travel and transport policy therefore needs to have a development perspective.

1.4 Scope

Nature of policy

The note defines what is meant by policy and strategy, and explains how these are used to guide the decision making process within public administration. Emphasis is given to the importance of policy, and to the issues which arise with rural transport. It is emphasised that policy formulation is a complex process. Policy needs to be set at different levels of government and in rural communities. To be effective, the different elements of the policy must fit together in a consistent manner.

Approach

The approach to policy formulation needs to determine which rural travel and transport issues should be addressed through policy measures in the local situation. It needs to set priorities between these issues. It requires a structured and iterative approach with parallel top-down and bottom-up processes that need to be co-ordinated if the resulting policy is to be implementable and sustainable. The approach also needs to recognise that policy for rural travel and transport needs to be integrated with wider policy aims for the road sub-sector, the transport sector, and for national and rural development more generally. It must also understand the nature of the various instruments which are available for implementing policy. An approach to the formulation of policy and strategy is put forward that recognises all of these various aspects and inter-linkages.

Content

Chapter 2 defines the terms ‘policy’ and ‘strategy’, and describes how policy is set at different levels in public administration. Chapter 3 considers the nature of rural travel and transport in more detail, and discusses the requirements for sustainable access and mobility. Chapter 4 discusses typical problems which occur in developing countries, and which may need to be addressed through policy measures. It recognises that the symptoms and causes will differ from country to country. These are grouped according to whether they relate to the context in which rural travel and transport are taking place, to the provision and management of road infrastructure, or to the means of transport. Chapter 5 considers some policy measures and options that may be appropriate for addressing issues identified. Chapter 6 puts forward an approach to policy formulation. This treats policy development as a project, and shows how project planning techniques can be used to meet goals in this area. The role of international organisations and donors is also considered in this context. Chapter 7 gives several examples of rural travel and transport policy, which highlight particular policy issues, and that can be used as models by individual bodies when forming their own policy. Finally, Chapter 8 discusses the monitoring of policy. The use of performance indicators is described, as is the need to obtain feed-back from experience in practice.

2 The meaning of policy and strategy

2.1 Purpose

This chapter aims to clarify the meaning of the terms ‘policy’ and ‘strategy’ since it is recognised that considerable confusion often surrounds their use. Instruments for implementing policy are described and comments are made on their individual use in different circumstances and at different levels of government. A ‘framework’ is put forward that enables policy to be formulated in a structured manner at different levels of public administration. A structured approach is necessary because policy is a complex entity, and there is a need to involve and co-ordinate between many organisations and bodies if sustainable implementation is to be obtained.

2.2 Policy

2.2.1 The nature of policy

Framework for decision making

Policy lays down the basic rules and requirements which can guide all decisions and actions that need to be taken. In particular, it provides a frameworks within which professional and technical decisions can be made. If policy is well defined, then there are clear guidelines for taking decisions. Without a policy, actions can be haphazard, inconsistent, and biased. Normally, a policy is broad in scope. Procedures and practices can then be derived from the broad policy which can then be used to guide day-by-day decision making.

Public administration

Policy is, by its nature, set by public administrative bodies rather than by the private sector. Aspects of rural transport policy can be set by national, regional and local government administrations. The policy will provide the basis for determining issues such as the distribution of budgets, about priorities, and all other administrative functions related to the aspects of rural transport which are the responsibility of the particular administration. To be really effective, there needs to be a consistency of policy between all levels of government, and this requires that the policy formulation process is well co-ordinated between the various public administrative bodies concerned.

Inter-relationships

Policy provides a framework that enables the following different things to be considered together, as conceptualised in Figure 2.1:

- ?? The traveller and mode of transport
- ?? The infrastructure on which the travel takes place
- ?? The physical, social and political context or environment in which the travel takes place

The various inter-relationships can lead to confusion in different policy areas, and this is compounded because the structure of government does not follow the structure of sectors or of required policies. One of the aims of the policy formulation process is to ‘make sense of this confusion’ by tying all of the disparate aspects of policy together in a coherent manner. A structured approach to policy formulation is therefore proposed in Chapter 6 to assist in achieving this.

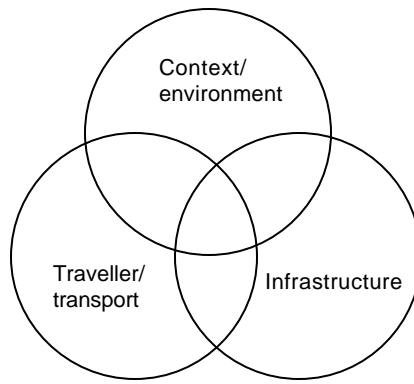


Figure 2.1 Inter-relationships considered by policy

Promulgation

Policies can be considered to include all of the:

- ?? Statements and documents published by public administrative bodies
- ?? Relevant laws and statutes, especially their preambles and announcements
- ?? Decisions of the courts and regulatory bodies on important issues
- ?? Guidelines and procedure manuals issued by relevant organisations concerned with the management of sector activities

Inter-relating policies

Governments will set policy in a number of areas, such as social, fiscal and development. Policies in the different areas will interact. For example, transport sector policy may have influence on social and development policy, and be influenced by fiscal policy. The relationships between the policy areas are complex, and it is often difficult to make a clear-cut distinction between where one policy ends and another starts. This is complicated further because of the need to set policies at different levels of public administration, such as national, regional and local. In an ideal situation, all of the policies in different areas and sectors, and at different levels of public administration, would be well co-ordinated and consistent. This is seldom the case because the different aspects of policy will reflect the different aspirations of policy formulators, with a wide variety of vested interests. For example local policy may be at variance with national policy because needs are perceived as being different when viewed from local and national levels.

Development over time

Policy also reflects the changing needs and aspirations of society. As such, policy should be reviewed and updated on a regular basis. The impact of policy also needs to be monitored continuously to provide feed-back on its effectiveness. Aims can be redefined to reflect actual achievements and lessons learned from experience. This may mean that different policies are set or updated at different times, so mis-matches occur as needs are perceived to change in different areas.

2.2.2 Sector and sub-sector policy

Sector policy

Rural transport is part of the transport sector. As such, rural transport policy needs to be set in conjunction with transport policy. Both transport and rural transport policies should also be

considered as contributing to social and development policy more generally at both national and local levels.

Transport policy

Transport issues touch all segments of society, so transport policy is important for all of the population. Comprehensive transport provision is an important input into the efficient functioning of industry, agriculture and commerce. It also affords individuals and households the benefits of mobility and access. A strong national policy is required for the transport network to be efficient and to provide essential services for everyone. Rural transport policy is an important component of this.

Requirements for rural transport

Rural transport policy defines the broad level of service which the different levels of government intend to provide in rural areas. Policy must be determined in conjunction with an overall vision for transport. This vision may be explicit or implicit, but it should be customer focused and recognise demands needing to be met. As such, rural transport policy needs to target all of the rural population, including pedestrians and non-motorised users.

2.2.3 Strategy

Policies should also be distinguished from plans. Policies are the *what* and *why*; plans are the *how*, *who*, *when* and *where*. Planning is a systematic and formalised process for directing and controlling future operations in such a manner that policy objectives are achieved. It is the process of determining how an entity can get where it wants to go. The objectives are defined as part of the policy. Thus, plans may provide the *strategy* by which policy is implemented.

2.3 Elements of policy

2.3.1 Policy, dissemination and implementation

Elements

Policy only has meaning to the extent that it is implemented in practice. This is done through dissemination of the intention of policy and through instruments that force or encourage its adoption. Thus, there is a need to distinguish between the following:

- ?? The policy itself - the aims and intentions of government in the area concerned
- ?? The means of disseminating the policy - policy documents, policy statements, and the like
- ?? The means or instruments for implementing the policy - laws, statutes, taxes, and the like

Typical policy aims and intentions are described in Chapters 3 to 5, and an approach to identifying policy requirements in individual situations is given in Chapter 6. Means of dissemination and policy instruments are described below.

Relationship between elements

The success of policy will depend on a number of factors. In addition to success depending on aspects such as the way that policy is formulated and how this reflects public opinion, the quality of the dissemination mechanisms and implementation instruments will also be important. These need to reflect the detailed policy requirements and be sufficiently well prepared and produced to

enable the policy to be understood and enacted in a meaningful manner. The effectiveness of policy can be improved by adopting a structured approach both to its formulation, and to its dissemination and implementation.

2.3.2 *Vested interests*

Responsibility

Policy is administered by government bodies operating within the sector. These organisations may be national, regional or local government ministries or departments. Normally only public sector bodies are responsible for administering and implementing policy. Policy cannot normally be imposed on private sector bodies, other than through the use of policy instruments, as described in Section 2.5.

Politics and administration

Different aspects of policy are developed and used by entities and bodies which have different vested interests. The vested interests may be at different levels of government or within the government bodies or other organisations which will implement the policy. As such, policy at government level provides a 'political' perspective, whereas those produced by government bodies are more concerned with the administrative arrangements necessary to put the policy in place. Different means of dissemination and different implementation instruments will be relevant depending on the particular vested interest. If the policy is to be coherent, all of the various means of dissemination and implementation must be consistent with each other.

Policy requirements

Policy requirements at national level will be the responsibility of central government, and will be formulated on behalf of the population as a whole. Local policy will need to be consistent with that at national level but will reflect local interests, and its formulation will be the responsibility of local government. Individual organisations, such as a rural or feeder roads departments, will have a policy related to their own particular organisational mission, but again being consistent with more general policy requirements.

2.4 Means of dissemination

2.4.1 *Framework for policy*

Relationship between policy documents

Policy is disseminated principally through policy documents. These need to be produced by all bodies with vested interests in the policy process. They should normally be published or at least made available for public scrutiny. A typical relationship between the various policy documents is shown in Figure 2.2. This shows how, at central government level, a policy document would be produced by central government itself and by the various national bodies which would need to implement policy. These might be a national department of feeder roads, a ministry of transport or local government, a department of women's and minority affairs, for example. The policy documents produced by these bodies would need to be consistent with and to amplify the document produced by central government. This structure is mirrored at regional and local governments, with a linkage being provided by the policy documents produced by government at each of these levels. There would be several regional governments, each of which could contain several local governments. The actual arrangement will differ from country to country.

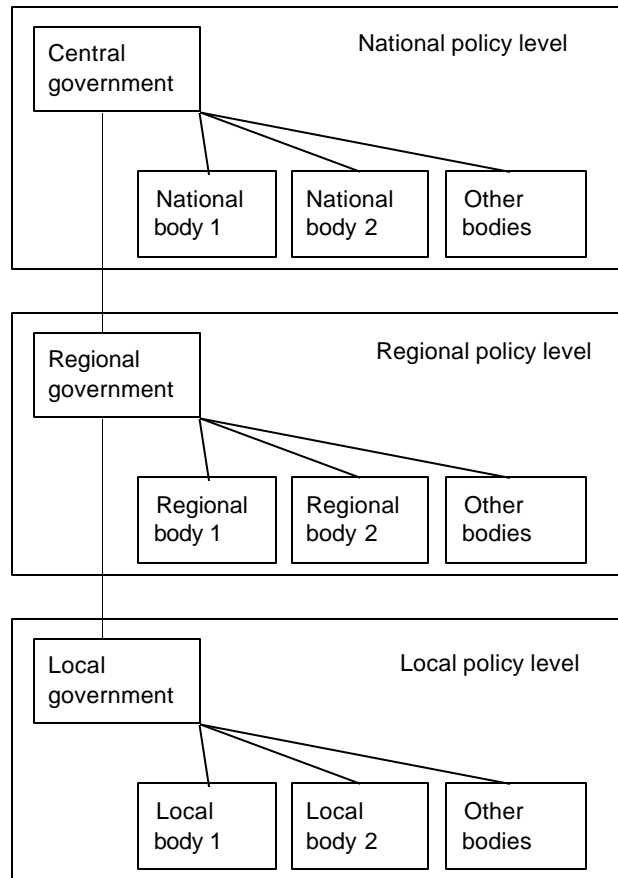


Figure 2.2 Example of relationship between policy documents produced by different vested interests

Types of documents

The nature of policy documents produced by governments and by bodies that implement policy need to be different. Documents produced by government bodies provide a broad overview of the policy aims and intents, reflecting the political objectives. Documents produced by bodies responsible for implementing policy need to describe how they will administer and implement those aspects of policy relevant to their organisation.

Benefits

Although the production of policy documents is an important objective, significant benefits result from the preparation process itself. This provides the opportunity for wide ranging discussions on the many issues affecting the sector and for reaching a consensus on how best to address them. The policy development process also provides the opportunity for informing people about the role and aims of the sector, and for considering ways in which aims can best be accomplished. On occasions, the process leads to proposals for significant changes in the direction of policy. These can sometimes result in fundamental restructuring of the way that the sector is managed, financed or operated.

2.4.2 Government level

Central government

Policy documents produced by central government provide a ‘statement of intent’ about how government intends the sector should be managed, operated and developed. In some countries, these documents are known as ‘white papers’, and are preceded by a ‘green paper’ stage where comments are sought through public consultation. It is crucial that these policy documents are available for public scrutiny and are updated at regular intervals.

Document contents

Thus, the national policy document should identify those key areas where government wishes to influence activities in the sector. It should be a relatively brief statement, and written at a summary level of detail. The policy will then be implemented by government through the enactment of legislation, through regulations and taxation, through the way that its annual budgets are allocated, and other available measures. The details of the policy will be provided by the policy frameworks of government ministries and other bodies working in the sector at national, regional and local level. Each will need to set up their own policy frameworks to provide the basis for the management decisions that will enable them to meet the requirements of the national sector policy.

Regional and local government

Policy documents produced at regional or local levels of government are similar in intent to national policy documents, but have a different perspective. Their aim should be to indicate how national policy should be applied in the particular situations found locally, and to identify additional issues of local importance that are not covered by the national document. They should also be brief documents which set out political aims. Administrative details of policy implementation should be covered in the policy documents of regional and local government bodies.

2.4.3 Organisational level

Administrative framework

Government bodies or other organisations responsible for administering and implementing policy need to define the framework within which they will operate in order to meet their own and wider policy requirements. Whereas governments, at the political level, will normally only produce one policy document for a particular sector, organisations will often produce several documents relating to different aspects of their policy framework. To understand the need for different documents, it is first necessary to consider organisational policy frameworks in more detail.

Structure of the policy framework

A policy framework within an organisation is normally set at three levels:

Mission statement

This outlines, in broad terms, the nature of the operation being managed by the organisation. Mission statements define how an individual organisation differs from another organisation. Thus, they are formulated at a summary level of detail, and are normally kept fairly brief. They are of main interest to senior policy staff within the organisation, although provide a basis of inspiration to all staff. The mission statement provides a broad definition of policy and how the organisation aims to achieve this. To enable a mission statement to be put into effect, objectives, standards and intervention levels are required.

Objectives

These set specific goals to be achieved within the short to medium term (tactical) and long term (strategic) time scales. Objectives need to be

- ?? *Measurable* - quantified in such a way that it is possible to determine whether or not the objective has been achieved; normally related to achievement within a stated time scale
- ?? *Relevant* - being pertinent and applicable to the organisation's mission, and having a direct bearing or influence on the item from the mission statement being considered
- ?? *Specific* - formulated in such a way as to be explicit, distinct and precise, in order to reduce the possibility of misinterpretation
- ?? *Achievable* - such that it is actually possible for the organisation to accomplish the requirement in the time available, or defined for response, with the resources available

Objectives are usually targeted at the individuals in the organisation who have the responsibility for delivering results. Often these will be the budget holders in the organisation. Specific objectives need to be set for each item identified in the mission statement.

Standards and intervention levels

These provide the detailed operational targets to be achieved by individual units in the organisation. Standards may be supported by legislation or regulations. Standards and intervention levels are normally targeted at technicians, inspectors, supervisors, and others, who have responsibility for ensuring that policy is implemented on the ground.

Box 2.1 Examples of mission statements, objectives and standards

Mission statement

The regional road administration will maintain its rural access road network in a manner that supports national and regional development aims.

Objective

All district administrative centres will be accessible by an all-weather road by the year 2005.

Standard

Access roads will be at least 2.5 metres wide.

Vision statements

Statements of vision for rural transport policy are broad indications of the general direction in which politicians or the public wish policy to develop over time. Visions serve to identify long term goals to which more detailed transport policy objectives can contribute. Many organisations produce a 'vision statement' in addition to a mission statement as part of their policy framework.

Relationships between components

There is a 'one-to-many' relationship between the components of the policy framework, as shown in Figure 2.3. Each item in the mission statement should be supported by one or more objectives, and each of these should be supported by one or more standards or intervention levels. All standards and intervention levels should support an objective, and all objectives should be

reflected in the mission statement. The mission statement, objectives and standards thus provide a consistent set of criteria that can guide all decisions. The figure also shows how each component of the policy framework applies to different levels of staff within the organisation.

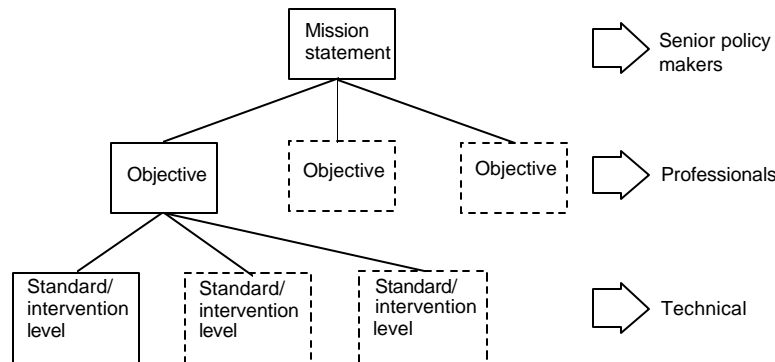


Figure 2.3 Relationship between components of the policy framework and principal user of each component

(Source: Robinson and others 1998)

Basis of monitoring

A policy framework for an organisation lays down the basic rules and requirements within which professional and technical decisions can be made about the sector. If this framework is well defined, the role of professionals in the administration becomes one of providing the appropriate technical solutions to implement the defined policy. Government then needs only to check that policy has been implemented by the professional staff, and to receive feed-back from them about which areas of the sector policy need to be modified so that policy can be improved in the future.

Documentation

Within a body responsible for administering and implementing policy, documents are normally produced at a number of different levels:

?? Framework document

Ministerial level requirements for the organisation and setting out its overall aims

?? Corporate plan

The business of the organisation; setting out the medium term objectives, developments and programmes

?? Business plan

The contribution to that business of each of the divisions within the organisation and setting out the annual objectives, tasks and programmes

?? Divisional business plan

Providing a greater level of detail

It will be seen that, for organisations, there should be no differentiation between documents produced to define 'policy' and those that define the 'business' activities. These organisational aspects should be indistinguishable. The documents need to be explicit, but as concise as possible.

Measurable outputs and performance indicators should be included wherever possible. More details on the structure for the documents is given in Box 2.2.

Box 2.2 Documentation at different levels in the corporate planning process**Framework document**

This should set out the requirements of ministers in relevant government departments. It should include the legal framework, the areas of responsibilities and the overall aims and objectives of the department. Government approved programmes, funding arrangements and any other government requirements should be included. It should also cover the organisation's relationships with national government, local government and the public, including the concept of customers. It should also set out the requirements for consultation and approval of proposals, monitoring performance and reporting requirements. The document should include the following:

- ?? Administration governing the organisation
- ?? Other relevant legislation
- ?? Government objectives
- ?? Responsibilities to government and to customers
- ?? Major programme strategies
- ?? Funding arrangements
- ?? Consultation and approval procedures
- ?? Monitoring arrangements
- ?? Reporting arrangements

Corporate plan

This should set out the medium to long term strategy for the organisation's business, and include all major aims, objectives, programmes and tasks for the next few years. In effect, this is a statement of where they would expect to be in, say, five years time. It should cover all the main issues and act as the framework for the preparation and review of the annual business plan. The document should contain the following:

- ?? Mission/aims/vision
- ?? Objectives
- ?? Key targets and performance indicators
- ?? Financial framework
- ?? Major programmes to meet objectives
- ?? Major actions and tasks to meet objectives
- ?? Organisation, management and business development
- ?? Operation development
- ?? Systems development
- ?? Technical issues and standards

Business plan

This should concentrate on setting out the business for the following year. It will consist of detailed programmes and tasks, with specific targets. It should be built up on established budgets and staff resources, and be a realistic indication of what will be achieved. It will form the framework for the preparation of the divisional business plans. The document should include the following:

- ?? Budgets
- ?? Programmes for development, improvement, rehabilitation, maintenance and operation
- ?? Actions and tasks
- ?? Specific targets and performance indicators to meet corporate plan objectives

2.5 Policy instruments

Typical policy instruments available to the transport sector are summarised in the Table 2.1. Policy instruments often involve trade-offs between their attributes. For example, money contributed by individuals through taxation may be in the expectation that it will be used effectively and efficiently to provide collective services. Where the revenue collected is perceived to be utilised poorly, resistance to payment is likely to develop. Resorting to policy instruments that are

underpinned by coercion to overcome this is likely to generate even more resistance, leading to evasion and abuse.

Table 2.1 Policy instruments typically available

Policy focus	Target	Policy instruments	Level of government
<i>Access</i> Improved access to goods and services	Households	?? Planning guidelines and controls ?? Investment policies and criteria ?? Direct investment ?? Subsidies ?? Credit legislation	Central/local Central/local Central/local Central/local Central
<i>Mobility</i> Improved use of existing infrastructure or provision of new facilities	Non-motorised transport users and pedestrians	?? Planning guidelines and controls ?? Investment policies and criteria ?? Direct investment ?? Taxation levels on IMT ?? Subsidies ?? Credit legislation	Central/local Central/local Central/local Central Central/local Central
	Mechanised transport users	?? Planning guidelines and controls ?? Investment policies and criteria ?? Direct investment ?? Road traffic regulations ?? Subsidies ?? Credit legislation ?? Technical standards of infrastructure ?? Physical controls relating to infrastructure use, including traffic management measures	Central/local Central/local Central/local Central Central/local Central Central/local Central/local
Improved use of transport equipment	Transport operators	?? Operator entry/exit controls through licensing and franchising ?? Regulation of operation and businesses ?? Tariff controls ?? Government administration ?? direct operation ?? autonomous corporations ?? privatisation	Central/local Central/local Central/local Central/local
	Non-motorised transport users	?? Taxation levels on IMT ?? Foreign exchange controls ?? Regulation of operation ?? Direct investment	Central Central Central/local Central/local
	Mechanised transport users	?? Vehicle construction and use regulations ?? Road traffic regulations	Central Central
<i>Gender</i> Reducing the transport burden of women	Rural women	?? Planning guidelines and controls ?? Investment policies and criteria ?? Direct investment ?? Subsidies	Central/local Central/local Central/local Central/local
<i>Resource allocation</i> Prices equal to real cost to ensure optimum allocation of resources	Overall market	?? Infrastructure user charges, fuel pricing, etc ?? Taxation ?? Subsidies	Central Central/local Central/local
<i>Market</i> Removal of market distortions	Market power	?? Business regulations ?? Monopoly and merger regulations ?? Tariff regulations	Central Central Central
	Externalities	?? Physical controls ?? Price controls ?? Taxation	Central Central Central

Policy focus	Target	Policy instruments	Level of government
		?? Subsidies	Central
	Transparency	?? Operation quality controls ?? Information provision	Central/local Central/local
<i>Environment</i> Control of environmental damage and pollution	Transport operators	?? Vehicle and emission regulations ?? Fuel types	Central Central
	Infrastructure developers and managers (as required and appropriate)	?? Planning controls ?? Design standards (appropriate instruments)	Central/local Central/local
Others such as: ?? Defence ?? Political unity ?? National prestige ?? Income redistribution ?? Increasing food supplies etc			
<i>Notes:</i> IMT Intermediate means of transport			

3 The nature of rural travel and transport

3.1 Components of travel and transport

Transport components

Rural travel and transport can be considered to be made up from two components:

?? Transport infrastructure

?? Means of transport

Transport infrastructure

Transport infrastructure in the less developed countries consists of two complementary parts: modern and traditional. The modern transport system is a skeletal network of roads, navigable water, railways and airways which is used, in the main, by mechanical means of transport. The traditional network has been overlain partly by the modern network. It consists of a dense pattern of paths and tracks, and sometimes rivers and lakes, used by pedestrians and non-motorised means of transport. It is surprisingly extensive, and some estimates put the amount of goods moved by head-loading on footpaths at least as large as that moved by motorised means on the main networks (Howe 1996). Descriptions of the various types of rural transport infrastructure are given in Box 3.1.

Box 3.1 Types of rural transport infrastructure

Access roads

Link access zones to a major road network; they are normally accessible to motor vehicle traffic, but do not usually serve through traffic

Tracks

Single lane, cleared and improved seasonal roads that connect higher class roads; they are usually traversible at certain times by light four-wheel drive vehicles, pick-up trucks, animal-drawn carts or pack animals

Trails

Narrow tracks suitable only for two-wheel vehicles, pedestrians and pack animals

Paths

Narrow cleared way for walking traffic and, in some cases, bicycles and motorcycles

Source: Connerly and Schroeder 1996

Means of transport

There are two principal means of transport:

?? Personal transport

?? walking

?? intermediate means of transport (IMT), including motorised two and three wheelers, bicycles, wheel barrows, hand and animal-drawn carts, etc

?? motorised transport

?? Transport services

Transport services

Rural transport services can be divided into two categories (Barwell 1996).

Hire services:

- ?? Bus services, using large buses, and operating on fixed routes to a timetable
- ?? Services using pick-ups and mini-buses, operating on fixed routes but with flexible pick-up points and no timetable
- ?? Trucks available for hire
- ?? Informal transport services in vehicles that are not licensed for such use, and often operating illegally
- ?? Rail services

Delivery vehicles operated by government, parastatals, NGOs and the private sector:

- ?? Deliveries of farm inputs to local depots
- ?? Crop purchasing services by co-operatives, marketing boards or private traders
- ?? Deliveries of consumer goods
- ?? Agricultural extension and community development services
- ?? Supplies to rural health and educational facilities

Informal variants of the above occur where lifts are given to travellers in vehicles and no payment is made for the service.

3.2 Rural travel

Household travel and transport

It is necessary to consider travel and transport from the basic unit of the rural household. Household travel and transport can be divided into the following categories (Barwell 1996).

Trips within the village and to local places:

- ?? Frequent trips (several per day)
 - ?? domestic transport - collection of water and firewood, trips to the grinding mill to produce flour for domestic consumption
 - ?? school travel
- ?? Frequent trips following the agricultural cycle
 - ?? trips to fields, movement of inputs and outputs, crop marketing
- ?? Other frequent trips
 - ?? for social purposes, such as visits to family and friends

Travel outside the village:

- ?? Regular travel
 - ?? travel to paid employment
 - ?? visits to local markets
- ?? Infrequent and irregular trips
 - ?? trips to dispensary and hospital
- ?? Infrequent long distance trips
 - ?? often for social purposes, such as visits to family or for other social obligations
 - ?? travel to markets where there are none locally, or to larger markets

Travel and transport patterns

The following are typical features of the transport activities of rural households (Connerly and Schroeder 1996):

- ?? The majority of time spent on essential travel is for domestic tasks (typically 75 per cent in Sub-Saharan Africa (SSA))
- ?? Subsistence agriculture is the dominant economic activity (in SSA 18 per cent of essential travel is spent on agricultural activity, and 6 per cent is market related)
- ?? A very small amount of time is spent travelling to health facilities (less than one per cent in SSA)
- ?? Long distance (motorised) travel is very rare
- ?? The vast majority of household trips are pedestrian
- ?? Carrying of relatively heavy loads is the norm
- ?? Rural household members seldom leave the local area
- ?? Women shoulder a disproportionate share of the load

A specific example of rural travel patterns from Zimbabwe is given as Box 3.2.

Box 3.2 Rural travel and transport in three districts of Zimbabwe

In rural areas in Zimbabwe, most people live in isolation and poverty. Studies on rural transport carried out in certain districts of the country reached the following general conclusions:

- ?? A household averaging five persons spends on average between 60 and 70 hours per week on travelling, excluding farm-related transport
- ?? In addition, an average of 17 hours per week is being spent waiting at service points
- ?? Women carry a disproportionate amount of the burden, ranging from 70 to 80 per cent
- ?? Although ownership levels of intermediate means of transport (IMT) are relatively high, the use of IMT is low compared with ownership levels

Travel takes place around the community, and away from the road network. The majority of rural households spend a considerable amount of time and effort on meeting their basic subsistence needs which are food, water, fuel wood and shelter. Water collection is the biggest burden, and heavy efforts are required here since most of the loads are carried on the head. Women carry the brunt of the burden. In addition, households spend a lot of time and money to meet their social and economic needs in education, health and income generation, as these opportunities are often located far from the homestead. For members of a household who spend so much time and effort in surviving, and meeting the basic needs of life, participating in other social and economic activities is difficult.

Source: Mannock Management Consultants and the International Labour Organisation 1997

Use of transport services

Passenger transport services are usually limited and typically used only rarely by rural people living outside the influence of major urban centres. Use is then normally for some special, usually social, purpose that involves making a long journey. A small minority of rural people, such as government officials, local businessmen, and people with paid employment outside the locality, are the main users of passenger transport services, and use them quite frequently. The hiring of trucks for the transport of crops is rare, principally because the cost of hire is relatively large.

3.3 Requirements

3.3.1 Access and mobility

Definitions

Access and mobility are defined in Box 3.3. Rural households generally have poor access and low mobility.

Box 3.3 Access and mobility

Accessibility

The ease of reaching desired destinations. Accessibility objectives are concerned with increasing the ability with which people from different locations, and with different availability of transport, can reach different kinds of facilities.

Mobility

The ability of individuals to move about. This can be considered in two parts: the first relates to the amount of travel that is actually made in terms of the numbers of trips by all modes for all purposes; the second relates to ease of movement.

Availability

Capable of being used, or within the reach of travellers. This requires both the existence of transport infrastructure and services that they are in a condition or state that enables them to be used.

Based on: Gwilliam and Shalizi 1996 with additional material

Determinants of access and mobility

Distance to facilities is the prime determinant of trip time and the physical effort involved in travelling. The following factors influence this (Barwell 1996):

- ?? Spatial structure of settlements - whether villages with dwellings located in clusters (nuclear villages) or scattered settlements
- ?? Cultural variations in demand for goods and services - such as types of food preferences
- ?? Natural resource endowments - determines access to land and distances to sources of water and firewood
- ?? Demographic characteristics - distances to social and economic facilities
- ?? Government rural development policy - influences distances to water supplies and social facilities, and opportunities for agricultural marketing; these may also be influenced by past colonial policies
- ?? Availability and affordability of means of transport - determines the extent of travel on foot
- ?? Type and quality of transport infrastructure - condition of network influences means of transport and its productivity

3.3.2 Sustainability

Definition

Sustainability is defined in Box 3.4. Good transport policy needs to be concerned with the economic, social and environmental aspects of sustainable transport, and to try and balance these to optimise the population's use of transport. Economic, social and environmental sustainability are often mutually reinforcing. For example, road or public transport systems that fall into

disrepair, because they are economically unsustainable, fail to serve the needs of the poor, and often have environmentally damaging consequences.

Box 3.4 Sustainability*Sustainability*

The pursuit of development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

In transport terms, this needs to consider the trade-off between accessibility, availability and mobility on the one hand, and environment and safety on the other. A strategy that achieves improvements in accessibility and mobility without degrading the environment or increasing the accident toll is clearly more sustainable. However, definitions of sustainability also needs to include consideration of the impact on the wider, or global, environment for future generations.

Based on: Gwilliam and Shalizi 1996

Economic sustainability

A sound economic base is fundamental to sustainability. Transport investments should be subject to rigorous cost-benefit analysis that encompasses social aspects and environmental externalities. The need for economic justification applies both to infrastructure and to decisions on the purchase and use of vehicles, and the organisation of the logistic chain, whether in public or the private sector. Ensuring the long term sustainability of facilities requires that capital assets be maintained adequately. The costs of maintaining excessively ambitious road network and the subsidised operation of poorly managed public transport enterprises in transport also frequently impose unsustainable financial burdens.

Social sustainability

This is concerned with reducing poverty. In rural areas the poor are mainly dependent for their livelihood on their ability to produce and market agricultural products. Increased access to agricultural inputs, such as fertilisers and equipment, and the possibility of transporting agricultural products to distant markets create the conditions for cash cropping to replace subsistence farming. This transformation also facilitates the development of non-agricultural activities in rural areas.

Environmental sustainability

Dependence on road transport tends to raise total energy consumption, generate air pollution, and have other adverse effects on the environment. These adverse environmental impacts are very difficult to reverse once personal lifestyles and the location of activities have been arranged to accommodate a high dependence on private road transport. The challenge is to devise a transport policy that ensures that the actual outcomes are chosen and planned for, rather than being the unintended and unforeseen consequences of the policies adopted.

4 Typical symptoms and causes

4.1 Problem areas

4.1.1 Country-specific issues

The detailed problems, symptoms and causes related to rural travel and transport will differ from country to country. Guidance on approaches to addressing these is given in Chapter 6. However, the following may provide assistance in highlighting those that may need to be addressed.

4.1.2 Poverty

Impact on the poor

Anything that limits the provision of basic transport, or makes it more expensive, is particularly damaging to the poor. The ultimate damage that can be done to the poor is the elimination of either the home (resettlement) or the job (redundancy), and these can be by-products of rationalising the provision and operation of transport networks and services. Central to these problems is the failure to provide or maintain those activities and services that are most critical in ensuring that the poor have access to markets, employment and social facilities. Because planning skills and paradigms that are relevant to industrial countries have been applied in developing countries, priority has been given to the provision of high mobility rather than basic accessibility. This has favoured persons who are already mobile, particularly vehicle users.

Impact on women

Particular problems arise in meeting the transport needs of women. Many of the trips made by women are not associated with formal work. As a result, these needs have received inadequate attention, both in the planning and in the financing of transport needs.

4.1.3 Categories of problem

Impacts

The following impacts result from the present situation (Barwell 1996):

- ?? Transport is a derived need and is, itself, unproductive
 - ?? the amount of time devoted to unproductive transport limits time available for productive activities
 - ?? the human energy currently expended carrying loads restricts its use for more productive physical activities
- ?? Rural transport efficiency tends to be low; the time and effort invested typically
 - ?? only meets subsistence requirements
 - ?? allows only limited participation in the productive economy
 - ?? restricts use of social services
- ?? The rural transport burden falls disproportionately on women
- ?? Poor rural transport is a major contributor to poverty

Categorisation

Causes of the problems can be considered under the following headings, which are each then considered in turn:

- ?? External or contextual factors (which are outside the control of national governments)
- ?? Factors relating to the provision and management of rural transport infrastructure; including (Malmberg Calvo 1998)
 - ?? unclear responsibilities
 - ?? insufficient and uncertain maintenance funding
 - ?? disintegration of management and planning systems
 - ?? inadequate local capacity
 - ?? inappropriate technology
- ?? Factors relating to the means of transport
 - ?? pedestrian travel and IMT
 - ?? rural transport services

4.2 External factors

Factors included

The ability to address rural transport problems will be influenced by some factors that are beyond the powers of individual governments to influence through policy. These factors include things such as:

- ?? World macro-economic situation and terms of trade
- ?? The physical environment in the country
- ?? Socio-cultural background of the country
- ?? External donor and lender policies

Focus of discussion

Rural transport policies adopted need to recognise the impact of these external factors, and to try and mitigate their effects. These factors are not discussed further. Instead, the discussion focuses on the weak local government and community institutions that are the underlying cause of the rural transport infrastructure problem, and the provision and operation of transport.

4.3 Infrastructure provision and management

4.3.1 *Unclear responsibilities*

Fragmented responsibilities at central government level

Multiple agencies are involved in providing rural roads in many countries. This results in responsibilities for individual roads being unclear. Effective management is inhibited because organisational arrangements result in multiple and convoluted reporting channels and decision making processes. In addition, in recent decades, many countries have repeatedly changed the organisational structures of central government agencies overseeing local government roads. This has involved shifting responsibility for them from one ministry to another, often accomplishing little but confusion and inaction.

Lack of a legal framework for community ownership of roads and paths

A significant degree of confusion often exists regarding ownership of individual roads, tracks and paths, and maintenance responsibilities for these at local level. Many roads either have no legal caretakers or are untended by the local governments who are legally responsible. In particular, access roads and paths are often undesignated and are considered to belong to adjoining landowners, communities or commercial entities. Unless an entity has been granted or

established ownership, no-one can be held legally responsible for a specific road or path. The upkeep of orphan roads can be assumed by interested parties, but many are abandoned.

4.3.2 Financing

Overall shortage of maintenance funds

The total allocation by most governments to road maintenance falls short of the amount needed for network preservation. The shortage has been particularly severe at lower levels of the network. In many countries, recurrent budgets have withered to the point where they barely cover staff salaries and administrative expenses, leaving little for spending on the actual road.

Central government funding allocations to local governments

This is the main source of maintenance funding in most cases. The amount of funding allocated is set by central government. Sometimes block grants are made with delegated spending powers; sometimes they are sector-specific. These transfers are unpredictable and irregular. They cannot normally be relied upon to maintain local government roads for the following reasons:

- ?? Only a very small share of aggregate public sector revenue is normally made available to local government
- ?? General budgets are normally insufficient to fund main roads, let alone rural roads
- ?? Separate allocations are often made for capital and recurrent budgets that are not fungible; the recurrent budget is often barely adequate to meet salary costs of the local roads units
- ?? A significant difference often exists between authorised revenues and the amounts actually received

Local revenue

The ability to raise revenue locally is generally modest. Collection of potential revenue is also poor because of a lack of enforcement, a limited local court system, and poor incentives for tax collectors. There is a general reliance on maintenance funds from the central budget, and these have tended to be irregular and unreliable.

4.3.3 Management and planning systems

Over-centralised decision making

Many governments have, in the past, been highly centralised, with ministries and government enterprises (parastatals) structured vertically. Central government agencies have repeatedly acted without consulting or co-ordinating with each other or with local governments. Such an arrangement absolves local government of accountability for rural infrastructure and other local services. Centralised planning has marginalised stakeholders, and local people have not participated in the decision process. Participation in planning often demands substantial amounts of people's time, even if sporadic. The poor and women, whose time is already heavily occupied, may not be able to participate, even if the opportunity is offered. The problem is made worse if participation is perceived as involving financial obligations for participants. Centralised provision of rural roads has been accentuated by donor intervention which have reacted to institutional weaknesses by channelling support through central government sector ministries, by-passing local government.

Inconsistent and uncoordinated planning

Planning of rural roads has been driven by a multiplicity of objectives and institutions, with lack of continuity, lack of sustainability, and generally poor use of resources. Roads get built by sector ministries aiming to meet their particular client requirements. As a result, roads are constructed as part of agricultural projects, by NGOs, marketing boards and by private companies, outside of any national planning framework, and with no consultation with the road administrations that are eventually to be responsible for the roads' maintenance. Sector and regional planning are influenced by politics. The lack of a comprehensive planning system assessing overall client demands means, in practice, that many of the basic access needs of rural households have not been addressed.

Uneconomic allocation of financial resources

There has been no analytical method available for determining the allocation to rural roads, and no guidelines for the balance of expenditure between construction, rehabilitation and maintenance. There have been problems with the use of vehicle operating cost savings when the majority of rural traffic has been non-motorised, and with the application of producer surplus methods where production data have been patchy. Planning has been concerned with route selection rather than with optimising resources over the entire network. It has paid insufficient attention to maintenance and has not fostered community involvement. Economic return computations have neglected increases in personal travel which have been one of the most striking impacts of rural road improvements. Non-transport solutions that could solve access problems more effectively and at lower cost have often not been considered. For example, a programme to rehabilitate and maintain grinding mills or water sources may cost less and have larger impact than rehabilitating a road. Projects undertaken by ministries of agriculture tend to have high construction costs because of the costs of fixed equipment and overheads, and leave no institutional capacity for maintenance upon completion.

Unsuccessful management arrangements

Planning and management of roads has traditionally been carried out by public sector organisations. However, this has led to problems of supervision, poor motivation and inherent lack of flexibility which have been difficult to overcome. The resulting work has often been carried at high cost, and with poor quality and low durability.

4.3.4 Local capacity

Problems of scale

In-house management of rural roads at the local government level has not generally been successful because road networks are too small to justify adequate technical capacity in each local government unit. Local governments sometimes do not have the technical know-how that is required by ownership. Often the responsibility for work has been decentralised to a level below which a critical mass of skilled and experienced staff can be employed cost-effectively. Central sector ministries may have technical capacity, but they do not possess any sustainable interest or stake in maintaining rural transport infrastructure over time.

Lack of incentives for roads staff at the local level

Poor government salaries have adversely affected the technical capacity of road administration staff, leading to high vacancy rates and poor motivation. This is a particular problem at local government level, where staff tend to have fewer career prospects and opportunities for training compared with staff working in a strong sector ministry. Furthermore, living conditions can often be harsh. As a result, many district works departments are headed by under-qualified and indifferent staff. However, even a competent cadre of local officials will be ineffective if they command few resources.

Weak private sector response in rural areas

Many countries wish to move to a market sector approach to procuring goods and services. This poses certain problems for rural transport infrastructure. Although, in many countries, there is considerable experience of using private contractors for large capital works on rural roads, few countries have much experience of the use of contractors for routine maintenance works. Local consultants have little experience of planning and supervising rural transport infrastructure contracts. This is partly because the small size of contracts that can be offered by local governments makes it unattractive for large and experienced firms to mobilise in rural areas, and partly due to a lack of experience of local governments in dealing with the private sector more generally. This has all resulted in a lack of private sector expertise for transport infrastructure works in rural areas.

Urban bias in the allocation of resources

Centralised administration and poor communications between urban and rural areas have perpetuated an urban bias in allocating both human and financial resources. Policy makers tend to respond first to what they see close at hand and, since they tend to live in urban areas, the more visible urban issues take first priority. As a result, governments have inadvertently accelerated rural to urban migration by failing to respond better to the needs of rural areas and build up local capacity.

4.3.5 Technology

Inappropriate technical standards

Past programmes have tended to emphasise conventional highways for use by motorised traffic. This partly relates to the training of engineers which has been based on requirements in the high-wage industrialised countries. This has been encouraged by foreign technical assistance more accustomed to much higher traffic levels. Engineers generally tend to favour high standards, seeing this (incorrectly) as synonymous with quality, but also because this allows a factor of safety and reduces the risk of 'failure'. In the past, geometric standards have been based on speed and safety criteria rather than the needs for access by different types of vehicle in different seasons. This has resulted in unnecessarily high standards of design and quality for access roads, given community traffic and resources. Simple improvements to a dirt track might be sufficient, and result in reduced costs, considering the small number of visiting vehicles.

Works technology

The use of labour-based technology, although widely acknowledged to be more cost-effective in many situations, is not used in all appropriate cases for undertaking works on rural roads. Other methods potentially waste resources and fail to take the opportunity to create rural employment.

4.4 Means of transport

Technology

Transport technology in use in many countries is similar to that in industrialised countries, tending to be high-tech and high cost. IMT can increase the efficiency of short/medium distance personal travel and goods movement, but several factors affect its ownership and use. For example, IMT is widely used in South East Asia, but used to only a limited extent in Africa and elsewhere. This is partly because of low income levels and a lack of familiarity with available transport types. But other factors are a lack of credit facilities with which to purchase IMT, a lack of locally available

spare parts and maintenance capability, and some issues of cultural acceptance and gender. The use of IMT and the factors affecting its ownership are summarised in Box 4.1.

Box 4.1 Intermediate means of transport

Impacts of IMT:

- ?? Reduces the time and effort devoted to movement of large quantities of agricultural inputs and outputs
- ?? Facilitates access to local crop marketing points of sale
- ?? Facilitates small enterprise activities
- ?? Facilitates access to social services
- ?? Facilitates social travel outside the village
- ?? Reduces the burden of water and firewood collection in certain circumstances
- ?? Enables fast and easy travel to local paid employment

Factors affecting its use:

- ?? Income level is the most important factor
- ?? The local availability of IMT and spare parts
- ?? The familiarity of people with IMT
- ?? Terrain condition
- ?? Cultural acceptance, particularly for use by women
- ?? Availability and terms of credit for the purchase of IMT
- ?? Income-generating potential of IMT
- ?? Attitudes towards community ownership

Source: Barwell 1996

Improvements to infrastructure

Improvement of transport infrastructure has not necessarily resulted in increased availability and efficiency of transport services for goods or people. Deficient transport services have resulted from inadequate policies concerning pricing and marketing of fuel, and tariff regulation. Regulated prices are often set at levels that are too low to provide for the adequate maintenance of equipment. Reliance on parastatal transport corporations for crop transport has stifled the development of private transporters. More attention should be given to policies affecting the availability and cost of transport services at the local level. IMT is generally under-developed.

Improvements in agriculture

Programmes to improve farm productivity have not generally focused on transport activities, which accounts for a sizeable part of the work involved in agricultural production and household upkeep. Improvements are needed through changes in transport technology, especially alternatives to head-loading, such as wheel barrow, bicycle, animal draft, power tillers, etc. Improvements are also needed to off-road infrastructure and changes in post-harvest processing and storage practices.

5 Addressing issues through transport policy

5.1 Policy areas

Requirements

To be effective, transport policy must satisfy three main requirements. First it must ensure that a continuing capability exists to support an improved material standard of living. This corresponds to the concept of economic and financial sustainability. Second, it must generate the greatest possible improvement in the general quality of life, not merely an increase in traded goods. This relates to the concept of environmental and ecological sustainability. Third, the benefits that transport produces must be shared equitably by all sections of the community. This can be termed social sustainability.

Issues

The issues to be addressed by rural transport policy are those that have been raised in Chapter 4. These can be summarised as:

General issues for national-level policy:

?? Access and mobility

?? Sustainability

Infrastructure provision and management:

?? Responsibility

?? sectoral organisation

?? legal framework

?? Financing

?? Management, planning systems and local capacity

?? Technology

Means of transport:

?? personal transport

?? transport services

The following sections give examples of the type of policy measures that can be used to address the above issues.

5.2 National-level policy

Required approach

Characteristically, the poor lack mobility and access to vital goods and services. In the poorest countries, the majority of the population are non-users of motorised transport, and their rural travel needs are not addressed by an approach to policy and planning that is concerned predominantly with the provision of road transport infrastructure. Conventional approaches are top-down, reflecting the development of motorised transport outwards from the centre, with the establishment of primary links, to secondary and then tertiary connections. Similarly, motor vehicle ownership starts with the wealthy, and then trickles down through decreasing income strata of society. In the least developed countries, the scarcity of the road network and extremely low levels of vehicle ownership implies limited relevance of such processes to the poorest. Their travel needs can only be met by policies which work from the bottom-upwards.

Access and mobility

Policy measures to improve physical access involve either increasing the mobility of rural people to reach a particular facility, or bringing the facilities closer to rural communities. Specific measures could include:

- ?? Establish achievable national targets, based on levels of accessibility, for provision of water supply, rural health centres and educational facilities, and to prioritise the location of new facilities on the basis of degree of improvement in access that would result
- ?? Give priority to reforestation, and include the establishment of sustainable and accessible sources of firewood as part of this policy
- ?? Adopt a spatial planning approach to maximise improvements in accessibility
- ?? Make funding available for the improvement and maintenance of local footpaths
- ?? Ensure that commercial practices do not inadvertently cause transport and distribution problems; for example, the provision of fertiliser in bags that are too heavy for carrying on foot

Sustainability

Economic sustainability:

- ?? Investments in all aspects of transport should be subject to rigorous cost-benefit analysis that encompasses social aspects and environmental considerations
- ?? Priority for funding should be given to maintenance
- ?? Proclamation of the network should be restricted to those parts for which adequate maintenance funding can be made available
- ?? Commitment to disposal by government of loss-making transport parastatals, except where they serve a social purpose for which a subsidy can be made available

Social sustainability:

- ?? Addressed by policy measures aiming to provide access and mobility, and that give emphasis to
 - ?? pedestrian travel
 - ?? reducing the physical burden of transport
 - ?? reducing the travel and transport requirements of women
- ?? Measures for policy formulation that combine top-down requirements from central government and bottom-up requirements determined from the participation of stakeholders, including the rural poor and women

Environmental sustainability:

- ?? Introduction of environmental protection legislation, including requirements for environmental impact assessment in appropriate situations

5.3 Infrastructure provision and management

5.3.1 Sectoral organisation

Enabling environment for decentralisation

Provision of rural transport infrastructure must be viewed within the broader context of rural development and rural service delivery. An arbitrary shift of responsibility for rural roads to weak local governments is unlikely to be successful. Strengthening local institutions through effective decentralisation is the centre piece of rural development and implies building local capacity in both public and private sectors. To do this, an enabling environment of sound policies, incentives, effective management structures, democratic control of local governments and trained and motivated people is needed.

Fiscal decentralisation

Effective decentralisation (devolution) hinges on a balance of political, institutional and fiscal responsibilities. The allocation and control of finances lies at the root of decentralisation. Many decentralisation efforts are only partial: administrative responsibilities are assigned to local governments, whereas central governments remain in control of fiscal instruments. Partial decentralisation risks perpetuating weak local governments and causes central government to take back or temporarily assume local government responsibilities due to poor performance.

Organisational options

The strengths and weaknesses of different organisational models for managing rural roads are discussed in Box 5.1.

Box 5.1 Models and options for managing rural roads

Two common organisational models for the management of rural roads are:

?? Model A

Legal responsibility assigned to one ministry or specialised road agency

?? Model B

Responsibility assigned for main and rural roads to different ministries or levels of government

Within the second model, there are further options depending on whether a centralised or a decentralised approach is adopted.

Model A: Roads managed by same ministry

Three varieties of this model exist:

?? Separation of network management function (separate rural and main roads departments)

?? Separation of management by road standard (paved road and unpaved road departments)

?? Management of main roads and rural roads together

Model B: Roads managed by different ministries or different levels of government

In this case, the institution legally responsible is, most frequently, a local government or rural district council. The agency responsible for overseeing roads at central government level may be the main road ministry, local government ministry, the ministry of agriculture, the office of the prime minister or the president. The overseeing agency advises on policy and standards, and has responsibility for planning, guidelines, technical and financial oversight, and resource allocation. Some countries have no co-ordinating ministry.

One of the main challenges for managing designated rural roads is the mobilisation of local capacity to plan and programme physical works adequately, and to award and manage contracts. Four common options for this draw on both the centralised Model A (Option 1) and the decentralised Model B (Options 2, 3 and 4):

Option 1: Central government rural roads department

A typical organisation has a national headquarters in the capital and branch offices in provincial centres and, possibly, area office in some districts. The functions of headquarters are to advise on policy, formulate guidelines and provide technical support to branch offices on planning and contract management. Area offices are in charge of day-to-day management of the network and supervision of works. Area offices may liaise with local government administrations, but they report ultimately to central government which is the source of funds. Where the rural roads department is attached to the sector ministry of roads, there is the advantage that technical support and guidance are received from the

Box 5.1 Models and options for managing rural roads

parent ministry. Co-ordination at various levels of the network is also facilitated. The disadvantages include ensuring sufficient attention to local priorities and local consultation on planning.

Option 2: Local government management through contract management agency

Local governments purchase the services for which they lack capacity through a contract management agency. The agency can then hire consultants to work with local government staff for drawing up development and maintenance plans, and for contract design and bidding. In Francophone Africa, these agencies are known as AGETIP. These have proved to be highly successful in reducing bureaucracy, particularly in ensuring prompt payments to contractors. Drawbacks include the monopoly over contract management for public agencies, heavy reliance on donor funding, although there is no reason why agencies should not operate for profit in a private market. Other challenges include: (a) the existence of able contract management firms; (b) the ability of local government to deal with the contract management agency; and (c) scale, because small networks and small funds result in small contracts. There is limited experience of this management option for rural roads and, although highly efficient in the management of individual contracts, the arrangement does not really solve the problem of network management or funding.

Option 3: Local government management through joint services committee

A group of local governments can form a special purpose district for management by a joint services committee (JSC). This can achieve sufficient *scale* to procure services competitively from the private sector for road works. Creation of a JSC reflects the fact that needs and demands of an area within an administrative district may not necessarily follow jurisdictional patterns. JSCs may provide a wide range of public services other than roads and are typically organised as commissions or task forces. Members of a JSC are commonly elected representatives and technical officers of the relevant local governments. It is also common to include representatives of special interest groups, such as transport operators and road users. The bodies need only exist for the time necessary to complete the tasks for which they are charged, possibly appointing a lead agency for specific projects, or they can be set up as an independent agency charged with the responsibility for the joint programme. Physical works are normally let to the private sector. Key determining factors for success are the ability and willingness of the originating jurisdiction to innovate, and the degree of motivation to co-operate. This may be influenced by common history, economic stress, or public or political pressure. Advantages are that local governments can still set their own priorities, but gain economies of scale. In addition, where there are differences in tax incidence and needs for development between different jurisdictions, JSCs provide the opportunity for cost-sharing formulae to balance inequalities. Some governments provide incentives for JSC arrangements by making it easier to attract grants. The main disadvantage is the existing rigidity of local government arrangements that may give administrative and legal difficulties. Technical assistance may still be required from central sector ministries.

Option 4: Local government management through private consultants

Use of consultants enables local governments with small networks to determine their own priorities while procuring selectively the services they require from the private sector. It should result in better quality of work at lower cost. Changing to this model requires that local governments currently operating in-house works units need to develop the skills to become a client; and the private sector may need to learn the skills to undertake new types of services and works.

The centralised and decentralised models each have strengths and weaknesses. The challenge with Model A lies in ensuring adequate local input to planning; with Model B it is to ensure that local government road departments are technically competent. Thus, the first model is more suitable for countries with centralised governments and limited technical capabilities at local level; the second is more suitable where there are decentralised administrative systems. Both models should, however, attempt to decentralise operations through the active involvement of local constituencies in priority setting and planning, and have a strong central unit responsible for co-ordination, guidance and oversight.

Comparison of models for mobilising management capacity

Management model	Options	Local priorities	Market discipline	Sufficient scale	Administrative simplicity
Centralised	1. Central government rural road department	Usually not achieved	Usually achieved	Achieved	Achieved

Box 5.1 Models and options for managing rural roads

Decentralised	2. Contract management agency	Achieved	Usually achieved	Achieved	Usually achieved
	3. Joint services committee	Achieved	Usually achieved	Achieved	Usually not achieved
	4. Private consultants	Achieved	Achieved	Usually achieved	Achieved

Source: Malmberg Calvo 1998

Policy requirement

Sectoral organisational structures, based on the above and appropriate to local conditions, should be implemented as a policy measure.

5.3.2 Legal framework

Proclamation

A coherent legal framework needs to be developed for the management of both local government and community roads and paths. This needs to include the procedures for designating roads, as described in Box 5.2. Legal instruments may be needed to delegate ownership to communities and other interest groups.

Box 5.2 Establishing the legal status of roads

Roads fall into two main legal categories. They are either *designated* or *undesignated*. Terminology varies from country to country, and other terms like adopted/unadopted, declared/undeclared and proclaimed/ unproclaimed are also used to describe legal status. When a road is designated, the act of designation is published in the Gazette, or other official journal used to record acts of government, in a formal notice. This cites the Act under which the road is to be designated, its location, the road administration responsible, and the functions delegated to the administration. In the case of access roads, the Act cited may be the Roads or Road Traffic Act, or its equivalent, or a variety of other Acts, including the Local Government Act, the National Parks Act, or the Private Street Works Act.

Once a road has been designated, the road administration responsible is expected to mark out the road reserve physically, which defines the land holding of the road administration, and to take responsibility for the various functions delegated to it in the Gazette (such as with regard to drainage). Roads that are undesignated belong simply to the adjoining land-owners, who are solely responsible for maintaining them. However, under certain circumstances, government may channel funds through a designated road administration to meet part of the costs of maintenance. When a private road is built to a certain specific standard, or is improved to that standard, the government will usually designate it and assign it to a legally constituted owner.

Source: Heggie and Vickers 1998

Inventories

Knowledge of which roads are to be managed requires that inventory records are kept of roads. The minimum legal requirement should be for road administrations responsible to keep an up-to-date *gazetteer*, which provides a basic record of all roads that have been designated. A more stringent requirement would be to keep detailed maps and inventories of the network of roads, tracks, trails and paths. However, the requirement for such inventories should be simple, avoiding the costly collection of large amounts of data.

Community ownership

Institutional frameworks and incentives can be adopted to encourage citizens who live alongside undesignated roads to become effective owners and managers of the specific roads. Ownership of private roads requires a legal framework that permits communities and non-governmental entities to assume management responsibility. In many cases, a specific private roads law is necessary. Granting legal ownership to a community engenders a vested interest than can be translated into effective management. The legal framework also needs to allow for change in ownership. Procedures for this need to be explicit and prompt to allow change where existing legal owners can no longer cope with road management. An example of community ownership is given in Box 5.3.

Box 5.3 Private co-operative roads in Finland

Finland has over 100 000km of private roads that are managed by co-operatives. These roads, mostly with gravel or earth surfacings, carry an average of about 45 vehicles/day. The *Private Roads Act* sets up a mechanism for the management and funding of these roads by the users and residents themselves, with support from government. The Act stipulates the right-of-way, the co-operative ownership, and the formula for distributing maintenance costs among both road users and adjoining property owners. The co-operative is responsible for organising maintenance of these roads, and may either pay its own members to do the work, or may use a contractor. Membership of the co-operative is compulsory for property owners who use the road.

The co-operative sets its own maintenance fees, accepts new members, and is responsible for having the previous year's accounts audited. Maintenance costs are shared among members, depending on the size of their property and the amount of traffic that they generate. The government supports maintenance of co-operative roads providing:

- ?? A formal co-operative has been established
- ?? The road length to a permanent residence is at least one kilometre
- ?? There are at least three estates with permanent residents along the road

In 1990, government support to co-operatives was \$30 million, support from municipalities was \$40 million, while the amount paid by the co-operatives themselves was \$50 million. Government support is channelled through the Finnish National Road Administration, and allocations are based on traffic volume and the number of permanent households serviced. The figure is also adjusted by climate and average income.

Source: Isotalo 1995

5.3.3 Financing

Priorities

The first challenge is to secure a sufficient and reliable source of domestic funding for maintenance. Given the low levels of traffic volumes on access roads and paths, and the constrained finances of governments, communities should expect to provide the majority of the finances for infrastructure which is their responsibility. This may require cost-sharing

arrangements between local institutions, beneficiaries and central government, and such arrangements can provide important leverage for scarce resources at all levels. Voluntary labour has sometimes been successful for construction, but seldom for maintenance. Even then, works need to be close to settlements. Investment funds are likely to come mainly from donor sources for the foreseeable future in many countries.

Sources of finance

Four sources of finance are commonly available (Malmberg Calvo 1998):

- ?? Central government grants from the general budget
- ?? Local revenues
- ?? Allocations from a dedicated road fund
- ?? Community financing, including cost-sharing
- ?? Donor funds

Central government budget and local revenues

The unreliable nature of the central government budget and local revenues suggest that alternative sources of funding should normally be sought for road maintenance. Policy measures could be adopted to use a combination of a road fund, community financing and cost-sharing arrangements for this purpose.

Road funds

Road funds typically operate in the manner summarised in Box 5.4. A road maintenance fund has great potential for providing partial funding to rural communities for the maintenance of their roads, tracks, trails and paths to support village self-help efforts. Creating awareness of the needs of access roads among road fund board members may be needed to earn support for redirecting road fund revenues to these. Changes in the membership structure of some road fund boards may also be necessary to obtain representation of local interests. The introduction of a road fund requires the adoption of policy measures at the centre of government.

Box 5.4 Road funds

Dedicated road funds are a mechanism for off-budget financing of roads. They consist typically of road user charges collected centrally, the main source of which is a fuel levy. Other revenue sources are vehicle licence fees, international transit fees, tolls and overloading fines. Road funds should be used for all roads, not just for main roads. There is no generally accepted method for distributing road funds, which must be allocated among different levels of the road network, between urban and rural roads, and divided among rural districts. To ensure that the interests of road users are heard, road fund allocations should be set by a road fund board which includes strong representation from road users, including rural constituents. Financial and technical audits are needed to oversee operation of the fund.

Source: Heggie and Vickers 1998

Community financing

Communities can sometimes raise local resources to pay for high priority investments. Payment is sometimes in cash but, more often, it is in kind. Communities can raise cash in a variety of ways, such as with a crop levy, an income generating project, or through household contributions. Collection of cash for recurrent expenditure is more difficult. Contributions in kind can be through the donation of materials or through communal labour. However, relying on such contributions

can be difficult and inequitable. A number of factors determine the potential for self-help in rural communities (Malmberg Calvo 1998):

- ?? The road or path needs to be considered important by the community from choices across all sectors
- ?? Motivation is through a strongly felt need and a sense of fairness
- ?? Commitment by political and village leaders is important, as is the ability to organise themselves
- ?? Past experience with forced labour
- ?? The need may be to ensure access rather, such as by the provision of water crossings, than for roads between these

Enabling legislation may be needed for this approach.

Cost sharing

This involves several communities joining together to commission road maintenance services or physical works. It fulfils the following functions (Malmberg Calvo 1998):

- ?? Expands the revenue base
- ?? Constitutes a financial incentive for communities to organise themselves
- ?? Verifies demand for investment
- ?? Improves allocative efficiency through economies of scale

Contracts need to be set up between the communities and a local road agency, an NGO, or a road fund board to agree what will be contributed by whom. Informal cost-sharing agreements can exist, but are better formalised through written contracts. These arrangements may require that communities organise themselves into road associations in which there is considerable community involvement. As with community financing, enabling legislation may be needed for this approach to be adopted.

5.3.4 Management, planning and local capacity

Sectoral organisation

The choice of sectoral organisational arrangements, as above, will determine to a large extent the policy implications under this heading.

Separating government and administrative functions

Many countries have found it beneficial to separate the political role of government from the professional role of the road administration. This recognises that the role of government is to 'govern' and to frame overall policy for the road network, and that the role of a road administration is to administer and manage the network, making decisions based on professional considerations within the policy framework laid down by government. An example of how responsibilities could be split is shown in Box 5.5.

Box 5.5 Split of responsibility between a government and a road administration

Role of government:

- ?? Framing policy
- ?? Providing a legislative and regulatory framework

Role of the road administration:

- ?? Maintaining, developing and, more generally, managing the road network and the roads programme
- ?? Setting detailed rules and standards for the road

?? Long term planning, including that between transport modes	network
?? Allocation of budgets to the sub-sector	?? Enforcing regulations for such things as traffic safety and axle loading
?? General instructions to the road administration to undertake work on the network	?? Monitoring performance of the road network to improve the way that it is managed in the future, and to advise government on changes to policy that may be advisable

Source: Swedish National Road Administration (as reported in Robinson and other 1998)

Separation of client and supplier functions

The functions of a road administration can be split conveniently into those for the planning and management of road operations (the 'client' function), and those for works execution (the 'supplier' function). The client role is concerned with specifying activities to be carried out, determining appropriate standards to use, commissioning works, supervising, controlling and monitoring activities. The supplier role is concerned with delivering the defined product to an agreed quality standard, to time and to budget. Arrangements between the parties is put on a more contractual basis. Such separation clarifies roles, and increases the focus and specificity of action, both of the management and the works execution functions. Both parties have incentives to increase operational performance. Greater benefits in effectiveness and efficiency have been achieved as a result of such separation than from virtually any other type of organisational reform.

Commercialisation

This involves increasing the specificity and focus of operations by enabling organisations to work in a more business-like manner. Commercialisation includes such features as (Heggie and Vickers 1998, Robinson and others 1998):

- ?? Identifying customers and introducing policies to ensure that customer requirements are met
- ?? Functional separation of roles
- ?? Operating the organisation like a commercial business, including having financial autonomy, with delegated accountability for managerial decisions and actions
- ?? Introduction of appropriate management structures and operational procedures
- ?? Addressing human resource requirements, including employing sufficient (and only sufficient) staff with adequate skills
- ?? Improving access to information by implementing management systems in the areas of finance and accounting, road and bridge management, and personnel management

Changes to policy and legislation may be necessary to enable public sector road administrations to operate in this manner.

Competitive procurement

Competition provides customers with choices that can improve the way that their needs are met, and that compel providers to become more efficient and accountable. It provides a mechanism for enforcing standards of both organisations and staff. In addition to external competition from others, competitive pressures can be exerted on an organisation by the political establishment, regulatory agencies and by road users, and by managerial measures that create a competitive atmosphere within the organisation. Thus, competition can be (Israel 1987):

- ?? *External*, such as between private contractors bidding for construction works

- ?? *Internal*, as can sometimes be possible between different departments of an organisation, or
- ?? *Mixed*, where a public sector organisation competes with organisations from the private sector, as is now common in several industrialised countries

The key issue is not whether the organisation concerned is in the public or private sector, but whether it operates in a monopolistic or competitive environment. A parastatal or private body operating in a monopoly position has little incentive to perform better than a government organisation, and both can be much less accountable in terms of price and level of service. The key to effectiveness and efficiency is therefore competition, not privatisation.

Managerial and technical advice

Community road owners are likely to need some expert advice on road management, and the policy framework should make provision for this. More details are given in Box 5.6.

Box 5.6 Managerial and technical advice

Advice may be needed by typically in the following areas:

- ?? Managerial areas
 - ?? road maintenance management
 - ?? information management and systems
 - ?? financial accounting
 - ?? procurement
 - ?? contract management
- ?? Technical areas
 - ?? road design and standards
 - ?? appropriate materials
 - ?? work planning

Experience shows that the required skills in road maintenance at this level can be transferred to communities by a foreman in a period of days coupled with periodic supervisory visits. One option is for community representatives who have worked as labourers on local government roads to assume responsibility for supervising work on the access roads in their home villages. Another option is for technical advice to be provided to private road associations by the provincial road agency. With increased involvement of the private sector in physical works, this function will vanish because associations will purchase advice from private consultants. Advice may also be needed on contract management and procurement. Road associations need to keep proper accounts, and this may require that communities involved to strengthen village organisations.

Based on: Malmberg Calvo 1998

Planning

Policy and strategy for rural roads should recognise the need for close co-ordination with policies and programmes for main roads and for agricultural development. There is a need for multi-tiered planning and programming based on locally acceptable criteria and with participation of local communities. Planning methods should include factors such as population density, target road densities, improved traffic demand assessment for low flow roads. Priorities should reflect the determinants of community demand for local travel including: population, area, production, and social, economic and cultural services. Thus, economic return calculation should only be used to validate results based on multi-criteria analysis and local community involvement. Planning, programming and budgeting should consider the balance of investment between maintenance, rehabilitation and improvements.

Transport services

Investment decisions for rural roads should be made only after confirmation that existing transport services are available to operate on the roads, or that other measures will be adopted to develop such services. This requirement can be enshrined within the policy framework.

5.3.5 Technology

Road standards

The aim should be to optimise resources over the network rather than to provide predetermined widths and speeds for just a few selected roads. Design standards should be based on reliability and durability, and should recognise that all-year vehicle access may not always be necessary. Standards where 'economic road access' is required should be concentrated on essential access, spot surface improvements in critical sections, on surface drainage and essential structures, rather than on geometric characteristics determined by design speed. For the provision of 'social road access', road standard should relate to the frequency, seasonal timing, and type of services that will operate. Lowering standards normally enables more roads to be built for the same money.

Use of contractors

Rationalising and reducing demands on local government in-house capacity involves two basic steps:

- ?? Contracting out the physical works to the private sector
- ?? Contracting out the key management functions to local consultants

Execution of physical works by contract allows local governments to focus on what kinds, quantity and quality of infrastructure to provide, and how to finance its construction and maintenance. Although contract operations should normally be preferred, this may not always be straight forward. A policy decision in favour of using contractors is necessary and specific measures to encourage and assist the development of the local contracting industry may be necessary. This will require providing an enabling environment which makes labour-based works execution commercially attractive to contractors, as in Box 5.7. An option may include offering IMT as a means of payment, thus providing provision of infrastructure and promoting the use of IMT.

Box 5.7 Policy requirements for the use of contractors

For the efficient and effective management of roads by private sector contractors, the following conditions are required:

- ?? Steady funding must be ensured by
 - ?? political and economic stability to establish a climate of confidence and co-operation among operatives
 - ?? provision of a predictable workload
 - ?? timely payment for works carried out
- ?? Adaptable bidding procedures and contract documents to suit the nature of works to be undertaken
- ?? Accountability and transparency of bidding
- ?? Application of incentives and sanctions as applicable
- ?? Continuous monitoring and evaluation

Source: Lantran 1990-93

Work s technology

The employment of local labour for road works can provide additional income for local people. Labour based methods should be considered the normal choice for rural roads works, although conditions may be inappropriate for this in very sparsely populated areas, and also for specific tasks such as long distance haulage. Requirements for this can be embodied within policy.

5.4 Means of transport

5.4.1 Personal transport

IMT

Policy should be designed to encourage the user of IMT, through measures such as (Barwell 1996):

- ?? Reducing the price and increasing the supply of bicycles through
 - ?? review of tax and duty structure
 - ?? elimination of constraints on availability of foreign exchange for import
 - ?? elimination of any price fixing or business licensing constraints to the operation of a competitive market in the supply and distribution of bicycles and spare parts
- ?? Encouragement, where feasible through policy and fiscal measures, of local manufacture of components and spare parts
- ?? Using government, parastatal or NGO systems to market bicycles where a private sector distribution system is lacking; this should be implemented to complement rather than constrain private sector activity in this area
- ?? Agricultural policies and extension services to
 - ?? develop ox training in areas that are appropriate for ox transport or on-field tasks
 - ?? promote the use of donkeys both as hauliers and pack animals, in areas where they are not prone to serious endemic diseases, through provision of training and extension services
 - ?? address constraints imposed by diseases on the use of work animals
- ?? Using IMT for official travel by government personnel in rural areas, where appropriate, both to increase the mobility and effectiveness of many officials, and for demonstration purposes
- ?? Promoting the use of IMT by women through mass media communication, demonstration and community development initiatives, working closely with women's organisations

Critical factors

Three factors are critical to success:

- ?? A long term perspective is important to the introduction of IMT to a new area
- ?? The intervention and demonstration should be on a sufficient scale to make a significant impact
- ?? It may be necessary to adapt IMT designs for use by women

Credit

The availability of credit can be a significant constraint on the use of IMT, and should be addressed through policy measures including:

- ?? Provision and encouragement of access to credit by rural women, including groups of women for the purchase of IMT
- ?? Encourage savings
- ?? Encourage both NGOs and the private sector in the provision of credit
- ?? Discourage subsidised interest rates which can damage the chances of establishing safe, responsible, private credit; however, grant elements could be used to promote IMT

5.4.2 Transport services

Rural transport services

The following policy measures may be appropriate (Barwell 1996):

- ?? Remove unnecessary regulatory constraints to the provision and development of transport services by the private sector; regulations should focus on safety and insurance measures, and should not inhibit
 - ?? the types of vehicle used
 - ?? the routes on which they operate
 - ?? the type of service operated - passenger, goods or both; fixed or flexible route
 - ?? the fare rates charged
- ?? Eliminate unnecessary constraints on the import of vehicles and, most importantly, spare parts, and by developing capability for vehicle maintenance and repair
- ?? Support and promote innovative schemes for the operation of services targeted at local level needs, including services provided by 'non-commercial' operators such as local development associations; this support might involve
 - ?? measures to encourage the financing of services, but only if there is clear evidence that the transport operation is financially viable
 - ?? provision of training in transport management
 - ?? the adoption of a regulatory and licensing framework that facilitates innovative services, for example, using motorised IMT

6 Approach to policy development

6.1 Structured approach

Structure of policy

In Chapter 2, it was noted that policy has a structure, consisting typically of:

- ?? A policy statement formulated by government at national level, and possibly regional and local levels
- ?? A policy framework for each organisation involved in implementing the policy, consisting of
 - ?? mission statement
 - ?? objectives
 - ?? standardsthese need to be consistent with the policy statement of government

The policy statement and policy framework will normally be included in policy documents produced by government or the respective organisations.

Basic steps of policy development

The policy development process needs to reflect this structure by itself taking a structured approach to policy formulation. Once a policy statement has been agreed and adopted by government, policy frameworks can then be put in place in the various levels of the administration and other public sector bodies that are involved in the sector.

Government policy statement

Government needs to draft a mission statement stating its general aims for rural travel and transport policy. Where the policy is very different to the existing situation, it may also be appropriate to have a vision identifying the strategic directions in which the organisation needs to move in order to deliver the policy. Objectives may need to be set in key areas; perhaps defining levels of accessibility to the road network, and the like. This drafting will normally be undertaken by a 'lead ministry' on behalf of government, but should involve consultation with a wide range of stakeholders.

Bodies responsible for implementing policy

Once a statement of government policy is available, sector organisations charged with implementing the policy on behalf of government need to draft a mission statement, and possibly a vision, stating their own aims. Note that these must be entirely consistent with those put forward by government. For each area of the mission statement, the organisations need to set objectives to enable their performance to be monitored and measured; they may also need to draft standards to support these objectives with detailed information.

6.2 Stakeholder commitment

Commitment and leadership

Introduction of a new rural travel and transport policy can have significant impact on the existing government administration and other vested interests. For policy reforms to have any chance of success, there must be a combination of political and public pressure for reform. Unless ways can be found to combine these pressures, and to internalise them within government, it is unlikely that progress will be made. Policy formulation requires strong leadership and commitment from

the most senior levels of the administrations responsible for rural transport, and this will need to be backed up further by support from government. Those at high political level need to grasp the importance of the issues and the role of policy in addressing these. Committed politicians may need to find ways of fostering interest groups and raising awareness of needs within government circles. Awareness also needs to be created within potential interest groups and with the general public at all levels of society.

Champions

The process can be facilitated if there is a 'champion' for the adoption of policy measures. A champion is often an individual holding a senior position in government; they will be a highly respected person and, preferably, will have the charisma to command support for the policy formulation process, and so be able to drive the process through to completion. However, it is also possible for a 'champion' to be represented by a group of committed people or an organisation.

Lead organisation

It is also necessary that a 'lead organisation' takes responsibility for the policy formulation process. For the formation of national policy, this body is likely to be a central government ministry. Because rural travel and transport can be considered as part of the transport sector, it may be seen that the appropriate lead should be taken by a ministry of transport. However, many ministries of transport are focused mainly on strategic national and international transport issues, and pay little attention to the needs of rural travel and transport because of the inherent local nature of many of the issues involved. For this reason, a local government ministry may be a better choice as lead organisation in many situations. The appropriate lead organisation for forming local policy will depend on the public sector organisational structure in place at local level. It is difficult to make general recommendations.

Institutional capability

Which ever organisations are considered appropriate to lead the policy formulation process at either national or local level, they need to have sufficient capability to be able to undertake the process. Capability in this context needs to be considered in terms of:

- ?? Sufficient staff with the required degree of competence and knowledge to commit to managing the policy formulation process
- ?? Sufficient resources to invest in policy formulation, recognising that many of the resources will need to be expended outside of the organisation itself
- ?? A mandate to lead the policy formulation process and to implement any resulting policy on behalf of government at central or local level

Co-ordination

It was noted earlier that, if rural transport is to be appropriate, it needs to be formulated through parallel top-down and bottom-up approaches. This requires discussions within government, within sector agencies, and by interested parties and organisations, both at central and at local levels down to the household. There is some merit in setting up a policy formulation steering committee to co-ordinate the process. This will normally need to be based centrally for national policy. This should have representatives of relevant government departments, local governments and organisations that are active in the sector. There should also be representatives of the users, such as rural transport operators, farmers unions, women's groups, NGOs and other relevant bodies. Local steering committees could also be formed to mirror the functions of the national committee. A full-time secretariat is likely to be needed to support the steering committee. Both the steering committee and the secretariat would be transitory bodies set up only for the duration of the process.

Building consensus and ownership

One of the key roles of the steering committee will be to promote the policy formulation or reform process. With membership drawn from a wide range of vested interests, the committee will be placed uniquely in a position of influence. There are a number of ways in which this influence can be capitalised upon. The following are examples of activities that can be undertaken to promote rural transport policy reforms, and build consensus and ownership of issues and policy measures:

- ?? Prepare ‘policy papers’ that discuss relevant issues and measures, perhaps with the assistance of local interest groups, consultants and academics
- ?? Run ‘policy workshops’ where issues and measures can be raised and discussed, at national, regional and local level
- ?? Prepare media briefings on selected topics and follow these up by arranging media debates and interviews with key players and interested parties on a regular basis
- ?? Arrange study tours for key individuals to other countries where successful policy reform has taken place, and invite key individuals from such countries to participate in policy workshops and other events

The secretariat will have a key role to play in all of these activities.

6.3 The policy formulation process

6.3.1 Basic approach

Complexity

It has been noted earlier that policy is a complex entity. Particularly for rural travel and transport, it is likely to involve several sectors and several levels of government; it will have implications for public sector regulators and managers, as well as private sector transport operators; it will have wide-ranging impacts affecting the national economy as a whole, as well as impacting individual households in rural areas. The complexity of the policy issues involved makes policy formulation a complex process. It requires an iterative approach that is top-down from central government, coupled with a bottom-up approach starting from the level of the rural household: this requires collaboration between central and local government organisations where there is often no tradition of such communication. It requires the formulation of mission statements by governments at central and local government level that take account of these impacts; it requires the formulation of mission statements, objectives and standards by individual public sector organisations at the various levels of government that are consistent with national and local policy statements, and consistent one-with-another between organisations.

Dealing with complexity

Because of the complexity of the various interacting factors, it may not be possible to produce an ‘ideal’ policy that meets all needs. A pragmatic approach must be taken: policies need to be put in place that address important needs in a rational way. A structured approach to policy formulation is recommended to achieve this, and is discussed below. However, it must be recognised that the ‘ideal’ may not be possible to achieve. Nevertheless, policy formulation is an on-going process, and this allows incremental improvements to be made to policy over time to reflect improvements that are recognised as well as changing policy environments.

Stages involved

There are two main aspects of the policy formulation process. The first is the preparation of a

national policy statement. The second is the preparation of policy frameworks that are consistent with this within organisations that have the power to influence rural transport issues. These aspects need to be addressed at both national and local level. A similar approach can be adopted for all aspects. However, policy measures at organisational level will be more specific and detailed than those in the national or local government policy statement. The approach adopted can be similar to that for managing any institutional change, and a four-stage process can normally be adopted. The stages are illustrated in Figure 6.1.

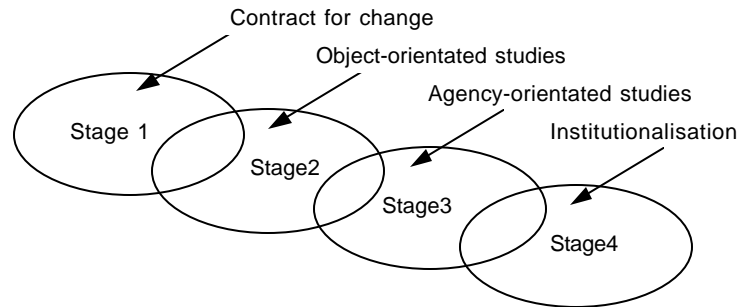


Figure 6.1 Conceptual illustration of the core processes of policy formulation

Overlapping continuum of stages

The stages involved represent an evolutionary continuum, rather than discrete steps. It is not possible to skip any of these stages, although some may be over-lapping. Stages can be undertaken simultaneously in some situations. Within this approach, there are core processes that must be undertaken to enable the policy to be formulated.

Time period

Policy formulation can be a relatively long process. Building commitment can take a long time, and a stakeholder consultation process at several layers of government, with organisations in the public and private sectors, and with interested parties down to rural households can be a lengthy process. Typically, the process will take between two and three years. Taking longer than this reduces the specificity of the process to a point where little is likely to be achieved. It is better to produce an 'imperfect' policy and then to update this at two to three year intervals.

Policy documents

Policy is disseminated through documents that should be produced at all levels of government. That at national level will contain the national policy statement, and the relevant components of the mission statements and objectives produced by sector organisations. This recognises that some organisations will have responsibilities that are wider than just rural travel and transport. The national policy document should be published. National policies will normally be updated and new documents published every three to five years. Organisational policy frameworks should normally be updated annually. Sometimes they can be published as part of an 'annual report'.

6.3.2 Stage 1: contract for change

Purpose

This is the commitment stage. It requires participation of all interested parties, right down to household level in rural areas. Commitment can be facilitated through seminars, workshops, and media coverage. The role of the steering committee is crucial at this stage, and its members will

play a leading part in securing commitment. Task forces can be set up at various levels in government to consider the various different policy options and report back to the steering committee. The existence of a champion can be of considerable assistance at this stage.

Output

The principal output from this stage will normally be a first draft of a national policy statement. This is circulated widely within and outside of government. It can provide the basis for a more detailed debate by all interested parties on policy issues.

Core processes

The main issues to be considered at this stage are the role of the sector and of the organisations within it. These include:

- ?? Responsibilities
 - ?? government understanding of the issues
 - ?? vision and strategic directions
 - ?? responsibility for policy delivery
 - ?? decentralisation
- ?? General issues of
 - ?? access and mobility
 - ?? sustainability
- ?? Issues concerned with infrastructure provision and management
 - ?? responsibility for sectoral organisation
 - ?? legal framework
 - ?? financing
 - ?? management and planning systems
 - ?? local capacity and improving this
 - ?? technology
- ?? Means of transport
 - ?? personal transport
 - ?? transport services
- ?? Others

Time period

Up to 12 months

6.3.3 Stage 2: object orientated studies

Purpose

It is at this stage when the objects or purpose of the policy are refined. At national level, this requires that the policy statement is refined through the participative consultation process. Within the sector organisations, this requires that mission statements are developed that are consistent with the national policy framework, and yet are appropriate to institutional needs. These studies focus on the topics that are important to parties affected by the proposed policy, including politicians who may be the driving force behind any changes. Commitment to change may be necessary and this, again, requires participation of all interested parties, recognising that some parties will be reluctant to adopt new ideas and concepts. The motivation for any opposition must be understood so that it can be addressed in an appropriate manner through policy measures. The mission statements developed internally within organisations need to adopt a participative approach to ensure their ownership. At this stage, the process of policy formulation is just as

important as the policy outcome itself. Issues must be discussed and evaluated openly in policy workshops, and disseminated to all parties not involved directly by both word of mouth and in writing. Task forces can again be set up to assist with the process.. Development or initiation of enabling legislation can also start at this stage.

Output

The principle output from this stage will normally be a firm national policy statement. This can be used as the input for the agency orientated studies undertaken in Stage 3. Draft organisational mission statements will also result.

Core processes

The following issues need to be refined and finalised at national policy level:

- ?? Defined responsibility for policy delivery
- ?? General issues of access, mobility and sustainability
- ?? Issues concerned with infrastructure provision and management (as in Sub-section 6.3.2)
- ?? Means of personal transport and transport services
- ?? Others

These need to be reflected in organisational mission statements and outline objectives.

Time period

12-36 months

6.3.4 Stage 3: agency orientated studies

Purpose

These studies take place within the organisations responsible for rural transport, and aim at broad-based problem solving using the results of the object orientated studies. In this stage, work begins on a number of important aspects of changing the way that agencies operate. These might include: change in the policy framework; first steps in reorganising the management structure; re-evaluation of centralisation/ decentralisation issues; possible revamping of the planning procedures and processes; making data collection more systematic; development of management systems; management training; development of community participation procedures, and so forth. Within the agencies, the studies can be carried out by task forces operating in the different policy areas, and several workshops are held. The task forces provide a focus for all activities. All levels of administration in the agency need to be involved, as should external stakeholders. Enactment of any enabling legislation is likely to take place during this stage.

Output

The principal outputs from this stage will be agreed mission statements and objectives for the agencies involved in the rural transport sector. Some supporting standards may also be developed, although it should be recognised that the production of these can be a longer term process.

Core processes

The following activities are among those that may need to be undertaken at this stage:

- ?? Improvement of management structures
- ?? restructure organisations

- ?? clarify and decentralise accountability and responsibility
- ?? improve decision support systems, including data
- ?? Strengthening management processes and procedures
 - ?? put in place stakeholder participation procedures
 - ?? design management systems to support the decision-making levels
 - ?? define outputs: service, road condition, access and mobility, safety, environment, and information
 - ?? monitor performance and goal attainment
- ?? Others

Time period

12-36 months

6.3.5 Stage 4: institutionalisation

Purpose

This is a continuing process, with the government and involved agencies seeking continually to improve performance through monitoring achievement and feeding back results. This process, in essence, starts a new cycle of policy formulation or updating. Changes are implemented gradually, but there will be no final solution because there will always be new problems and new solutions.

Outputs

These will include policy that is updated from time to time but, more importantly, the main output will be an improved ability to meet policy requirements over time.

Core processes

This stage will include continuous evaluation of all core processes.

Time period

On-going

6.4 Identifying the policy issues

Generic issues

Chapters 3 to 5 give background to assist in identifying rural travel and transport issues and the type of policy instruments that might be available to address them. However, issues will vary considerably from county to country, and within regions inside a county. There are no generic statements of policy which will apply in all situations. The policy formulation process needs to include a means of identifying issues and possible policy solutions.

Stakeholder workshops

A key process for each of the four stages of policy development is the holding of stakeholder workshops. These involve groups of individuals coming together to agree key issues and the policy measures that might be appropriate for addressing these. The types of issues will differ depending on the stage of the policy formulation process, and the level of detail discussed will increase as the process progresses. Workshops need to be 'managed' through skilled facilitation if the best is to be obtained from them.

Problem tree analysis

One approach to running stakeholder workshops is to use ‘goal-orientated project planning’ or ‘problem tree analysis’. This process attempts to identify the causes of problems by breaking issues down into smaller and smaller components. The process then identifies solutions to each of the small components and builds these back up again in such a way that objectives can be achieved. The approach is illustrated in Figure 6.2.

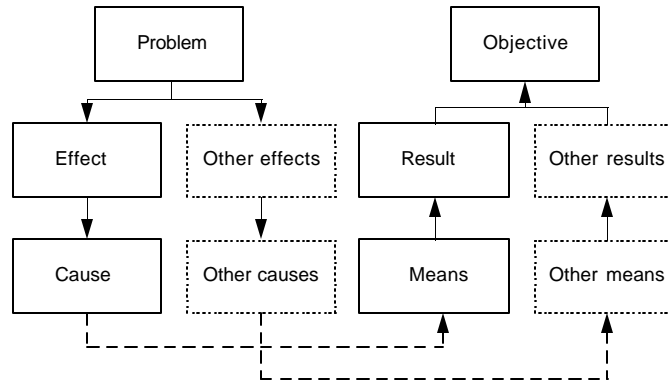


Figure 6.2 Problem tree analysis

Problem tree analysis establishes cause and effect relationships between ‘problems’ with the existing situation and identifies ‘issues’ that need to be addressed. The results of the analysis can be recorded in a diagram showing the effects of a problem and its causes. The ‘problem’ is then converted into a solution diagram by replacing the causes of problems with the means of achieving the required objective. A particular problem will generally have several effects and causes, and several means of achieving results will be needed to achieve objectives by addressing all aspects of a problem. It will be seen that the tree structure used can be related to a policy framework of mission, objectives and standards, as described in Sub-section 2.4.3. The results of a problem tree analysis are also frequently presented in the form of a ‘log-frame’.

6.5 Policy development as a project

Nature of projects

This structured approach can be achieved by considering the development of a rural transport policy as a *project*:

- ?? A project has the purpose of meeting an agreed objective
- ?? It has both a defined start and a defined finished
- ?? It consumes resources in progressing from start to finish; both time and physical resources for undertaking a project are normally constrained

A project approach allows all of the normal tools of project management to be applied.

Project steps

A series of well-defined steps can be used to take the policy formulation process through the project management decision-making activity. These steps can be considered as the following.

1. *Aims*

Agree on the aim or purpose to be accomplished, and specify this in an output-

orientated way, so that achievement can be measured. For example, the activity may be to formulate a national policy statement to be published by government as part of a 'White Paper', or it may be to formulate a policy framework for a local government ministry with respect to rural transport policy.

2. *Needs*

This requires breaking the aims down into their component parts, making sure that no relevant aspect is omitted, however remote they appear at first sight, so that each can be considered fully. A key aspect of assessing needs is the collection of data. These data provide the information on the extent of the gap between the present situation and that required by the aims. It also involves consultation with a wide variety of vested interests, and the participation of representative groups and individuals affected by the policy being developed.

3. *Options and actions*

There are likely to be many choices available about the possible components of the policy being framed. As many alternatives need to be considered as is reasonably possible, given the circumstances prevailing. The most attractive of these need to be considered on the basis of their likelihood of success to determine which are likely to be viable and which promise to be the most effective.

4. *Resources and priorities*

Resources consist of human, material and equipment, each of which can be quantified in terms of money. The resources available to implement the aims of the policy need to be reviewed since requirements will often be greater than can be met using current resources. Consideration can be given to the provision of additional resources in some areas. But, in general, policy requirements will have to be prioritised to fit resources available. The setting of priorities between competing needs will be a key aspect of policy. Ideally, it should be done in a systematic manner that considers issues of effectiveness, efficiency and equity.

5. *Implementation*

This involves actually implementing the policy statement, policy framework, or other aim of the project. This may require co-ordination between various different bodies implementing the policy, and collecting information about achievement and progress of each activity.

Monitoring

Policy formulation is not a one-off activity. It should be a continuous process, whereby policy is reviewed and updated continuously or regularly to reflect lessons from experience and changing requirements. The effects and impacts of policy therefore need to be monitored. This helps to identify the degree to which policy requirements are being met. It identifies problem areas where changes either in implementation, or in the policy itself, are needed. Thus, monitoring enables feed-back to be given to the policy formulation process to seek improvements in the way that policy is set in the future. Monitoring is discussed in more detail in Chapter 8.

The project cycle

Inclusion of 'monitoring' as a step in the policy process is illustrated in Figure 6.3. This sequence of well-defined steps through the decision-making process is known as the *project cycle*.

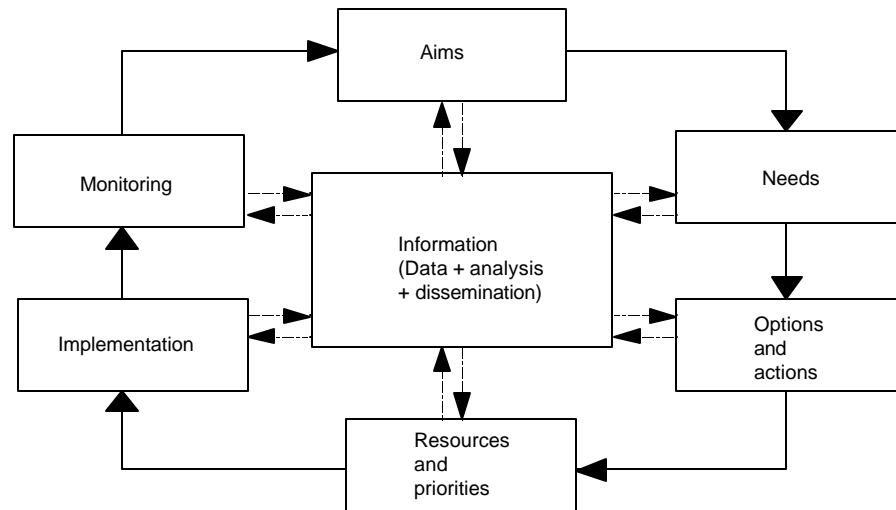


Figure 6.3 The project cycle

Information and data

The policy formulation process is only possible with appropriate and up-to-date information and data. These can be considered to sit at the heart of the project cycle, and are used as the basis of decisions at each step of the cycle. Hence, it is the combination of decisions and information that enable a policy to be put in place.

Application to policy formulation

Each of the four policy formulation stages, described in Section 6.3, can be treated as a project. The project steps of aims, needs, options and actions, resources and priorities, and implementation can be used to provide a structured approach to achieving the purpose of each of the stages. The process can then be managed using normal project management tools.

6.6 Strategy and action planning

Relationship with policy

The rural transport policy requirements identified through the above process are likely to consist of those policy issues that can be addressed immediately, and those that can only be addressed over time. A strategy may be needed to enable the policy process to move from the immediate possibilities to those policy measures desired in the future. Thus, 'strategy' adds the dimension of time to the policy formulation process. An action plan enables a strategy to be put in place. Whereas a strategy may be defined in fairly broad terms at a fairly high level, an action plan is much more detailed. It should be very specific about the activities to be undertaken, the individuals responsible for each component of the strategy, and the time scale and resources for completion.

Key players

One of the key roles of the steering committee and its secretariat will be to produce a strategy and action plan for policy formulation and updating. These will need to reflect the four stages of the policy development process, described in Section 6.3, for both the national policy statement and the policy frameworks for the sector organisations.

Time periods

The strategy will also need to reflect the time periods indicated above. Note that these time periods are not, necessarily, consecutive. Although Stage 1 *Contract for change* needs to be completed before others start, there is no reason that certain aspects of Stages 2 and 3 should not run in parallel. Although this reduces the time scale for the formulation of policy at all levels, it should be noted that the overall time period needed to devise and implement a coherent rural transport policy is likely to be of the order of several years. The actual time required will depend on the starting situation, the existing degree of commitment to change, and the various socio-political factors prevailing in the particular country. However, it should be noted that it is difficult to sustain a process such as described here for more than about two to three years; otherwise, impetus is lost.

Formulation

The process of formulating a strategy and action plan will mirror that of the policy formulation process, as described above. Normally, the strategy for policy formulation will be developed in parallel to the policy itself. In many cases, it will not be possible to divorce the two activities. However, there is a need at all times to keep in mind the distinction between policy and strategy.

Format

The strategy and action plan should be written down and made available for public scrutiny. The national strategy will normally be contained within the same document as the policy statement. Action plans consist of a list of activities to be undertaken. Against each can be noted:

- ?? The activity to be undertaken
- ?? The individual, unit or organisation responsible for delivery of this activity
- ?? The target completion date for the activity

6.7 The role of international financing institutions and donors

Areas of assistance

International financing institutions and bilateral donors can play an important role in facilitating the policy formulation process. Assistance can be given in a number of areas, including the following:

- ?? Encouragement of governments at a high level to address rural transport policy issues, and facilitate inter-departmental communication within government
- ?? Provision of technical advice and documentation on the issues which may need to be addressed, and on the policy formulation process itself
- ?? Provision of grants which contribute to the funding of the policy formulation process
- ?? Provision of technical assistance to steering committees and policy co-ordination units
- ?? Capital lending to support the provision of rural transport infrastructure, transport services, and other physical facilities identified by rural transport policy

Sector investment programmes

The *sector investment programme* approach (Harrold and associates 1995) to external finance, currently being promoted by a number of donors, is entirely consistent with the above approach. This recognises that a locally-produced sector level policy needs to be put in place as a pre-condition of any lending.

7 Examples of rural transport policy

7.1 Basis of examples

This chapter provides typical examples of extracts from frameworks for rural transport policy. These aim to show how policy can be framed at different levels to meet the requirements for rural transport policy defined in Chapter 2, and to address the issues such as those identified in Chapter 5. Examples are used to illustrate the relationship between the national policy statement, policy instruments, and the missions and objectives of the various bodies charged with delivering rural transport policy.

7.2 Example 1: access and mobility

7.2.1 Basic approach

Cross-sectoral issues

Policy in this area needs to deal with the cross-sectoral nature of the issues that arise. It is for this reason that policy is best addressed at national level through a ministry of local government or rural development, rather than a ministry of transport which has a single sector remit. Additionally, the problem of lack of access to motorised transport by poor people is relatively remote from a transport ministry which has a national and strategic focus.

Policy development

Policy in this area needs to address questions such as ‘access to what and by whom?’. These questions can only be answered if the policy is developed from the bottom up, starting at the household and village levels. The bottom-up process will place the emphasis on ‘desire’ and, as the policy formulation process moves up from local to regional and then to national level, the desire will be tempered progressively by constraints on achievability. These constraints are likely to be in terms of economic/financial resources and institutional factors. The existence of constraints on achievability will mean that policy formulation will be an iterative process between bottom-up and top-down. The policy discussions are likely to be of considerable benefit in themselves by drawing real local issues to the attention of ‘policy makers’ at higher levels of government, and by making people at the local level more aware of the real constraints in terms of resources and other factors.

Issues to be addressed

Some of the issues that should be addressed in this policy area are described in Section 5.2.

7.2.2 National policy statement

National targets

This example has the aim of establishing national targets, based on levels of accessibility, for the provision of water supply, rural health centres and educational facilities.

Access to health care

The Government is committed to improving the access of rural dwellers, and particularly of women, to health care facilities

Access to education

Education is a high Government priority, and emphasis will be given to the provision of properly staffed and resourced primary schools to meet the aspirations of all of the population, bearing in mind the particular needs of rural dwellers, both girls and boys

Access to water

Access to clean drinking water is acknowledged to be a basic human right, and the Government will pursue a long term plan to provide piped potable water to all households in the country, and will put in place programmes to provide access to water within a reasonable distance of all villages in the medium term

Policy markers

Note that the statements are phrased in a fairly general way, and have the aim of putting up policy markers rather than making definitive statements about policy delivery, which is the role of ministries and other organisations with sectoral responsibilities.

7.2.3 Mission statement of government ministry responsible for rural development

Aims and responsibilities

The mission statement of the relevant national ministry should define the areas and sectors for which it is responsible. It should also make statements about broad aims, and these need to be consistent with any national policy statement of government more generally. Such a mission statement might reflect government policy in the above areas in the following way.

The Ministry of [??] will have the responsibility for overseeing local government administration and will support these administrations in the implementation of Government policy through the framing of legislation, the distribution of budgets, and the provision of advice and support.

In particular, the Ministry will implement Government policy in the areas of:

- ?? Provision of health care and education by assisting local governments to plan and construct health centres, schools and supporting infrastructure, and will make budget provisions to enable objectives to be met
- ?? Water supply through the planning and development of boreholes in conjunction with local government administrations

Departmental responsibilities

Note that mission statements of different government departments need to demarcate clearly their different responsibilities. For example, the above mission statement indicates that it is the responsibility of the rural development ministry to provide the physical facilities for health care and education. However, the mission is silent on the subject of on-going operation of these facilities, which presumably would be the responsibility of ministries of health and education, perhaps working through local government bodies. The cross-sectoral implications of policy in areas such as this can lead to considerable confusion about responsibilities, and the need for co-ordination between different organisations and departments is crucial.

7.2.4 Objectives of government ministry

Criteria for objectives

Objectives set by the ministry need to be specified in output terms so they are

- ?? Measurable
- ?? Relevant to the mission of the ministry
- ?? Specific so that they cannot be misunderstood
- ?? Achievable, particularly in terms of the resources that can be made available and the institutional capacity for implementation.

Objectives supporting the above mission might take the form of the following.

Health care

- ?? Clinics will be provided in all villages with a population greater than [??] by the end of the year [20??]
- ?? These villages will be linked by an all-weather road to the classified road network before the clinics are provided

Education

- ?? Primary schools will be provided in all villages with a population greater than [??] by the end of the year [20??]

Water supply

- ?? Boreholes with hand-pumps for drinking water will be provided in all villages with a population greater than [??] by the end of the year [20??]
-

Outcome of objectives

It will be seen that these objectives are measurable, relevant to the mission, and specific. The extent to which they are achievable will depend on the size of village population included and the time frame chosen for implementation. These need to be achievable within the budget and resources that can be made available from government sources. Objectives phrased in this way are aimed at achieving access to defined services, but only for people living in villages of more than a specific size. The objectives do not say anything about access more generally, particularly for people whose dwellings are remote from villages. To address these access issues, objectives would need to be stated more in the following form.

Health care

- ?? Clinics will be provided within [??]km of all of the population by the end of the year [20??]
 - ?? Motorable tracks will be provided in all areas so that, by the end of the year [20??], no one is living more than [??]km from such a track
- (Similarly worded objectives could be phrased for education and water supply)
-

Difficulty of implementation

It will be noted that, although these objectives address issues of access more directly, the formulation makes it much more difficult to implement the policy and to measure compliance. For many of the poorer countries, expressing objectives in this way will also make targets extremely difficult to meet in the short to medium term.

7.2.5 Mission of a district government body

The mission statement of a district council or other local government body should reflect the national policy statement, but show how this will be implemented at district level. In those areas of government where the district has devolved responsibility, it is of course a matter for the district alone to set policy. The following is an example extract of a mission statement for a district body.

The Council of Mokindo District will be responsible for administering those responsibilities with which it is assigned under the [??] Act, and will do this in support of Government policy through the allocation of budgets and other means.

In particular, the District Council will implement Government policy in the areas of:

- ?? Provision of health care and education by planning and constructing health centres, schools and supporting infrastructure to meet Government targets within the budget level that is provided
- ?? Planning and development of boreholes in conjunction with the Ministry of [??] to meet Government targets within the budget level that is provided

The District Council will enter into cost-sharing arrangements with individual villages for the maintenance of rural tracks and paths (an area of devolved responsibility).

7.2.6 Objectives of a district government body

Reflecting local needs

Objectives in this area at district level can be formulated in a similar way to those at central government. However, the formulation is likely to be more specific, reflecting the local situation, and the results of local priorities derived through consultation with appropriate groups. An example of typical objectives might be as follows.

Health care

- ?? Clinics will be provided at Mokindo by the end of the year 2002, at Devundra by the end of the year 2003, and at Tawito by the end of the year 2004
- ?? Motorable tracks will be provided between Mokindo and Semalanka by the end of July 2002, between Devundra and Mokindo by the end of 2002, and between Tawito and Semalanka by the end of 2003

Cost-share arrangements for maintenance

Up to 50km of tracks and paths will be maintained under cost-share agreements between the District Council and residents associations by the end of the year [20??]. Details of the arrangements will be as set out in the document *Maintenance of rural tracks and paths under cost-sharing arrangements* published by the Ministry of Local Government.

Standards

Note that the objective for cost-shared maintenance refers to another document which provides the details about how these arrangements can operate, and the responsibilities of each of the parties to any such agreements. This document is in effect a standard, as described in Sub-section 2.4.3.

7.2.7 *Supporting policy instruments*

Budget and legislation

The details of the instruments needed to support a policy framework as outlined in the above example will depend on the details of the policy adopted. In this particular case, there will be the need for instruments in terms of the budget required to support the development of clinics, schools and the supporting infrastructure. There would need to be legislation covering the relationships between the various government bodies involved, the devolution of powers and, in this particular example, for the cost-sharing arrangements for maintenance of tracks and paths.

Indirect policy measures

Note that the example illustrates that many issues related to accessibility need to be addressed by policy measures other than the provision of rural transport infrastructure or services. Any provision of infrastructure or services are supporting activities to meet wider accessibility needs.

7.3 **Example 2: sustainability**

7.3.1 *Basic approach*

Section 5.2 identifies several policy issues related to sustainability. It groups these under the headings of economic, social and environmental sustainability. National policy statements in this area are likely to be of a similar form to those relating to access and mobility, as above. They will make broad statements emphasising the government's commitment to addressing issues of importance under these headings. Similarly, these broad aims will be reflected in the mission statement of the central government ministries and bodies charged with implementing national policy in this area. As with access and mobility, meaningful policy will only result if it is developed primarily with a bottom-up approach, tempered only by the top-down imposition of resource and institutional constraints.

7.3.2 *Objectives of government ministry responsible for rural development*

Areas of government policy

Taking social sustainability as an example, the mission of the responsible ministry will need to reflect government policy, perhaps by emphasising the importance and outlining its role in the areas of:

- ?? Pedestrian travel
- ?? Reducing the physical burden of transport
- ?? Reducing the travel and transport requirements of women

Indirect objectives

It is difficult to set objectives at ministerial level which address these issues directly. Objectives are more likely to be dealing with issues of access and mobility, in order that social aims are met. Examples of relevant objectives follow.

Pedestrian travel

[??] per cent of the budget made available in the next three years for rural transport infrastructure rehabilitation will be reserved for spending on footpaths through the provision of matching funds to residents associations who wish to

enter into agreements for carrying out this type of work in their locality.

Physical transport burden

- ?? Encourage the purchase and use of bicycles by the removal of tax and import duty from FY[200??]
- ?? Carry out a study, to completed by the end of June [20??], to recommend ways of promoting the use of animals for transport or on-field tasks

Women's travel and transport requirements

- ?? Introduce a mass media campaign before the end of the current calendar year to promote the use of intermediate means of transport by women, involving women's organisations in the formulation and undertaking of the campaign
- ?? Put in place legislation by the end of [20??] to enable credit to be provided to rural women, and groups of women, for the purchase of intermediate means of transport and for other purposes

7.3.3 Objectives of district council

At district level, it is also difficult to address social issues directly through policy measures, and objectives need to be set in other areas where social outcomes will result. Some examples are given below of objectives that are complementary to those listed above.

Pedestrian travel

A budget of [??] will be set aside in each of the next three financial years to hire local consultants to work with and train representatives of residents associations in the rehabilitation of footpaths.

Physical transport burden

Make available bicycles for official travel in the rural areas of the district, where appropriate, both to increase the mobility and effectiveness of officials, and to promote the use of bicycles more widely.

Women's travel and transport requirements

A budget of [??] will be set aside in each of the next three financial years to provide grants to private credit organisations for promoting the use of intermediate means of transport by women.

7.3.4 Supporting policy instruments

As above, the details of the policy adopted will dictate the type of instruments needed to support a policy framework in this area. In the case of the examples at ministerial level, there will be the need for instruments enabling changes in taxation relating to bicycles; budgets made available at national level for carrying out the proposed study and for the media campaign; and legislation on credit. The main instrument used at local level in these examples is budget required for hiring consultants, purchase and maintenance of bicycles, and for making grants to credit organisations.

7.4 Example 3: responsibility for infrastructure provision and management

7.4.1 Basic approach

Models and options

Several models and options were put forward in Sub-section 5.3.1 for managing rural roads. The option chosen will have implications at all levels of government, and at community level. The choice of option should result from a policy debate, such as discussed in Chapter 6. In the case of rural transport infrastructure, the input to this process from individuals, households, communities and organisations at the local level is crucial in determining structures that are appropriate and sustainable at local level. Discussions should recognise the implications of responsibilities for funding and management. They need to take a realistic view of institutional capacity at the local level, and not just consider issues about where the power of decision-making should lie.

Policy definition

Once a policy is formulated, it can be reflected in a national policy statement and then implemented through legislation such as a Roads Act. This will define the bodies with legal powers and responsibilities for the provision and management of rural transport infrastructure. The mission statements of the individual bodies will then set out their roles and responsibilities in a manner that is consistent with the policy statement and legislation.

7.4.2 National policy statement

Responsibilities

At national level, the policy statement needs to define where responsibilities lie for different hierarchies of roads and rural transport infrastructure. In the following example, the tertiary road network and rural transport infrastructure are to be owned by local government administrations, but managed on their behalf by contract management agencies. In the phraseology used in this particular Roads Act, ownership is assigned by conferring 'road authority' status on the local government body. This is an example of Model B, Option 2, from Box 5.1.

Rural district councils will be defined in the Roads Act as Road Authorities and will be assigned the following statutory functions in respect of rural roads and other rural transport infrastructure:

- ?? Designation of rural roads within their administrative area
 - ?? Closure of any of these rural roads on a permanent basis
 - ?? Setting standards for road design, construction, maintenance and safety of rural roads within their administrative area
 - ?? Administering and funding the network of rural roads and other rural transport infrastructure within their administrative area
 - ?? Arranging for the management of rural roads and other rural transport infrastructure within their jurisdiction through agency agreements or contracts with other public or private sector organisations
-

Implications on management arrangements

Note that this particular policy statement makes the rural district council responsible for administering and funding rural transport infrastructure for which it is responsible under the Roads Act, but requires it to arrange for the management of the infrastructure by a third party body.

7.4.3 Mission of a rural district council in respect of rural transport infrastructure

Consistency with national policy

The mission statement of a rural district council responsible for administering rural transport infrastructure within its administrative jurisdiction will need to include clauses that are consistent

with the requirements of national policy and relevant legislation. These might be something like the following.

The Mokindo Rural District Council will aim to provide and maintain its network of rural transport infrastructure to support national and District development objectives and, in particular, to:

- ?? Provide a minimum level of service which is safe for all road users, including motorised, IMT and pedestrians
- ?? Preserve the existing investments in rural transport infrastructure
- ?? Allocate funds between rural roads, tracks, trails and paths to strike a balance between their economic and social importance
- ?? Arrange for the management of its rural transport infrastructure through competitive procurement from the Regional Road Management Agency or from private consultants and contractors
- ?? Ensure that work is undertaken effectively, efficiently and safely, and in a way that minimises damage to the environment

Aims, responsibilities and management

This makes general statements about the responsibilities and aims of the Council, and also sets down the principles governing the way that management of the network will be undertaken.

7.4.4 Objectives of a rural district council in respect of rural transport infrastructure

Objectives for fund allocation

The above mission statement would need to be supported by several objectives to define the policy adequately. As an example, the following objectives could be set to support the clause of the above mission statement which deals with allocation of funds.

Priority for the funding of works will be as follows.

First priority - routine maintenance

Funds will be allocated between rural roads, tracks, trails and paths according to the following formula that takes into account length, population served, and traffic level on the road in terms of motorised vehicles, IMT and pedestrians (formula would be quoted).

Second priority - periodic maintenance

Funds for periodic maintenance will be allocated by the District Council based on requests received from local bodies responsible for roads, tracks, trails and paths. Allocations will be prioritised according to the criteria given in *Pocket guidelines for the maintenance of rural transport infrastructure* issued by the Ministry for Rural Development

Third priority – rehabilitation

(etc)

Fourth priority - new construction

Funds for network extension can be made available from Council revenues, when available, for projects listed in the Mokindo District Development Plan. Potential projects will be subject to social and economic cost-benefit analysis using the method included in *Pocket guidelines for feasibility studies of rural transport infrastructure* issued by the Ministry for Rural Development.

Standards

Note that these objectives again refer to the use of ‘standards’ (pocket guidelines) containing the detailed procedures to be followed when preparing bids for funds for larger works. Given that the rural district council has delegated authority for managing and funding its rural transport infrastructure, it is able to choose which standards and procedures to apply to its decision-making process. In this particular example, it has chosen to adopt guidelines issued by central government. These guidelines would be expected to lay down the procedures to be followed for participation in the planning process from all vested interests, including women and minority groups, at community level.

7.4.5 *Supporting policy instruments*

The instruments required to support policy in this area will be principally legislation, which will define responsibilities for management and funding of rural transport infrastructure networks. The legislation will need to deal with designation of infrastructure, under a ‘Roads’ or other Act, and will need to define what are the legal responsibilities for infrastructure that is not designated. This will be the case for most tracks, trails and paths, and even for many rural roads. A key issue for rural travel and transport policy is how to deal with infrastructure that is not designated and, hence, has no legal status. Other supporting instruments will be needed for budget allocation, and for the adoption of standards or procedures for fund allocation.

7.5 *Example 4: funding*

7.5.1 *Basic approach*

Road funds

Policy can only be implemented in the area of rural travel and transport if there is a sufficient and reliable source of funding. Second generation road funds are being introduced in many countries for funding in this area. These funds bring with them the concept of conditionality, since funds will normally only be disbursed for works agreed in advance, carried out to pre-defined standards, and undertaken against stringent cost controls. Sometimes, road funds have requirements for works to be procured through competition. By their nature, this type of road fund is centralised, partly because fuel levies, which are the main source of revenue normally used, are collected most efficiently from centralised sources. Yet ownership of the rural transport network is increasingly being decentralised, with the aim of placing decision-making closer to the population who are affected by the decisions. This results in decentralised ownership but centralised funding. However, without the responsibility for funding, ownership is not very meaningful. This approach to funding, by its very nature, often gives rise to conflict.

Community funding

It was noted in Sub-section 5.3.3 that, given the relatively low level of traffic volumes on rural infrastructure, communities should expect to provide the majority of the finances for infrastructure for which they are responsible. Indeed, even when a road fund is in place, this can seldom raise enough money to fund works on the whole of the classified and unclassified transport infrastructure network. Cost sharing arrangements between local or central government, and local communities can help to resolve conflicts between ownership and funding ability.

7.5.2 *National policy statement*

This example covers policy relating to the establishment of an off-budget road fund for classified roads, and for the provision of cost-sharing arrangements for funding unclassified rural transport infrastructure. The road fund is managed by a national road management authority, incorporating a roads board. The national policy statement might include the following.

Management of the road network

The classified road network will be managed by the National Roads Authority according to commercial management practices. The National Roads Authority will be directed by an independent Roads Board appointed by the Minister from stakeholders in the public and private sectors.

Principle of road pricing and cost recovery

Funding of classified roads will be based on the principle that road users, including foreign road users, contribute the full costs of maintaining all roads, and contribute progressively over time to the full costs of providing roads. In the short term, other sources of funds will be used for capital development and rehabilitation costs. Allocation of funds to the road network shall be based on need and functional classification

Off-budget funding for roads

Funds for the road network will be deposited in a dedicated road fund that is autonomous and independent. The road fund shall be managed by the Roads Board.

Unclassified rural transport infrastructure

The Roads Board will make available a portion of the total available funds for the maintenance of the unclassified rural transport network. These funds shall be allocated on the basis of matching local contributions from community associations taking responsibility for local networks.

7.5.3 Roads Board/National Roads Authority mission statement

Fund administration

The mission statement of the Roads Board, on behalf of the National Roads Authority, would need to include a statement of intent about delivering its requirements under off-budget funding. It will need to say how it will administer funds that are to be allocated to rural transport infrastructure under a cost-sharing arrangement. This might include something like the following.

The National Roads Authority will administer the Road Fund by collecting revenue from road users as required by legislation and in a manner that is efficient and transparent.

Allocations from the Fund to the Department of Main Roads, rural district councils and other bodies, will be undertaken in such a manner that:

- ?? Provides a minimum level of service which is safe for all road users, including motorised, IMT and pedestrians
- ?? Preserves the existing investments in road infrastructure
- ?? Allocates funds between road authorities to strike a balance between the economic and social importance of roads
- ?? Assures that work is undertaken effectively, efficiently and safely, and in a way that minimises damage to the environment

A proportion of the funds collected will be reserved for funding maintenance of rural transport infrastructure and will be allocated on the basis of matching local contributions from community associations taking responsibility for local networks.

Other functions

The mission statement would also describe other functions that the National Roads Authority would be required to undertake.

7.5.4 Objectives of the Roads Board/National Roads Authority

Classified and unclassified transport infrastructure

The following objectives could be set to support the above clauses of the mission statement.

Rural transport infrastructure

At least [??] per cent of the funds available will be allocated to local government bodies for the maintenance of rural transport infrastructure according to the following formula (to be quoted).

The Authority will require local government bodies in receipt of these funds to disburse them under cost-sharing arrangements, according to guidelines that will be issued by the Authority from time to time.

Classified roads

Priority for funding:

First priority - routine maintenance

Funds will be allocated between main, district and community roads according to the following formula that takes into account road length, population served by the road, and traffic level on the road (formula would be quoted).

Second priority - periodic maintenance

Funds will be allocated in response to bids received from the Department of Main Roads, other bodies, and rural district councils on their own behalf, and on behalf of villages and communes. Works funded will have a minimum economic rate of return of xx per cent for main roads, and (xx - yy) per cent for district and community roads (a standard will need to exist to provide the details of the standard method used to determine economic rates of return of bids).

Third priority - rehabilitation

Funds will be allocated in response to bids received, as for periodic maintenance funds. Works funded will have a minimum economic rate of return of (etc). Where funds are insufficient to enable all identified works to be carried out, priorities will be determined on the basis of the ratio of net present value and cost.

Fourth priority - new construction

Funds will be allocated in response to bids received from regions, as for rehabilitation funds (etc).

Standards

Note that several of these objectives require that standards exist, perhaps in the form of guidelines or procedures, to provide details of allocation, disbursement and audit procedures for the funds. Sub-sections 7.4.3 and 7.4.4 illustrate how a local government body might work within such a funding arrangement.

7.5.5 *Supporting policy instruments*

Model legislation

The above arrangements will need supporting legislation. A model for this is that produced by SATCC as *Model legislation for Roads Act*, although this does not cover cost-sharing arrangements. The model legislation includes clauses covering the following.

Clause 25	Establishment of a fund
Clause 26	Fund management
Clause 27	Utilisation of fund
Clause 28	New funding sources
Clause 29	Declaration of toll roads and levying and collection of tolls or user charges
Clause 30	Loans and government guarantees for loans
Clause 31	Use of fund monies

Regulations

Such an Act would need to be supported by regulations defining, for example, specific sources and amounts of road user charges. Details of the cost-sharing arrangements would need to be defined in the Act and regulations.

7.6 **Example 5: management, planning systems and local capacity**

7.6.1 *Basic approach*

Items to be dealt with under this heading relate to the management procedures applied to ensure effectiveness and efficiency of operations in the organisations with responsibility for managing the infrastructure network. The requirement for this would normally be stated in general terms in the national policy statement. The policy issues involved were discussed in Sub-section 5.3.4. Issues that might need to be enshrined in policy at organisational level are measures to increase the specificity of operations, and the extent to which use is made of competitive procurement. Where works are to be undertaken by bodies with limited capacity, issues of how technical assistance might be provided to them by competent bodies may also need to be covered. Issues of co-ordination should also be addressed, particularly for planning activities which, by their nature, cut across the responsibilities of several organisations.

7.6.2 *Mission of a body responsible for rural transport infrastructure*

This body is likely to be a local government administration, but could be a parastatal or private body where management services are procured under an agency or contract arrangement. Its mission will need to state the aims and purpose of the body, but will also need to address specifically the issues noted above, where appropriate.

The [??] will seek to manage the network of classified roads and unclassified rural transport infrastructure in a manner that:

- ?? Provides a minimum level of service which is safe for all road users, including motorised, IMT and pedestrians
- ?? Preserves the existing investments in rural transport infrastructure
- ?? Manages the network in such a way as to strike a balance between the economic and social importance of rural transport infrastructure
- ?? Assures that work is undertaken effectively, efficiently and safely, and in a way that minimises damage to the environment

Assistance will be provided to communities where they are taking responsibility for managing infrastructure under cost-sharing arrangements.

7.6.3 Objectives of a body responsible for rural transport infrastructure

Targets for working practices

Specific targets will need to be set in all areas identified in the mission. Examples of those that might be adopted under the clause dealing with effective, efficient and safe working practices are given below.

From the end of June [20??] all periodic, rehabilitation and development works execution above a value of [\$??] will be subject to competitive procurement procedures.

By the end of the current calendar year, the organisation of routine works will be separated into 'client' functions of commissioning works, supervising, controlling and monitoring activities, and 'supplier' functions of carrying out the commissioned works. The client functions will be based in the headquarters office and those of the supplier will be based at the depots.

The [??] organisation will make available a qualified engineer for up to three days per year for technical assistance and advice to each of those communities participating the cost-sharing agreement for managing rural transport infrastructure.

Standards and procedures

The objectives will need to be supported by standards and procedures. For example, these will be needed to define relationships between the client and supplier parts of the organisation where routine maintenance functions are separated.

7.6.4 Supporting policy instruments

The type of arrangements included in policy in this area are unlikely to require separate policy instruments to enable them to be implemented. Necessary instruments are likely to be already in place to implement other measures from which these arrangements would follow.

7.7 Example 6: technology

7.7.1 Basic approach

Policy areas

Policy may need to be set in the area of appropriate technology in the three main areas introduced in Sub-section 5.3.5, and discussed below.

Standards

There is a need to ensure that standards are appropriate to the function of the infrastructure. For rural transport infrastructure, this often means being sufficient to provide basic access. There is a tendency for politicians, engineers, economists and others to provide infrastructure at standards well in excess of those actually required. This wastes resources and limits the ability of available funds to achieve as much as they could.

Competitive procurement

The second technology issue that can be addressed by policy is when to use in-house units for works and management, and when to use contractors and consultants. This will depend on in-house capability and capacity, and also on the availability of an external market for the services that are needed. The benefits of competitive procurement have already been noted.

Labour and equipment

Thirdly, the use of labour-intensive, equipment-based, or intermediate technology needs to be determined through policy. In most countries where this document is used, there should be a preference for maximising the use of local resources, such as labour, and minimising the use of imported capital equipment. Where the cost of labour is low, policy can be driven by requirements for adopting the most efficient practice, rather than ideology about using labour. However, a preference for using labour does have implications for the way that works are designed and broken down into lots for execution, and the policy needs to ensure that appropriate practices are adopted in these areas.

7.7.2 National policy statement

An example follows of how national policy might be stated to achieve use of labour-intensive methods.

Works execution will be carried out by labour-dominated methods in all cases where their use is more effective and efficient.

7.7.3 Mission of a body responsible for rural transport infrastructure

In this particular example, the mission of the body responsible for rural transport infrastructure can be identical to the requirements of the national policy statement, as above.

7.7.4 Objectives of a body responsible for rural transport infrastructure

Putting the mission into effect

Specific objectives will be needed to enable the requirements of the mission to be put into effect. These should aim to ensure that methods of design, maintenance and contract procedures are, as a minimum, neutral to the use of labour-intensive methods. To give full force to the example

policy, objectives need to be defined such that these methods are favoured. Some examples of appropriate objectives follow.

- ?? Design of rural transport infrastructure will be undertaken, wherever possible, to favour the use of labour for its maintenance
- ?? Work packages will be broken down into small lots to make them more attractive to labour-based contractors
- ?? Free training will be provided in contract management for at least ten labour-based contractors each year

Standards

These objectives require supporting by standards to give effect to the objectives. For example, design standards for ditch construction might be to provide flat-bottomed, rather than 'V'-shaped ditches, which are more easily maintained by hand; culvert design may favour the use of masonry arches which can only be constructed and maintained by hand.

7.7.5 Supporting policy instruments

It is unlikely that separate instruments will be required to enable policy in this area to be implemented.

7.8 Example 7: personal transport

7.8.1 Basic approach

Policy issues for personal transport were discussed in Sub-section 5.4.1. These included issues related to intermediate means of transport and the provision of credit. Critical factors were identified as the need for a long-term perspective, and for interventions and demonstrations needing to be on a sufficient scale to make a significant impact. There are several facets of this policy area where the needs of women need to be given particular attention.

7.8.2 Policy measures

Examples of policy measures to encourage the use of IMT to reduce the physical burden of transport were described in Section 7.3, above.

7.9 Example 8: transport services

7.9.1 Basic approach

Difficult issues arise in this area in terms of the extent to which government, both national or local, should intervene in the provision of rural transport services. Leaving rural transport services completely up to the market place may well lead to un-economic routes not being served, which will disadvantage rural dwellers in these locations. On the other hand, providing, or subsidising services from a supply point of view, may reduce economic efficiency. Certainly, current development thinking is that there is no role for government in the direct provision of transport

services, and this is always best left to the private sector. The role of government should be to provide a regulatory environment that focus on safety of the provision of services, and should not inhibit the types of vehicles used, the routes on which they operate, the fares or tariffs, or the type of service provided in terms of passengers or freight. However, governments may decide that, as a policy measure, there is a need to subsidise or even operate services on their own account.

7.9.2 National policy statement

The emphasis of national policy might be on deregulating the transport industry as much as possible, but by controlling operations on certain routes through licensing. Such an approach provides the opportunity for operators to buy licences on routes where demand is high, but for there to be a subsidy to the licence on routes where demand is uneconomic. An example of a policy statement that reflects this follows.

The Ministry of Transport will be responsible for issuing licences for public transport services which operate predominantly on primary and secondary roads. It will issue non-exclusive licences for operating on defined routes, subject to control of the safety of vehicles and operating practices.

The Government seeks to encourage private companies to operate public transport services in rural areas. It will be empower local authorities to issue non-exclusive licences for operating on defined routes, subject to control of the safety of vehicles and operating practices.

Public transport licence fees for individual routes will aim only to cover the cost of their issue and administration.

For those routes which do not attract interest from private concerns to operate on a commercial basis, local authorities will be empowered to enter into cost-sharing arrangements with operators to provide minimum levels of transport services.

Licences will not be necessary for operating freight transport services, but operators will need to meet requirements of health and safety legislation as that applies to commercial companies. Responsibility for regulation and enforcement in this area will be with the Ministry of Commerce.

7.9.3 Mission statement of local government body relating to rural transport services

The national policy statement exemplified above delegates responsibility clearly to local government bodies for the licensing of rural public transport services, and states that these should be on a cost recovery basis. However, the policy statement is silent about the source of funding for cost-sharing agreements for uneconomic services, so any subsidies will need to come from local government budgets. An example of a mission that reflects this follows.

The Mokindo Rural District Council will aim to encourage private companies to operate public transport services on the tertiary road network, and will issue non-exclusive licences for operating on defined routes, subject to control of the safety of vehicles and operating practices.

Public transport licence fees for individual routes will aim only to cover the cost of their issue and administration.

The Council will also encourage companies and other organisations to operate minimum levels of service on

uneconomic routes, and will consider entering into cost-sharing arrangements to enable remote rural communities to be served by public transport.

7.9.4 Objectives of local government body relating to rural transport services

Subsidy of uneconomic routes

In the above example, each local government body will need to decide for itself what level of service it is prepared to subsidise on uneconomic routes, and the criteria that will guide its decision making in this area. The type of objective that might be adopted are given in the following example.

The Mokindo Rural District Council will ensure that the following minimum level of passenger services are provided:

- ?? At least [??] service(s) per day on classified tertiary roads
- ?? At least [??] service(s) per week on all weather unclassified roads

Limits of control

Note that none of the policy statements, missions or objectives state any requirements in terms of the number of operators who may operate on any route, the types of vehicles used to operate services, or the fare levels that are charged. Neither do they require that operators must be commercial companies, thus allowing organisations such as postal services, local development associations, and the like, to enter into cost-sharing arrangements.

7.9.5 Supporting policy instruments

All issues of transport regulation will need to be governed by legislation, and this will need to be framed by central government. Budgets will need to be allocated where cost-sharing arrangements are entered into on uneconomic routes.

8 Monitoring

8.1 Feeding back experience

Evolution of policy

Policy is a living entity. It needs to evolve over time to reflect changing situations and aspirations, and to reflect more accurately what realistically can be achieved in practice. Monitoring the effect of policy is therefore important to provide feed-back to the on-going policy formulation process, so that when the next policy cycle begins it is possible to learn from past experience. For example, aims can be redefined to reflect the actual achievements, cost assumptions can be revised to reflect those actually obtained in practice, or technical standards may be improved as a result of monitoring.

Formal policy review

Monitoring should be a regular and on-going activity for all staff concerned with policy formulation and updating. A formal review of national policy should be undertaken at least every five years and, for sector organisations, the policy framework should be updated annually.

Data

Monitoring should be concerned with issues of quality, cost and time for all policy areas. It requires collection of data in relevant areas to enable the effectiveness of policy to be assessed in a quantitative manner.

8.2 Performance indicators

8.2.1 Nature of performance indicators

Policy

A convenient way of monitoring is to produce performance indicators. These can be used to assess the effectiveness of policy because they measure:

- ?? Impacts
- ?? Outcomes
- ?? Outputs
- ?? Inputs

The use of performance indicators clarifies the relationships between these factors, and helps to:

- ?? Quantify the degree to which objectives have been achieved
- ?? Identify any problems that are impeding the achievement of objectives

Customers and policy

Their use recognises that there exist:

- ?? Customers for the services of any organisation or agency
- ?? Policy frameworks that define objectives in terms of meeting customer requirements

Publication

Progressive organisations and agencies have become more aware, open and responsive to customers' expressed needs, and publish their performance indicators for public scrutiny. The benefits of publishing performance indicators have been found to be that entities:

- ?? Focus more clearly on their mission, and are not side-tracked onto unproductive tasks
- ?? Have an incentive through external pressure to achieve objectives
- ?? Increase the effectiveness and efficiency of their operations, resulting in better value for money

Performance indicators and operational statistics

Performance indicators differ from the operational statistics that most organisations produce and use in the following way.

Operational statistics

are used by the organisation to oversee and manage all aspects of its operations. The statistics are mainly for internal use although, in the case of government departments, some may be made available publicly through their inclusion in annual statistical abstracts published by government.

Performance indicators

relate to the impacts and perceptions by the 'customers' of the organisation. As such, they are targeted externally. Indicators consist typically of a few selected operational statistics that characterise performance in a way that customers can relate to and understand.

8.2.2 Use of performance indicators

Performance indicators can be seen to have a number of uses:

?? Monitoring

- ?? to assess the adequacy of government and managerial policies, and the effectiveness of programmes in achieving their objectives; for the rural transport sector, these might be increases in accessibility, improvement to the network of tracks and paths, or increases in the use of IMT

?? Diagnosis

- ?? to identify critical needs for investment or policy change, by type of investment or region, to determine priorities, and to identify key factors influencing performance

?? Management

- ?? to provide inputs to managerial decisions such as levels of investment, maintenance expenditures and standards, allocation between regions or districts, and where to focus efforts on policies such as transport for rural women

?? Prognosis

- ?? to give early warning of undesirable trends and potential future problems

?? Effectiveness and efficiency

- ?? incentive for improvements in the effectiveness and efficiency of organisations or agencies, and which could be used as a basis of a performance contract between the entity and central or local government

?? *Comparisons*

- ?? to enable comparative studies to be made within the sub-sector, between sub-sectors and sectors, geographic regions, or other countries

8.2.3 *Users of performance indicators*

There are many users of performance indicators, and each will have a different perspective on the issues and, as a result, will require different performance indicators. In the case of the rural transport sector, the following different perspectives exist.

Sector

The sector as a whole with its constituent parts and its relation to its surrounding economic, social and physical environments; customers for performance indicators will be mainly:

- ?? Government, on behalf of the general public, because of the impact on national economic and social development

Provision

The process of provision and the providers; customers for performance indicators will include:

- ?? Government in order that appropriate policies and budget levels can be set
- ?? Road network private users, including pedestrians, who require a certain quality of services from road transport service suppliers (bus and haulage companies), as well as safety, accessibility, mobility, affordability, comfort, and a good travelling environment
- ?? Commercial and transport service suppliers, who are concerned with the service qualities of the road network and the impacts of policy decisions on transport operations

Transport use

The utilisation of the system, the users of it and those impacted by it: customers for performance indicators will include:

- ?? Road transport policy institutions (regulators and enforcement agencies) who are concerned with the efficiency of investment allocation to various road administrations, pricing and cost-recovery for road-related usage (eg fuel prices, licence fees), and compliance with road laws and regulations (eg safety and vehicle weights and dimensions)
- ?? Road network providers (owners and investors), transport service suppliers (managers and operators), and producers (of materials and services used in the supply of roads) who are concerned with efficiency, productivity, and effectiveness in satisfying user demands

Typical operational statistics from which performance indicators could be selected for each of these perspectives are given in Box 8.1.

Box 8.1 <i>Examples of performance indicators for different</i>
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perspectives

Sub-sector perspective:

- ?? Road length (kilometre by road class)
- ?? Network density (kilometres/100km²; km/capita)
- ?? Motorisation (motor vehicles per capita)
- ?? IMT ownership (IM T/capita)
- ?? Employment of labour (number by type)
- ?? Road accident fatalities (number)

Provision perspective:

- ?? Expenditure (\$ million) on
 - ?? preservation
 - ?? development
 - ?? operations
- ?? Works (kilometre by works type)
- ?? Network extension (kilometres and percentage increase)
- ?? Preservation average cost (expenditure/km by works type)
- ?? Asset condition (road by length and percentage; bridge by number and percentage)

User perspective:

- ?? Access (percentage living within 5km of all-weather road)
- ?? Annual travel (kilometres/year/vehicle by class of vehicle, IMT and pedestrian)
- ?? Mobility (percentage of households owning a bicycle)
- ?? Road condition (percentage of travel by road standard)
- ?? Risk exposure (accidents/million vehicle-km)

8.2.4 Presentation of performance indicators

Since performance indicators are designed for a non-technical audience, the format of their presentation needs to be appropriate. Examples of presentation styles are illustrated in Figures 8.1 to 8.3. Performance indicators can be published in national and local newspapers to disseminate results as widely as possible.

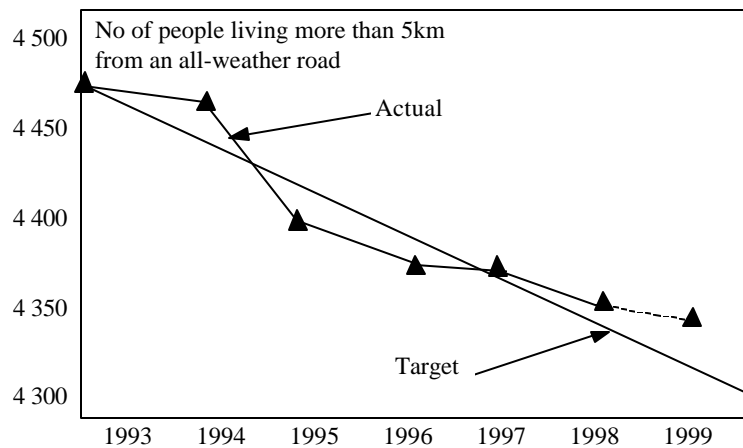


Figure 8.1 Example of a line graph presentation of a performance indicator showing progression over time

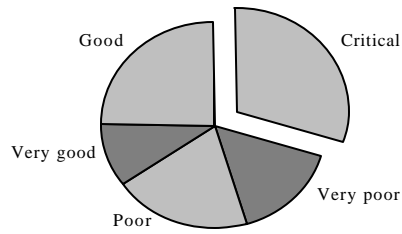


Figure 8.2 Example of a pie chart presentation of a performance indicator showing proportions of access road network in different conditions

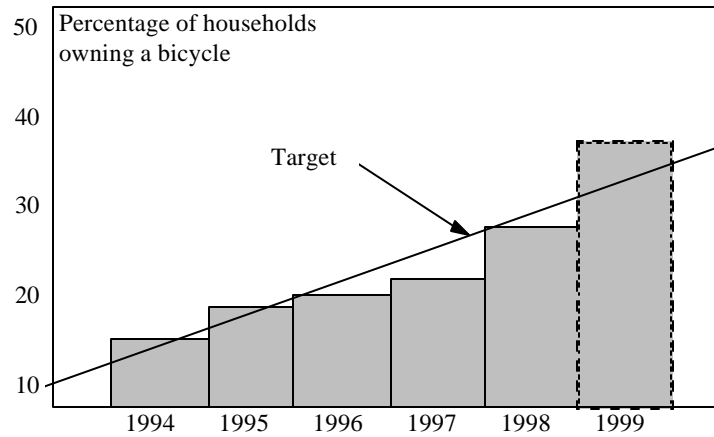


Figure 8.3 Example of a histogram presentation of a performance indicator showing change over time

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Glossary of terms

Access roads

These cater for within-district travel by linking access zones to roads of a higher functional class

Accessibility

The ease of reaching desired destinations

Arterial roads

Main roads connecting national and international centres

Availability (of travel and transport)

Capable of being used, or within the reach of travellers; requires both the existence of transport infrastructure and services that are in a condition or state that enables them to be used

Business plan

A document describing the contribution to achieving corporate objectives of each of the divisions within an organisation and setting out the annual objectives, tasks and programmes

Collector roads

These roads link traffic to and from rural areas, either direct to adjacent urban centres, or to the arterial road network

Corporate plan

A document describing the business of an organisation and setting out its mission and medium term objectives, and strategy for meeting these

Designated road

A road that is a legal entity under a Roads Act or similar legislation (the terms 'adopted', 'declared', 'gazetted', 'proclaimed' are used in some countries)

Framework document

A document describing ministerial policy requirements for an organisation and in terms of its overall aims

(Management) functions

Areas where road management decisions are made, normally sub-divided into (strategic) planning, programming, preparation, and operations

Goal-orientated project planning

A project development process that works by identifying the causes of problems, then breaking these down into smaller and smaller components, and then identifying solutions to each of the small components, building these back up again in such a way that objectives can be achieved

Intermediate means of transport (IMT)

Motorised vehicles with less than four wheels; unconventional motorised vehicles; and non-motorised vehicles, including bicycles, wheel barrows, hand and animal-drawn carts, and the like

Intervention level

The threshold above or below which action must be taken to ensure that standards are met

Mission (statement)

This outlines in general terms the nature of the operation of the body to which the policy applies, along with broad aims to be achieved

Mobility

The ability of individuals to move about

Monitoring

Reviewing past activities to learn from experience to enable better objectives to be set in the future

Objective

A specific and measurable goal or target to be achieved by a body within the short to medium term (tactical) or long term (strategic) time scale

Path

Narrow cleared way for pedestrian traffic and, in some cases, bicycles and motorcycles

Performance indicator

A sub-set of objectives, performance against which is published for public scrutiny

Plan

A systematic and formalised process for directing and controlling future operations in such a manner that policy objectives are achieved

Policy

The statement or series of statements which define the basic rules and requirements which can guide all decisions and actions that need to be taken

Policy document

A document containing a written statement of policy; a 'statement of intent'

Policy instrument

The means of putting policy in place

Policy framework

A hierarchical set of statements that define policy relevant to different bodies or levels of administration; typically consisting of mission statement, objectives and standards

Project

A set of activities with a defined start and finish, and which consume resources in moving from start to finish

Project cycle

A defined sequence of steps to be followed in executing a project

Rural roads

Access roads, arterial and collector roads in rural areas

Rural transport infrastructure

Tracks, trails, paths and roads in rural areas

Sector

A sub-division of government administration; *transport sector*; *road sub-sector*

Standard

A detailed operational target to be achieved by an individual unit in an organisation to enable policy to be implemented

Strategy

A plan for implementing policy

Sustainability

The pursuit of development that meets the needs of the present without compromising the ability of future generations to meet their needs

Tracks

Single lane, cleared and improved seasonal roads that connect to higher class roads; used mainly by non-motorised traffic and pedestrian travellers, but traversible at certain times by light four-wheel drive vehicles, pick-up trucks, animal-drawn carts and pack animals; sometimes known as community roads

Trails

Narrow tracks suitable only for two-wheel vehicles, pedestrians and pack animals

Transport

The movement of passengers and freight from one place to another

Travel

Making journeys; moving around

Undesignated road

A road that has not been designated as a legal entity under a Roads Act or similar legislation

Vision (statement)

A broad indication of the general direction in which policy should develop over time

Works

Activities that are carried out on the road network, normally sub-divided into routine maintenance, periodic maintenance, special works, rehabilitation, and development

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